Yolico

YD680 Series

High-Performance Inverter



380V 3-phase 0.75 ~ 630kW

Ver 1.3

Preface

First of all, thank you for purchasing the YD680 series inverter developed and produced by YOLICO! YD680 series inverter is a general-purpose high-performance current vector inverter, which is mainly used to control and regulate 3-phase AC Asynchronous or synchronous motors Speed & Torque. YD680 adopts high-performance vector control technology, low speed and high torque Output, with good dynamic characteristics, super overload capacity, with user programmable functions and background software monitoring, communication bus functions, It supports a variety of encoder types, with rich and powerful combination functions and stable performance. It can be used in textile, papermaking, wire drawing, machine tools, packaging, food， Drives for fans, pumps and various automated production equipment.

Meets standards

The relevant certification directives and standards are shown in the following table, and whether the relevant certification qualifications are obtained are subject to the product nameplate identification.

Certification	Mark	Directives		Standard
CE	CE	EMC directives	2014/30/EU	EN 61800-3
		LVD directives	2014/35/EU	EN 61800-5-1
		RoHS directives	2011/65/EU	EN 50581

NOTE

- Under the conditions of correct installation and use, it meets the requirements of the IEC/EN 61800-3 standard, please refer to Peripheral Connection and Constant for details
  See the EMC Problem Rectification section.

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Safety Precautions

Security Notice

- ◆ When installing, operating, and maintaining the product, please read and comply with this safety precautions first.
- ◆ In order to ensure the safety of people and equipment, when installing, operating and maintaining the product, please follow all the instructions on the product logo and manual Safety Precautions.
- ◆ The "Caution", "Warning" and "Danger" items in the manual do not represent all safety precautions that should be observed
  There are additions with safety precautions.
- ◆ This product should be used in an environment that meets the requirements of the design specifications, otherwise it may cause failure and work caused by failure to comply with relevant regulations
  Abnormal or damaged parts are not within the scope of product quality assurance.
- ◆ Our company will not assume any legal responsibility for personal safety accidents and property losses caused by illegal operation of products.

Definition of security level

Danger	"Danger" means that failure to do so would result in death or serious bodily injury.
Warning	"Warning" means that failure to do so could result in death or serious bodily injury.
Caution	"Caution" If not performed as directed, it may result in minor bodily injury or damage to the device.

Security Identification

In order to ensure the safe operation and maintenance of the equipment, please be sure to follow the safety signs affixed to the equipment and products, and do not damage, damage, or Peel off the security marking. The safety signs are described as follows:

Security Identification	Content description
	◆ Read user manu before install & operate, or it will be risk of elec-shock! ◆ Don't remove cover when power is on and within 10 min of the power cut-off! ◆ For mainten, check, and wiring, turn off power supply on input and output Wait 10 minu,start work after the power indicator is completely turned off.

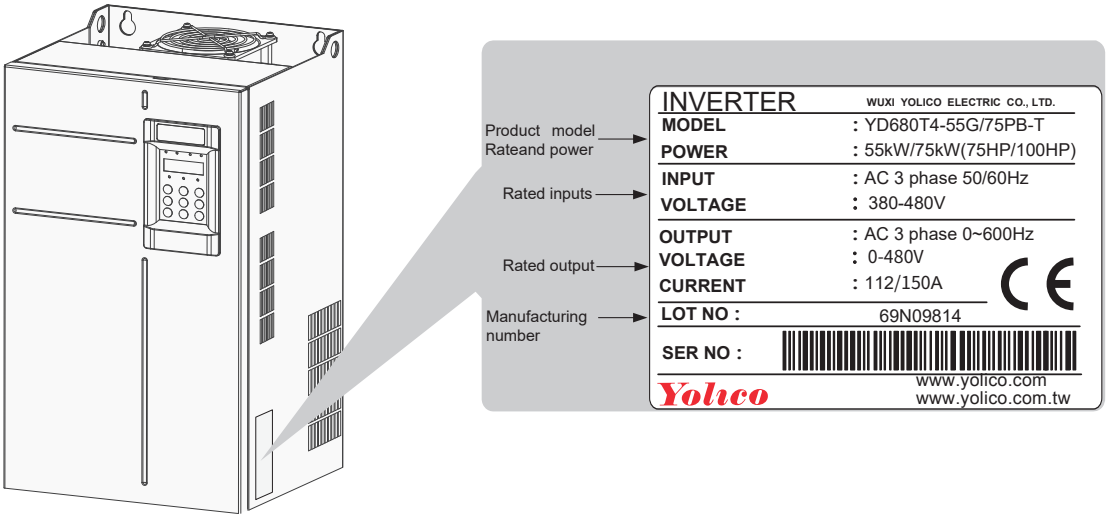
Chapter 1 Product Information

Safety Precautions

note

- Do not grasp the front or terminal cover to carry the inverter. If only the front cover is grasped, Inverter will fall and there is a risk of smashing;
- When operating drive, follow the step set forth in the ESD prevention measures.or the inside of the inverter will be damaged due to static electricity circuits.

1.1 Nameplate Model



YD680 T4- 18P5G / 22P B

Mark	Product name
YD680	High-Performance

Mark	Voltage level
T4-	3PH 380~480V

Mark	Power Rating (kW)
0P7	0.75kW
1P5	1.5kW
...	...
630	630kW

Mark	Overload type
G	150%*60s level

Mark	Suffix
NULL	Without
-L	With Output AC reactor
-T	With DC reactor
-A	Auxi-electrical cabinets

Mark	Brake unit
NULL	Without
B	With

Mark	Overload type
P	120%*60s level

Mark	Power Rating (kW)
1P5	1.5kW
2P2	2.2kW
...	...

Figure 1-1 Product naming and nameplate identification

Chapter 2 System Connection

Safety Precautions



- It is strictly forbidden to wire when power on, or there will be a risk of electric shock!
- Be sure to keep the circuit breaker in the OFF state.



- When install inverter in a closed cabinet , use a cooling fan to fully cool it to make the inverter keep inlet air temperature of inverter below 50°C, or it may cause overheating.



- When install inverter, cover the upper of the inverter with cloth or paper to prevent metal shaving, oil, and water from the hole during drilling into inside of the inverter. If foreign matter gets inside inverter, it may cause inverter to malfunction, so remove it after the work is finished If cloth or paper continues to be covered on it, the ventilation effect will be worse, resulting in abnormal heating of inverter!
- When using the drive, please follow the steps specified in the ESD prevention measures, otherwise the drive will be damaged due to static electricity!
- The torque characteristics are different when driving with an inverter and when driving with a commercial power supply, so check the load torque characteristics of the machine to be connected Sex.
- Do not lift the inverter with the housing removed, as this may cause damage to the inverter's circuit board or terminal strip!

2.1 YD680 System Connection Diagram

When using YD680 series inverter to control asynchronous motor to form a control system, it is necessary to install various electrical components on the input and output sides of the inverter to ensure the safety and stability of the system. The product system composition of three-phase 380V~480V 0.75kW and above power is shown in the following figure：

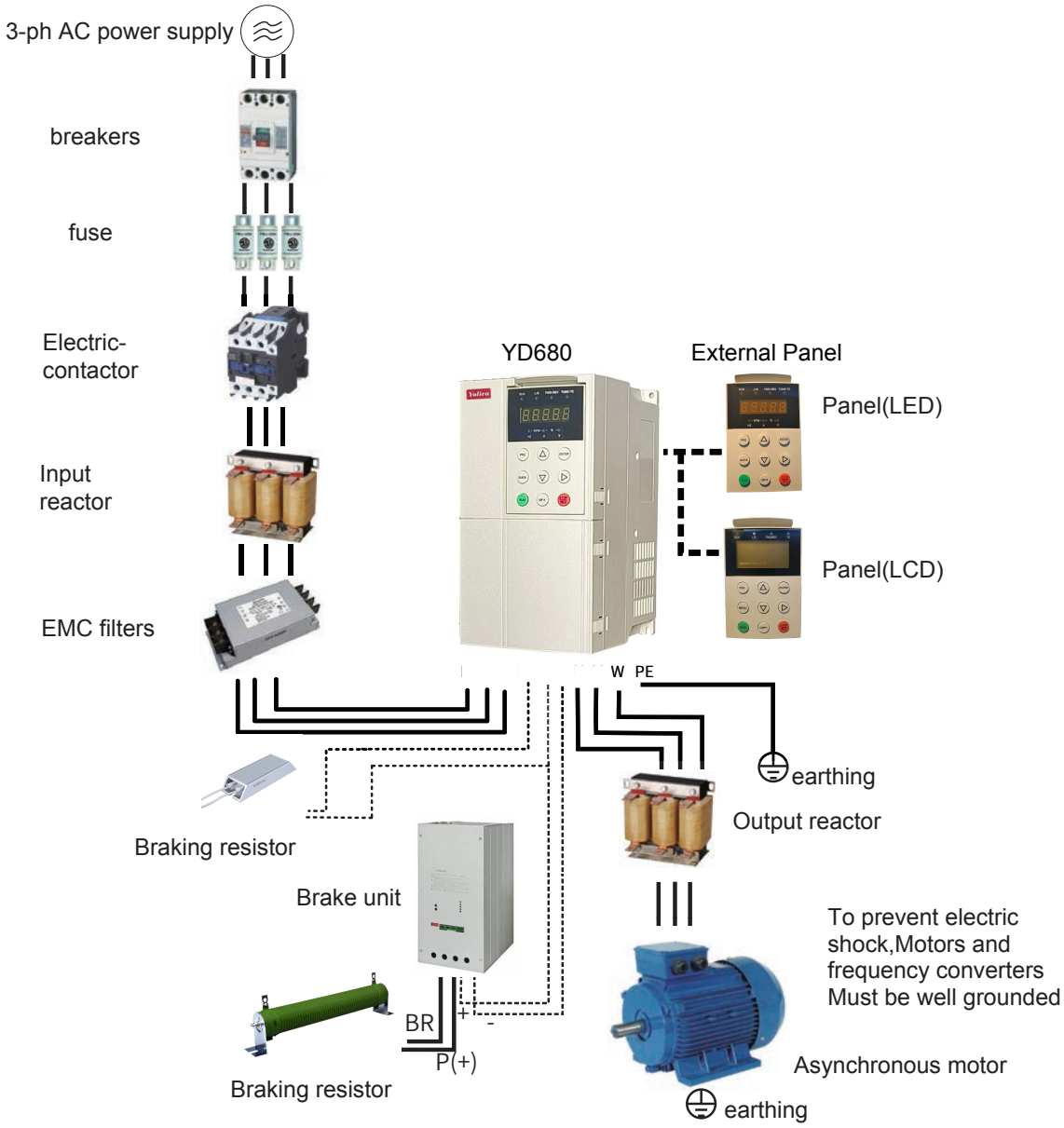


Figure 2-1 YD680 series system configuration

NOTE

● The above picture is only used as a schematic diagram of the YD680 inverter system connection, please refer to Chapter 9 "Specifications and Selection" for the selection of peripheral equipment。

Chapter 3 Installation and Wiring

3.1 Installation

3.1.1 Installation Environment

1) Ambient temperature: The ambient temperature has a great impact on the life of the inverter, and the operating ambient temperature of the inverter is not allowedExceeding the allowable temperature range (-10°C~ 50°C).

2) Install the inverter on the surface of a flame-retardant object, and there should be enough space around it to dissipate heat. The inverter is prone to produce a large amount when working

Heat. And install it vertically on the mounting support with screws.

3) Install it in a place where it is not easy to vibrate. The vibration should not be greater than 0.6G. Pay special attention to stay away from equipment such as punches.

4) Avoid direct sunlight, humidity, and water droplets.

5) Avoid places with corrosive, flammable and explosive gases in the air.

6) Avoid installation in places with oil and dust.

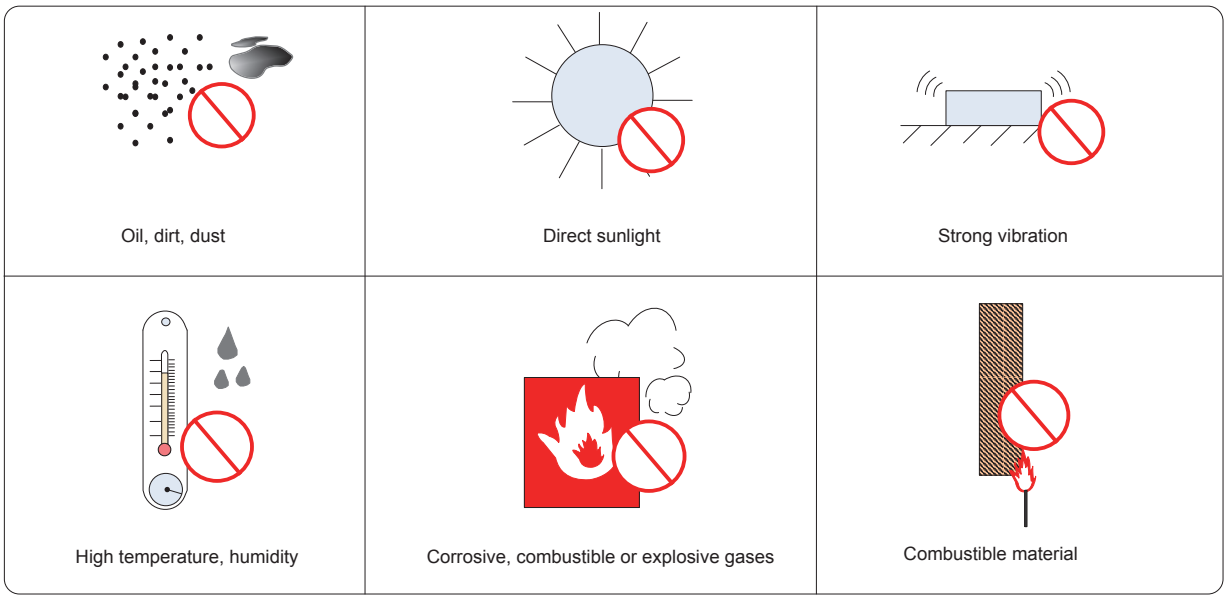


Figure 3-1 Requirements for the installation environment

7) YD680 series products are cabinet installation products, which need to be installed in the final system for use, and the final system should be provided corresponding fireproof enclosures, electrical protective enclosures and mechanical protective enclosures, etc., and comply with local laws and regulations and relevant IEC Standard requirements:

3.2 Connection

3.2.1 Standard wiring diagram

The typical wiring is shown in the figure below, please note that the wiring part at the double arrow in the figure is different for the 0.75kW~110kW model and the 132kW~450kW model.

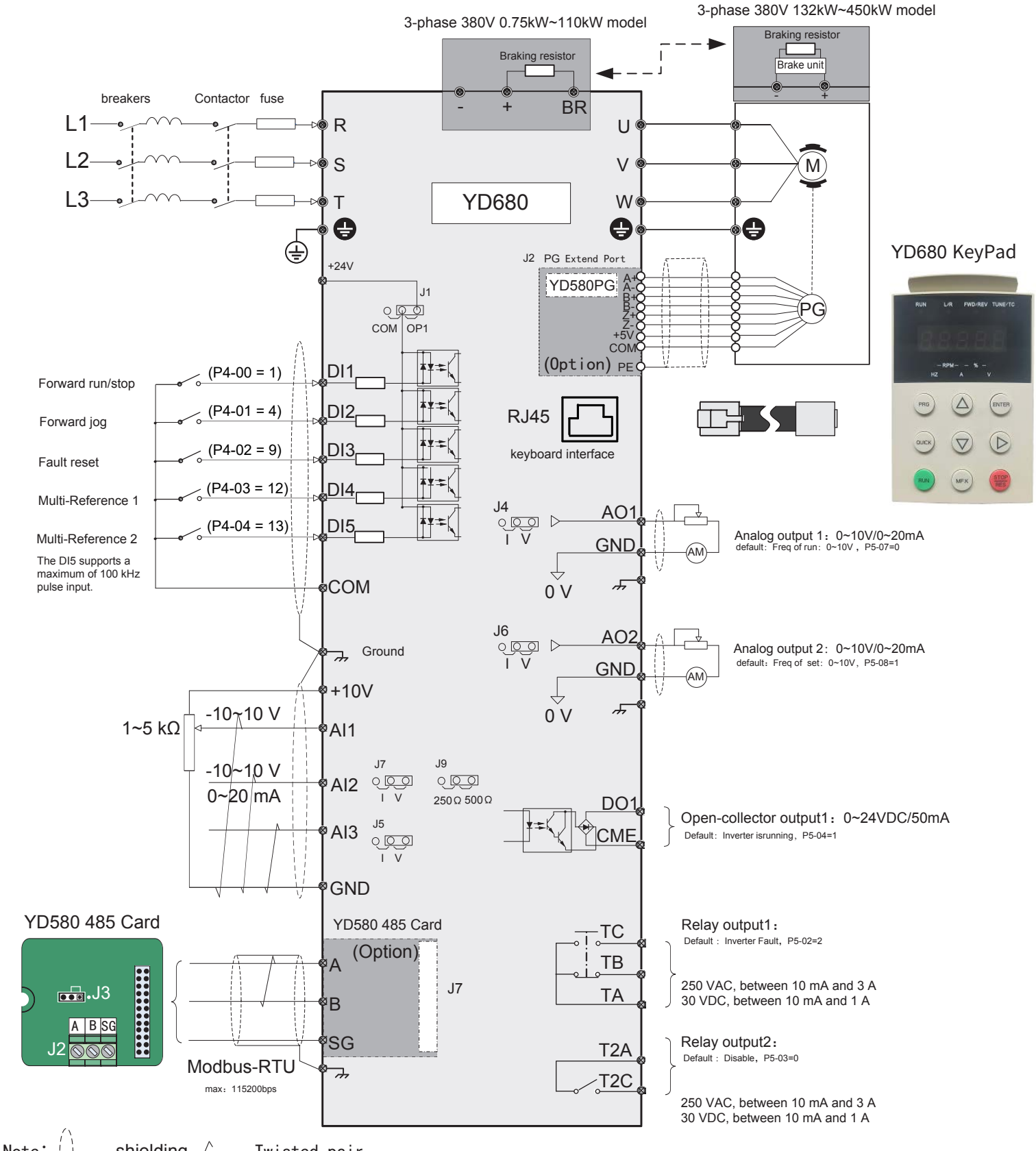
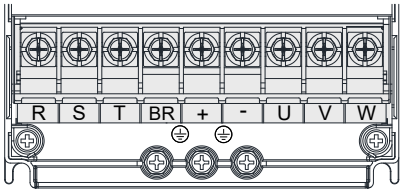
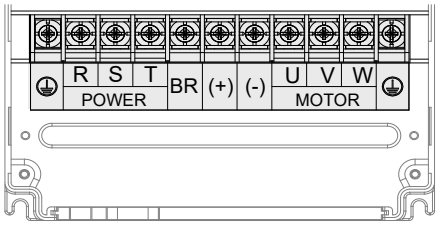


Figure 3-26 Typical wiring diagram of 3-phase 380V~480V

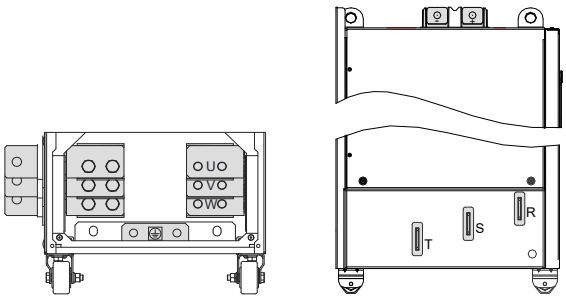
3.2.2 Function of main circuit terminal



YD680T4-0P7G/1P5PB ~ YD680T4-22G/30PB



YD680T4-30G(B)(-T) ~ YD680T4-160G/200P-T



(Front view) (Side view)

YD680T4-200G/250P-T ~ YD680T4-450G-T

Table 3-3 Main circuit terminals of YD680 series inverters

Terminal marking	Terminal name	Feature description
R、S、T	3-phase power input	AC input three-phase power connection point
(+) 、 (-)	DC bus positive、negative	Common DC bus input , and connect external braking units
(+) 、BR	Braking resistor connection	Braking resistor connection point
U、V、W	Inverter output terminal	Connect a three-phase motor
⏚	Ground Terminal (PE)	Protective grounding

3.2.3 Distribution of Control circuit terminal

◆ Control loop terminal arrangement

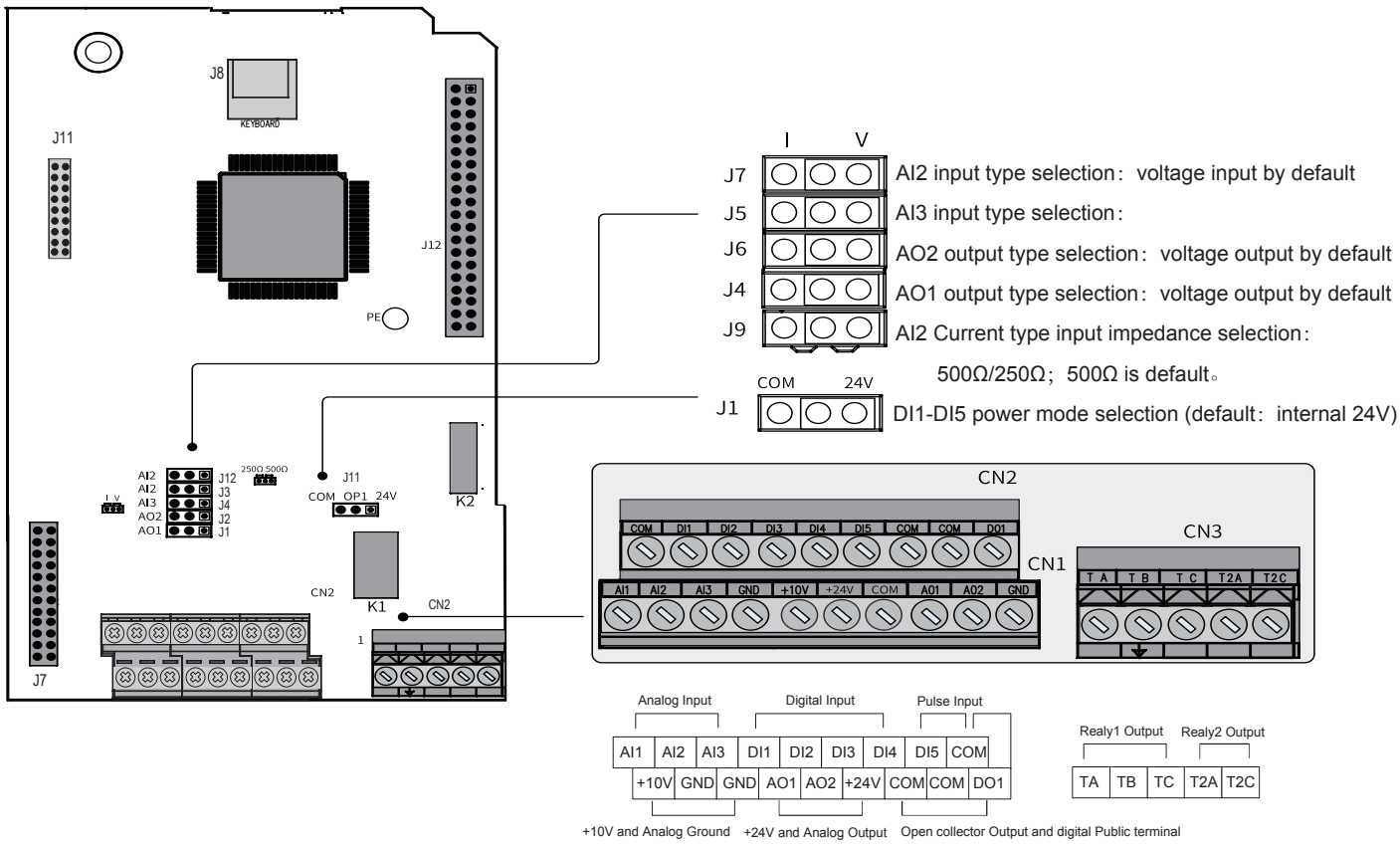


Figure 3-57 Terminal layout of the control circuit

ITEM	Symbol	Terminal Function	Function Description
JUMPER	J11	DI Power supply mode	DI power supply mode, default internal 24V power.
	J1	AO1 Output Selection	Voltage or current output is optional, Default voltage.
	J2	AO2 Output Selection	Voltage or current output is optional, Default voltage.
	J4	AI3 Input Selection	Voltage or current Input is optional, Default voltage.
	J3	AI2 Input Selection	Voltage or current Input is optional, Default voltage.
	J12	AI2 Input Impedance Selection	In AI2 current mode, input impedance is 500Ω or 250Ω.

3.2.4 Instructions of Control circuit terminal

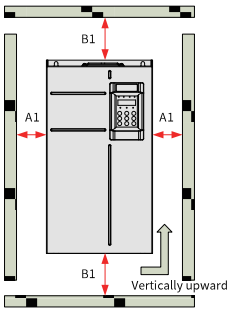
Table 3–17 Description of control circuit terminals

Item	Terminal Code	Terminal Name	Description
Power supply	+10 V-GND	External +10 V power supply	Provides +10 V power supply to an external unit. Its maximum output current is 10 mA. It is generally used to supply power to an external potentiometer with resistance ranging from 1 kΩ to 5 kΩ.
	+24 V-COM	External +24V power supply	Provides +24 V power supply to an external unit. It is generally used to supply power to digital input/output terminals and external sensors. Maximum output current: 200 mA
Analog input	AI1-GND	Analog input terminal 1	Input voltage range: –10 VDC to +10 VDC Input impedance: 22 kΩ
	AI2-GND	Analog input terminal 2	Input range: –10 VDC to +10 VDC or 0–20 mA, as determined by the J7 jumper on the control board Input impedance: 22 kΩ (voltage input) or 500 Ω (current input)
	AI3-GND	Analog input terminal 3	Input range: –10 VDC to +10 VDC or 0–20 mA, as determined by the J5 jumper on the control board Input impedance: 22 kΩ (voltage input) or 500 Ω (current input)
Digital input	DI1-COM	Digital input 1	Photocoupler isolation enabled with input frequency less than 100 Hz. It is driven by external or internal power as determined by the J1 jumper on the control board. Input impedance: 1.39 kΩ Voltage range with effective level input: 9–30 V
	DI2-COM	Digital input 2	
	DI3-COM	Digital input 3	
	DI4-COM	Digital input 4	
	DI5-COM	Digital input 5	
Analog output	AO1-GND	Analog output 1	Whether voltage or current is output is determined by the J4 jumper on the control board. Maximum load resistance is 500 Ω. Output voltage range: 0–10 V Output current range: 0–20 mA
	AO2-GND	Analog output 2	Whether voltage or current is output is determined by the J6 jumper on control board. Max.imum load resistance is less than 500 Ω. Output voltage range: 0–10 V Output current range: 0–20 mA
Digital output	DO1-COM	Digital output 1	Dual polarity open collector output with photocoupler isolation Output voltage range: 0–24 V Output current range: 0–50 mA
Relay output	TA-TB	Normally closed terminal	Contact driving capacity: 250 VAC, 3 A, COSø = 0.4 30 VDC, 1 A
	TA-TC	Normally open terminal	
	T2A-T2C	Normally open terminal	
Auxiliary ports	J7	Extension card port	A 28-conductor terminal, which interfaces to optional cards (such as bus cards)
	J9	PG card port	Connects resolver and differential encoders.
	J8	Port for external operating panel	Connects an external operating panel.
Jumper	J11	DI terminal power mode selection	Determines the power mode of DI terminals. The internal 24 V power supply is used by default.
	J1	AO1 output selection	The options are voltage output (default output) and current output.
	J2	AO2 output	The options are voltage output (default output) and current output.
	J4	AI3 input selection	The options are voltage input (default input) and current input.
	J3	AI2 input selection	The options are voltage input (default input) and current input.

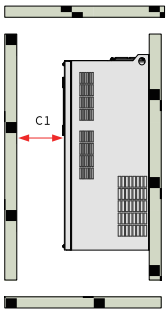
3.3 Installation Space

- Installing one AC drive

(Front view)



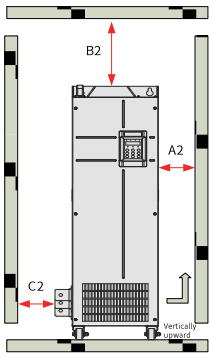
(Side view)



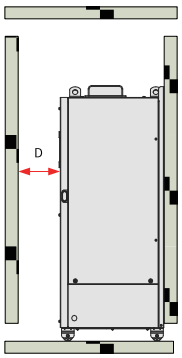
Installation clearance requirement

Power Rating	Clearance Requirement (mm)		
0.4-15 kW	A1 ⩾ 10	B1 ⩾ 100	C1 ⩾ 40
18.5-22 kW	A1 ⩾ 10	B1 ⩾ 200	C1 ⩾ 40
30-37 kW	A1 ⩾ 50	B1 ⩾ 200	C1 ⩾ 40
45-160 kW	A1 ⩾ 50	B1 ⩾ 300	C1 ⩾ 40

(Front view)



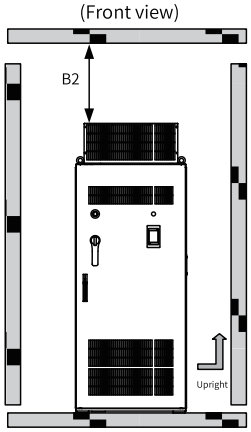
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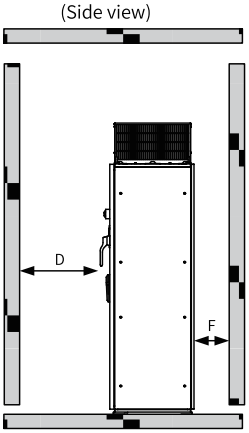
Installation clearance requirement

Power Rating	Clearance Requirement (mm)			
200-450 kW	A2 ⩾ 10	B2 ⩾ 250	C2 ⩾ 20	D⩾ 20

(Front view)



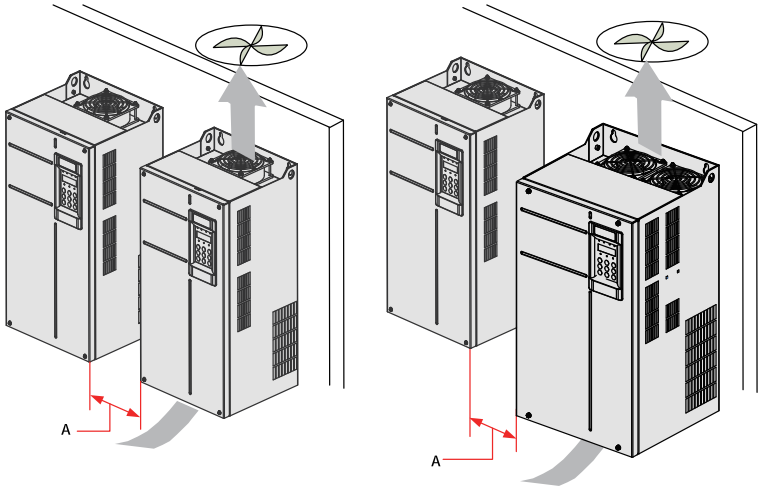
(Side view)



Installation clearance requirements

Power Rating	Clearances (mm)		
500 kW to 630 kW	B2 ⩾ 250	D ⩾ 800	F ⩾ 100

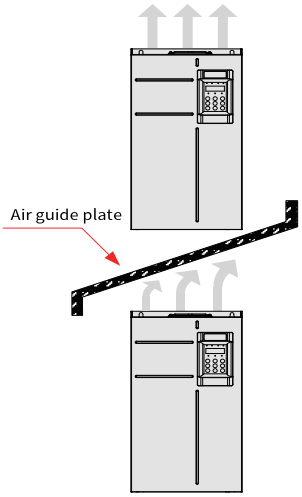
- Dual-row installation



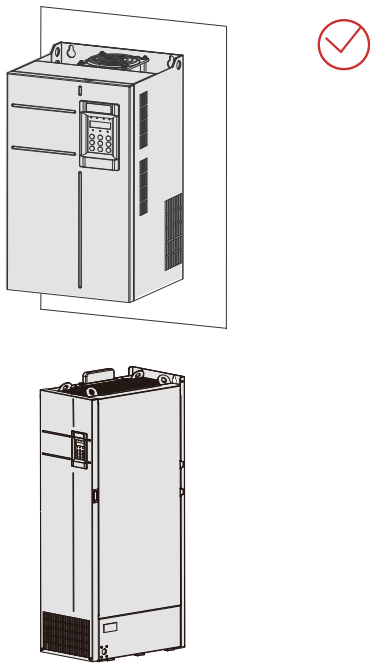
Installation clearance requirement

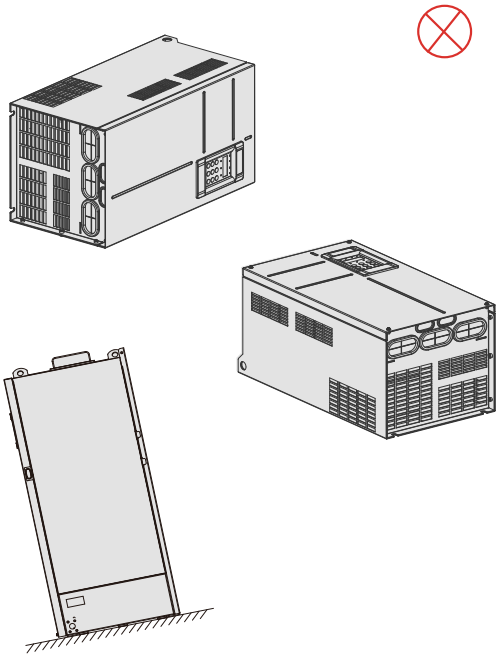
Power Rating	Clearance Requirement (mm)
0.4-15 kW	A ⩾ 10
18.5-22 kW	A ⩾ 10
30-37 kW	A ⩾ 50
45-160 kW	A ⩾ 50

- Requirements for dual-row installation



- Installation Direction





Chapter 4 Operating Panel

4.1 Introduction

YD680 series inverter can be operated by LED operation panel or LCD operation panel for parameter operation, status monitoring and control.

In addition to the LED operation panel that comes with the inverter, users can also choose to configure the LED operation panel (YKEY059) or LCD operation panel (YKEY060) to realize the external introduction of the panel. Among them, the parameters can be modified and viewed through the LED operation panel, and its appearance and use are described in "4.2 LED Operation Panel Introduction"; Through the optional LCD operation panel, it can realize functions such as parameter copying and downloading. For details on how to use this keyboard, see "Introduction to the 4.3 LCD Operation Panel".

4.2 Introduction to LED Operator Panel

With the operation panel, you can set and modify the parameters of the inverter, monitor the working status, and control the operation (start, stop) and other operations.
The appearance of the operation panel and the names of the operation keys are shown in the following figure:

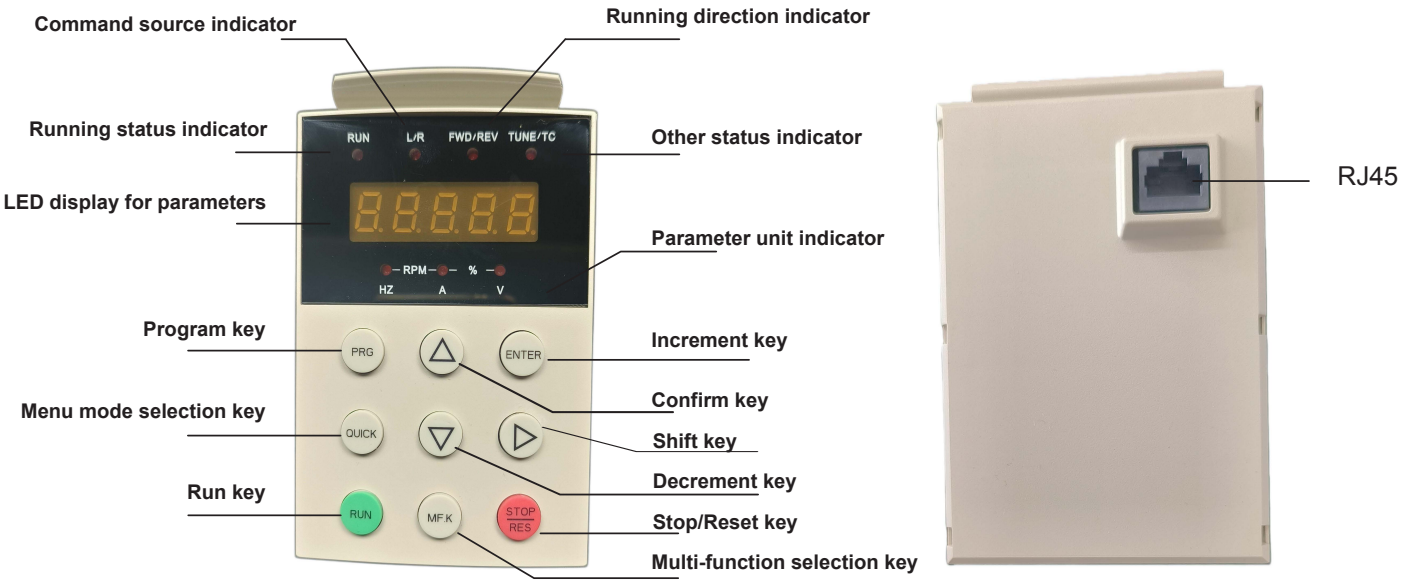


Figure 4-1: Keyboard Diagram

4.2.1 Function Indicator

Table 4-1 Indicator descriptions on the operation panel

■ Status Indicators

There are four red LED status indicators at the top of the operating panel.

Indicator	Indication
○ RUN	OFF indicates the STOP status.
	ON indicates the RUNNING status.
○ L/R	OFF indicates under operating panel control.
	ON indicates under terminal control.
	FLASHING indicates under serial communication control.
○ FWD/REV	OFF indicates reverse motor rotation.
	ON indicates forward motor rotation.
○ TUNE/TC	ON indicates torque control mode.
	FLASHING SLOWLY (once a second) indicates auto-tuning status.
	FLASHING QUICKLY (four times a second) indicates a fault condition.

■ Unit Indicators

There are three red unit indicators below the data display. These indicators operate individually or in pairs to show the units used to display data,

Indicator appearance	Meaning
Hz ● RPM A ○ % V ○	Hz for frequency
Hz ○ RPM A ● % V ○	A for current
Hz ○ RPM A ○ % V ●	V for voltage
Hz ● RPM A ● % V ○	RPM for motor speed
Hz ○ RPM A ● % V ●	Percentage

4.2.2 LED Display Area

There are a total of 5-digit LED displays on the operation panel, which can display the setting frequency, output frequency, various monitoring data, and alarm codes.

Table 4-2 Actual correspondence and LED display correspondence table

LED Display	Indication	LED Display	Indication	LED Display	Indication	LED Display	Indication
0	0	6	6	C	C	N	N
1	1	7	7	c	c	P	P
2	2	8	8	d	D	r	R
3	3	9	9	E	E	t	T
4	4	A	A	F	F	U	U
5	5, S	b	B	L	L	u	u

4.2.3 Keyboard Button Function

Table 4-3 Keyboard key function list

Key	Key Name	Function
PRG	Programming	• Enter or exit Level I menu. • Return to the previous menu.
ENTER	Decrement	• Enter each level of menu interface. • Confirm displayed parameter setting.
△	Increment	• When navigating a menu, it moves the selection up through the screens available. • When editing a parameter value, it increases the displayed value. • When the AC drive is in RUN mode, it increases the speed.
▽	Decrement	• When navigating a menu, it moves the selection down through the screens available. • When editing a parameter value, it decreases the displayed value. • When the AC drive is in RUNNING mode, it decreases the speed.
▷	Shift	• Select the displayed parameter in the STOP or RUNNING status. • Select the digit to be modified when modifying a parameter value
RUN	RUN	Start the AC drive when using the operating panel control mode. It is inactive when using the terminal or communication control mode.
STOP RES	Stop/Reset	• Stop the AC drive when the drive is in the RUNNING status. • Perform a reset operation when the drive is in the FAULT status. Note: The functions of this key can be restricted by using function P7-02.
MF.K	Multifunction	Perform a function switchover as defined by the setting of P7-01, for example to quickly switch command source or direction.
QUICK	Menu mode selection	Press it to switch over between menu modes as defined by the setting of PP-03.

4.2.4 How to view and modify parameters

YD680 The operation panel of the inverter adopts a three-level menu structure for parameter setting and other operations. The three-level menus are:



After entering each level of menu, when the display bit flashes, you can press keys, keys, and keys to modify them. Figure 4-2 shows the operation process.

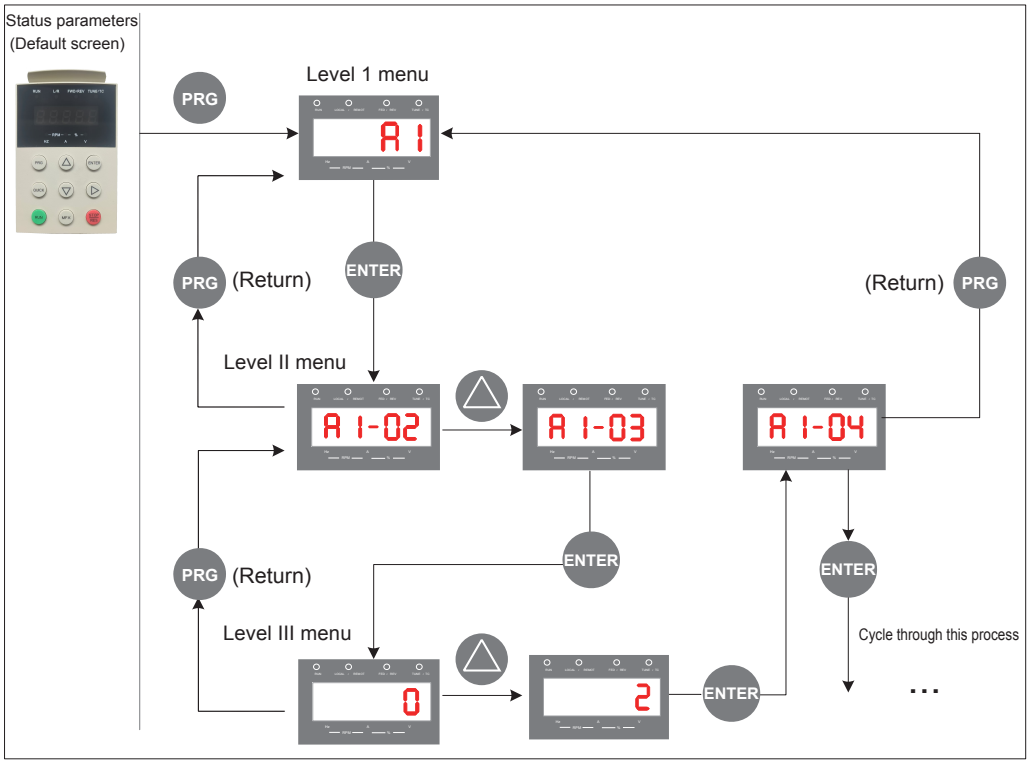


Figure 4-2 Flowchart of the three-level menu

View Parameter If set PP-02=11，PP-03=11，The process is as follows。

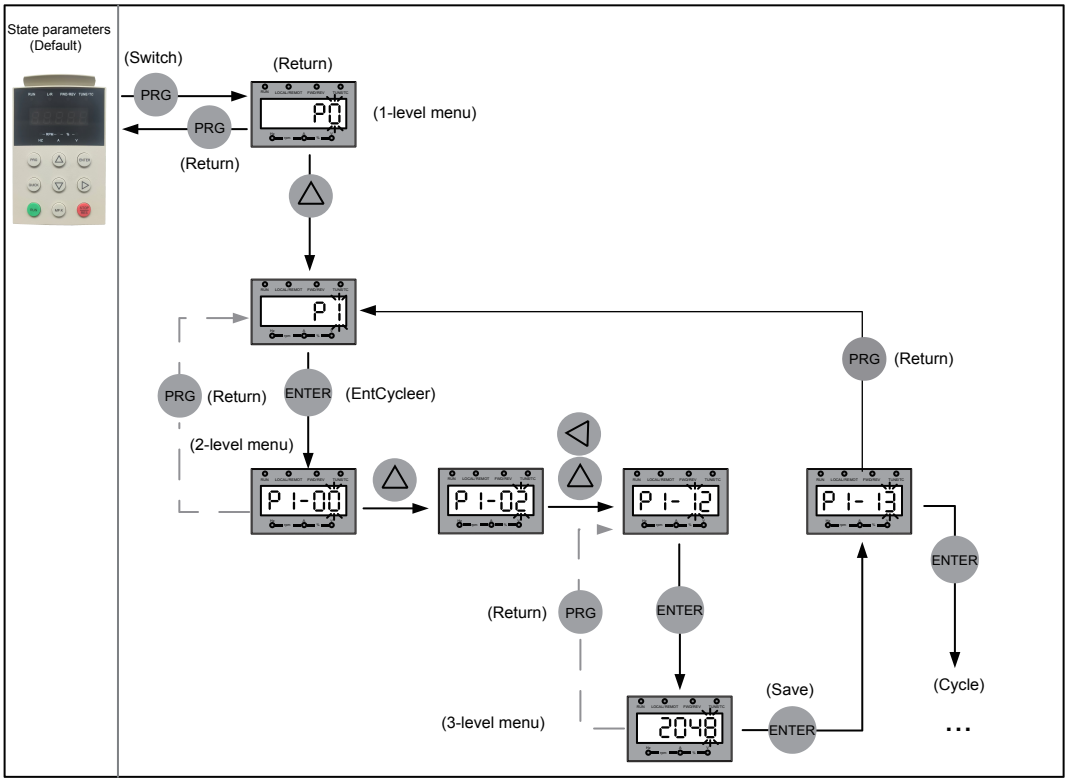


Figure 4-4 Parameter Viewing Operation Diagram

4.2.5 Status Parameter Display

In the running state, press ▷ to view status parameters. The default displayed status parameters include: running frequency, set frequency, DC bus voltage, output voltage, and output current. To view more status parameters, please refer to the description of P7-03 and P7-04 in "Related Parameters".

In the stop state, press ▷ to view status parameters. The default displayed status parameters include: set frequency, DC bus voltage, AI1 voltage, and AI2 voltage. To view more status parameters, please refer to the description of P7-05 in "Related Parameters".

4.2.6 Fault and Alarm Display

When the product fails, the fault indicator flashes, and the operation panel displays the fault code as shown in Figure 4-5.

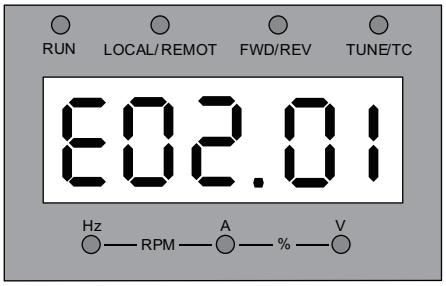


Figure 4-5 Fault Code Display

When the fault indicator flashes, the device stops output immediately, and the fault relay contact closes.Please refer to *Chapter 7 "Fault Diagnosis and Countermeasures"* for common troubleshooting methods or contact technical support. Locate and clear the fault according to the fault type displayed on the operation panel, and reset the device after fault clearance.

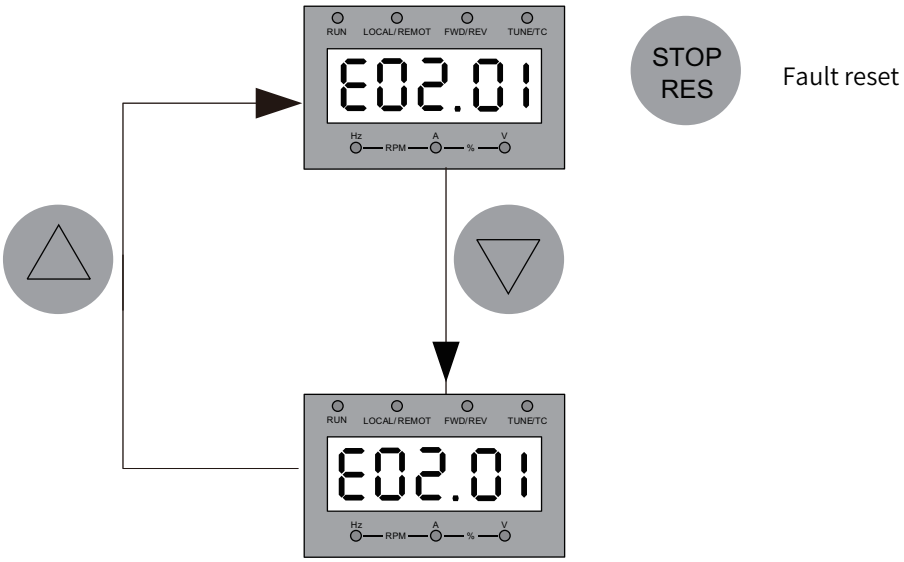


Figure 4-6 Viewing and Resetting Multiple Faults

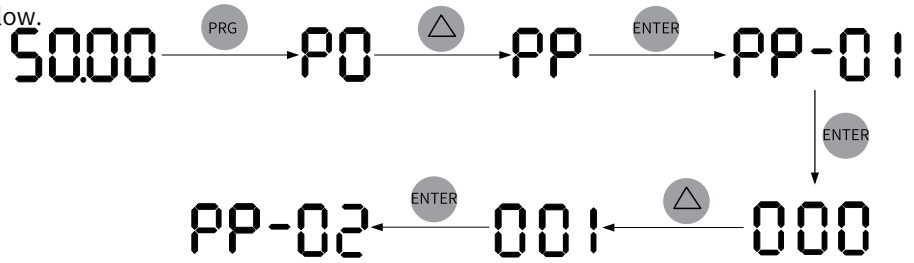
4.2.7 Panel Demonstration Drive Motor

Press the MF.K key on the operation panel to control the motor for forward jog and reverse jog operations.

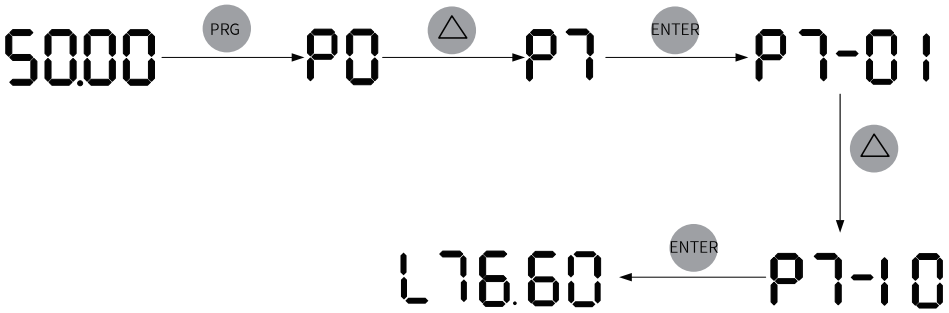
Press the RUN and STOP RES keys to control the motor start and stop operations.

Operation Steps

1. Pre-power-on check.
   Follow the *installation manual* for installation and wiring checks. See the Installation Guide for pre-power-on inspection details.
2. Press the power switch to turn on the inverter.
3. Check that the operation panel displays 50.00, indicating successful power-on.
4. Set PP-01=001 to restore all parameters to factory defaults. The operation example is shown in the figure below.



5. Check the value of P7-10, which indicates the software version number.

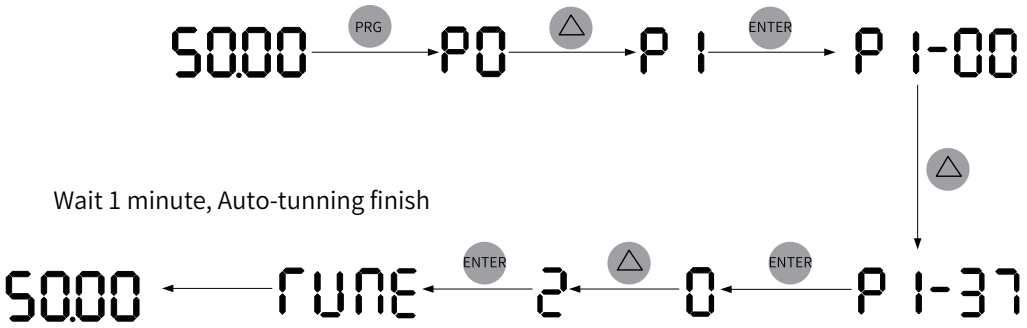


6. Set the motor parameters for group P1 according to the motor nameplate data.

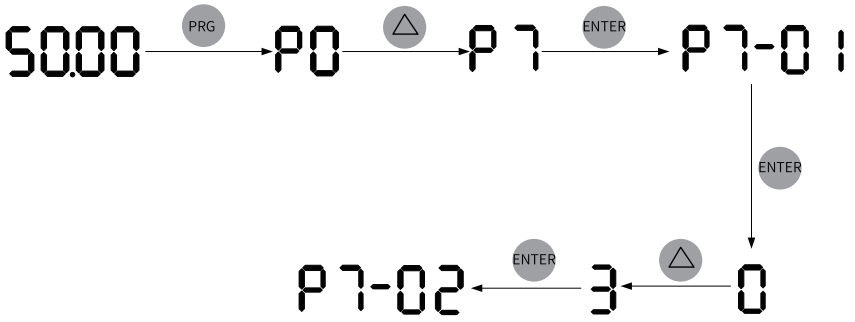
Table 4–7 Motor Parameter Description

Parameter	Function	Default	Range of setting	Parameter Description	Value
P1-00	Motor type selection	0	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Synchronous motor	A variable frequency motor can adjust its frequency and speed according to the load. Where the voltage is low, it can reduce the frequency and start reliably. Where the load is light, it can reduce the frequency, speed, and current to save electric energy. A common asynchronous motor is suitable for applications with normal voltage but often full load. It is designed based on constant frequency and constant voltage. Therefore, it may not meet all the frequency and speed change requirements.	0
P1-01	Rated motor power	Model	0.1kW~1000.0kW	This parameter indicates the power of the motor during normal operation. Its value is the motor rated voltage multiplied by the motor rated current. Select a proper motor power on the premise that the motor can meet the requirements of mechanical load. Factors such as motor heating, allowable overload capacity, and starting capacity must be considered.	22.0
P1-02	Rated motor voltage	Model	1V~2000V	The rated motor voltage indicates the voltage of the motor during normal operation, which usually refers to the line voltage.	0380
P1-03	Rated motor current	Model	0.1A~6553.5A	The rated motor current indicates the current of the motor during normal operation, which usually refers to the line current.	45.0
P1-04	Rated motor frequency	Model	0.01Hz~600.00Hz	The rated motor frequency indicates the frequency of the power supply connected to the stator winding under the rated operation state of the motor.	50.00
P1-05	Rated motor speed	Model	1rpm~65535rpm	This is the speed of the rotor in RPM when the motor is running in rated conditions.	1460

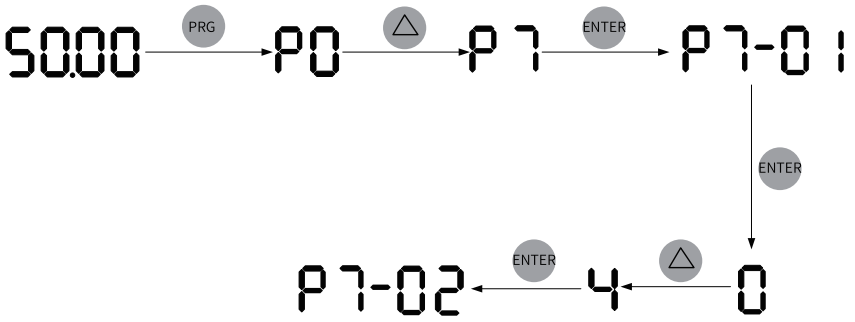
7. Set P1-37=2，Press ENTER，LED show  Press and hold RUN on panel for more than 3 seconds。Auto-Tuning. During this process, the RUN indicator stays on, the TUNE/TC indicator flashes, and the inverter powers the motor. After about 1 minute, the panel displays 50.00, indicating that the tuning is complete.



8. Set P7-01=3，After set，press MF.K，The motor rotates forward in jog mode.



9. Set P7-01=4，After set，press MF.K，The motor rotates reverse in jog mode.



10. Press RUN Press the key to start the motor. The motor shaft begins to accelerate, and the panel displays the current operating frequency, as shown in the figure below. After acceleration is complete, the frequency value shows 50.00. Press the button to switch the displayed operating status parameters.



11. Press STOP/RES Stop button, motor decelerates and stops。

4.2.8 Related parameters

Parameter	Communication Address	Name	Value Range	Default	Unit	Change Property
P7- 01	0xF701	MF.K key function	0: MF.K key disabled 1: Switchover between operating panel control and remote command control (terminal or communication) 2: Switchover between forward and reverse running 3: Forward jog 4: Reverse jog	0	-	At stop
P7- 02	0xF702	STOP/RES key function	0: STOP/RES key enabled only in operating panel control mode 1: STOP/RES key enabled in any operating mode	0	-	In real time

Parameter	Communication Address	Name	Value Range	Default	Unit	Change Property
P7- 03	0xF703	LED display 1 in running state	Bit 00: Running frequency (Hz) Bit 01: Frequency reference (Hz) Bit 02: Bus voltage (V) Bit 03: Output voltage (V) Bit 04: Output current (A) Bit 05: Output power (kW) Bit 06: Output torque (%) Bit 07: DI status Bit 08: DO status Bit 09: AI1 voltage (V) Bit 10: AI2 voltage (V) Bit 11: AI3 voltage (V) Bit 12: Count value Bit 13: Length value Bit 14: Load speed display Bit 15: PID reference	0x1F	-	In real time

Parameter	Communication Address	Name	Value Range	Default	Unit	Change Property
P7- 04	0xF704	LED display 2 in running state	Bit 00: PID feedback Bit 01: PLC stage Bit 02: Pulse input reference (kHz) Bit 03: Running frequency 2 (Hz) Bit 04: Remaining running time Bit 05: AI1 voltage before correction (V) Bit 06: AI2 voltage before correction (V) Bit 07: AI3 voltage before correction (V) Bit 08: Linear speed Bit 09: Current power-on time(hour) Bit 10: Current running time (min.) Bit 11: Pulse input reference (Hz) Bit 12: Communication Bit 13: Encoder feedback speed(Hz) Bit 14: Roll diameter (mm) Bit 15: Taper tension (N)	0	-	In real time

Parameter	Communication Address	Name	Value Range	Default	Unit	Change Property
P7- 05	0xF705	LED display in stop state	Bit 00: Frequency reference (Hz) Bit 01: Bus voltage (V) Bit 02: DI state Bit 03: DO state Bit 04: AI1 voltage (V) Bit 05: AI2 voltage (V) Bit 06: AI3 voltage (V) Bit 07: Count value Bit 08: Length Bit 09: PLC state Bit 10: Load speed display Bit 11: PID setting Bit 12: Pulse input frequency (kHz) Bit 13: Roll diameter (mm) Bit 14: Tension (N)	0x33	-	In real time

PP-01	Parameter initialization		default value	0
	range of set	0	No action	
		1	Factory restore parameters, excluding motor parameters	
		2	Clear the record information	
		4	Back up the user's current parameters	
		501	Restore user backup parameters	

Function	define	default	range of set	Description
PP-02	Functional parameters are displayed in groups to select	11	Single-digit: U-group display select 0: No display; 1: Display Ten-digit: A-group display select 0: No display; 1: Display	Used for group A, group U parameters or not Controls for display.

parameter	define	default	range of set	illustrate
PP-03	The function parameter group displays the selection	00	Single-digit: -USEr display-sel 0: Not displayed; 1: Visible Sen-digit: --C-- display-sel 0: Not displayed; 1: Visible	Decide on user custom groups, user changes Change whether the parameter group is displayed.

4.2.9 MF.K Multi-Function Key Operation

The MF.K key on the operation panel is a multi-function key, which can be used by the parameter P7-01 (MF. K key function selection) sets the function of the MF.K key. In the shutdown or running state, you can use this key to switch the operation command or the rotation direction of the inverter, or realize the jog of forward and reverse rotation.

parameter	define	default	range of set	Parameter description
P7-01	MF.K Choice of features	0	0: MF.K invalid	This key is invalid
			1: Operation panel and terminals Toggle or operate the panel with Communication switching	P0-02 is set to 0 (operation panel), and there is no effect when the MF.K key is pressed; P0-02 is set to 1 (terminal), and the terminal and operation surface can be realized by the MF.K key switching between plates; P0-02 is set to 2 (communication), and communication and operation surfaces can be realized through the MF.K key switching between plates;
			2: Forward and reverse switching	Use the MF.K key to switch the direction of the frequency command. This feature is only run from the command source The command is valid when the command is an operation panel.
			3: Forward jog	Forward jog action (FJOG) is achieved by using the MF.K key of the keyboard. The function is only in commands Source Run Command is valid when the operation panel is used.
			4: Reverse jog	Reverse jog action (RJOG) is achieved by using the MF.K key of the keyboard. The function is only in commands Source Run Command is valid when the operation panel is used.

4.3 Introduction to the LCD Control Panel

The YKEY060 is an external operator panel (optional) for the YD680, which uses LCD display and supports parameter copy and download Function, users can easily change parameters through this panel, provide Chinese display, more simple and convenient to use. YKEY060.For more information about the external operation panel, please refer to the YKEY060 Smart Operation Keyboard User Manual.

1) Appearance and Interface:

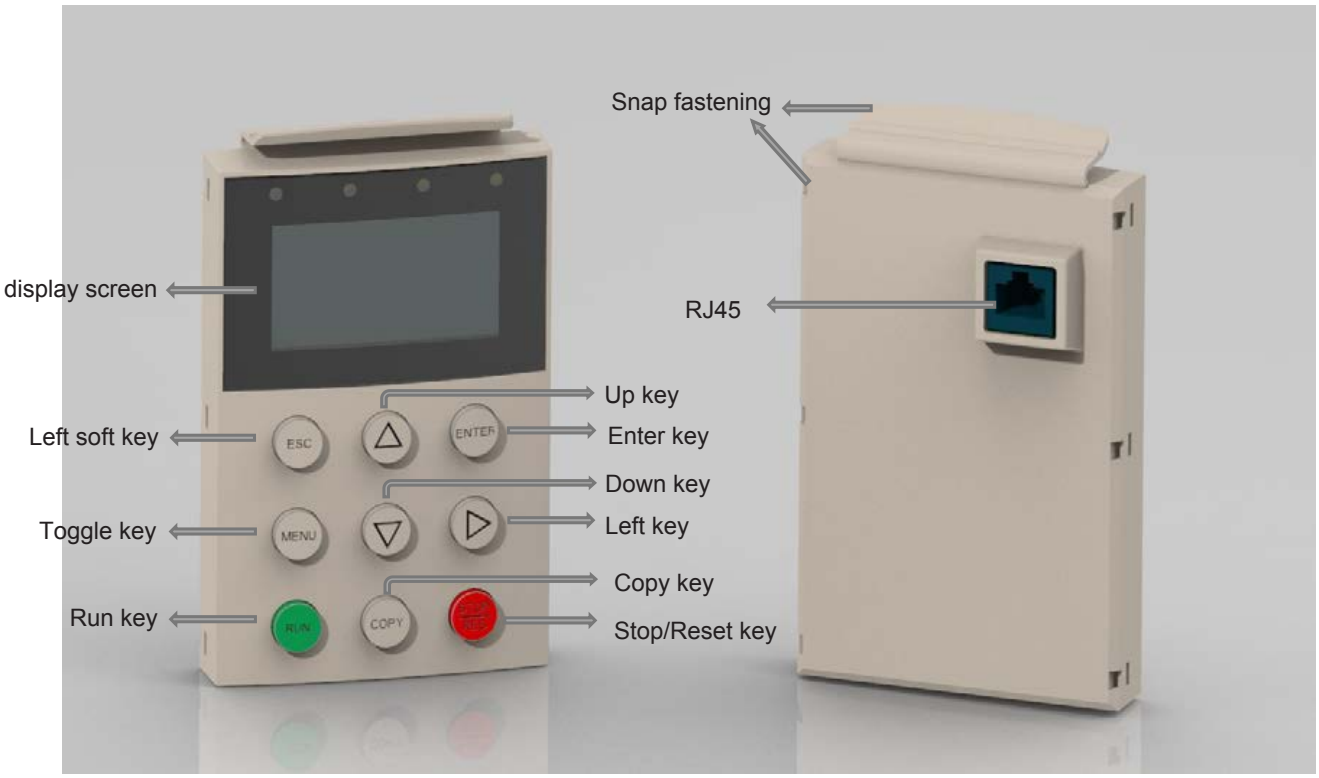


Figure 4-6 Appearance of YKEY060

2) Keyboard installation dimensions

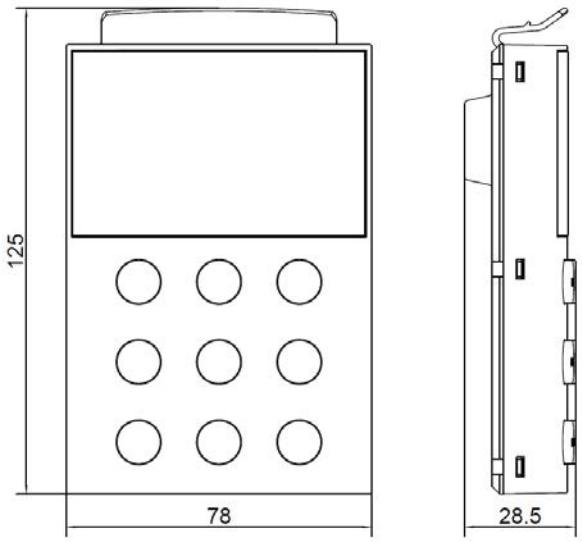


Figure 4-7 YDKEY060 external operation panel dimensions

5 Commissioning Process

5.1 Basic Commissioning Process

5.11 For different modes, see related sections.

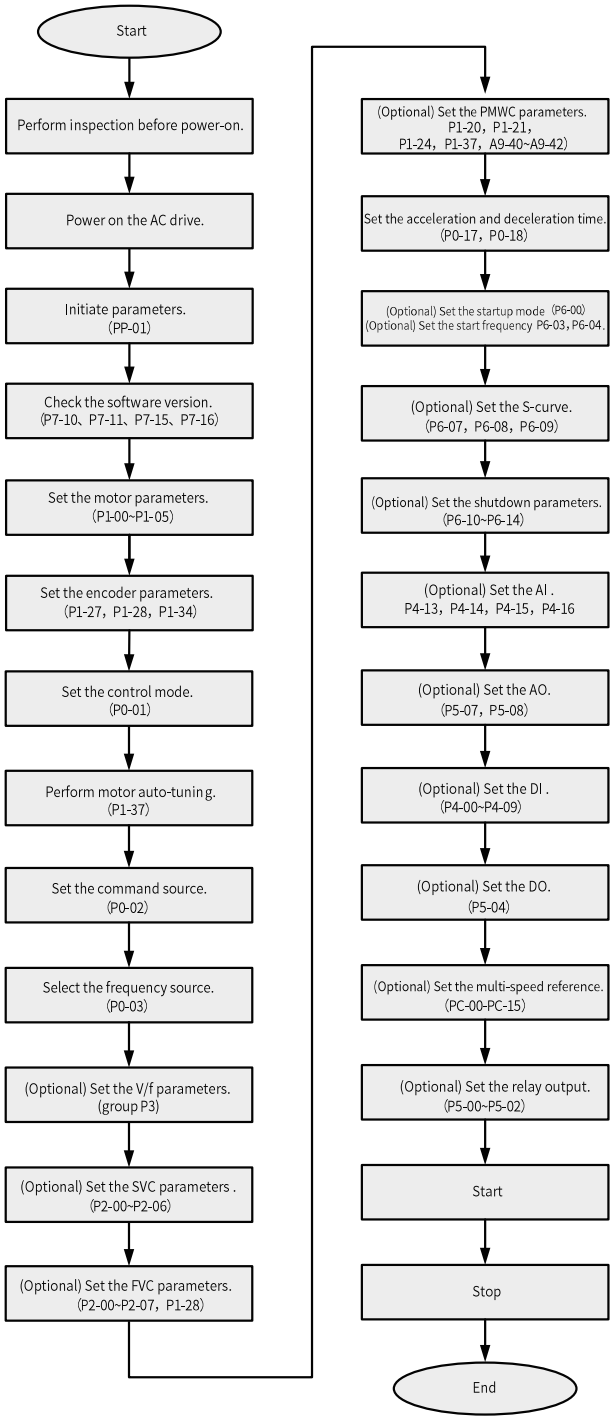


Figure 5-1 Basic commissioning flowchart

Table 5–1 Basic commissioning process

No.	Step	Related Parameter
1	Perform inspection before powe r-on.	None
2	Power on the AC drive.	None
3	Initiate parameters.	PP-01
4	Check the software versions	P7-10, P7-11, P7–15, and P7–16
5	Set the motor parameters.	P1-00 to P1-05 You also need to set the motor type.
6	Set the encoder parameters.	P1–27, P1–28, and P1–34
7	Set the control mode.	P0-01
8	Perform motor auto-tuning.	P1-37
10	Select the command source.	P0-02
11	Select the frequency source.	P0-03
12	(Optional) Set the V/f parameters.	Parameters in group P3
13	(Optional) Set the SVC parameters.	P2-00 to P2-06
14	(Optional) Set the FVC parameters.	P2-00 to P2-07, and P1-28
15	(Optional) Set the PMVVC parameters.	P0-01, P1-00, P1-20, P1-21, P1-24, P1-37, and A9-40 to A9-42
16	Set the acceleration and deceleration time.	P0-17 and P0-18
17	(Optional) Set the startup mode.	P6-00
18	(Optional) Set the startup frequency.	P6-03 and P6-04
19	(Optional) Set the S-cu rve.	P6-07, P6-08, and P6-09
20	Set the shutdown parameters.	P6-10 to P6-14
21	(Optional) Set the AI.	P4-13, P4-14, P4-15, and P4-16
22	(Optional) Set the AO.	P5-07 and P5-08
23	(Optional) Set the DI.	P4-00 to P4-09
24	(Optional) Set the DO.	P5-04
25	(Optional) Set the multi-speed reference.	PC-00 to PC-15
26	(Optional) Set the replay output.	P5-00, P5-01, and P5-02
27	Start the AC drive.	None
28	Stop the AC drive.	None

5.1.2 Commissioning Process in V/f Control Mode

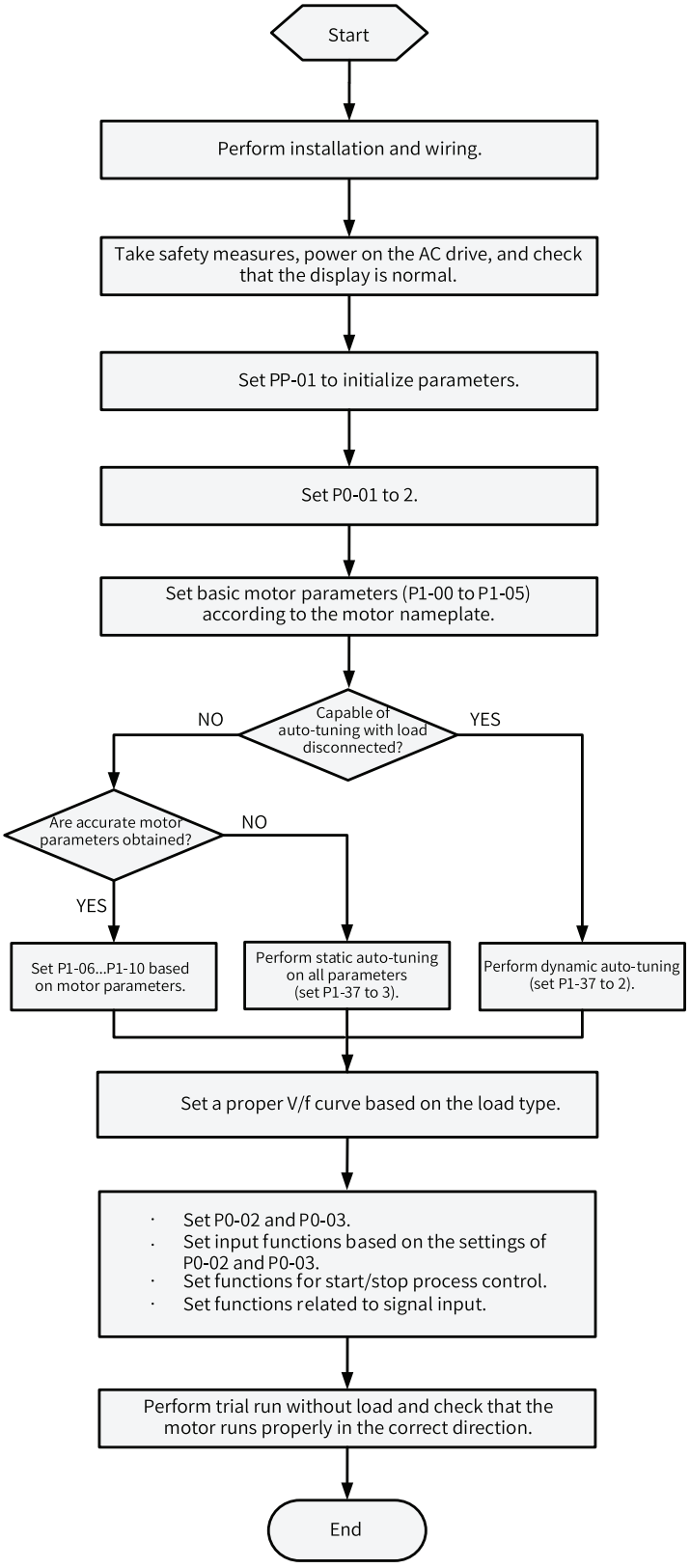


Figure 5-2 AC drive commissioning flowchart (in V/f control mode)

5.1.3 Commissioning Process in SVC Mode

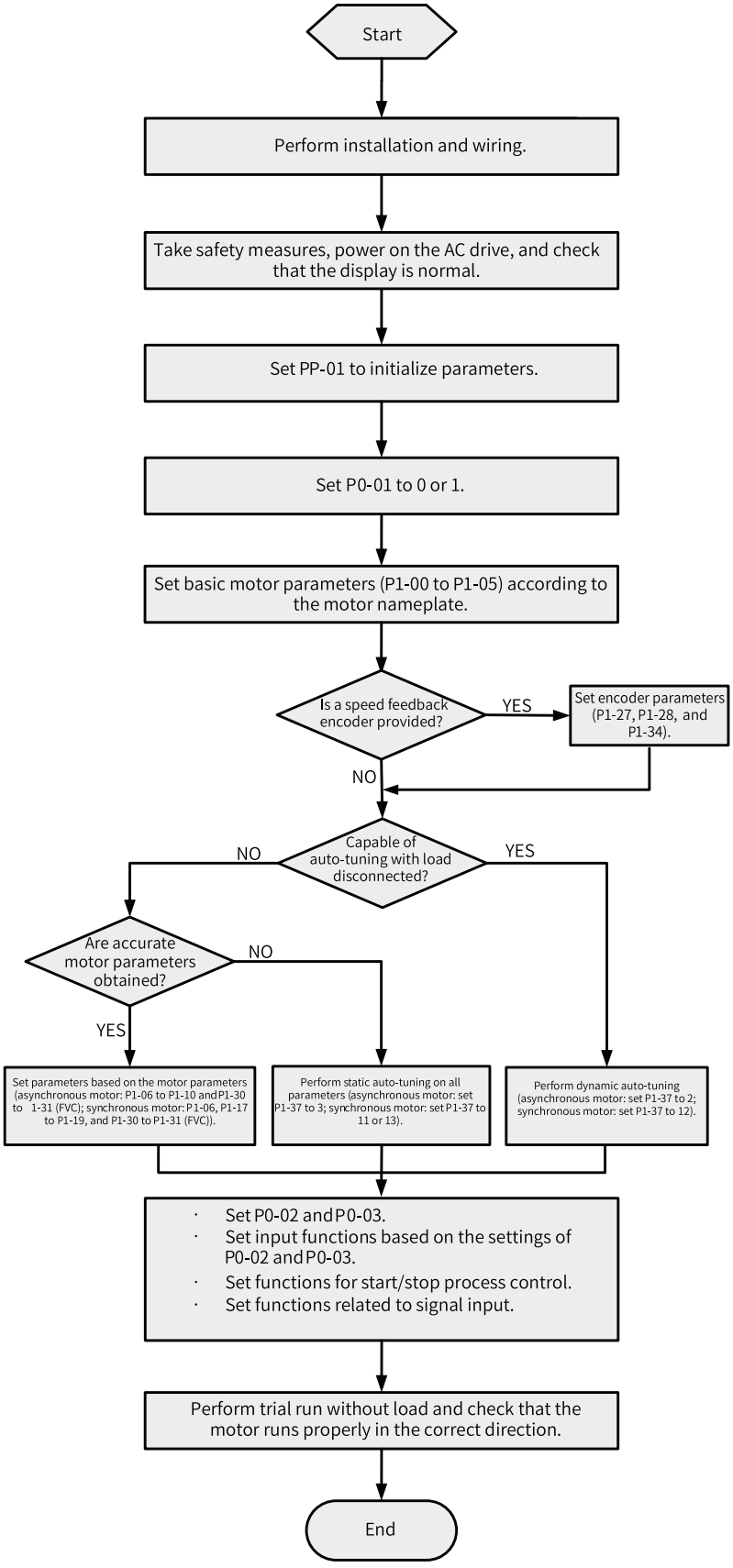


Figure 5-3 AC drive commissioning flowchart (in SVC mode)

5.1.4 Commissioning Process in FVC Mode

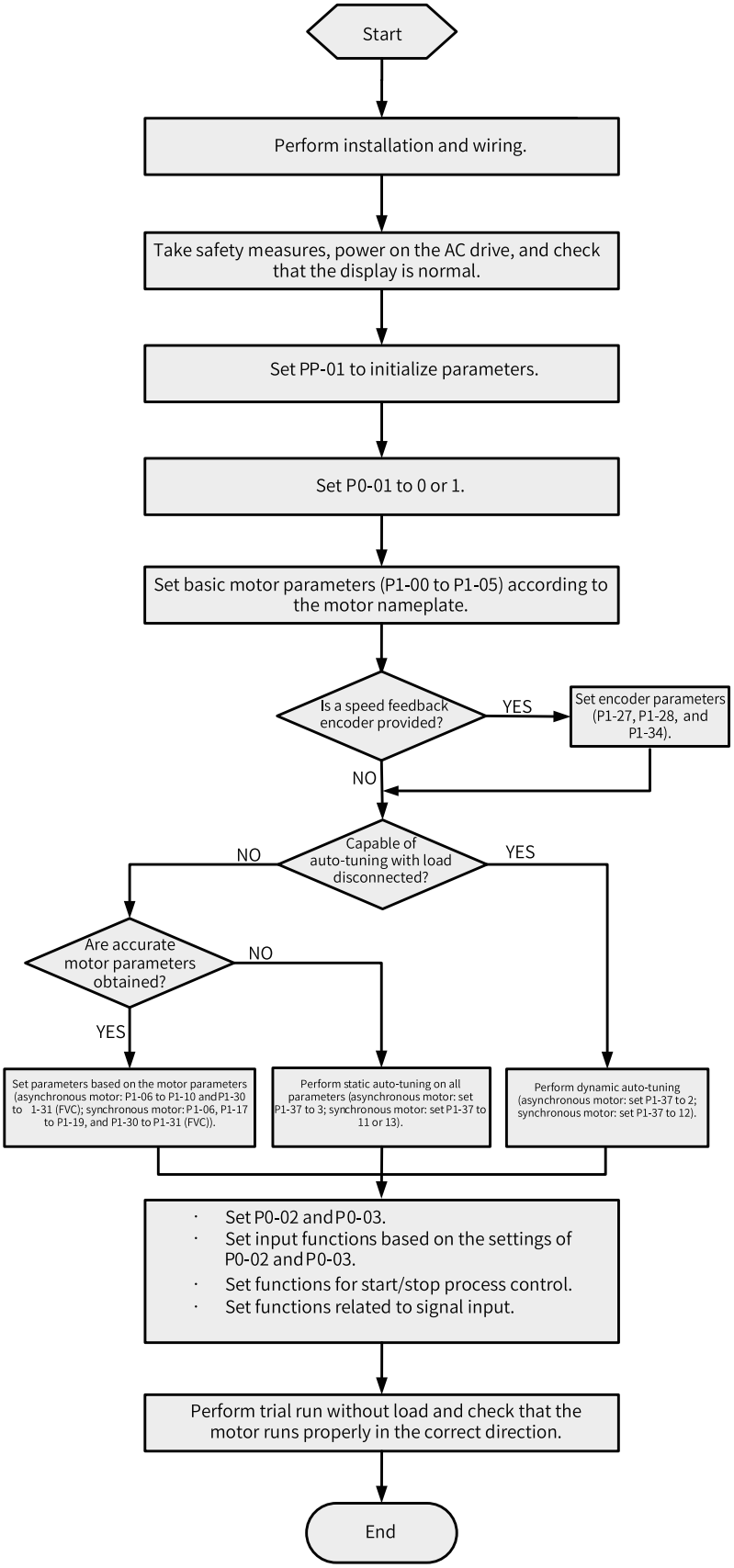


Figure 5-4 AC drive commissioning flowchart (in FVC mode)

5.1.5 Commissioning Process in PMVVC Mode

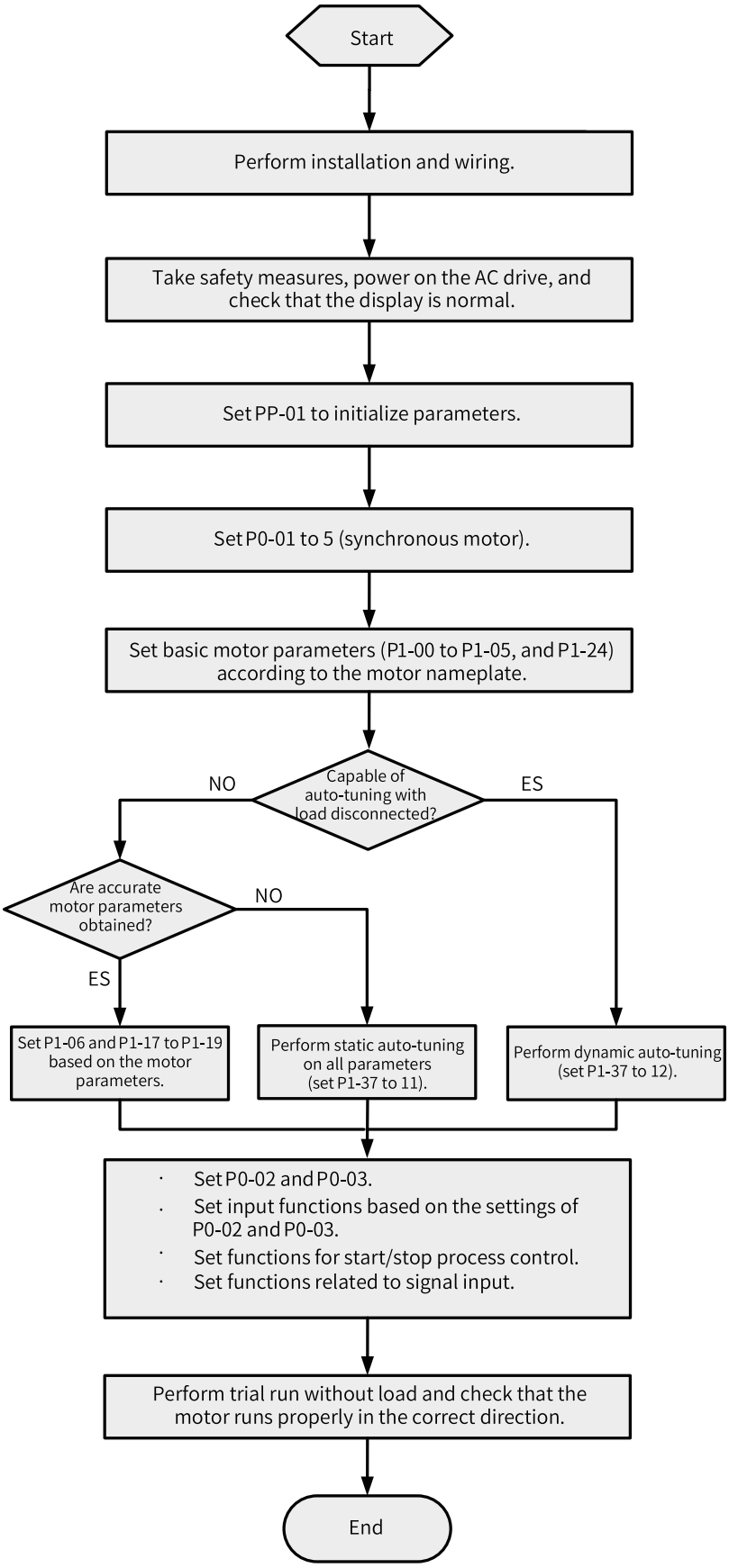


Figure 5-5 AC drive commissioning flowchart (in PMVVC mode)

5.2 Commissioning Procedure

5.2.1 Checklist Before Power-on

Ensure compliance of the items in the following table before power-on.

Table 2–2 Checklist before power-on

Item	Checklist
Main circuit wiring	The power supply voltage is correct (380–480 VAC; 50/60 Hz).
	The power input terminals and the AC drive input terminals (R/S/T) are connected properly.
	The motor input terminals and the AC drive output terminals (U/V/W) are connected properly.
	The AC drive and motor are properly grounded.
	The cross sectional area of the main circuit cable is proper.
	The heat-shrink tube is applied to the copper lug and conductors of the main circuit cable and the tube completely wraps the conducting parts of the cable.
	The motor output cable is shorter than 50 m, or the carrier frequency (P0-15) is reduced otherwise.
Control circuit wiring	The control circuit terminals are reliably connected to other control devices.
	The control circuit signal cables in use are shielded twisted pair cables.
	Optional cards are connected correctly.
	Control circuit cables and main circuit cables are routed through different routes.
	The control circuit terminals of the AC drive are all OFF (the AC drive is not running).
Load	The motor is not connected to any load or mechanical system.
Braking resistor	The braking resistor and braking unit, where applicable, are wired properly with proper resistance value.

5.2.2 Powering on the AC Drive

Switch off the power switch and check the display on the operating panel of the AC drive.
If the operating panel displays 50.00, the AC drive is powered on properly.

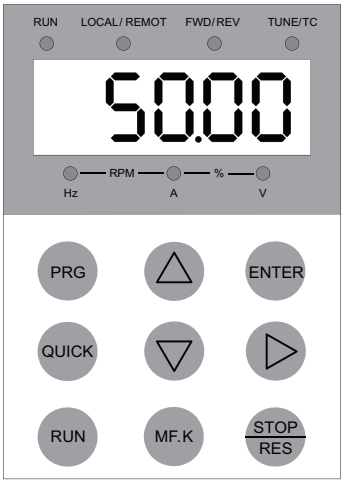


Figure 5-6 Power-on display on the operating panel

5.2.3 Initializing Parameters

Para. No.	Name	Default	Value Range	Description
PP-01	Parameter initialization	0	0: No action 1: Restore default settings (mode 1) 2: Clear records 4: Back up current user parameters 501: Restore user backup parameters 503: Restore default settings (mode 2)	This parameter is used to set the action of the AC drive upon parameter initialization. 0: No action The AC drive takes no action. 1: Restore default settings (mode 1) Parameters of the AC drive are restored to default settings except motor parameters, frequency reference resolution (P0-22), fault records, accumulative running time (P7-09), accumulative power-on time (P7-13), accumulative power consumption (P7-14), and heatsink temperature of IGBT (P7-07). 2: Clear records The fault records, accumulative running time (P7-09), accumulative power-on time (P7-13), and accumulative power consumption (P7-14 are cleared) 4: Back up current user parameters All parameter settings specific to the current user are backed up. 501: Restore user backup parameters The parameter settings that are backed up by setting PP-01 to 4 are restored. 503: Restore default settings (mode 2) All AC drive parameters are restored to factory settings except PP-00, PP-01, and the parameters in group PP.

5.2.4 Checking Software Versions

Para. No.	Name	Value Range	Description
P7-10	Performance software version	-	Indicates the performance software version of the AC drive.
P7-11	Function software version	-	Indicates the function software version of the AC drive.
P7-15	Temporary performance software version	-	Indicates the temporary performance software version.
P7-16	Temporary function software version	-	Indicates the temporary function software version.

5.2.5 Setting the Motor Parameters

Parameter	Name	Value Range	Description
P1- 00	Motor type	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Synchronous motor	A variable frequency motor can adjust its frequency and speed according to the load. When the voltage is low, the motor can reduce the frequency and start reliably. When the load is light, the motor can reduce the frequency, speed, and current to save electric energy. A common asynchronous motor is suitable for applications with normal voltage but often full load. Designed on constant frequency and constant voltage, asynchronous motors cannot meet all frequency control requirements.
P1- 01	Rated motor power	0.1 kW to 1000.0 kW	The rated motor power indicates the shaft end output power of the motor during operation under rated working conditions. Select a motor of a proper power rating based on the requirements of the mechanical load, with due consideration to factors such as motor heating, overload capacity, and starting capacity.
P1- 02	Rated motor voltage	1 V to 2000 V	The rated motor voltage indicates the voltage of the motor during normal operation, which typically refers to the line voltage.
P1- 03	Rated motor current	0.1 A to 6553.5 A	The rated motor current indicates the current of the motor during normal operation, which usually refers to the line current.
P1- 04	Rated motor frequency	0.01 Hz to P0-10	The rated motor frequency indicates the frequency of the power supply connected to the stator winding under the rated operation state of the motor.
P1- 05	Rated motor speed	1 RPM to 65535 RPM	The rated motor speed indicates the speed of the rotor in RPM when the motor is running in rated conditions.
P1- 06	Asynchronous/ Synchronous motor stator resistance	0.001Ω to 65.535 Ω (power ≤ 55 kW) 0.0001 Ω to 6.5535 Ω (power > 55 kW)	This is the DC resistance of the motor stator winding, which can be obtained through motor auto-tuning.
P1- 07	Asynchronous motor rotor resistance	0.001 (power ≤ 55kW) 0.0001 (power > 55kW)	This is the DC resistance of rotor winding of an asynchronous motor, which can be obtained by static or dynamic motor auto-tuning.
P1- 08	Asynchronous motor leakage inductance	0.01 mH to 655.35 mH (power ≤ 55 kW) 0.001 mH to 65.335mH (power > 55kW)	The asynchronous motor leakage inductance is caused by the leakage flux of the motor winding. When current is introduced to the motor winding, magnetic flux will be generated. Based on the path, the magnetic flux can be divided into main flux and leakage flux. The leakage flux is the leakage inductance. This parameter can be obtained by static auto-tuning or dynamic auto-tuning of the motor.
P1- 09	Asynchronous motor mutual inductance	0.1 mH to 6553.5 mH (power ≤ 55 kW) 0.01 mH to 655.35 mH (power > 55 kW)	When the current in one coil of the motor changes, electromotive force is induced in a coil adjacent to it. Such mutually induced electromotive force can be described by this parameter. The mutual inductance of a motor can be divided into two types. One type is the interphase inductance of the stator, which is the reactance between two phases of the stator. The other type is the inductance between the stator and the rotor. The former does not change with the rotation of the rotor, whereas the latter changes accordingly with the rotation of the rotor. Both types of mutual inductance can be obtained through static or dynamic motor auto-tuning.
P1- 10	Asynchronous motor no-load current	0.1 A to P1-03 (Rated motor current)	This parameter defines the current passing through the three-phase winding of the stator when the motor is running without load. It can be obtained by dynamic auto-tuning of the motor.
P1- 17	Synchronous motor axis D inductance	0.01 mH to 655.35 mH (power ≤ 55 kW) 0.001 mH to 65.535 mH (power > 55 kW)	This is the inductance of the main magnetic pole axis (vertical axis) of a synchronous motor.
P1- 18	Synchronous motor axis Q inductance	0.01 mH to 655.35 mH (power ≤ 55 kW) 0.001 mH to 65.535 mH (power> 55 kW)	This is the inductance of the central line (quadrature axis) between adjacent magnetic pole axes of the synchronous motor rotor.

Parameter	Name	Value Range	Description
P1- 07	Asynchronous motor rotor resistance	0.001 (power ⩽ 55kW) 0.0001 (power > 55kW)	This is the DC resistance of rotor winding of an asynchronous motor, which can be obtained by static or dynamic motor auto-tuning.
P1- 08	Asynchronous motor leakage inductance	0.01 mH to 655.35 mH (power ⩽ 55 kW) 0.001 mH to 65.535 mH (power > 55kW)	The asynchronous motor leakage inductance is caused by the leakage flux of the motor winding. When current is introduced to the motor winding, magnetic flux will be generated. Based on the path, the magnetic flux can be divided into main flux and leakage flux. The leakage flux is the leakage inductance. This parameter can be obtained by static auto-tuning or dynamic auto-tuning of the motor.
P1- 09	Asynchronous motor mutual inductance	0.1 mH to 6553.5 mH (power ⩽ 55 kW) 0.01 mH to 655.35 mH (power > 55 kW)	When the current in one coil of the motor changes, electromotive force is induced in a coil adjacent to it. Such mutually induced electromotive force can be described by this parameter. The mutual inductance of a motor can be divided into two types. One type is the interphase inductance of the stator, which is the reactance between two phases of the stator. The other type is the inductance between the stator and the rotor. The former does not change with the rotation of the rotor, whereas the latter changes accordingly with the rotation of the rotor. Both types of mutual inductance can be obtained through static or dynamic motor auto-tuning.
P1- 10	Asynchronous motor no-load current	0.1 A to P1- 03 (Rated motor current)	This parameter defines the current passing through the three-phase winding of the stator when the motor is running without load. It can be obtained by dynamic auto-tuning of the motor.
P1- 17	Synchronous motor axis D inductance	0.01 mH to 655.35 (power ⩽ 55 kW) 0.001 mH to 65.535 mH (power > 55kW)	This is the inductance of the main magnetic pole axis (vertical axis) of a synchronous motor.
P1- 18	Synchronous motor axis Q inductance	0.01 mH to 655.35 mH (power ⩽ 55 kW) 0.001 mH to 65.535 mH (power > 55kW)	This is the inductance of the central line (quadrature axis) between adjacent magnetic pole axes of the synchronous motor rotor.
P1- 19	Synchronous motor back EMF coefficient	0.0 V to 6553.5 V	This is the valid value of the back EMF line of the motor at the rated frequency specified by P1-04.
P1- 20	Filter time constant (PMVVC)	0.003 to 65.535	This is a parameter applicable to the PMVVC mode.
P1- 21	Oscillation suppression gain (PMVVC)	0 to 65535	This is a parameter applicable to the PMVVC mode.
P1- 23	Percentage of the frictional moment	0.00% to 100.00%	-
P1- 24	Number of motor pole pairs	0 to 65535	-
P1- 26	Auto-tuning direction (inertia auto-tuning and synchronous motor auto-tuning)	0 to 1	-
P1- 27	Encoder pulses per revolution	1 to 20000	This is the number of pulses generated by the encoder disk per revolution. In feedback vector control (FVC) mode, an improper number of such pulses may cause malfunction of the motor. Set a proper value of this parameter.
P1- 28	Encoder type	0: ABZ incremental encoder 1: 23-bit encoder 2: Resolver	Encoders are classified into incremental encoders and absolute encoders. An incremental encoder converts displacement signals into periodic electrical signals, and then converts the electrical signals into pulses that are counted. The number of pulses describes the magnitude of the displacement. Each position of an absolute encoder corresponds to a certain digital code. Therefore, its indication is related only to the start and end positions of the measurement.
P1- 29	PG signal filter	0: Non-adaptive filter 1: Adaptive filter 2: Fixed interlock 3: Automatic interlock	-
P1- 30	Encoder wiring flag	Ones (position): AB signal direction or rotational direction Tens (position): Reserved	-

Parameter	Name	Value Range	Description
N1-1/	Encoder zero position angle	0.0° to 359.9°	-
N1-10	Motor gear ratio numerator	1 to 65535	-
N1-11	Motor gear ratio denominator	1 to 65535	-

5.2.6 Performing Motor Auto-tuning

Enter motor parameters (P1-00 to P1-05) correctly according to its nameplate.

Set P1-37 to 1 (asynchronous motor static auto-tuning) and press ENTER. The operating panel displays TUNE. Press the RUN key.

The motor auto-tuning starts. When the operating panel displays 50.00, motor auto-tuning has been completed. Then parameters P1-06 to P1-10 are obtained and written automatically.

parameter	name	default	Range	Description
P1-37	Auto-tuning selection	0	0： No auto-tuning	Not thing to do
			1：Static auto-tuning on partial (parameters (Rs, Rr, L0) of asynchronous motor)	This method is applicable to scenarios where the motor cannot be disconnected from the load and dynamic auto-tuning is not allowed. Auto-tuning is performed on partial motor parameters including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), and P1-08 (Asynchronous motor leakage inductance). For other parameters, use their default values.
			2: Dynamic auto-tuning on all parameters of asynchronous motor (supporting dynamic auto-tuning with load)	This method is applicable to scenarios with high speed revolution. Auto-tuning with no load, light load (below 50% load), or pure inertia load is supported. Auto-tuning is performed on all the motor parameters, including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), P1-08 (Asynchronous motor leakage inductance), P1-09 (Asynchronous motor mutual inductance), P1-10 (Asynchronous motor no-load current), and P1-30 (Encoder phase sequence).
			3：Static auto-tuning on all parameters (Rs, Rr, L0, Lm, IO) of asynchronous motor	This method is applicable to scenarios where the motor cannot be disconnected from the load and dynamic auto-tuning on all parameters is not allowed. Auto-tuning is performed on all the motor parameters, including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), P1-08 (Asynchronous motor leakage inductance), P1-09 (Asynchronous motor mutual inductance), and P1-10 (Asynchronous motor no-load current).
			4：keep	4：keep
			5: Dynamic auto-tuning 3 of the asynchronous motor (Auto-tuning on mutual inductance curve requires no load, light load, or pure inertia load; V/f, SVC, and FVC modes are supported)	This method is applicable to scenarios with high speed revolution. Auto-tuning with no load, light load (below 10% load), or pure inertia load is supported. Auto-tuning is performed on all the motor parameters, including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), P1-08 (Asynchronous motor leakage inductance), P1-09 (Asynchronous motor mutual inductance), P1-10 (Asynchronous motor no-load current), and P1-30 (Encoder phase sequence).
			11: Static auto-tuning on partial parameters of the synchronous motor (excluding back EMF)	It is applicable to auto-tuning of the synchronous motor with load and to scenarios where the motor cannot be disconnected from the load. Auto-tuning is performed on the following motor parameters in the FVC mode: P1-06 (Motor stator resistance), P1-17 (Synchronous motor d-axis inductance), P1-18 (Synchronous motor q-axis inductance), P1-20 (Filter time constant), P1-21 (Oscillation suppression gain), P1-30 (Encoder phase sequence), and P1-31 (Encoder zero position angle). Auto-tuning is performed on the following motor parameters in other modes: P1-06 (Motor stator resistance), P1-17(Synchronous motor d-axis inductance), P1-18(Synchronous motor q-axis inductance), P1-20 (Filter time constant), and P1-21 (Oscillation suppression gain).
			12: No-load dynamic auto-tuning on all parameters of synchronous motor	It is applicable to scenarios where the motor can be disconnected from the load. Auto-tuning is performed on the following motor parameters in the FVC mode: P1-06 (Motor stator resistance), P1-17 (Synchronous motor d-axis inductance), P1-18 (Synchronous motor q-axis inductance), P1-19 (Synchronous motor back EMF), P1-20 (Filter time constant), P1-21 (Oscillation suppression gain), P1-30 (Encoder phase sequence), and P1-31 (Encoder zero position angle). Auto-tuning is performed on the following motor parameters in other modes:P1-06 (Motor stator resistance), P1-17(Synchronous motor d-axis inductance), P1-18(Synchronous motor q-axis inductance), P1-19(Synchronous motor back EMF), P1-20 (Filter time constant), and P1-21 (Oscillation suppression gain).
			13: Static auto-tuning on all parameters of the synchronous motor (excluding the encoder installation angle)	This method is applicable to applications where the motor cannot be disconnected from the load. Auto-tuning is performed on all parameters, including P1-06 (motor stator resistance), P1-17 (synchronous motor d-axis inductance), P1-18 (synchronous motor q-axis inductance), P1-20 (filter time constant), and P1-21 (oscillation suppression gain).

5.2.7 Selecting a Command Source

Set P0-02 to select a command source, which is the source or input mode of commands to control the startup, stop, forward run, reverse run, and jog of the AC drive.

Para. No.	Name	Default	Value Range	Description
P0- 02	Command source selection	0	0: Operating panel 1: Terminal 2: Communication	This parameter specifies the input mode of AC drive control commands, including start/stop, forward run, reverse run, and jog. 0: Operating panel Control commands are input using the RUN, STOP/RES, and MF.K keys on the operating panel. This mode is suitable for initial commissioning. 1: Terminal Control commands are input through DI terminals of the AC drive. These commands are set as appropriate to the application, such as start/stop, forward/reverse run, jog, two-wire/three-wire mode, and multi-speed operation. This mode is suitable for most applications. 2: Communication Control commands are input through remote communication. The AC drive must be equipped with a communication card to realize communication with the host controller. This mode is suitable for remote control and centralized control on multiple devices or systems.

5.2.8 Selecting a Frequency Source

Parameter	Name	Default	Value Range	Description
P0-03	Main frequency source X selection	0	0: Digital setting (preset frequency (P0-08) that can be changed by pressing UP/DOWN; non-retentive upon power failure) 1: Digital setting (preset frequency (P0-08) that can be changed by pressing UP/DOWN; retentive at power failure) 2：AI1 3：AI2 4：AI3 5: Pulse reference(DI5) 6: Multi-reference 7: Simple PLC 8：PID 9：Communication 10：Keep	0: Digital setting (non-retentive upon power failure) The initial value of the frequency reference is the value of P0-08 (preset frequency). The value can be changed by pressing ▲/▼ on the operating panel (or pressing UP/DOWN of the multi-function terminals). When the AC drive is powered on again after power failure, the value is restored to the value of P0-08. 1: Digital setting (retentive at power failure) The initial value of the frequency reference is the value of P0-08 (preset frequency). The value can be changed by pressing ▲/▼ on the operating panel (or pressing UP/DOWN of the multi-function terminals). After a power cycle, the frequency reference is that before the last power failure. The value set by pressing ▲/▼ or pressing UP/DOWN is retained. 2: AI1 The frequency reference is input by AI1. The frequency is calculated by the current or voltage signal input by AI1 according to the set AI curve. 3: AI2 The frequency reference is input by AI2. The frequency is calculated by the current or voltage signal input by AI2 according to the set AI curve. 4: AI3 The frequency reference is input by AI3. The frequency is calculated by the current or voltage signal input by AI3 according to the set AI curve. 5: Pulse reference (DI5) The frequency reference is set by DI5. The frequency is calculated by the mapping curve of the pulse frequency and frequency reference. 6: Multi-reference When a multi-reference is configured for the frequency reference, you can set different frequency reference values by flexibly combining DI terminal states. The four multi-reference terminals can have 16 state combinations, representing 16 frequency reference values. 7: Simple PLC The value is a multi-reference used to control the running time and acceleration/deceleration time. PC-00 to PC-15 are used to set the values of each frequency. PC-18 to PC-49 are used to set the running time and acceleration/deceleration time of each frequency. A maximum of 16 references can be set. 8: PID PID is selected as the main frequency source. PID control is a common process control method, which calculates the proportion, integral, and differential of the difference between feedback signals and target signals of the controlled variable, and adjusts the output frequency of the AC drive accordingly. This method finally creates a closed-loop system to stabilize the controlled variable at the target value. Generally, PID output can be used as the frequency reference for on-site closed-loop process control applications, such as closed-loop pressure control and closed-loop tension control. 9: Communication The main frequency value is set through communication. The frequency reference is input through remote communication. The AC drive must be equipped with a communication card to realize communication with the host controller. This mode is suitable for remote control and centralized control on multiple devices or systems.

5.2.9 Setting the Control Mode

Parameter	Name	Default	Value Range	Description
P0-01	Motor 1 control mode	0	0: Sensorless vector control (SVC) 1: Feedback vector control (FVC) 2: V/f control 5: PMVVC (applicable only to synchronous motors)	0: Sensor-less vector control (SVC) This is open-loop vector control applied to high performance control applications. One AC drive can drive only one motor. It is used for loads such as machine tools, centrifuges, wire drawing machines, and injection molding machines. 1: Feedback vector control (FVC) This is closed-loop vector control. An encoder must be installed at the motor end, and the AC drive must be equipped with a PG card of the same type as the encoder. It is applicable to applications requiring high-precision speed control and torque control. One AC drive can drive only one motor. It is used for loads such as high-speed paper machines, cranes, and elevators. 2: V/f control This mode is applicable to applications that do not require high load control performance, such as fans and pumps. If one AC drive is required to drive multiple motors, only the V/f control mode can be used. 5: PMVVC (open-loop speed control of synchronous motor) This mode is used for loads such as fans and water pumps that do not require high accuracy.

5.2.10 Setting V/f Parameters (Optional)

Parameter	Name	Default	Value Range	Description
P3-00	V/f curve setting	0	0: Linear V/f curve 1: Multi-point V/f curve 2 to 9: Reserved 10: V/f complete separation mode 11: V/f half separation mode	0: Linear V/f curve Below the rated frequency, the output voltage and output frequency of the AC drive change linearly. This curve is applicable to common mechanical drive applications such as large inertia fan acceleration, punch presses, centrifuges, and water pumps. 1: Multi-point V/f curve The frequency points range from 0.00 Hz to the rated motor frequency. The voltage points range from 0.0% to 100.0%, corresponding to the voltage range from 0 V to the rated motor voltage. Generally, the multi-point V/f curve is set based on the motor load. Ensure the following conditions are met: P3-03 ⩽ P3-05 ⩽ P3-07. 2 to 9: Reserved 10: V/f complete separation mode The output frequency of the AC drive is independent from its output voltage. The output frequency is determined by the frequency source, and the output voltage is determined by the voltage source for V/f separation. This mode is applicable to scenarios such as motor torque control. 11: V/F half separation mode In this mode, the voltage is proportional to the frequency. The proportional relationship can be set through the voltage source, and the relationship between the voltage and the frequency is also related to the rated motor voltage and the rated motor frequency in group 1. If the voltage source input is X (0 to 100%), the relationship between the voltage and the frequency is as follows: V/f = 2 x X x (Rated motor voltage)/(Rated motor frequency)

5.2.11 Setting SVC Parameters (Optional)

Parameter	Name	Default	Value Range	Description
P2-00	Low-speed loop Kp	30 (asynchronous motor) 20 (synchronous motor)	1~200	This is the PID control parameter Kp for the speed loop,which affects the response speed of the motor speed. A larger Kp value indicates higher sensitivity and more intensive tuning. A smaller Kp value indicates lower sensitivity and less intensive tuning. The low-speed speed loop Kp is effective at low speed.
P2-01	Low-speed loop Ti	0.500s	0.001s~10.000s	The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. If the speed loop integral time constant increases, the speed loop response slows down. For quicker response, a larger speed loop proportional gain is required. The low-speed speed loop Ti is effective at low speed.

Parameter	Name	Default	Value Range	Description
P2-02	Switchover frequency 1	5.00Hz	0.00Hz~P2-05	Speed loop PI parameters are divided into low-speed and high-speed groups. If the running frequency is lower than switchover frequency 1 (P2-02), the speed loop PI parameters are adjusted by P2-00 and P2-01. If the running frequency is higher than switchover frequency 2 (P2-05), the speed loop PI parameters are adjusted by P2-03 and P3-04. If the running frequency is between switchover frequency 1 and switchover frequency 2, the speed loop PI parameters switch linearly between the two groups of PI parameters. This parameter must be set to a value lower than switchover frequency 2 (P2-05).
P2-03	High-speed loop Kp	20	1~200	This is the PID control parameter Kp for the speed loop, which affects the response speed of the motor speed. A larger Kp value indicates higher sensitivity and more intensive tuning. A smaller Kp value indicates lower sensitivity and less intensive tuning. The high-speed speed loop Kp is effective at high speed.
P2-04	High-speed loop Ti	1.000s	0.001s~10.000s	The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. If the speed loop integral time constant increases, the speed loop response slows down. For quicker response, a larger speed loop proportional gain is required. The high-speed speed loop Ti is effective at high speed.
P2-05	Switchover frequency 2	10.00Hz	P2-02~P0-10	Speed loop PI parameters are divided into low-speed and high-speed groups. If the running frequency is lower than switchover frequency 1 (P2-02), the speed loop PI parameters are adjusted by P2-00 and P2-01. If the running frequency is higher than switchover frequency 2 (P2-05), the speed loop PI parameters are adjusted by P2-03 and P3-04. If the running frequency is between switchover frequency 1 and switchover frequency 2, the speed loop PI parameters switch linearly between the two groups of PI parameters. This parameter must be set to a value lower than switchover frequency 2 (P2-05).

5.2.12 Setting the FVC Parameters (Optional)

Parameter	Name	Default	Value Range	Description
P1- 27	Encoder pulses per revolution	1024	1 to 20000	This is the number of pulses generated per revolution of the encoder disk. In feedback vector control (FVC) mode, you must set a proper number of such pulses; otherwise, the motor may malfunction.
P1- 34	Number of pole pairs of resolver	1	1 to 32	A resolver is an electromagnetic transducer, also known as a synchronous resolver. It is a small AC motor used to measure angles. It consists of stators and rotors and is used to measure the shaft angular displacement and angular velocity of a revolving object. This parameter indicates the number of pole pairs of a resolver. A larger number of pole pairs indicates higher accuracy.
P2- 00	Low-speed loop Kp	30 (asynchronous-motor) 20 (synchronous-motor)	1 to 200	This parameter indicates the speed loop PID control parameter Kp, which affects the response to the motor speed. A greater Kp value indicates higher adjustment sensitivity and adjustment intensity. A smaller Kp value indicates lower adjustment sensitivity and adjustment intensity. The low-speed speed loop Kp is used in the case of low speed.
P2- 01	Low-speed loop Ti	0.500s	0.001s to 10.000s	The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. Increasing the speed loop integral time constant slows down the response of the speed loop. In this case, increase the speed loop proportional gain to shorten the response time of the speed loop. The low-speed speed loop Ti is used in the case of low speed.
P2- 02	Switchover frequency 1	5.00 Hz	0.00 to P2- 05	The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (P2- 02), the speed loop PI is adjusted by P2-00 and P2-01. When the running frequency is higher than switchover frequency 2 (P2-05), the speed loop PI is adjusted by P2-03 and P3-04. When the running frequency falls between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters. The value of this parameter must be smaller than P2-05 (switchover frequency 2).
P2- 03	High-speed loop Kp	20	1 to 200	This parameter indicates the speed loop PID control parameter Kp, which affects the response to the motor speed. A greater Kp value indicates higher adjustment sensitivity and adjustment intensity. A smaller Kp value indicates lower adjustment sensitivity and adjustment intensity. The high-speed speed loop Kp is used in the case of high speed.

Parameter	Name	Default	Value Range	Description
P2- 04	High-speed loop Ti	1.000s	0.001s to 10.000s	The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. If the speed loop integral time constant increases, the speed loop response slows down. For quicker response, a larger speed loop proportional gain is required. The high-speed speed loop Ti is effective at high speed.
P2- 05	Switchover frequency 2	10.00 Hz	P2-02 to P0- 10	The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (P2- 02), the speed loop PI is adjusted by P2-00 and P2-01. When the running frequency is higher than switchover frequency 2 (P2-05), the speed loop PI is adjusted by P2-03 and P3-04. When the running frequency falls between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters. The value of this parameter must be smaller than P2-05 (switchover frequency 2).
P2- 06	VC slip compensation gain	100%	50% to 200%	In SVC control mode, this parameter is used to adjust the speed stability accuracy of the motor. For example, when the running frequency of the motor is lower than the output frequency of the AC drive, you can increase the value of this parameter. In FVC mode, this parameter can be used to adjust output current of the AC drive. For example, decrease this parameter gradually when a high-power AC drive is used to control a motor with low load capacity. You do not need to change the value of this parameter in most cases.
P2- 07	Speed loop feedback filter time	0.004s	0.000s to 0.100s	In FVC mode (P0-01 set to 1), the speed loop feedback filter time is effective. Adjusting the parameter can improve the motor stability. A larger value indicates better motor stability but slower dynamic response, and a smaller value indicates faster dynamic response. A small value of this parameter may result in motor oscillation. Generally, the motor stability meets requirements, and no adjustment is required.
P1- 27	Encoder pulses per revolution	1024	1 to 20000	This is the number of pulses generated per revolution of the encoder disk. In feedback vector control (FVC) mode, you must set a proper number of such pulses; otherwise, the motor may malfunction.
P1- 28	Encoder type 1	1	0: ABZ incremental encoder 1: 23-bit encoder 2: Resolver	Encoders are classified into incremental encoders and absolute encoders. An incremental encoder converts displacement into periodic electrical signals, and then converts the electrical signals into pulses that are counted. The number of pulses describes the magnitude of the displacement.Each position of an absolute encoder corresponds to a certain digital code. Therefore, its indication is related only to the start and end positions of the measurement.
P1- 34	Number of pole pairs of resolver	1	1 to 32	This is the number of pulses generated per revolution of the encoder disk. In feedback vector control (FVC) mode, you must set a proper number of such pulses; otherwise, the motor may malfunction.

5.2.13 Setting the PMVVC Parameters (Optional)

Parameter	Name	Default	Value Range	Description
P0-01	Motor 1 control mode	0	0: Sensorless vector control (SVC) 1: Feedback vector control (FVC) 2: V/f control 5: PMVVC (applicable only to synchronous motors)	0: Sensorless vector control (SVC) This is open-loop vector control applied to high-performance control applications. One AC drive can drive only one motor. It is used for loads such as machine tools, centrifuges, wire drawing machines, and injection molding machines. 1: Feedback vector control (FVC) This is closed-loop vector control. An encoder must be installed at the motor end, and the AC drive must be equipped with a PG card of the same type as the encoder. It is applicable to applications requiring high-precision speed control and torque control. One AC drive can drive only one motor. It is used for loads such as high-speed paper machines, cranes, and elevators. 2: V/f control (speed open loop control) This mode is applicable to applications that do not have high requirements on load control, such as fans and pumps. If one AC drive is required to drive multiple motors, only the V/f control mode can be used. 5: PMVVC (open-loop speed control of synchronous motor) This mode is used for loads such as fans and water pumps that do not require high accuracy.
P1-00	Motor type	0	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Permanent Magnet Synchronous motor	A variable frequency motor can adjust its frequency and speed according to the load. Where the voltage is low, it can reduce the frequency and start reliably. Where the load is light, it can reduce the frequency, speed, and current to save electric energy. A common Permanent Magnet asynchronous motor is suitable for applications with normal voltage but often full load. It is designed based on constant frequency and constant voltage. Therefore, it may not meet all the frequency and speed control requirements.
P1-20	Filter time constant (PMVVC)	0.100	0.003~65.535	This parameter is applicable to the PMVVC mode.
P1-21	Oscillation suppression gain (PMVVC)	100	0~65535	This parameter is applicable to the PMVVC mode.
P1-24	Number of motor pole pairs	2	0~65535	-

Parameter	Name	Default	Value Range	Description
P1-37	Auto-tuning	0	0: No auto-tuning 1: Static auto-tuning of asynchronous motors (Rs, Rr, L0) 2: Dynamic auto-tuning of asynchronous motors (supporting auto-tuning with load) 3: Static auto-tuning on all parameters of asynchronous motors (Rs, Rr, L0, Lm, IO) 4: Dynamic auto-tuning 2 of asynchronous motors (inertia autotuning only in FVC) 5: Dynamic auto-tuning 3 of asynchronous motors (mutual inductance auto-tuning requires no-load, light load, or inertia load; supporting V/f, SVC, and FVC) Continue	0: No operation No parameter identification 1: Static part parameter identification of asynchronous machine. The parameters of the stationary part of the asynchronous machine are identified, and it is difficult to separate the motor from the load, and no Allows dynamic parameters to identify the occasion of the run. Identify some motor parameters: P1-06(motor stator resistance), P1-07 (asynchronous motor rotor resistance), P1-08 (different).step motor leakage induction resistance), and other parameters use the default values. 2: Dynamic parameter identification of asynchronous machine. Motors and application systems can rotate at higher speeds, supporting no-load and light load(below 50% load), and parameter identification under pure inertia load. Identify everything Motor parameters: P1-06 (stator resistance of asynchronous motor), P1-07 (asynchronous motor).Rotor resistance), P1-08 (asynchronous motor leakage inductive resistance), P1-09 (asynchronous motor mutual inductance resistance), P1-10 (no-load current of asynchronous motor), P1-30 (encoder phase).Preface). 3: Static complete parameter identification of asynchronous machine. The static complete parameter identification of the asynchronous machine makes it difficult to separate the motor from the load, and it is not allowed Dynamic complete parameter identification of the running occasion. Identify all motor parameters: P1-06 (motor stator resistance), P1-07 (asynchronous motor rotor resistance), P1-08 (different).stepper motor leakage induction resistance), P1-09 (asynchronous motor mutual inductance resistance), P1-10 (asynchronous). no-load current of the motor). 4: Reserve Motors and application systems can rotate at higher speeds, supporting no-load and light load (below 80% load), and parameter identification under pure inertia load. Identify everything. Motor parameters: P1-06 (motor stator resistance), P1-07 (asynchronous motor rotor). resistance), P1-08 (asynchronous motor leakage inductance), P1-09 (asynchronous motor mutual induction).resistance), P1-10 (no-load current of asynchronous motor), P1-30 (encoder phase sequence).), P2-35 (system inertia). 5: Asynchronous machine dynamic parameter identification 3 (add mutual inductance curve identification requires no load or Light load or pure inertia load supports V/f, SVC, FVC)Motors and application systems can rotate at higher speeds, supporting no-load and light load (below 10% load), and parameter identification under pure inertia load. Identify everything Motor parameters: P1-06 (motor stator resistance), P1-07 (asynchronous motor rotor). resistance), P1-08 (asynchronous motor leakage inductance), P1-09 (asynchronous motor mutual induction). resistance), P1-10 (no-load current of asynchronous motor), P1-11 (asynchronous machine core saturation). sum coefficient 1), P1-12 (asynchronous core saturation coefficient 2), P1-13 (asynchronous Saturation coefficient of the core 3), P1-14 (saturation coefficient of the core of the asynchronous machine 4), P1-30 (encoder phase sequence).Continued below

Parameter	Name	Default	Value Range	Description
P1-37	参数辨识选择	0	11: Static auto-tuning on partial parameters of synchronous motors (excluding back EMF) 12: No-load dynamic auto-tuning on all parameters of synchronous motors 13: Static auto-tuning on all parameters of synchronous motors (excluding the encoder installation angle) 14: Inertia auto-tuning of synchronous motors (only in FVC mode)	11: Synchronous Machine Load-Carrying Parameter Identification (Without Adjusting Back EMF) Load-carrying parameter identification for synchronous machines, used when the motor and load cannot be easily separated. Motor parameters identified in FVC mode: P1-06 (motor stator resistance), P1-17 (synchronous machine D-axis inductance), P1-18 (synchronous machine Q-axis inductance), P1-20 (filter time constant), P1-21 (oscillation damping gain), P1-30 (encoder phase sequence), P1-31 (encoder zero position angle). Motor parameters identified in other modes: P1-06 (motor stator resistance), P1-17 (synchronous machine D-axis inductance), P1-18 (synchronous machine Q-axis inductance), P1-20 (filter time constant), P1-21 (oscillation damping gain). 12: Synchronous Machine No-Load Dynamic Complete Parameter Identification No-load dynamic complete parameter identification for synchronous machines, used when the motor and load can be separated during operation. Motor parameters identified in FVC mode: P1-06 (motor stator resistance), P1-17 (synchronous machine D-axis inductance), P1-18 (synchronous machine Q-axis inductance), P1-19 (synchronous machine back EMF), P1-20 (filter time constant), P1-21 (oscillation damping gain), P1-30 (encoder phase sequence), P1-31 (encoder zero position angle). Motor parameters identified in other modes: F1-06 (motor stator resistance), P1-17 (synchronous machine D-axis inductance), P1-18 (synchronous machine Q-axis inductance), P1-19 (synchronous machine back EMF), P1-20 (filter time constant), P1-21 (oscillation damping gain). 13: Synchronous Machine Static Parameter Identification (Without Identifying Encoder Installation Angle) Static parameter identification for synchronous machines, used when the motor and load cannot be easily separated and dynamic complete parameter identification is not allowed. Identified motor parameters: P1-06 (motor stator resistance), P1-17 (synchronous machine D-axis inductance), P1-18 (synchronous machine Q-axis inductance), P1-20 (filter time constant), P1-21 (oscillation damping gain).
A9-40	Low-speed closed loop current selection (for VVC)	0	0：Disable 1：Enable	-
A9-41	Low-speed closed loop current (for VVC)	50%	30%~200%	-
A9-42	Oscillation suppression damping coefficient (for VVC)	100%	0%~500%	-
A9-43	Initial position compensation angle (for VVC)	0	0~5	-

5.2.14 Setting the Acceleration/Deceleration Time

Parameter	Name	Default	Value Range	Description
P0-17	Acceleration time 1	20.0s	0.0s~6500.0s	This is the time required for the output frequency to increase from 0 to the acceleration/deceleration time base frequency (P0-25). Generally, the acceleration time is determined by the increase of the frequency reference signal. The frequency reference rise rate must be limited to prevent over-current during acceleration of the motor. The acceleration time must be set such that the acceleration current is below the over-current capacity of the AC drive to avoid that the AC drive trips due to over-current stall.
P0-18	Deceleration time 1	20.0s	0.0s~6500.0s	This is the time required for the output frequency to decrease from the acceleration/deceleration time base frequency (P0-25) to 0. Generally, the deceleration time is determined by the decrease of the frequency reference signal. The frequency reference drop rate must be limited to prevent over-voltage during deceleration of the motor. The deceleration time must be set such that the smoothing circuit voltage is not excessive to avoid that the AC drive trips due to over-voltage stall.
P0-25	Acceleration/ Deceleration time base frequency	0	0: Maximum frequency (P0-10) 1: Target frequency 2: 100 Hz	This parameter is used for setting the target frequency for acceleration and the start frequency for deceleration.

5.2.15 Setting the Startup Mode (Optional)

Parameter	Name	Default	Value Range	Description
P6-00	Start mode	0	0: Direct start 1: Flying start 2: Vector pre-excited start (asynchronous motor)	0: Direct start This mode is applicable to most load conditions. Startup with the startup frequency is applicable to lifting loads, such as elevators and cranes. 1: Flying start This mode is applicable to scenarios where the motor is not static upon the startup of AC drive, for example, large-inertia restart upon an instantaneous power failure. In some applications, the motor rotates before the AC drive is started. In this mode, the AC drive can automatically follow the motor speed and direction, allowing smooth startup of the motor without impact. For example, when the AC drive is running, an instantaneous power failure of the grid occurs and the AC drive is powered down and restarted, whereas the motor is still running due to inertia. In this case, to recover control on the asynchronous motor,the AC drive must detect the current speed of the motor to avoid over-current, overvoltage, and even burn-out of the power transistor of the AC drive. 2: Vector pre-excited start (asynchronous motor)This mode is applicable to scenarios with large static load resistance that requires great starting torque. Pre-excited start can increase the starting torque. This mode is applicable only to the SVC and FVC modes of asynchronous motors. Before startup, the AC drive performs pre-excitation on the motor,which speeds up response of the motor and reduces the startup current. The startup time sequence of pre-excitation is the same as the restart time sequence of the DC braking unit.

5.2.16 Setting the Startup Frequency (Optional)

Parameter	Name	Default	Value Range	Description
P6-03	Startup frequency	0.00Hz	0.00Hz~10.00Hz	This is the startup frequency for direct start of the AC drive. When the startup frequency is lower than the frequency reference, the AC drive stays in the standby state.
P6-04	Startup frequency hold time	0.0s	0.0s~100.0s	The output frequency stays at the startup frequency for a period of time as specified by this parameter. At the expiry of this time , the output frequency will accelerate to the frequency reference.
P0-22	Frequency Command Resolution	2	1：0.1Hz 2：0.01Hz	Option Description: 1- 0.1Hz: The inverter's frequency unit is 0.1Hz; 2- 0.01Hz: The inverter's frequency unit is 0.01Hz; Special Instructions: ① When switching the frequency unit from 0.1Hz to 0.01Hz, the related frequency function codes need to be adjusted (increased 10 times). ② When switching the frequency unit from 0.01Hz to 0.1Hz, the related frequency function codes need to be adjusted (reduced 10 times).

5.2.17 Setting the S-curve (Optional)

Parameter	Name	Default	Value Range	Description
P6-07	Acceleration/ Deceleration mode	0	0: Linear acceleration/ deceleration 1: S-curve acceleration/ deceleration	This parameter specifies the frequency change mode in the AC drive start/ stop process. 0: The output frequency increases or decreases linearly. 1: The output frequency increases or decreases according to the S-curve when the target frequency is changing dynamically. This mode is applicable to applications requiring supreme riding comfort and real-time fast response.
P6-08	Time proportion of Scurve at start	30.0%	0.0%~(100.0%-P6-09)	The sum of the time proportion of S-curve at start (P6-08) and the time proportion of S-curve at end segment (P6-09) cannot exceed 100%.
P6-09	Time proportion of Scurve at end	30.0%	0.0%~(100.0%-P6-08)	The sum of the time proportion of S-curve at start (P6-08) and the time proportion of S-curve at end (P6-09) cannot exceed 100%.

5.2.18 Setting Stop Parameters

Parameter	Name	Default	Value Range	Description
P6-10	Stop mode	0	0: Decelerate to stop 1: Coast to stop	0: Decelerate to stop After the stop command takes effect, the AC drive reduces the output frequency based on the deceleration time and stops when the frequency decreases to zero. 1: Coast to stop After the stop command takes effect, the AC drive immediately stops output. Then, the motor coasts to stop following mechanical inertia.
P6-11	Starting frequency of DC braking at stop	0.00Hz	0 to the maximum frequency(P0-10)	In a decelerate-to-stop process, the AC drive starts DC braking when the running frequency drops to this frequency.
P6-12	Waiting time of DC braking at stop	0.0s	0.0s~100.0s	When the running frequency decreases to the starting frequency of DC braking at stop, the AC drive stops output and starts DC braking after this waiting time. Such delay is intended to prevent faults such as over-current from occurring when DC braking starts at a high speed.

Parameter	Name	Default	Value Range	Description
P6-13	DC braking current at stop	0%	0%~150%	A greater DC braking current at stop indicates a greater braking force. 100% corresponds to the rated motor current,with an upper limit being 80% of the rated current of the AC drive. You can use P6-34 to set the current upper limit. The maximum current upper limit can be set to 135% of the rated current of the AC drive.
P6-14	DC braking time at stop	0.0s	0.0s~100.0s	This parameter specifies the hold time of DC braking. If it is set to 0, DC braking is disabled.

5.2.19 Setting AI (Optional)

Parameter	Name	Default	Value Range	Description
P4-13	AI curve 1 minimum input	-10.00V	-10.00~P4-15	When the main frequency is set by analog input, each AI terminal, as a frequency source, supports five types of AI curves. The AI curve is used to set the mapping between the analog input voltage (or current) and the percentage with respect to the maximum frequency (P0-10). The x-axis of this curve indicates the analog input voltage (or current), and the y axis indicates the percentage corresponding to analog input, that is, the percentage with respect to the maximum frequency (P0-10). Five types of AI curves are provided, where curves 1, 2,and 3 are two-point curves set by parameters P4-13 to P4-27. Curves 4 and 5 are four-point curves set by parameters A6-00 to A6-15. The two points on curves 1 to 3 are the minimum input point and maximum input point, respectively. P4-13 corresponds to the x axis of AI curve 1 minimum input, that is, the minimum analog input voltage (or current).
P4-14	Percentage corresponding to AI curve 1 minimum input	-100.0%	-100.0%~100.0%	P4-14 corresponds to the y axis of AI curve 1 minimum input, that is, the percentage corresponding to the minimum analog input.
P4-15	AI curve 1 maximum input	10.00V	P4-13~10.00V	P4-15 corresponds to the x axis of AI curve 1 maximum input, that is, the maximum analog input voltage (or current).
P4-16	Percentage corresponding to AI curve 1 maximum input	100.0%	-100.0%~100.0%	P4-16 corresponds to the y axis of AI curve 1 maximum input, that is, the percentage corresponding to the maximum analog input.

5.2.20 Setting AO (Optional)

Parameter	Name	Default	Value Range	Description
P5-07	AO1 function selection	0	0: Running frequency 1: Frequency reference 2: Output current 3: Output torque 4: Output power 5: Output voltage 6: Pulse input (100.0%corresponds to 100.00 kHz) 7: AI1 8: AI2 9: AI3 10: Length 11: Count value 12: Communication 13: Motor speed 14: Output current (100.0% corresponds to 1000.0 A) 15: Output voltage (100.0% corresponds to 1000.0 V) 16: Output torque (directional) 19: Taper output 20: Roll diameter output 21: Tension output 22: Encoder feedback frequency	0: Running frequency (100.0% corresponds to the maximum frequency P0-10) 1: Frequency reference 2: Output voltage (100.0% corresponds to 2 times the rated motor current) 3: Motor output current (100.0% corresponds to 2 times the rated motor torque) (absolute value, a percentage relative to the rated motor torque) 4: Output power (100.0% corresponds to 2 times the rated motor power) 5: Output voltage (100.0% corresponds to 1.2 times the rated motor voltage) 6: Pulse input (100.0% corresponds to 100.0 kHz) 7: AI1 (100.0% corresponds to 10 V) 8: AI2 (100.0% corresponds to 10 V) 9: AI3 (100.0% corresponds to 10 V) 10: Length (100.0% corresponds to the value of PB-05) 11: Count value (100.0% corresponds to the value of PB-08) 12: Communication (100.0% corresponds to AO communication) 13: Motor speed (100.0% corresponds to the maximum frequency P0-10) 14: Output current (100.0% corresponds to 1000.0A) 15: Output voltage (100.0% corresponds to 1000.0V) 16: Motor output torque (100.0% corresponds to 2 times the rated motor torque in one direction,50.0% corresponds to 0, and 0 corresponds to 2 times the rated motor torque in reverse direction)(actual value, a percentage relative to the rated motor torque) 19: Taper output 20: Roll diameter (100.0% corresponds to the maximum roll diameter B0-08) 21: Tension output (100.0% corresponds to the maximum tension output B1-02) 22: Encode feedback frequency (100.0% corresponds to the maximum frequency P0-10)
P5-08	AO2 function selection	1		

5.2.21 Setting the DI (Optional)

Parameter	Name	Default	Value Range		Description
P4-00	DI1 function selection	1	00: No function 1: Forward run (FWD) 2: Reverse run (REV) 3: Three-wire motion control 4: Forward jog (FJOG) 5: Reverse jog (RJOG) 6: Terminal UP 7: Terminal DOWN 8: Coast to stop 9: Fault reset (RESET) 10: Running pause 11: NO input of external fault 12: Multi-reference terminal 1 13: Multi-reference terminal 2 14: Multi-reference terminal 3 15: Multi-reference terminal 4 16: Terminal 1 for acceleration/deceleration selection 17: Terminal 2 for acceleration/deceleration selection 18: Frequency source switchover 19: UP/DOWN setting clear (terminal and keypad) 20: Running command switchover terminal 21: Acceleration/Deceleration disabled 22: PID pause 23: PLC status reset 24: Wobble pause 25: Counter input (DI5) 26: Counter reset 27: Length count input (DI5) 28: Length reset 29: Torque control inhibited 30: Pulse input 31: Reserved 32: Immediate DC braking 33: NC input of external fault	34: Frequency modification enabled 35: PID action direction reversal 36: External stop terminal 1 37: Command source switchover terminal 2 38: PID integral pause 39: Switchover between main frequency source X and preset frequency 40: Switchover between auxiliary frequency source Y and preset frequency 41: Reserved 42: Position lock enabled 43: PID parameter switchover 44: User-defined fault 1 45: User-defined fault 2 46: Speed control/Torque control switchover 47: Emergency stop 48: External stop terminal 2 49: Deceleration DC braking 50: Clear the current running time 51: Two-wire/three-wire control switchover 52: Electromagnetic shorting 53: Thickness accumulation 54: Winding diameter reset 55: Initial winding diameter 1 56: Initial winding diameter 2 57: Pre-drive 58: Winding/unwinding switchover 59: Winding diameter calculation disabled 60: Exiting tension mode 61: Terminal tension rise 62: Thickness selection 1 63: Thickness selection 2 90: Water cooling system fault 91: Low liquid level fault 92: Revolution number reset 93: Reserved	As follows
P4-01	DI2 function selection	4			
P4-02	DI3 function selection	9			
P4-03	DI4 function selection	12			
P4-04	DI5 function selection	13			
P4-05	DI6 function selection	0			
P4-06	DI7 function selection	0			
P4-07	DI8 function selection	0			
P4-08	DI9 function selection	0			
P4-09	DI10 function selection	0			

0: No function
The DI terminal has no function.
1: Forward run
The AC drive runs in the forward direction. FWD indicates forward running direction.
In two-wire mode 1 (P4-11=0), the terminal is used to set the AC drive to forward run.
In two-wire mode 2 (P4-11=1), the terminal gives a running command.
2: Reverse run
The terminal is used to set the AC drive to reverse run. REV indicates reverse running direction. In three-wire mode 1 (P4-11=2), the terminal is used to set the AC drive to reverse run. In three-wire mode 2 (P4-11=3), the terminal is used to set the forward/reverse run direction.
3: Three-wire motion control
The terminal is used to set the AC drive to run in three-wire control mode. To use a terminal as the command source, set P4-11 (terminal control mode) to 2 (three-wire mode 1) or 3 (three-wire mode 2), and set this parameter to 3. The three-wire control
modes include three-wire mode 1 and three-wire mode 2.
4: Forward jog (FJOG)
The terminal is used to set the AC drive to run in FJOG mode. In jog mode, the AC drive runs at a low speed for a short time. This mode is typically used for maintenance and commissioning of field equipment.
5: Reverse jog (RJOG)
The terminal is used to set the AC drive to run in RJOG mode.
6: Terminal UP
Activating the terminal gives a frequency increase command when the frequency is set using a terminal. When the terminal is active, the effect is equivalent to holding down the increment key. When the terminal is inactive, the effect is equivalent to releasing the increment key.
7: Terminal DOWN
Activating the terminal gives a frequency decrease command when the frequency is set using a terminal. When the terminal is active, the effect is equivalent to holding down the decrement key. When the terminal is inactive, the effect is equivalent to releasing the decrement key.
8: Coast to stop
When a coast to stop command is given through the terminal, the AC drive stops output immediately, and the load stops according to mechanical inertia. When the AC drive stops output, the motor is powered off, and the system enters free braking. Since the stopping time is determined by the inertia of the system, this is also called
inertia stop.
9: Fault reset (RESET) Activating the terminal resets the AC drive. This function is the same as that of the STOP/RES key on the operating panel. This function can remotely reset the AC drive upon a fault.
10: Running pause
When the terminal is active with this function, the AC drive decelerates to stop, and the settings of all the running parameters, such as the PLC, wobble, and PID parameters, are saved. When the terminal is inactive, the AC drive restores the previously memorized running state.
11: NO input of external fault
When the terminal is active, the AC drive reports the Err15 alarm upon receiving an external signal.
12–15: Multi-reference terminals 1–4
Multi-reference is selected as the main frequency source. You can set the 16 states of the four terminals to 16 speeds or 16 references. This function is applicable to scenarios where continuous adjustment of the AC drive running frequency is not required and only several frequency values are required.
16 and 17: Terminals 1 and 2 for acceleration/deceleration selection
Four groups of acceleration/deceleration time can be selected through combinations of four states of these two terminals.
The acceleration time is the time required by the AC drive to accelerate from zero frequency to the acceleration/deceleration base frequency (P0-25). The deceleration time is the time required by the AC drive to decelerate from the acceleration/deceleration base frequency (P0-25) to zero frequency.

18: Frequency source switchover
The terminal is used to switch among input methods of the frequency reference. The frequency reference is set through P0-07 (frequency reference superposition).
19: UP/DOWN setting clear
When the main frequency is set using the operating panel, activating the terminal clears the main frequency that is set using the increment or decrement key on the operating panel or the terminals UP and DOWN and resumes the main frequency to the value specified by P0-08.
20: Command source switchover terminal 1
● With the command source set to terminal control (P0-02=1), activating the terminal switches between terminal control and operating panel control.
● With the command source set to communication control (P0-02=2), activating the terminal switches between communication control and operating panel control.
21: Acceleration/Deceleration inhibited
The terminal is used to keep the the current running frequency of the AC drive unchanged even if the external input frequency changes (unless a stop command is received).
22: PID pause
The terminal is used to disable PID control temporarily, so that the AC drive keeps the current output frequency unchanged without PID tuning on the frequency source.
23: PLC status reset
The terminal is used to reset the AC drive to the initial state of simple PLC.
24: Wobble pause
In the wobble process, the terminal being active suspends the wobble function, so that the AC drive provides output at the central frequency.
25: Counter input
In the counting process, the terminal being active inputs the pulses counted by the counter.
26: Counter reset
In a counting process, the terminal being active resets the counter.
27: Length count input
In a fixed length process, the terminal being active inputs the length count.
28: Length reset
In a fixed length process, the terminal being active resets the length.
29: Torque control inhibited
When the terminal is active, the AC drive is switched from the torque control mode to the speed control mode. When the terminal is inactive, the AC drive resumes the torque control mode.
30: Pulse input
This function must be selected when DI5 is used for pulse input.
32: Immediate DC braking
The terminal is used to set the AC drive to immediate DC braking. DC braking means that the AC drive outputs DC to the stator winding of the asynchronous motor to form a static magnetic field. In this case, the motor is in the state of energy consumption based braking. The rotor cuts the static magnetic field to generate braking torque, which stops the motor quickly.
33: NC input of external fault
When the terminal is active, the AC drive reports the Err15 alarm upon receiving an external signal.
34: Frequency modification enabled
When the terminal is active, frequency modification is enabled. When the terminal is inactive, frequency modification is disabled.

35: PID action direction reversal
The terminal is used to reverse the PID action direction specified by PA-03.
36: External stop terminal 1
If the command source is set to operating panel control (P0-02=0), the terminal is used to stop the AC drive. This function is the same as that of the STOP/RES key on the operating panel.
37: Command source switchover terminal 2
The terminal is used to switch the AC drive between terminal control and communication control.
● With the command source set to terminal control, the terminal being active switches the system to communication control.
● With the command source set to communication control, the terminal being active switches the system to terminal control.
38: PID integral pause
The terminal is used to suspend integral tuning of PID without disabling its proportional and derivative tuning.
39: Switchover between main frequency source X and preset frequency The terminal is used to switch main frequency reference X to the preset frequency(P0-08).
40: Switchover between auxiliary frequency source Y and preset frequency The terminal is used to switch auxiliary frequency reference Y to the preset frequency(P0-08).
41: Reserved
42: Position lock enabled
When the terminal is active, the AC drive decelerates to 0 Hz and then enters the
position lock state.
43: PID parameter switchover
When the PID parameter switchover condition is set to "Switchover by DI terminal"(PA-18=1):
● When the terminal is inactive, the PID parameters are PA-05 to PA-07 (proportional gain Kp1, integral time Ti1, and derivative time Td1).
● When the terminal is active, the PID parameters are PA-15 to PA-17 (proportional gain Kp2, integral time Ti2, and derivative time Td2).
44: User-defined fault 1
The terminal is used to make the AC drive report the Err27 alarm and proceed according to the value of P9-49 (fault protection action selection).
45: User-defined fault 2
The terminal is used to make the AC drive report the Err28 alarm and proceed according to the value of P9-49 (fault protection action selection).
46: Speed control/Torque control switchover
The terminal is used to switch the AC drive between speed control and torque control.
● If A0-00 (speed/torque control mode) is set to 0, the torque control mode is used when the terminal is active, and the speed control mode is used when the terminal is inactive.
● If A0-00 (speed/torque control mode) is set to 1, the speed control mode is used when the terminal is active, and the torque control mode is used when the terminal is inactive.
47: Emergency stop
Upon an emergency, the AC drive decelerates to stop within the deceleration time for emergency stop specified by P8-55. In V/f control mode, if the deceleration time for emergency stop is 0s, the AC drive decelerates to stop within the minimum unit time.
The terminal does not need to be in the closed state. Even if it stays closed only for a short moment, the AC drive will come to an emergency stop. Different from the general deceleration time, the emergency stop input terminal is disconnected after the emergency stop deceleration time expires. In this case, if the running signal of the AC drive terminal is still closed, the AC drive will not start. To start the AC drive,disconnect the running terminal and input the running command.
48: External stop terminal 2
The AC drive decelerates to stop regardless of the command source (operation panel,terminal, or communication control). In this mode, the deceleration time is fixed to deceleration time 4 (P8-08).

49: Deceleration DC braking
The AC drive decelerates to the DC braking frequency during stop (P6-11) before entering the DC braking state.
50: Clear the current running time
The terminal is used to clear the current running time of the AC drive.
● If the current running time is shorter than the value of P8-53 (current running time threshold, which is greater than 0), and the terminal is active in the process, the current running time is cleared.
● If the current running time is longer than the value of P8-53 (greater than 0), and the the terminal is active in the process, the current running time is not cleared.
51: Two-wire/Three-wire switchover. The terminal is used to switch the AC drive between the two-wire control mode and three-wire control mode.
● When P4-11 is set to 0 (two-wire mode 1), and the terminal is active, the AC drive switches to three-wire mode 1. When the terminal is inactive, two-wire mode 1 is used.
● When P4-11 is set to 1 (two-wire mode 2), and the terminal is active, the AC drive switches to three-wire mode 2. When the terminal is inactive, two-wire mode 2 is used.
● When P4-11 is set to 2 (three-wire mode 1), and the terminal is active, the AC drive switches to two-wire mode 1. When the terminal is inactive, three-wire mode 1 is used.
● When P4-11 is set to 3 (three-wire mode 2), and the terminal is active, the AC drive switches to two-wire mode 2. When the terminal is inactive, three-wire mode 2 is used.
52: Electromagnetic shorting
When the terminal is active, the AC drive enters the electromagnetic shorting state.
53: Revolution count signal
When the winding diameter is calculated based on accumulative thickness, the terminal is used to record the number of revolutions.
54: Winding diameter reset
When the terminal is active, the initial winding diameter is reset. When the tension mode is used, the initial winding diameter is reset upon reel replacement.
55: Initial winding diameter 1
56: Initial winding diameter 2
When the tension mode is used, select the initial winding diameter B0-11/12/13 through the terminal combination. If neither the terminal for initial winding diameter 1 nor that for initial winding diameter 2 is active, select the minimum winding diameter B0-09 as the initial winding diameter. If the terminal only for initial winding diameter 1 is active, select B0-11 as the initial winding diameter. If the terminal only for initial winding diameter 2 is active, select B0-12 as the initial winding diameter. If both the terminal for initial winding diameter 1 and that for initial winding diameter 2 are active, select B0-13 as the initial winding diameter.When the terminal is active, the AC drive will not run reversely even if the reverse frequency is set. In this case, the AC drive runs fast at 0 Hz. This function is the same as P8-13.
57: Pre-drive
When the terminal is active, the AC drive is switched to the pre-drive speed mode.
When the tension mode is used, this function synchronizes the linear speed for the axis that requires automatic reel replacement. After reel replacement, the terminal is deactivated. In this case, tension control can function properly.

58: Winding/unwinding switchover
This function is used to switch between winding and unwinding when the tension mode is used.
59: Winding diameter calculation disabled
When the terminal is active, the roll diameter calculation is disabled. When the tension mode is used, this function disables winding diameter calculation to prevent automatic reel replacement and pre-drive from affecting roll diameter calculation.
60: Exiting tension mode
This function is used to exit the tension control mode.
61: When the terminal is active, the tension torque is increased by certain ratio. After the DI terminal is inactive, the increased torque will be decreased gradually based on time.
62: Thickness selection 1
63: Thickness selection 2.
When the tension mode is used, select the material thickness B0-32/33/34/35 through the terminal combination. If neither the terminal for thickness selection 1 nor that for thickness selection 2 is active, select the material thickness B0-32. If the terminal only for the thickness selection 1 is active, select the material thickness B0-33. If the terminal only for the thickness selection 2 is active,select the material thickness B0-34. If both the terminal for thickness selection 1 and that for thickness selection 2 are active, select the material thickness B0-35.
64 to 89: Reserved
90: Water-cooling system failure. For T13 models, when the water-cooling system fails, this terminal will receive the signal, and the AC drive will report fault E64.
91: Low liquid level fault. For T13 models, when the water tank level is too low, this terminal will receive the signal, and the AC drive will report warning A63.
92: Revolution counting reset. When the terminal is active, the number of revolutions is cleared.
93: Reserved

5.2.22 Setting the DO (Optional)

Parameter	Name	Default	Value Range		Description
P5-04	DO1 function selection	1	0: No output 1: AC drive running 2: Fault output (stop upon fault) 3: Frequency level detection FDT1 output 4: Frequency reached 5: Zero-speed running (no output at stop) 6: Motor overload pre-warning 7: AC drive overload pre-warning 8: Set count value reached 9: Designated count value reached 10: Length reached 11: PLC cycle completed 12: Accumulative running time reached 13: Frequency limited 14: Torque limited 15: Ready to run 16: AI1 > AI2 17: Frequency upper limit reached 18: Frequency lower limit reached (related to running) 19: Under-voltage output 20: Communication setting 21: Reserved 22: Reserved 23: Zero-speed running 2 (having output at stop) 24: Accumulative power-on time reached 25: Frequency level detection FDT2 output	26: Frequency 1 reached 27: Frequency 2 reached 28: Current 1 reached 29: Current 2 reached 30: Output as scheduled 31: AI1 input limit exceeded 32: Output load loss 33: Reverse running 34: Zero current state 35: Module temperature reached 36: Output current limit exceeded 37: Frequency lower limit reached (having output at stop) 38: Alarm (all faults) 39: Current over-temperature pre-warning 40: Current running time reached 41: Fault (coast-to-stop fault and no output upon under-voltage) 42: Fault output 3	see below
P5-05	Expansion card DO2 output selection	4			

Expansion card relay terminal function selection

0: No output

The DO has no function.

1: AC drive running

The DO outputs the ON signal when the AC drive is running with an output frequency,which can be zero.

2: Fault output (coast-to-stop fault)

The DO outputs the ON signal when the AC drive stops due to a fault.

3: Frequency level detection FDT1 output

The DO outputs the ON signal when the running frequency exceeds the frequency detection value and stops outputting the ON signal when the running frequency is lower than the result of the frequency detection value minus the frequency detection hysteresis (FDT, which equals the result of P8-19 multiplied by P8-20).

4: Frequency reached
The DO outputs the ON signal when the running frequency of the AC drive is within a particular range (target frequency±result of P8-21 multiplied by the maximum frequency).
5: Zero-speed running (no output at stop)
The DO outputs the ON signal when the AC drive is running with the output frequency being 0. The DO outputs the OFF signal when the AC drive is stopped.
6: Motor overload pre-warning
When detecting that the motor load has exceeded the warning threshold specified by P9-02 (overload pre-warning coefficient), the DO outputs the ON signal before an overload protection action is taken.
7: AC drive overload pre-warning
The DO outputs the ON signal 10s before an AC drive overload protection action.
8: Set count value reached
In a counting process, the DO outputs the ON signal when the count reaches the value of PB-08.
9: Designated count value reached
In a counting process, the DO outputs the ON signal when the count reaches the value of PB-09.
10: Length reached
In a fixed length process, the DO outputs the ON signal when the detected length exceeds the value of PB-05.
11: Simple PLC cycle completed
The DO outputs a pulse signal with the width of 250 ms when the simple PLC completes one cycle.
12: Accumulative running time reached
The DO outputs the ON signal when the accumulative running time of the AC drive exceeds the value of P8-17 (accumulative power-on time threshold).
13: Frequency limited
The DO outputs the ON signal when the frequency reference rises above the upper limit or falls below the lower limit and the output frequency of the AC drive reaches the upper limit or lower limit.
14: Torque limited
In speed control mode, the DO outputs the ON signal when the output torque reaches
the torque limit.
15: Ready to run
After the AC drive is powered on, the DO outputs the ON signal if no exception occurs.
16: AI1 > AI2
The DO outputs the ON signal when the value of AI1 is greater than that of AI2.
e17: Frequency upper limit reached
The DO outputs the ON signal when the running frequency reaches the upper limit (P0-12).
18: Frequency lower limit reached (no output at stop)
When P8-14 (running mode when the frequency reference is lower than the lower limit) is set to 1 (stop), the DO outputs the OFF signal regardless of whether the running frequency has reached the lower limit.
When P8-14 (running mode when the frequency reference is lower than the lower limit) is set to 0 (running at the lower limit frequency) or 2 (zero-speed running), and the running frequency has reached the lower limit, the DO outputs the ON signal.
19: Under-voltage
The DO outputs the ON signal when the AC drive is in the under-voltage state.
20: Communication
Whether the terminal is active or inactive is determined by communication address 0x2001.
21: Reserved
22: Reserved

23: Zero-speed running 2 (having output at stop)
The DO outputs the ON signal when the AC drive is running with the output frequency being 0. The DO outputs the ON signal when the AC drive is stopped.
24: Accumulative power-on time reached
The DO outputs the ON signal when the accumulative power-on time (P7-13) of the AC drive exceeds the accumulative power-on time threshold (P8-16).
25: Frequency level detection FDT2 output
The DO outputs the ON signal when the running frequency exceeds the frequency detection value and stops outputting the ON signal when the running frequency is lower than the result of the detection value minus the frequency detection hysteresis (which equals the result of P8-28 multiplied by P8-29).
26: Frequency 1 reached
The DO outputs the ON signal when the running frequency of the AC drive is within the frequency detection range specified by P8-30 (detection of frequency 1). Frequency detection range: Value of P8-30 – Value of P8-31 x Value of P0-10 (maximum frequency) to Value of P8-30 + Value of P8-31 x Value of P0-10
27: Frequency 2 reached
The DO outputs the ON signal when the running frequency of the AC drive is within the frequency detection range specified by P8-32 (detection of frequency 2).
Frequency detection range: Value of P8-32 – Value of P8-33 x Value of P0-10 (maximum frequency) to Value of P8-32 + Value of P8-33 x Value of P0-10
28: Current 1 reached
The DO outputs the ON signal when the output current of the AC drive is within the current detection range specified by P8-38 (free reach current 1).
Current detection range: Value of P8-38 – Value of P8-39 x Value of P1-03 (rated motor current) to Value of P8-38 + Value of P8-39 x Value of P1-03
29: Current 2 reached
The DO outputs the ON signal when the output current of the AC drive is within the current detection range specified by P8-40 (free reach current 2).
Current detection range: Value of P8-40 – Value of P8-41 x Value of P1-03 (rated motor current) to Value of P8-40 + Value of P8-41 x Value of P1-03
30: Output as scheduled
With the timing function (P8-42) enabled, the DO outputs the ON signal when the current running time of the AC drive reaches the set timing duration. The timing duration is set using P8-43 and P8-44.
31: AI1 input limit exceeded
The DO outputs the ON signal when the value of AI1 is greater than that of P8-46 (AI1 input voltage upper limit) or less than that of P8-45 (AI1 input voltage lower limit).
32: Load lost
The DO outputs the ON signal when load of the AC drive is lost.
33: Reverse running
The DO outputs the ON signal when the AC drive is in reverse run.
34: Zero current state
The DO outputs the ON signal when the output current of the AC drive stays in the zero current range for the time longer than the zero current detection delay (P8-35).
Zero current detection range: 0 to Value of P8-34 x Value of P1-03
35: Module temperature reach
The DO outputs the ON signal when the IGBT heatsink temperature (P7-07) reaches the IGBT temperature threshold (P8-47).
36: Output current limit exceeded
The DO outputs the ON signal when the output current of the AC drive stays higher than the output overcurrent threshold (P8-36) for the time longer than the output over-current detection delay (P8-37).

37: Frequency lower limit reach (having output at stop) The DO outputs the ON signal when the running frequency reaches the lower limit (P0-14), even when the AC drive is stopped.

38: Alarm (all faults)
The DO outputs the ON signal when the AC drive is faulty and "Continue to run" is selected as the fault protection action. For details about fault protection actions, see the description of parameters P9-47 to P9-50.

39: Motor over-temperature
The DO outputs the ON signal when the motor temperature reaches the value of P9-58 (motor over-temperature pre-warning threshold). (You can check the motor temperature using U0-34.)

40: Current running time reached
The DO outputs the ON signal when the current running time of the AC drive exceeds the value of P8-53 (current running time threshold).

41: Fault (coast-to-stop fault and no output upon under-voltage) The DO outputs the ON signal when an AC drive fault (other than the under-voltage fault) occurs.

42: Fault output 3
The DO outputs the ON signal when an AC drive fault occurs.

Reserved

48：Process Instructions 4

Reserved

49：Process Instructions 5

Reserved

50：Process Instructions 6

Reserved

51：Process Instructions 7

Reserved

52：Process Instructions 8

Reserved

53：Brake command output When inverter brake on, outputs avalid signal。

5.2.23 Setting Multi-speed References (Optional)

Application scenarios for PC group parameters: When it is necessary to use a simple PLC as the main frequency, please set the PC group parameters. In some industrial situations, when using an AC motor, functions such as start/stop, timed segmented speed control, and simple automatic forward/reverse rotation can be achieved; using a simple PLC can accomplish control functions that previously required adding a PLC. Simple PLCs are generally used in industry equipment such as mixed material mixers and industrial washing machines.

Relationship between PC group parameters and other parameters: When parameter P0-03=7 is set and a simple PLC is selected as the main frequency, the PC group parameters need to be set.

Para. No.	Name	Default	Value Range	Description
PC-00	Multi-reference 0	0.0%	–100.0% to +100.0%	These are the frequency references for multiple speed segments. PC-00 to PC-15 correspond to a total of 16 frequency reference values for segments 0 to 15. A frequency reference value is calculated as a percentage of the maximum frequency instead of an absolute frequency value. 100% corresponds to the maximum frequency (P0-10). The four multi-reference terminals provided by the AC drive together have 16 states, corresponding to the 16 frequency reference values. The parameters in this group are applicable to applications where simple PLC is used as the main frequency source. In some industrial applications, the AC motor is only used to implement the functions of start/stop, timed per-segment speed regulation, and simple automatic forward and reverse running, with simple PLC to provide the control functions that are conventionally provided by an additional PLC. Simple PLC is typically used in industrial equipment such as mixture mixing and industrial washing machines. Parameters in this group are required when simple PLC is used as the main frequency (P0-03 set to 7).
PC-01	Multi-reference 1			
PC-02	Multi-reference 2			
PC-03	Multi-reference 3			
PC-04	Multi-reference 4			
PC-05	Multi-reference 5			
PC-06	Multi-reference 6			
PC-07	Multi-reference 7			
PC-08	Multi-reference 8			
PC-09	Multi-reference 9			
PC-10	Multi-reference 10			
PC-11	Multi-reference 11			
PC-12	Multi-reference 12			
PC-13	Multi-reference 13			
PC-14	Multi-reference 14			
PC-15	Multi-reference 15			

5.2.24 Setting the Relay Output (Optional)

Parameter	Name	Default	Value Range		Description
P5-01	Expansion card relay output function selection	0	0: No output 1: AC drive running 2: Fault output (stop upon fault) 3: Frequency level detection FDT1 output 4: Frequency reach 5: Zero-speed running (no output at stop) 6: Motor overload pre-warning 7: AC drive overload pre-warning 8: Set count value reached 9: Designated count value reached 10: Length reached 11: PLC cycle completed 12: Accumulative running time reached 13: Frequency limited 14: Torque limited 15: Ready to run 16: AI1 > AI2 17: Frequency upper limit reach 18: Frequency lower limit reached (related to running) 19: Undervoltage output 20: Communication setting 21: Reserved	22: Reserved 23: Zero-speed running 2 (having output at stop) 24: Accumulative power-on time reached 25: Frequency-level detection FDT2 output 26: Frequency 1 reached 27: Frequency 2 reached 28: Current 1 reached 29: Current 2 reached 30: Timing reached 31: AI1 input limit exceeded 32: Output load loss 33: Reverse running 34: Zero current state 35: Module temperature reached 36: Output current limit exceeded 37: Frequency lower limit reached (having output at stop) 38: Alarm output (direct output at fault or alarm) 39: Current overtemperature pre-warning 40: Current running time reached 41: Fault output 2 42: Fault output 3	See below.
P5-02	Control board relay 1 function selection (T/A1-T/B1-T/C1)	2			
P5-03	Control board relay 2 function selection (T/A2-T/C2)	0			

Set the expansion card relay terminal function.

0: No output

The DO has no function.

1: AC drive running

The DO outputs the active signal when the AC drive is running with an output frequency, which can be zero.

2: Fault output (coast-to-stop fault)

The DO outputs the active signal when the AC drive stops due to a fault.

3: Frequency level detection 1

When the running frequency exceeds the frequency detection value, the DO outputs the active signal. When the running frequency is lower than the result of the frequency detection value minus the frequency detection hysteresis (FDT, which equals the value of P8-19 multiplied by the value of P8-20), the DO stops outputting the active signal.

4: Frequency reached

When the running frequency of the AC drive is within a particular range (target frequency ± value of P8-21 multiplied by the maximum frequency), the DO outputs the active signal.

5: Zero-speed running (no output at stop)

The DO outputs the active signal when the AC drive is running with the output frequency 0. The DO outputs the inactive signal when the AC drive is stopped.

6: Motor overload pre-warning

When detecting that the motor load has exceeded the pre-warning threshold specified by P9-02 (overload pre-warning coefficient) , the DO outputs the active signalbefore an overload protection action is taken.

7: AC drive overload pre-warning

The DO outputs the active signal 10s before an AC drive overload protection action. 8: Set count value reached

In a counting process, the DO outputs the active signal when the count reaches the value of FB-08.

9: Designated count value reached

In a counting process, the DO outputs the active signal when the count reaches the value of FB-09.

10: Length reach

In a fixed length process, the DO outputs the active signal when the detected length exceeds the value of FB-05.

11: Simple PLC cycle completed

the DO outputs a pulse signal with the width of 250 ms when the simple PLC completes one cycle.

12: Accumulative running time reached

The DO outputs the active signal when the accumulative running time of the AC drive exceeds the value of F8-17 (accumulative power-on time threshold).

13: Frequency limited

The DO outputs the active signal when the frequency reference rises above the upper limit or falls below the lower limit and the output frequency of the AC drive reaches the upper limit or lower limit.

14: Torque limited

The DO outputs the active signal when the output torque of the AC drive reaches the torque limit in speed control mode.

15: Ready to run

The DO outputs the active signal if no exception occurs after the AC drive is powered on.

16: AI1 > AI2

The DO outputs the active signal when the value of AI1 is greater than that of AI2.

17: Frequency upper limit reached

The DO outputs the active signal when the running frequency reaches the upper limit (P0-12).

18: Frequency lower limit reached (no output at stop)

When P8-14 (running mode when the frequency reference is lower than the lower limit) is set to 1 (stop), the DO outputs the inactive signal regardless of whether the running frequency has reached the lower limit.

When P8-14 (running mode when the frequency reference is lower than the lower limit) is set to 0 (running at the lower limit frequency) or 2 (zero-speed running) and the running frequency has reached the lower limit, the DO outputs the active signal. 19: Undervoltage

The DO outputs the active signal when the AC drive is in the undervoltage state.

20: Communication

The communication address 0x2001 determines the terminal status, including active and inactive.

21:Reserved

22: Reserved

23: Zero-speed running 2 (having output at stop)

The DO outputs the active signal when the AC drive is running with the output frequency 0. The DO outputs the active signal when the AC drive is stopped.

24: Accumulative power-on time reached

The DO outputs the active signal when the accumulative power-on time (P7-13) of the AC drive exceeds the accumulative power-on time threshold (P8-16).

25: Frequency level detection 2

When the running frequency exceeds the frequency detection value, the DO outputs the active signal. When the running frequency is lower than the result of the detection value minus the frequency detection hysteresis (which equals the value of P8-28 multiplied by the value of P8-29), the DO stops outputting the active signal.

26: Frequency 1 reached

The DO outputs the active signal when the running frequency of the AC drive is within the frequency detection range specified by P8-30 (detection of frequency 1).

Frequency detection range: value of P8-30 – value of P8-31 x value of P0-10 (maximum frequency) to value of P8-30 + value of P8-31 x value of P0-10

27: Frequency 2 reached

The DO outputs the active signal when the running frequency of the AC drive is within the frequency detection range specified by P8-32 (detection of frequency 2).

Frequency detection range: value of P8-32 – value of P8-33 x value of P0-10 (maximum frequency) to value of P8-32 + value of P8-33 x value of P0-10

28: Current 1 reached

The DO outputs the active signal when the output current of the AC drive is within the current detection range specified by P8-38 (free reach current 1).

Current detection range: value of P8-38 – value of P8-39 x value of P1-03 (rated motor current) to value of P8-38 + value of P8-39 x value of P1-03

29: Current 2 reach

The DO outputs the active signal when the output current of the AC drive is within the current detection range specified by P8-40 (free reach current 2).

Current detection range: value of P8-40 – value of P8-41 x value of P1-03 (rated motor current) to value of P8-40 + value of P8-41 x value of P1-03

30: Timing reached

With the timing function (P8 - 42) enabled, the DO outputs the active signal when the current running time of the AC drive reaches the set timing duration. The timing duration is set by P8-43 and P8-44.

31: AI1 input limit exceeded

The DO outputs the active signal when the value of AI1 is greater than that of P8-46 (AI1 input voltage upper limit) or smaller than that of P8-45 (AI1 input voltage lower limit).

32: Load lost

The DO outputs the active signal when load of the AC drive is lost.

33: Reverse running

The DO outputs the active signal when the AC drive is running reversely.

34: Zero current state

The DO outputs the active signal when the output current of the AC drive stays in the zero current range for a duration longer than the value of P8-35 (zero current detection delay). Zero current detection range: 0 to value of P8-34 x value of P1-03

35: Module temperature reached

The DO outputs the active signal when the drive unit heatsink temperature (P7-07) reaches the drive unit temperature threshold (P8-47).

36: Output current limit exceeded

The DO outputs the active signal when the output current of the AC drive stays higher than the output overcurrent threshold (P8-36) for a duration longer than the value of P8-37 (output overcurrent detection delay).

37: Frequency lower limit reached (having output at stop)

The DO outputs the active signal when the running frequency reaches the lower limit (P0-14), even when the AC drive is stopped.

38: Alarm (all faults)

The DO outputs the active signal when the AC drive is faulty and "Continue to run" is selected as the fault protection action.

For details about fault protection actions, see the description of parameters P9-47 to P9-50.

39: Motor overtemperature

The DO outputs the active signal when the motor temperature reaches the value of P9-58 (motor overtemperature pre-warning threshold). (You can check the motor temperature using U0-34.)

40: Current running time reached

The DO outputs the active signal when the current running time of the AC drive exceeds the value of P8-53 (current running time threshold).

41: Fault (coast-to-stop fault and no output upon undervoltage)

The DO outputs the active signal when an AC drive fault (other than the undervoltage fault) occurs.

42: Fault output 3

The DO outputs the active signal when an AC drive fault occurs.

5.3 Commissioning Functions

5.3.1 Commissioning the PMVVC Function (Applicable Only to Synchronous Motors)

Commissioning process

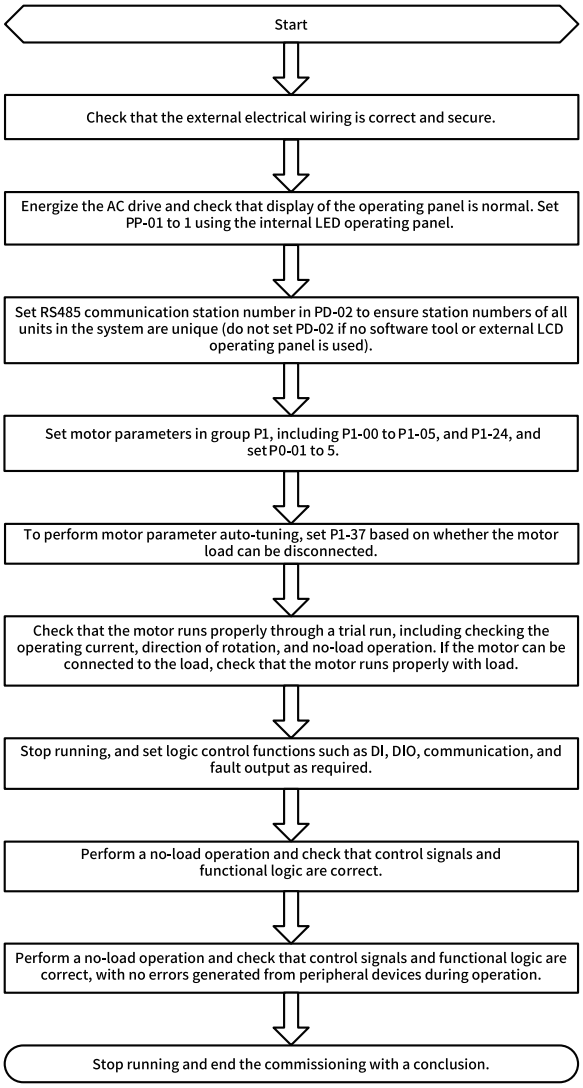


Figure 5-7 Commissioning flowchart

Debugging steps

1. Set the control mode to synchronous motor VVC control mode (P0-01=5) and set the motor type to permanent magnet synchronous motor (P1-00=2);
2. Set the related motor parameters P1-01~P1-05, and also set the motor pole pair number in P1-24;
3. Set P1-37 for parameter identification (select 12 for no-load dynamic parameter identification, select 11 for static parameter identification);
4. After parameter identification is completed, set the no-load test run;
5. For applications requiring high torque at low-speed start, you can manually set torque boost at P3-01.

Commissioning procedure

1. Set P0-01 to 5 and P1-00 to 2.
2. Set the motor-related parameters P1-01 to P1-05 and set P1-24 (number of motor pole pairs).
3. Set P1-37 (auto-tuning selection) to 12 (no-load dynamic auto-tuning) or 11 (static auto-tuning).
4. After auto-tuning, set no-load trial run.
5. If low-speed load startup is required, set P3-01 (torque boost).

Parameters

Parameter	Name	Default	Value Range	Reference Value
P0-01	Motor 1 control mode	0	0: Sensorless vector control (SVC) 1: Feedback vector control (FVC) 2: V/f control 5: PMVVC (applicable only to synchronous motors)	0
P1-00	Motor type	0	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Synchronous motor	0
P1-01	Rated motor power	Model dependent	0.1 kW to 1000.0 kW	Model dependent
P1-02	Rated motor voltage	Model dependent	1 V to 2000 V	Model dependent
P1-03	Rated motor current	Model dependent	0.1 A to 6553.5 A	Model dependent
P1-04	Rated motor frequency	Model dependent	0.01 Hz to 600.00 Hz	Model dependent
P1-05	Rated motor speed	Model dependent	1 rpm to 65535 rpm	Model dependent
P1-20	Filter time constant (PMVVC)	0.1	0.003 to 65.535	0.040
P1-21	Oscillation suppression gain (PMVVC)	100	0 to 65535	0.100
P1-24	Number of motor pole pairs	2	0 to 65535	1

Chapter 6 Parameter Description

6.1 P0 Basic Parameter Group

P0-00 G/P type display

Address: 0xF000

Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

1: G type (constant-torque load)

2: P type (fan and pump)

Description

1: G type (constant-torque load)

The G type models typically carry constant-torque loads with large overload capacity. The overload capacity is 150% in general. Such loads include conveyor belts and cranes, for example.

2: P type (fan and pump)

The P type models typically carry variable-torque loads such as fan and water pump.

P0-01 Motor 1 control mode

Address: 0xF001

Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Sensorless vector control (SVC)

1: Feedback vector control (FVC)

2: V/f control

3: Reserved

4: Reserved

5: Speed open loop control for the synchronous motor (PMVVC)

Description

0: Sensorless vector control (SVC)

It is a type of open-loop vector control applicable to high-performance control applications, where one AC drive can drive only one motor. It is used for loads such as machine tools, centrifuges, wire drawing machines, and injection molding machines.

1: Feedback vector control (FVC)
It is a type of closed-loop vector control. An encoder must be installed at the motor end, and the AC drive must be equipped with a PG card of the same type as the encoder. It is applicable to scenarios requiring high-precision speed control or torque control. One AC drive can drive only one motor. It is used for loads such as high-speed paper machines, cranes, and elevators.
2: V/f control (open loop speed control)
It is applicable to scenarios with low requirements on load control performance, such as fans and pumps. If one AC drive controls multiple motors, only the V/f control mode can be used.
3 and 4: Reserved
5: Speed open loop control for the synchronous motor (PMVVC)
It is suitable for loads with low precision requirements, such as fans and pumps.

P0-02 Command source selection

Address:	0xF002		
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: LED operating panel/LCD operating panel/Software
1: Terminal
2: Communication
Description
It is used to determine the input channel of the AC drive control commands, such as run, stop, forward run, reverse run, and jog operation.
0: LED operating panel/LCD operating panel/Software
Control commands are input using the RUN, STOP/RES, and MF.K keys on the operating panel or using the control panel of the software. This mode is suitable for initial commissioning.
1: Terminal
Control commands are input through the DIs of the AC drive. The DI control commands can be set according to different scenarios, such as start/stop, forward/reverse run, jog, two-wire/three-wire mode, multi-speed, and other functions. It is suitable for most applications.
2: Communication
Control commands are input through remote communication. The AC drive must be equipped with a communication card to communicate with the host controller. It is suitable for remote control or centralized control systems of multiple equipment.

P0-03 Main frequency source X selection

Address:	0xF003		
Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Digital setting (preset frequency (P0-08) that can be changed by pressing UP/DOWN, non-retentive upon power failure)
1: Digital setting (preset frequency (P0-08) that can be changed by pressing UP/DOWN, retentive at power failure)
2: AI1
3: AI2
4: AI3
5: Pulse reference (DI5)
6: Multi-reference
7: Simple PLC
8: PID
9: Communication
10: Reserved

Description

0: Digital setting (non-retentive at power failure)
The initial value of the frequency reference is the value of P0-08 (preset frequency). This value can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). When the AC drive is powered on again after power failure, the set frequency reverts to the value of P0-08.
1: Digital setting (retentive at power failure)
The initial value of the frequency reference is the value of P0-08 (preset frequency). This value can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). When the AC drive is powered on again after power failure, the frequency reference is that before the last power failure. The value set by pressing ▲/▼ or pressing UP/DOWN is retained.
2: AI1
The frequency reference is input by current or voltage signal through the AI1. The frequency is calculated according to the preset AI curve.
3: AI2
The frequency reference is input by current or voltage signal through the AI2. The frequency is calculated according to the preset AI curve.
4: AI3
The frequency reference is input by current or voltage signal through the AI3. The frequency is calculated according to the preset AI curve.

5: Pulse reference (DI5)
The frequency upper limit is set through the DI5. The frequency is calculated based on the curve of the relationship between the pulse frequency and the setting frequency.
6: Multi-reference
In multi-reference control mode, different combinations of DI terminal states correspond to different frequency references. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values.
7: Simple PLC
Simple PLC is a multi-speed running command that can control the running time and the acceleration and deceleration time. Parameters PC-00 to PC-15 are used to set the values of each frequency. PC-18 to PC-49 are used to set the running time and the acceleration and deceleration time of each frequency. Up to 16 speeds can be set.
8: PID
PID is selected as the main frequency. PID control is a general process control method. PID control is used to form a closed-loop system in which each controlled variable is stabilized at the target level through proportional, integral, and differential calculation of the difference between the feedback signal and the target signal of the controlled variable. Generally, PID output can be used as the frequency reference for on-site closed-loop process control applications, such as closed-loop pressure control and closed-loop tension control.
9: Communication
The main frequency is set through communication. Frequency reference is input through remote communication. The AC drive must be equipped with a communication card to realize communication with the host controller. It is suitable for remote control or centralized control systems of multiple equipment.
10: Reserved

P0-04 **Auxiliary frequency source Y selection**

Address:	0xF004		
Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Digital setting (preset frequency (P0-08) that can be changed by pressing UP/DOWN, non-retentive upon power failure)
1: Digital setting (preset frequency (P0-08) that can be changed by pressing UP/DOWN, retentive at power failure)

2: AI1
3: AI2
4: AI3

5: Pulse reference (DI5)
6: Multi-reference
7: Simple PLC
8: PID
9: Communication
10: Reserved

Description

0: Digital setting (non-retentive at power failure)
The initial value of the frequency reference is the value of P0-08 (preset frequency). The value can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). When the AC drive is powered on again after power failure, the set frequency reverts to the value of P0-08.
1: Digital setting (retentive at power failure)
The initial value of the frequency reference is the value of P0-08 (preset frequency). This value can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). When the AC drive is powered on again after power failure, the frequency reference is that before the last power failure. The value set by pressing ▲/▼ or pressing UP/DOWN is retained.
2: AI1
The frequency reference is input by current or voltage signal through the AI1. The frequency is calculated according to the preset AI curve.
3: AI2
The frequency reference is input by current or voltage signal through the AI2. The frequency is calculated according to the preset AI curve.
4: AI3
The frequency reference is input by current or voltage signal through the AI3 terminal. The frequency is calculated according to the preset AI curve.
5: Pulse reference (DI5)
The frequency upper limit is set through the DI5. The frequency is calculated based on the curve of the relationship between the pulse frequency and the setting frequency.

6: Multi-reference
In multi-reference control mode, different combinations of DI terminal states correspond to different frequency references. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values.
7: Simple PLC
Simple PLC is a multi-speed running command that can control the running time and the acceleration and deceleration time. Parameters PC-00 to PC-15 are used to set the values of each frequency. PC-18 to PC-49 are used to set the running time and the acceleration and deceleration time of each frequency. Up to 16 speeds can be set.
8: PID
PID is selected as the main frequency. PID control is a general process control method. PID control is used to form a closed-loop system in which each controlled variable is stabilized at the target level through proportional, integral, and differential calculation of the difference between the feedback signal and the target signal of the controlled variable. Generally, PID output can be used as the frequency reference for on-site closed-loop process control applications, such as closed-loop pressure control and closed-loop tension control.
9: Communication
The main frequency is set through communication. Frequency reference is input through remote communication. The AC drive must be equipped with a communication card to communicate with the host controller. It is suitable for remote control or centralized control systems of multiple equipment.
10: Reserved

P0-05 **Range selection of auxiliary frequency reference Y upon superposition**

Address: 0xF005

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Relative to the maximum frequency
1: Relative to the main frequency X
Description
0: Relative to the maximum frequency
The auxiliary frequency at superposition is equal to the auxiliary frequency source range (P0-06) multiplied by the maximum frequency (P0-10).
1: Relative to the main frequency X
The auxiliary frequency at superposition is equal to the auxiliary frequency source range (P0-06) multiplied by the main frequency X.

P0-06 Range of auxiliary frequency reference Y upon superposition

Address:	0xF006		
Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0% to 150%

Description

P0-07 Frequency source superposition selection

Address:	0xF007		
Min.:	0	Unit:	-
Max.:	44	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

Ones (position): Frequency reference selection

0: Main frequency reference X

1: Main and auxiliary operation result (based on tens position)

2: Switchover between the main frequency X and the auxiliary frequency Y

3: Switchover between the main frequency X and the main and auxiliary operation result

4: Switchover between the auxiliary frequency Y and the main and auxiliary operation result

Tens (position): Main and auxiliary operation of the frequency reference

0: Main + Auxiliary

1: Main – Auxiliary

2: Max. (main, auxiliary)

3: Min. (main, auxiliary)

4: Main x Auxiliary

Description

Ones position: Frequency reference selection

0: Main frequency reference X

The running frequency of the AC drive is directly determined by the main frequency reference X.

1: Main and auxiliary operation result (based on the tens place)

The running frequency of the AC drive is the calculation result of the main and auxiliary frequencies, and the calculation method is determined by the tens position of the value of P0-07.

2: Switchover between the main frequency reference X and auxiliary frequency reference Y
The running frequency of the AC drive is selected or switched between the main frequency reference X and the auxiliary frequency reference Y through the DI. In this case, the function of the DI must be set to the frequency source switching function. For example, if the DI2 is used for switchover, set P4-01 to 18.
3: Switchover between the main frequency reference X and the main and auxiliary operation result
The running frequency of the AC drive is selected or switched between the main frequency reference X and the main and auxiliary operation result through the DI.
4: Switchover between the auxiliary frequency reference Y and the main and auxiliary operation result
The running frequency of the AC drive is selected or switched between the auxiliary frequency reference Y and the main and auxiliary operation result through the DI.
Tens (position): Frequency reference main and auxiliary operation
0: Main + Auxiliary
The main and auxiliary operation result is the main frequency X plus the auxiliary frequency Y.
1: Main – Auxiliary
The main and auxiliary operation result is the main frequency X minus the auxiliary frequency Y.
2: Maximum value
The main and auxiliary operation result is the larger value between the main frequency X and the auxiliary frequency Y.
3: Minimum value
The main and auxiliary operation result is the smaller value between the main frequency X and the auxiliary frequency Y.
4: Main x Auxiliary
The main and auxiliary operation result is the main frequency X multiplied by the auxiliary frequency Y.

P0-08 **Preset frequency**

Address:	0xF008		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:
0.00 Hz to P0-10
Description
This parameter defines the target frequency.

P0-09 Running direction

Address: 0xF009

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Same as the default direction

1: Reverse to the default direction

Description

You can change the rotation direction of the motor by modifying this parameter without changing the motor wiring. Modifying this parameter is equivalent to exchanging any two of the motor's U, V, W wires.

P0-10 Maximum frequency

Address: 0xF00A

Min.:	5	Unit:	Hz
Max.:	599	Data type:	UInt16
Default:	50	Change:	At stop

Value Range:

5.00 Hz to 599.00 Hz

Description

This parameter defines the maximum output frequency of the AC drive.

P0-11 Source of the frequency upper limit

Address: 0xF00B

Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: P0-12 (Frequency upper limit)

1: AI1

2: AI2

3: AI3

4: Pulse reference (DI5)

5: Communication

6: Multi-speed reference

Description

0: P0-12 (Frequency upper limit)

The frequency upper limit is set by P0-12.

1: AI1

The frequency upper limit is input by current or voltage signal through the AI1. The frequency is calculated according to the preset AI curve.

2: AI2
The frequency upper limit is input by current or voltage signal through the AI2. The frequency is calculated according to the preset AI curve.
3: AI3
The frequency upper limit is input by current or voltage signal through the AI3. The frequency is calculated according to the preset AI curve.
4: Pulse reference (DI5)
The frequency upper limit is set through the DI5. The frequency is calculated based on the curve of the relationship between the pulse frequency and the maximum frequency.
5: Communication
The frequency upper limit is set through communication.
6: Multi-reference

P0-12 Frequency upper limit

Address:	0xF00C		
Min.:	P0-14	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:
P0-14 to P0-10
Description
This parameter defines the maximum running frequency allowed for the motor.

P0-13 Frequency upper limit offset

Address:	0xF00D		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to P0-10
Description
This parameter defines the offset of the frequency upper limit. It is used to adjust the output frequency upon minimum frequency reference signal when the frequency is set by an external analog signal (voltage or current).

P0-14 Frequency lower limit

Address:	0xF00E		
Min.:	0	Unit:	Hz
Max.:	P0-12	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to P0-12
Description
This parameter defines the minimum running frequency for the motor.

P0-15 **Carrier frequency**

Address:	0xF00F		
Min.:	0.8	Unit:	kHz
Max.:	16	Data type:	UInt16
Default:	6	Change:	In real time

Value Range:
0.8 kHz to 16.0 kHz
Description
The carrier frequency of the AC drive determines the number of times that the power switching device (such as IGBT) of the drive unit is turned on and off, so it is also called the switching frequency. It mainly affects the following aspects:
The power loss of the power module IGBT is related to the carrier frequency. As the carrier frequency increases, the power loss increases and the power module heats up, which is unfavorable to the AC drive.
When the carrier frequency is high, the waveform of the secondary current output by the AC drive is sinusoidal and smooth. In this way, the harmonic is low, but the interference is relatively strong, and the vice versa. When the carrier frequency is too low, the effective torque of the motor decreases, the loss increases, and the temperature increases. On the contrary, when the carrier frequency is too high, the loss of the AC drive itself increases, the IGBT temperature rises, and the change rate dv/dt of the output voltage increases, which has great influence on the insulation of the motor.

P0-16 **Carrier frequency change with temperature**

Address:	0xF010		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:
0: No
1: Yes
Description
This parameter defines whether the carrier frequency changes with the temperature.

P0-17 **Acceleration time 1**
Address: 0xF011

Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

The acceleration time indicates the time required for the output frequency to rise from 0 to P0-25 (acceleration/deceleration base frequency). It is usually determined by the rise of the frequency reference signal. The frequency reference rise rate must be limited to prevent over-current during acceleration of the motor. The acceleration time must be set to ensure that the acceleration current is below the over-current capacity of the AC drive to avoid that the AC drive trips due to over-current stall.

P0-18 Deceleration time 1

Address: 0xF012

Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

The deceleration time indicates the time required for the output frequency to decrease from P0-25 (acceleration/deceleration base frequency) to 0. The deceleration time is usually determined by the fall of the frequency reference signal. The frequency reference drop rate must be limited to prevent overvoltage during deceleration of the motor.

The deceleration time must be set to ensure that the smoothing circuit voltage will not be excessive to avoid that the AC drive trips due to overvoltage stall.

P0-19 Acceleration/Deceleration time unit

Address: 0xF013

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: 1s

1: 0.1s

2: 0.01s

Description

This parameter defines the acceleration/deceleration time unit.

P0-21 Frequency offset of auxiliary frequency source upon superposition

Address: 0xF015

Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00 Hz to P0-10

Description

This parameter defines the offset of the auxiliary frequency during superposition. It is used to adjust the auxiliary frequency upon minimum frequency reference signal when the frequency is set by an external analog signal (voltage or current).

P0-22 Frequency reference resolution

Address: 0xF016

Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	At stop

Value Range:

1: 0.1 Hz

2: 0.01 Hz

Description

This parameter defines the decimal places of the frequency reference.

P0-23 Retention of digital setting of frequency upon stop

Address: 0xF017

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Non-retentive

1: Retentive

Description

0: Non-retentive

P0-08 (preset frequency) is set through the operating panel and the frequency is modified by using the ▲ and ▼ keys or UP and DOWN of terminals. When the AC drive stops, the modification will be cleared.

1: Retentive

P0-08 (preset frequency) is set through the operating panel and the frequency is modified by using the ▲ and ▼ keys or UP and DOWN of terminals. When the AC drive stops, the modification will be retained.

P0-25 Acceleration/Deceleration time base frequency

Address:	0xF019		
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Maximum frequency (P0-10)

1: Frequency reference

2: 100 Hz

Description

This parameter defines the target frequency during acceleration and the start frequency during deceleration.

P0-26 Base frequency for UP/DOWN modification during running

Address:	0xF01A		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Running frequency

1: Frequency reference

Description

This parameter defines the base frequency from which the target frequency is adjusted by using the UP/DOWN key of the operating panel during operation.

If it is set to 0 and the running frequency is 25 Hz, the target frequency will change from 25 Hz at a certain rate when the UP key is pressed.

If it is set to 1, the target frequency will change from the original target frequency when the UP key is pressed.

P0-27 Main frequency coefficient

Address:	0xF01B		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:

0.00% to 100.00%

Description

This parameter defines the main frequency reference coefficient when the frequency superposition mode is Main x Auxiliary. The value 100.00% corresponds to the target main frequency reference.

P0-28 Auxiliary frequency coefficient

Address: 0xF01C

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:

0.00% to 100.00%

Description

This parameter defines the auxiliary frequency reference coefficient when the frequency superposition mode is Main x Auxiliary. The value 100.00% corresponds to the target auxiliary frequency reference.

6.2 P1 Parameters of Motor 1

P1-00 Motor type selection

Address: 0xF100

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Common asynchronous motor

1: Variable frequency asynchronous motor

2: Synchronous motor

Description

A variable frequency motor can adjust its frequency and speed according to the load. Where the voltage is low, it can reduce the frequency and start reliably. Where the load is light, it can reduce the frequency, speed, and current to save electric energy.

A common asynchronous motor is suitable for applications with normal voltage but often full load. It is designed based on constant frequency and constant voltage. Therefore, it may not meet all the frequency and speed change requirements.

P1-01 Rated motor power

Address: 0xF101

Min.:	0.1	Unit:	kW
Max.:	1000	Data type:	UInt16
Default:	1.5	Change:	At stop

Value Range:

0.1kW to 1000.0kW

Description

This parameter indicates the power of the motor during normal operation. Its value is the motor rated voltage multiplied by the motor rated current. Select a proper motor power on the premise that the motor can meet the requirements of mechanical load. Factors such as motor heating, allowable overload capacity, and starting capacity must be considered.

P1-02 Rated motor voltage

Address:	0xF102		
Min.:	1	Unit:	V
Max.:	2000	Data type:	UInt16
Default:	380	Change:	At stop

Value Range:

1 V to 2000 V

Description

The rated motor voltage indicates the voltage of the motor during normal operation, which usually refers to the line voltage.

P1-03 Rated motor current

Address:	0xF103		
Min.:	0.1	Unit:	A
Max.:	6553.5	Data type:	UInt16
Default:	9	Change:	At stop

Value Range:

0.1–6553.5 A

Description

The rated motor current indicates the current of the motor during normal operation, which usually refers to the line current.

P1-04 Rated motor frequency

Address:	0xF104		
Min.:	0.01	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	50	Change:	At stop

Value Range:

0.01 Hz to P0-10

Description

The rated motor frequency indicates the frequency of the power supply connected to the stator winding under the rated operation state of the motor.

P1-05 Rated motor speed

Address:	0xF105		
Min.:	1	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	1460	Change:	At stop

Value Range:

1 RPM to 65535 RPM

Description

This is the speed of the rotor in RPM when the motor is running in rated conditions.

P1-06 Asynchronous/Synchronous motor stator resistance

Address:	0xF106		
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	At stop

Value Range:

0.001 Ω to 65.535 Ω

Description

This parameter indicates the DC resistance of stator winding of asynchronous motor, which can be obtained by motor auto-tuning.

P1-07 Asynchronous motor rotor resistance

Address:	0xF107		
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	0.908	Change:	At stop

Value Range:

0.001 Ω to 65.535 Ω

Description

This parameter defines the DC resistance of rotor winding of the asynchronous motor, which can be obtained by static auto-tuning or dynamic auto-tuning of the motor.

P1-08 Leakage inductive reactance of the asynchronous motor

Address:	0xF108		
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	At stop

Value Range:

0.01 mH to 655.35 mH

Description

The leakage inductive reactance of the asynchronous motor is caused by the leakage flux of motor winding. In the winding of the motor, when current is introduced, magnetic flux will be generated. The magnetic flux can be divided into two parts based on the path: main flux and leakage flux. The leakage flux can be described by an inductance, namely, leakage inductance. This parameter can be obtained by static auto-tuning or dynamic auto-tuning of the motor.

P1-09 Mutual inductive reactance of the asynchronous motor

Address:	0xF109		
Min.:	0.1	Unit:	mH
Max.:	6553.5	Data type:	UInt16
Default:	156.8	Change:	At stop

Value Range:

0.1 mH to 6553.5 mH

Description

When the current in one coil of the motor changes, induced EMF is generated in the coil adjacent to it. This mutually induced EMF can be expressed by mutual inductance.

The mutual inductance of a motor can be roughly divided into two types. One is the interphase inductance of the stator, which is the reactance between two phases of the stator. The other is the inductance between the stator and the rotor. The former does not change with the rotation of the rotor, while the latter changes accordingly with the rotation of the rotor.

Both types of mutual inductance can be obtained through static or dynamic motor auto-tuning.

P1-10 Asynchronous motor no-load current

Address:	0xF10A		
Min.:	0.1	Unit:	A
Max.:	P1- 03	Data type:	UInt16
Default:	4.2	Change:	At stop

Value Range:

0.1 A to P1-03 (Rated motor current)

Description

This parameter defines the current passing through the three-phase winding of the stator when the motor is running without load. It can be obtained by dynamic auto-tuning of the motor.

P1-11 Asynchronous motor core saturation coefficient 1

Address: 0xF10B

Min.:	50	Unit:	%
Max.:	100	Data type:	UInt16
Default:	86	Change:	In real time

Value Range:
50.0% to 100.0%
Description
Asynchronous motor core saturation coefficient 1

P1-12 Asynchronous motor core saturation coefficient 2

Address:	0xF10C		
Min.:	100	Unit:	%
Max.:	150	Data type:	UInt16
Default:	130	Change:	In real time

Value Range:
100.0% to 150.0%
Description
Asynchronous motor core saturation coefficient 2

P1-13 Asynchronous motor core saturation coefficient 3

Address:	0xF10D		
Min.:	100	Unit:	%
Max.:	170	Data type:	UInt16
Default:	140	Change:	In real time

Value Range:
100.0% to 170.0%
Description
Asynchronous motor core saturation coefficient 3

P1-14 Asynchronous motor core saturation coefficient 4

Address:	0xF10E		
Min.:	100	Unit:	%
Max.:	180	Data type:	UInt16
Default:	150	Change:	In real time

Value Range:
100.0% to 180.0%
Description
Asynchronous motor core saturation coefficient 4

P1-17 Synchronous motor axis D inductance

Address:	0xF111		
Min.:	0.01	Unit:	mH

Max.:	655.35	Data type:	UInt16
Default:	15.86	Change:	At stop

Value Range:

0.01 mH to 655.35 mH

Description

This parameter defines the inductance of the main pole axis (longitudinal axis) of the synchronous motor.

P1-18 Synchronous motor axis Q inductance

Address:	0xF112		
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	15.86	Change:	At stop

Value Range:

0.01 mH to 655.35 mH

Description

This parameter defines the inductance of the center line (quadrature axis) between the adjacent pole axes of the synchronous motor rotor.

P1-19 Synchronous motor back EMF coefficient

Address:	0xF113		
Min.:	0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0 V to 6553.5V

Description

Used to set the RMS value of the motor back EMF at the rated frequency (P1- 04).

P1-20 Filter time constant (PMVVC)

Address:	0xF114		
Min.:	0.003	Unit:	-
Max.:	65.535	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.003 to 65.535

Description

This parameter specifies the filter time constant in PMVVC mode.

P1-21 Oscillation suppression gain (PMVVC)

Address: 0xF115

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 100 Change: In real time

Value Range:

0 to 65535

Description

This parameter specifies oscillation suppression gain in PMVVC mode.

P1-23 Percentage of the frictional moment

Address: 0xF117
Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 0 Change: At stop

Value Range:

0.00% to 100.00%

Description

P1-24 Number of motor pole pairs

Address: 0xF118
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 2 Change: In real time

Value Range:

0 to 65535

Description

P1-26 Auto-tuning direction (inertia auto-tuning and synchronous motor auto-tuning)

Address: 0xF11A
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: At stop

Value Range:

0: Reverse run
1: Forward run

Description

P1-27 Encoder pulses per revolution

Address: 0xF11B

Min.:	1	Unit:	-
Max.:	20000	Data type:	UInt16
Default:	1024	Change:	At stop

Value Range:
1 to 20000
Description
This is the number of pulses generated per revolution of the encoder disk. In feedback vector control (FVC) mode, an improper number of pulses may cause malfunction of the motor. Therefore, set a proper encoder pulses.

P1-28 Encoder type

Address:	0xF11C		
Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: ABZ incremental encoder
1: 23-bit encoder
2: Resolver
Description
Encoders are classified into incremental encoders and absolute encoders.
An incremental encoder converts displacement into periodic electrical signals, and then converts the electrical signals into pulses that are counted. The number of pulses describes the magnitude of the displacement.

Each position of an absolute encoder corresponds to a certain digital code. Therefore, its indication is related only to the start and end positions of the measurement.

P1-29 PG signal filter

Address:	0xF11D		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:
0: Non-adaptive filter
1: Adaptive filter
2: Fixed interlock
3: Automatic interlock

Description

P1-30 Encoder wiring flag

Address: 0xF11E

Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones (position): AB signal direction or rotational direction

0: Forward

1: Reverse

Tens (position): Reserved

Description

P1-31 Encoder zero position angle

Address: 0xF11F

Min.:	0	Unit:	°
Max.:	359.9	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0° to 359.9°

Description

P1-32 Motor gear ratio numerator

Address: 0xF120

Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

1 to 65535

Description

P1-33 Motor gear ratio denominator

Address: 0xF121

Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

1 to 65535

Description

P1-34 **Number of pole pairs of resolver**

Address:	0xF122		
Min.:	1	Unit:	-
Max.:	32	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

1 to 32

Description

A resolver is an electromagnetic transducer, also known as a synchronous resolver. It is a small AC motor used to measure angles. Consisting of stators and rotors, it is used to measure the shaft angular displacement and angular velocity of a revolving object.

This parameter indicates the number of pole pairs of a resolver. A larger number of pole pairs indicates higher accuracy.

P1-36 **PG open circuit detection**

Address:	0xF124		
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0 to 11

Description

Used to enable or disable the PG open circuit detection.

P1-37 **Auto-tuning selection**

Address:	0xF125		
Min.:	0	Unit:	-
Max.:	14	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No auto-tuning
1: Static auto-tuning on partial parameters of the asynchronous motor
2: Dynamic auto-tuning on all parameters of the asynchronous motor
3: With-load auto-tuning on all parameters of the asynchronous motor
4: Asynchronous motor inertia auto-tuning (only in FVC mode)
11: Static auto-tuning on partial parameters of the synchronous motor (excluding back EMF)
12: No-load dynamic auto-tuning on all parameters of the synchronous motor
13: Static auto-tuning on all parameters of the synchronous motor (excluding the encoder installation angle)
14: Synchronous motor inertia auto-tuning (only in FVC mode)

Description

0: No auto-tuning
Auto-tuning is not performed.

1: Static auto-tuning on partial parameters of the asynchronous motor
This mode applies to scenarios where motors cannot be disconnected from the load and dynamic auto-tuning is not allowed.
Auto-tuning is performed on partial motor parameters including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), and P1-08 (asynchronous motor leakage inductance).

2: Dynamic auto-tuning on all parameters of the asynchronous motor
This mode applies to scenarios where the motor can be disconnected from the load.
Auto-tuning is performed on all the motor parameters, including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), P1-08 (Asynchronous motor leakage inductance), P1-09 (Asynchronous motor mutual inductance), and P1-10 (Asynchronous motor no-load current).

3: With-load auto-tuning on all parameters of asynchronous motor
This mode applies to scenarios where motors cannot be disconnected from the load and dynamic auto-tuning on all parameters is not allowed.
Auto-tuning is performed on all the motor parameters, including P1-06 (Asynchronous motor stator resistance), P1-07 (Asynchronous motor rotor resistance), P1-08 (Asynchronous motor leakage inductance), P1-09 (Asynchronous motor mutual inductance), P1-10 (Asynchronous motor no-load current),
and P1-30 (Encoder phase sequence).

4: Asynchronous motor inertia auto-tuning (only in FVC mode)
11: Static auto-tuning on partial parameters of the synchronous motor (excluding back EMF)
12: No-load dynamic auto-tuning on all parameters of the synchronous motor
13: Static auto-tuning on all parameters of the synchronous motor (excluding the encoder installation angle)
14: Synchronous motor inertia auto-tuning (only in FVC mode)

6.3 P2 Vector Control Parameters of Motor 1

P2-00 **Low-speed speed loop Kp**

Address: 0xF200

Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:
1 to 200
Description
This parameter indicates the speed loop PID control parameter Kp, which affects the response to the motor speed. A larger Kp value indicates higher sensitivity and more intensive tuning. A smaller Kp value indicates lower sensitivity and less intensive tuning. The low-speed speed loop Kp is effective at low speed.

P2-01 **Low-speed speed loop Ti**

Address: 0xF201

Min.:	0.001	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0.5	Change:	In real time

Value Range:
0.001s to 10.000s
Description
The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. If the speed loop integral time constant increases, the speed loop response slows down. At this time, the proportional gain of the speed loop needs to be increased to fasten the speed loop response. The low speed loop Ti is used at low speed.

P2-02 **Switchover frequency 1**

Address: 0xF202

Min.:	0	Unit:	Hz
Max.:	P2- 05	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0.00 Hz to P2-05

Description

The speed loop PI parameters are divided into two groups: low speed and high speed. If the running frequency is lower than switchover frequency 1 (P2-02), the speed loop PI parameters are adjusted by P2-00 and P2-01. If the running frequency is higher than switchover frequency 2 (P2-05), the speed loop PI parameters are adjusted by P2-03 and P3-04. If the running frequency is between switchover frequency 1 and switchover frequency 2, the speed loop PI parameters switch linearly between the two groups of PI parameters. The parameter value must be lower than P2-05 (Switching frequency 2).

P2-03 High-speed speed loop Kp

Address:	0xF203		
Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

1 to 200

Description

This parameter indicates the speed loop PID control parameter Kp, which affects the response to the motor speed. A larger Kp value indicates higher sensitivity and more intensive tuning. A smaller Kp value indicates lower sensitivity and less intensive tuning. The high-speed speed loop Kp is effective at high speed.

P2-04 High-speed speed loop Ti

Address:	0xF204		
Min.:	0.001	Unit:	s
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.001s to 10.000s

Description

The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. If the speed loop integral time constant increases, the speed loop response slows down. At this time, the proportional gain of the speed loop needs to be increased to fasten the speed loop response. The high speed loop Ti is used at high speed.

P2-05 Switchover frequency 2

Address: 0xF205

Min.:	P2-02	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:

P2-02 to P0-10

Description

The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than P2-02 (Switchover frequency 1), the speed loop PI is adjusted by P2-00 and P2-01. If the running frequency is higher than switchover frequency 2 (P2-05), the speed loop PI parameters are adjusted by P2-03 and P2-04. If the running frequency is between switchover frequency 1 and switchover frequency 2, the speed loop PI parameters switch linearly between the two groups of PI parameters. This parameter must be set to a value lower than switchover frequency 2 (P2-05).

P2-06 VC slip compensation gain

Address: 0xF206

Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

50% to 200%

Description

In SVC control mode, this parameter is used to adjust the speed stability accuracy of the motor. For example, when the running frequency of the motor is lower than the output frequency of the AC drive, you can increase the value of this parameter.

In FVC mode, this parameter can be used to adjust output current of the AC drive. For example, decrease this parameter gradually when a high-power AC drive is used to control a motor with low load capacity. Generally, you do not need to change the value of this parameter.

P2-07 Speed feedback filter time

Address: 0xF207

Min.:	0	Unit:	s
Max.:	0.1	Data type:	UInt16
Default:	0.004	Change:	In real time

Value Range:

0.000s to 0.1s

Description

In FVC mode (P0-01 set to 1), the speed loop feedback filter time is effective. Adjusting the parameter can improve the motor stability. A larger value indicates better motor stability but slower dynamic response, and a smaller value indicates faster dynamic response. A small value of this parameter will result in motor oscillation. Generally, the motor stability can meet requirements, and you do not need to modify this parameter.

P2-08 VC deceleration over-excitation gain

Address:	0xF208		
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	64	Change:	In real time

Value Range:

0 to 200

Description

P2-09 Torque upper limit source in speed control (motoring)

Address:	0xF209		
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Digital setting (P2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Communication setting
6: Min. (AI1, AI2)
7: Max. (AI1, AI2)

Description

0: Digital setting (P2-10)
The torque upper limit in speed control mode is set by P2-10 (digital setting of torque upper limit in speed control).
1: AI1
The torque upper limit is input by current or voltage signal through the AI1. The torque is calculated according to the preset AI curve.
2: AI2
The torque upper limit is input by current or voltage signal through the AI2. The torque is calculated according to the preset AI curve.

3: AI3
The torque upper limit is input by current or voltage signal through the AI3. The torque is calculated according to the preset AI curve.
4: Pulse reference (DI5)
The torque upper limit in speed control mode is set through the DI5. The torque is calculated based on the curve of the relationship between the pulse frequency and running frequency.
5: Communication setting
The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to communicate with the host controller. This mode applies to remote control or centralized control systems of multiple equipment.
6: MIN (AI1, AI2)
The torque upper limit in speed control mode is the smaller value between AI1 and AI2 inputs.
7: MAX (AI1, AI2)
The torque upper limit in speed control mode is the larger value between AI1 and AI2 inputs.

P2-10 Setting of torque upper limit in speed control (motoring)

Address:	0xF20A		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	150	Change:	In real time

Value Range:
0.0% to 200.0%
Description
The torque upper limit under motoring state takes the rated current of the AC drive as the base value.

P2-11 Torque upper limit source in speed control (generating)

Address:	0xF20B		
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Digital setting (P2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Communication
6: Min. (AI1, AI2)
7: Max. (AI1, AI2)
8: Digital setting (P2-12)

Description

0: Digital setting (P2-10)
The torque upper limit in speed control mode is set by P2-10 (digital setting of torque upper limit in speed control).
1: AI1
The torque upper limit is input by current or voltage signal through the AI1. The frequency is calculated according to the preset AI curve.
2: AI2
The torque upper limit is input by current or voltage signal through the AI2. The frequency is calculated according to the preset AI curve.
3: AI3
The torque upper limit is input by current or voltage signal through the AI3. The frequency is calculated according to the preset AI curve.
4: Pulse reference (DI5)
The torque upper limit in speed control mode is set through the DI5. The frequency is calculated based on the curve of the relationship between the pulse frequency and running frequency.
5: Communication
The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to communicate with the host controller. This mode applies to remote control or centralized control systems of multiple equipment.
6: Min. (AI1, AI2)
The torque upper limit in speed control mode is the smaller value between AI1 and AI2 inputs.
7: Max. (AI1, AI2)
The torque upper limit in speed control mode is the larger value between AI1 and AI2 inputs.
8: Digital setting (P2-12)
The torque upper limit in speed control mode is set by P2-12 (torque upper limit reference in speed control (generating)).

P2-12 Setting of torque upper limit in speed control (generating)

Address: 0xF20C

Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	150	Change:	In real time

Value Range:

0.0% to 200.0%

Description

The torque upper limit under generating state takes the rated current of the AC drive as the base value.

P2-13 Low-speed current loop Kp adjustment

Address: 0xF20D

Min.:	0.1	Unit:	-
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.1–10.0

Description

P2-14 Low-speed current loop Ki adjustment

Address: 0xF20E

Min.:	0.1	Unit:	-
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.1–10.0

Description

P2-15 High-speed current loop Kp adjustment

Address: 0xF20F

Min.:	0.1	Unit:	-
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.1–10.0

Description

P2-16 High-speed current loop Ki adjustment

Address: 0xF210

Min.:	0.1	Unit:	-
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.1–10.0

Description

P2-17 Speed loop Kp upon zero speed lock

Address: 0xF211

Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:

1 to 100

Description

P2-18 Speed loop Ti upon zero speed lock

Address: 0xF212

Min.:	0.001	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0.5	Change:	In real time

Value Range:

0.001s to 10.000s

Description

P2-19 Inertia compensation gain

Address: 0xF213

Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

1 to 200

Description

P2-20 Speed loop switchover frequency upon zero speed lock

Address: 0xF214

Min.:	0	Unit:	Hz
Max.:	P2-02	Data type:	UInt16
Default:	0.05	Change:	In real time

Value Range:
0.00 Hz to P2-02
Description

P2-21 Maximum output voltage coefficient

Address: 0xF215

Min.:	100	Unit:	-
Max.:	110	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
100–110
Description
This parameter defines the boost capacity of the maximum output voltage of the AC drive.
Increasing P2-21 will improve the maximum loading capacity in motor field weakening area. However, this will increase motor current ripples and heat the motor. Decreasing P2-21 will lower the maximum loading capacity in motor field weakening area. However, this will reduce motor current ripples and motor heating values. Generally, this parameter needs no modification.

P2-22 Output voltage filter time

Address: 0xF216

Min.:	0	Unit:	s
Max.:	0.01	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.000s to 0.01s
Description
-

P2-23 Zero speed lock

Address: 0xF217

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled

Description
-

P2-24 Vector overvoltage suppression Kp

Address: 0xF218
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 40 Change: In real time

Value Range:
0–1000
Description
-

P2-25 Acceleration compensation gain

Address: 0xF219
Min.: 0 Unit: -
Max.: 200 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to 200
Description
-

P2-26 Acceleration rate compensation filter time

Address: 0xF21A
Min.: 0 Unit: -
Max.: 500 Data type: UInt16
Default: 10 Change: In real time

Value Range:
0–500
Description
-

P2-27 Overvoltage suppression in vector control mode

Address: 0xF21B
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: In real time

Value Range:
0: Disabled
1: Enabled

Description
-

P2-28 Cut-off frequency of torque filter

Address: 0xF21C

Min.:	50	Unit:	Hz
Max.:	1000	Data type:	UInt16
Default:	500	Change:	At stop

Value Range:
50 Hz to 1000 Hz
Description
-

P2-29 Synchronous motor initial angle detection current

Address: 0xF21D

Min.:	50	Unit:	-
Max.:	180	Data type:	UInt16
Default:	80	Change:	In real time

Value Range:
50–180
Description
-

P2-30 Speed loop parameter auto-calculation

Address: 0xF21E

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled
Description
-

P2-31 Expected speed loop bandwidth (high speed)

Address: 0xF21F

Min.:	0	Unit:	Hz
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0 Hz to 3 Hz

Description
-

P2-32 Expected speed loop bandwidth (low speed)

Address: 0xF220
Min.: 1 Unit: Hz
Max.: 10000 Data type: UInt16
Default: 100 Change: In real time

Value Range:
1 Hz to 10000 Hz
Description
-

P2-33 Expected speed loop bandwidth (zero speed)

Address: 0xF221
Min.: 1 Unit: Hz
Max.: 10000 Data type: UInt16
Default: 100 Change: In real time

Value Range:
1 Hz to 10000 Hz
Description
-

P2-34 Expected speed loop damping ratio (unchanged generally)

Address: 0xF222
Min.: 0.1 Unit: -
Max.: 65 Data type: UInt16
Default: 1 Change: In real time

Value Range:
0.1 to 65.000
Description
-

P2-35 System inertia (equivalent to the start time)

Address: 0xF223
Min.: 0.001 Unit: s
Max.: 50 Data type: UInt16
Default: 0.1 Change: At stop

Value Range:
0.001s to 50.000s

Description
-

P2-36 Single motor inertia (kg*m²)

Address: 0xF224
Min.: 0.001 Unit: kg*m²
Max.: 50 Data type: UInt16
Default: 0.001 Change: At stop

Value Range:
0.001 kg*m² to 50.000 kg*m²

Description
-

P2-37 Inertia auto-tuning maximum frequency

Address: 0xF225
Min.: 20 Unit: %
Max.: 100 Data type: UInt16
Default: 80 Change: At stop

Value Range:
20% to 100%

Description

P2-38 Inertia auto-tuning acceleration time

Address: 0xF226
Min.: 1 Unit: s
Max.: 50 Data type: UInt16
Default: 10 Change: At stop

Value Range:
1.0s to 50.0s

Description

P2-39 Bandwidth 1 of speed loop dynamic optimization test

Address: 0xF227
Min.: 1 Unit: Hz
Max.: 200 Data type: UInt16
Default: 5 Change: Unchangeable

Value Range:
1.0 Hz to 200.0 Hz

Description

P2-40 Bandwidth 2 of speed loop dynamic optimization test

Address: 0xF228

Min.:	1	Unit:	Hz
Max.:	200	Data type:	UInt16
Default:	10	Change:	Unchangeable

Value Range:

1.0 Hz to 200.0 Hz

Description

P2-41 Bandwidth 3 of speed loop dynamic optimization test

Address: 0xF229

Min.:	1	Unit:	Hz
Max.:	100	Data type:	UInt16
Default:	15	Change:	Unchangeable

Value Range:

1.0 Hz to 100.0 Hz

Description

P2-42 Bandwidth 4 of speed loop dynamic optimization test

Address: 0xF22A

Min.:	1	Unit:	Hz
Max.:	200	Data type:	UInt16
Default:	20	Change:	Unchangeable

Value Range:

1.0 Hz to 200.0 Hz

Description

P2-43 Inertia auto-tuning and dynamic speed reference

Address: 0xF22B

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	At stop

Value Range:

0–100

Description

P2-44 Rotor time constant check

Address: 0xF22C

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0: Disabled

1: Enabled

Description

P2-45 Torque amplitude of rotor time constant check

Address: 0xF22D

Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	30	Change:	Unchangeable

Value Range:

10% to 100%

Description

P2-46 Number of times of rotor time constant check

Address: 0xF22E

Min.:	1	Unit:	-
Max.:	6	Data type:	UInt16
Default:	3	Change:	Unchangeable

Value Range:

1 to 6

Description

P2-47 Inertia auto-tuning

Address: 0xF22F

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Enabled

Description

P2-48 Speed loop bandwidth during inertia auto-tuning

Address: 0xF230

Min.:	0.1	Unit:	Hz
Max.:	100	Data type:	UInt16
Default:	10	Change:	At stop

Value Range:

0.1 Hz to 100.0 Hz

Description

P2-49 Back EMF calculation

Address: 0xF231

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0: Disabled

1: Enabled

Description

P2-50 Inertia auto-tuning mode

Address: 0xF232

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Acceleration/Deceleration mode

1: Triangular wave mode

Description

P2-51 Inertia auto-tuning acceleration/deceleration coefficient

Address: 0xF233

Min.:	0.1	Unit:	-
Max.:	10	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0.1–10.0
Description

P2-52 Decoupling control

Address:	0xF234		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled
Description

P2-53 Generating power limit

Address:	0xF235		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled
Description

P2-54 Power limit during generating

Address:	0xF236		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	20	Change:	At stop

Value Range:
0.0% to 200.0%
Description

P2-55 Flux closed loop and torque linearity optimization in FVC mode

Address:	0xF237		
Min.:	0	Unit:	-
Max.:	1111	Data type:	UInt16
Default:	10	Change:	At stop

Value Range:

Ones (position): Flux closed loop in torque control mode
0: Disabled
1: Enabled
Tens (position): Flux closed loop in speed control mode
0: Disabled
1: Enabled
Hundreds (position): Torque upper limit and torque linearity in speed control mode
0: Disabled
1: Enabled
Description

P2-56 AC drive output current upper limit

Address:	0xF238		
Min.:	0	Unit:	%
Max.:	170	Data type:	UInt16
Default:	150	Change:	At stop

Value Range:
0.0% to 170.0%
Description

6.4 P3 V/f Control Parameters

P3-00 V/f curve setting

Address:	0xF300		
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Linear V/f curve
1: Multi-point V/f curve
2: Square V/f curve
3: 1.2-power V/f curve
4: 1.4-power V/f curve
6: 1.6-power V/f curve
8: 1.8-power V/f curve
10: V/f complete separation mode
11: V/f half separation mode
Description

0: Linear V/f curve
Under the rated frequency, the output voltage of the AC drive changes linearly with the output frequency. This curve is suitable for general mechanical drive applications such as large-inertia fan acceleration, punch presses, centrifuges, and water pumps.
1: Multi-point V/f curve
The frequency ranges from 0.00 Hz to the rated motor frequency. The range of the voltage points is 0.0% to 100.0%, which corresponds to the range of 0 V to the rated motor voltage. The multi-point V/f curve references are typically determined based on load of the motor. Ensure that the following conditions are met: P3-03 ≤ P3-05 ≤ P3-07.
2: Square V/f curve
Under the rated frequency, the output voltage changes with the output frequency of the AC drive according to the 2-power curve. This curve is suitable for applications with light loads that seldom change, such as fans and water pumps.
3: 1.2-power V/f curve
Under the rated frequency, the output voltage changes with the output frequency of the AC drive according to the 1.2-power curve.
4: 1.4-power V/f curve
Under the rated frequency, the output voltage changes with the output frequency of the AC drive according to the 1.4-power curve.
6: 1.6-power V/f curve
Under the rated frequency, the output voltage changes with the output frequency of the AC drive according to the 1.6-power curve.
8: 1.8-power V/f curve
Under the rated frequency, the output voltage changes with the output frequency of the AC drive according to the 1.8-power curve.
10: V/f complete separation mode
The output frequency and output voltage of the AC drive are independent of each other. The output frequency is determined by the frequency source, and the output voltage is determined by voltage source for V/f separation. This curve is generally applicable to scenarios such as motor torque control.
11: V/f half separation mode
In this mode, the voltage (V) is proportional to the frequency (f). The relationship between V and f can be set by the voltage source, and it is also related to the rated motor voltage and rated motor frequency in group P1. Assume that the voltage source input is X (0 to 100%), the relationship between V and f is as follows: V/f = 2 x X x (Rated motor voltage)/(Rated motor frequency)

P3-01 **Torque boost**
Address: 0xF301

Min.:	0	Unit:	%
Max.:	30	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 30.0%

Description

The torque boost function generally applies to the AC drive at low frequency. The output torque of the AC drive in V/f control mode is proportional to the frequency. Under the condition of low frequency, the torque of the motor is very low when the motor runs at low speed. This parameter is used to increase the output voltage of the AC drive, therefore increasing the current and output torque.
Set this parameter to a proper value to avoid triggering the overload protection mistakenly.

P3-02 Cutoff frequency of torque boost

Address:	0xF302		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	50	Change:	At stop

Value Range:

0.00 Hz to P0-10

Description

When the running frequency reaches the cutoff frequency of torque boost, the torque boost function is disabled.

P3-03 Multi-point V/f frequency 1

Address:	0xF303		
Min.:	0	Unit:	Hz
Max.:	P3-05	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.00 Hz to P3-05

Description

This parameter defines frequency 1 in the multi-point V/f curve.

P3-04 Multi-point V/f voltage 1

Address:	0xF304		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0% to 100.0%

Description

This parameter defines voltage 1 in the multi-point V/f curve.

P3-05 Multi-point V/f frequency 2

Address:	0xF305		
Min.:	P3-03	Unit:	Hz
Max.:	P3-07	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

P3-03 to P3-07

Description

This parameter defines frequency 2 in the multi-point V/f curve.

P3-06 Multi-point V/f voltage 2

Address:	0xF306		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0% to 100.0%

Description

This parameter defines voltage 2 in the multi-point V/f curve.

P3-07 Multi-point V/f frequency 3

Address:	0xF307		
Min.:	P3-05	Unit:	Hz
Max.:	P1-04	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

P3-05 to P1-04

Description

This parameter defines frequency 3 in the multi-point V/f curve.

P3-08 Multi-point V/f voltage 3

Address:	0xF308		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0% to 100.0%

Description
This parameter defines voltage 3 in the multi-point V/f curve.

P3-09 V/f slip compensation gain

Address:	0xF309		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0% to 200.0%
Description
In V/f mode, increasing the output frequency compensates for the motor speed deceleration. A higher gain indicates a higher compensation frequency. However, an excessively high gain can incur overcompensation.

P3-10 V/f over-excitation gain

Address:	0xF30A		
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	64	Change:	In real time

Value Range:
0 to 200
Description
A larger over-excitation gain indicates better suppression effect. When a braking resistor, braking unit, or energy feedback unit is used, set this parameter to 0. Otherwise, overcurrent may occur during operation.

P3-11 V/f oscillation suppression gain

Address:	0xF30B		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0–100
Description
A larger oscillation gain indicates better suppression effect.

P3-12 Oscillation suppression gain mode

Address:	0xF30C		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16

Default: 3 Change: At stop

Value Range:

0: Inactive
1: Reserved
2: Reserved
3: Active

Description

In V/f mode, speed and current oscillation typically occurs when the motor runs at low frequency, which may lead to overcurrent of the AC drive. In this case, you can enable this function to eliminate oscillation.

P3-13 Voltage source for V/f separation

Address: 0xF30D
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: Digital setting (P3- 14)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Multi-reference
6: Simple PLC
7: PID
8: Communication (1000H)

Description

This parameter sets the target voltage in V/f separation mode.
0: Digital setting (P3-14)
The V/f separation voltage is set by P3-14 (voltage digital setting of V/f separation).
1: AI1
The V/f separation voltage is input by current or voltage signal through the AI1.
The frequency is calculated according to the AI curve.
2: AI2
The V/f separation voltage is input by current or voltage signal through the AI2.
The frequency is calculated according to the AI curve.
3: AI3
The V/f separation voltage is input by current or voltage signal through the AI3.
The frequency is calculated according to the AI curve.

4: The Pulse reference (DI5)
The V/f separation voltage is set through the DI5. The frequency is calculated based on the curve of the relationship between the pulse frequency and running frequency.
5: Multi-reference
In multi-reference mode, different combinations of DI terminal states correspond to different reference values. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values (percentage x maximum frequency) of parameters in group FC.
6: Simple PLC
The V/f separation voltage is set by simple PLC. For details, see the function description of simple PLC.
7: PID
The V/f separation voltage is set by PID. For details, see the PID function description.
8: Communication
The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to communicate with the host controller. This mode applies to remote control or centralized control systems of multiple equipment.

P3-14 Digital setting of voltage for V/f separation

Address:	0xF30E		
Min.:	0	Unit:	V
Max.:	P1-02	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 V to P1-02
Description
The reference value is from 0 V to the rated voltage.

P3-15 Voltage rise time of V/f separation

Address:	0xF30F		
Min.:	0	Unit:	s
Max.:	1000	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 1000.0s
Description
Indicates the time required for the output voltage to increase from 0 to the set V/f separation voltage.

P3-16 Voltage decline time of V/f separation

Address: 0xF310

Min.:	0	Unit:	s
Max.:	1000	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 1000.0s

Description

Indicates the time required for the output voltage to decline from the set V/f separation voltage to 0.

P3-17 Stop mode selection for V/f separation

Address: 0xF311

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Frequency and voltage decline to 0.

1: Frequency declines to 0 after voltage declines to 0.

Description

0: Frequency and voltage decline to 0.

1: Frequency declines after voltage declines to 0.

P3-18 V/f overcurrent stall action current

Address: 0xF312

Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	150	Change:	At stop

Value Range:

50% to 200%

Description

When the motor current reaches the value of this parameter, the AC drive starts the overcurrent stall function. The default value is 150%, indicating 1.5 times the rated current of the AC drive.

P3-19 V/f overcurrent stall

Address: 0xF313

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: Disabled
1: Enabled

Description

Determines whether the V/f overcurrent stall function is enabled.

P3-20 V/f overcurrent stall suppression gain

Address:	0xF314		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0–100

Description

When the current exceeds the overcurrent stall action current, the overcurrent stall suppression function is triggered, and the output frequency decreases. When the current falls below the overcurrent stall threshold, the output frequency increases to the target frequency, and the actual acceleration time prolongs automatically. A larger parameter value indicates better suppression effect.

P3-21 Action current compensation coefficient for V/f speed multiplying overcurrent stall

Address:	0xF315		
Min.:	50	Unit:	-
Max.:	200	Data type:	UInt16
Default:	50	Change:	At stop

Value Range:

50 to 200

Description

This parameter reduces the overcurrent stall action current at high speed. It is invalid when set to 50%. The recommended value for F3-18 in the flux weakening area is 100%.

P3-22 Overvoltage stall action voltage in V/f mode

Address:	0xF316		
Min.:	200	Unit:	V
Max.:	2000	Data type:	UInt16
Default:	770	Change:	At stop

Value Range:

200.0 V to 2000.0 V

Description

When the bus voltage reaches the value of this parameter, the AC drive starts overvoltage stall protection.

P3-23 Overvoltage stall in V/f mode

Address: 0xF317

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: Disabled

1: Enabled

Description

0: Disabled

1: Enabled (default)

The function of P3-23 is the same as that of P9-04.

When a braking resistor, braking unit, or energy feedback unit is used, set this parameter to 0. Otherwise, the deceleration time may be prolonged.

P3-24 Frequency gain for overvoltage stall suppression in V/f mode

Address: 0xF318

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:

0–100

Description

Increasing P3-24 will improve the control effect of the bus voltage, but the output frequency will fluctuate. If the output frequency fluctuates greatly, reduce P3-24 appropriately.

P3-25 Voltage gain for overvoltage stall suppression in V/f mode

Address: 0xF319

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:

0–100

Description

This parameter is used to suppress the bus voltage. Increasing the parameter value reduces the overshoot of the bus voltage.

P3-26 Frequency rise threshold during overvoltage stall

Address: 0xF31A

Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16

Default: 5 Change: At stop

Value Range:

0–50

Description

The running frequency may increase when overvoltage stall suppression is enabled. This parameter limits the increase of the running frequency.

P3-27 Slip compensation time constant

Address: 0xF31B

Min.:	0.1	Unit:	Hz
Max.:	10	Data type:	UInt16
Default:	0.5	Change:	In real time

Value Range:

0.1 Hz to 10.0 Hz

Description

This parameter defines the time constant of the slip compensation frequency. The larger the time constant is, the more stable the frequency of the slip compensation is, and the less the frequency is affected by load disturbance and noise. However, the response to load changes will be slower.

P3-28 V/f parameter setting inertia coefficient

Address: 0xF31C

Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	0.1	Change:	At stop

Value Range:

0.00 to 10.00

Description

P3-29 Minimum motoring torque current

Address: 0xF31D

Min.:	10	Unit:	-
Max.:	100	Data type:	UInt16
Default:	50	Change:	At stop

Value Range:

10 to 100

Description

P3-30 Maximum generating torque current

Address: 0xF31E
Min.: 10 Unit: -
Max.: 100 Data type: UInt16
Default: 20 Change: At stop
Value Range:
10 to 100
Description

P3-31 Automatic frequency rise Kp

Address: 0xF31F
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 50 Change: In real time
Value Range:
0–100
Description

P3-32 Automatic frequency rise Ki

Address: 0xF320
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 50 Change: In real time
Value Range:
0–100
Description

P3-33 Online torque compensation gain

Address: 0xF321
Min.: 80 Unit: -
Max.: 150 Data type: UInt16
Default: 100 Change: At stop
Value Range:
80–150

Description

In V/f mode, P3-01 increases the output voltage of the AC drive according to a fixed curve. When P3-33 is larger than or equal to 100 or P3-01 is set to 0, the automatic torque boost compensation is an additional boost value related to the load plus the output voltage set by P3-01. The greater the P3-33, the greater the torque boost compensation. When P3-33 is smaller than 100 and P3-01 is set to a non-zero value, the automatic torque boost compensation is disabled.

6.5 P4 Input Terminal

P4-00 DI1 function selection

Address:	0xF400		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/Three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

0: No function
The DI terminal has no function.
1: Forward run
The operation mode of the AC drive is forward run. FWD indicates forward run.
In two-wire mode 1 (P4-11 = 0), activating the terminal sets the AC drive to forward run.
In two-wire mode 2 (P4-11 = 1), activating the terminal gives a running command.

2: Reverse run
The operation mode of the AC drive is reverse run. REV indicates reverse run.
In three-wire mode 1 (P4-11 = 2), activating the terminal sets the AC drive to reverse run.
In three-wire mode 2 (P4-11 = 3), activating the terminal sets the forward/reverse run direction.
3: Three-wire operation control
The AC drive operation mode is three-wire control mode. To set the running command through the terminal, set P4-11 (Terminal control mode) to 2 (Three-wire mode 1) or 3 (three-wire mode 2), and set this parameter to 3. The three-wire control modes include three-wire mode 1 and three-wire mode 2.
4: Forward jog (FJOG)
The terminal is used to set the AC drive to FJOG mode. In the jog mode, the AC drive runs at low speed for a short time, which is generally used for maintenance and commissioning of field equipment.
5: Reverse jog (RJOG)
The terminal is used to set the AC drive to RJOG mode.
6: Terminal UP
The terminal is used to increase the frequency when the frequency is set through the terminal. When the terminal is active, the effect is equivalent to holding down the increment key. When the terminal is inactive, the effect is equivalent to releasing the increment key.
7: Terminal DOWN
The terminal is used to decrease the frequency when the frequency is set through the terminal. When the terminal is active, the effect is equivalent to holding down the decrement key. When the terminal is inactive, the effect is equivalent to releasing the decrement key.
8: Coast to stop
Once the AC drive receives a stop command, it immediately stops output and the load then coasts to stop based on the mechanical inertia. The AC drive stops by stopping the output. At this time, the power supply of the motor is cut off and the drive system is in a free braking state. Since the stop time is determined by the inertia of the system, this is also called inertia stop.
9: Fault reset (RESET). Activating the terminal resets the AC drive upon a fault. This function is the same as that of the STOP/RES key on the operating panel. This function can remotely reset the AC drive upon a fault.
10: Running pause
With this function enabled, the AC drive decelerates to stop with all running parameters memorized (such as PLC, wobble, and PID parameters). When the terminal is inactive, the AC drive resumes its status before stop.
11: NO input of external fault
The AC drive reports Err15 upon receiving an external signal.

12-15: Multi-reference terminals 1–4
The AC drive selects the multi-reference as the main frequency. The setting of 16 speeds or 16 references can be implemented through combinations of 16 states of these four terminals. This function is applicable to applications where continuous adjustment of the AC drive running frequency is not required and only several frequency values are required.
16-17: Terminal 1 to 2 for acceleration/deceleration selection
Four groups of acceleration and deceleration time can be switched through four states of these two terminals. The acceleration time indicates the time required by the AC drive to accelerate from 0 Hz to the acceleration/deceleration base frequency (F0-25). The deceleration time indicates the time required by the AC drive to decelerate from the acceleration/deceleration base frequency (F0-25) to 0 Hz.
18: Frequency source switchover
This function enables selection of different frequency reference input mode. The frequency reference is set by F0-07 (Final frequency reference setting selection).
19: UP and DOWN setting clear
When the main frequency is set through the operating panel and this terminal is active, the frequency set through the UP/DOWN keys on the operating panel can be cleared, and the frequency will be reset to the value of F0-08.
20: Command source switchover terminal 1
When the running command is set through the terminal (P0-02=1) and this terminal is active, the control mode can be switched between the terminal and the operating panel.
When the running command is set through communication (P0-02 = 2) and this terminal is active, the control mode can be switched between the communication and the operating panel.
21: Acceleration/Deceleration inhibition
The terminal is used to keep the AC drive at the current running frequency regardless of changes of the external input frequency (unless a stop command is received).
22: PID pause
PID is invalid temporarily. The AC drive maintains the current output frequency without supporting PID adjustment of the frequency source.
23: PLC state reset
The terminal is used to restore the AC drive to the initial state of the simple PLC.
24: Wobble pause
In the wobble process, when this terminal is active, the wobble function pauses (the AC drive outputs at the center frequency).
25: Counter input
In the count process, when the terminal is active, a count pulse is input.

26: Counter reset
In the count process, when the terminal is active, the counter status is cleared.
27: Length count input
In the fixed length process, when the terminal is active, the length count is input.
28: Length reset
In the fixed length process, when the terminal is active, the length is cleared.
29: Torque control inhibited
When the terminal is active, the AC drive switches from the torque control mode to the speed control mode. When the terminal is inactive, the AC drive switches back to the
torque control mode:
30: Pulse input
When DI5 is used as the pulse input terminal, DI5 must be allocated with this function.
32: Immediate DC braking
The terminal is used to directly switch the AC drive to the DC braking state. DC braking means that the AC drive outputs DC to the stator winding of the asynchronous motor to form a static magnetic field,
enabling the motor to brake with energy consumption. In this state, the rotor cuts the static magnetic field to generate braking torque, which stops the motor quickly.
33: NC input of external fault
The AC drive reports Err15 upon receiving an external signal.
34: Frequency modification enabled
When the terminal is active, the frequency can be modified. When the terminal is inactive, the frequency cannot be modified.
35: PID action direction reversal
The PID action direction is reversed to the direction set by PA-03 (PID action direction).
36: External stop terminal 1
When the running command is set through the operating panel (P0-02 = 0), this terminal is used to stop the AC drive, which functions the same as the STOP/RES key on the operating panel.
37: Command source switchover terminal 2
This function enables the switchover between the terminal control and the communication control.
If the running command is given by terminal, the terminal being active switches the system to the communication control mode.
If the running command is given by communication, the terminal being active switches the system to the terminal control mode.

38: PID integral pause
The integral adjustment function pauses when the terminal is active. However, the proportional and derivative adjustment functions are still valid.
39: Switchover between main frequency reference X and preset frequency
This function is used to switch from main frequency reference X to P0-08 (Preset frequency).
40: Switchover between auxiliary frequency reference Y and preset frequency This function is used to switch from auxiliary frequency reference Y to P0-08 (Preset frequency).
41: Reserved
42: Position lock enabled
When the terminal is active, the AC drive decelerates to 0 Hz and then enters the position lock state.
43: PID parameter switchover
If PID parameters are switched over through DI (PA-18 = 1), the following conditions are true. When the terminal is inactive, the PID parameters are PA-05 to PA-07 (proportional gain Kp1, integral time Ti1, and differential time Td1). When the terminal is active, the PID parameters are PA-15 to PA-17 (PID gain Kp2, integral time Ti2, and differential time Td2).
44: User-defined fault 1
When the AC drive reports Err27, the AC drive will action according to the value of P9-49 (Fault protection action selection).
45: User-defined fault 2
When the AC drive reports Err28, the AC drive will action according to the value of P9-49 (Fault protection action selection).
46: Switchover between speed control and torque control
The terminal is used to switch between the speed control mode and the torque control mode.
When A0-00 (speed/torque control mode) is set to 0, the torque control mode is used when the terminal is active, and the speed control mode is used when the terminal is inactive.
When A0-00 (speed/torque control mode) is set to 1, the speed control mode is used when the terminal is active, and
torque control mode is used when the terminal is inactive.

47: Emergency stop
When the system is in the emergency state, the AC drive decelerates according to P8-55 (Terminal deceleration time for emergency stop). When the deceleration time for emergency stop is 0s in V/f mode, the AC drive decelerates according to the minimum unit time. The input terminal does not need to be kept in the closed state. Even if it stays closed only for a short moment, the AC drive will come to an emergency stop. Different from general deceleration, if the emergency stop input terminal is opened after the deceleration time for emergency stop expires and the running signal is still active on the AC drive terminal, the AC drive will not restart. To restart the AC drive in this case, disconnect the running terminal and input the running command.
48: External stop terminal 2
The terminal is used to make the AC drive decelerate to stop in any control mode (operating panel, terminal, or communication control). In this case, the deceleration time is fixed to deceleration time 4 (P8-08).
49: Deceleration DC braking
The AC drive decelerates to P6-11 (Shutdown DC injection braking start frequency) and then enters the DC braking state.
50: Clear the current running time
The terminal is used to clear the current operation time of the AC drive. If the current running time is less than the set value (greater than 0) of P8-53 (Current running time reached), and the terminal is active, the current running timing is cleared. If the current running time is greater than the set value (greater than 0) of P8-53, and the terminal is active, the current running time is not cleared.
51: Two-wire/Three-wire control switchover
The terminal is used to switch between two-wire control and three-wire control. When P4-11 is set to 0 (Two-wire mode 1) and the terminal is active, the AC drive switches to three-wire mode 1. When the terminal is inactive, two-wire mode 1 is used.
When P4-11 is set to 1 (Two-wire mode 2) and the terminal is active, the AC drive switches to three-wire mode 2.
When P4-11 is set to 2 (Three-wire mode 1) and the terminal is active, the AC drive switches to two-wire mode 1.
When P4-11 is set to 3 (Three-wire mode 2) and the terminal is active, the AC drive switches to two-wire mode 2.
52: Electromagnetic shorting
When the terminal is active, the AC drive enters the electromagnetic shorting state.
53 Thickness overlaying
When the roll diameter is calculated based on accumulative thickness, this terminal records the number of revolutions.

54: Roll diameter reset
When this terminal is active, the initial roll diameter is reset. The initial roll diameter must be reset when the roll is replaced in the tension mode.
55: Initial roll diameter 1
56: Initial roll diameter 2
In the tension mode, B0-11/12/13 is selected as the initial roll diameter through terminal combinations. When these two terminals are inactive, the minimum winding diameter (B0-09) is used as the initial roll diameter. When only the terminal for initial roll diameter 1 selection is active, B0-11 is used as the initial roll diameter. When only the terminal for initial roll diameter 2 selection is active, B0-12 is used as the initial roll diameter. When these two terminals are active, B0- 13 is used as the initial roll diameter.
57: Pre-drive
When the terminal is active, the AC drive switches to the pre-drive speed control mode. This function is used to synchronize the linear speed for the axis that requires automatic reel replacement when the tension mode is used. When the terminal is deactivated after reel replacement, the tension control can function properly.
58: Winding/Unwinding switchover
This terminal is used for winding/unwinding switchover in the tension mode.
59: Roll diameter calculation disabled
When this terminal is active, the roll diameter calculation is disabled. In the tension mode, to avoid influence on the winding diameter calculation for automatic roll replacement and pre-drive, winding diameter calculation can be disabled.
60: Exit tension mode
This terminal is used to exit the tension control mode.
61: Terminal tension rise
When the terminal is activated, the tension torque is increased by certain ratio. After the terminal is deactivated, the boost part will be canceled gradually based on time.
62: Thickness selection 1
63: Thickness selection 2
In the tension mode, B0-32/33/34/35 is selected as the material thickness through terminal combinations. When these two terminals are inactive, B0-32 is selected as the material thickness. When only the terminal for thickness selection 1 is active, B0-33 is selected as the material thickness. When only the terminal for thickness selection 2 is active, B0-34 is selected as the material thickness. When these two terminals are active, B0-35 is selected as the material thickness.
64-89: Reserved
90: Water cooling system fault
When the water cooling system of T13 models encounters a fault, the terminal receives the signal and the AC drive reports the E64 alarm.

91: Low liquid level fault
When the liquid in the water tank of T13 models is too low, the terminal receives the signal and the AC drive reports the A63 alarm.
92: Revolution count reset
The number of revolutions counted will be cleared after this terminal is activated.
93: Reserved

P4-01 DI2 function selection

Address:	0xF401		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	4	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI2 terminal. The setting is similar to that of P4-00.

P4-02 DI3 function selection

Address:	0xF402		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	9	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI3 terminal. The setting is similar to that of P4-00.

P4-03 DI4 function selection

Address:	0xF403		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	12	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI4 terminal. The setting is similar to that of P4-00.

P4-04 DI5 function selection

Address:	0xF404		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	13	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI5 terminal. The setting is similar to that of P4-00.

P4-05 DI6 function selection

Address:	0xF405		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI6 terminal. The setting is similar to that of P4-00.

P4-06 DI7 function selection

Address:	0xF406		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI7 terminal. The setting is similar to that of P4-00.

P4-07 DI8 function selection

Address:	0xF407		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI8 terminal. The setting is similar to that of P4-00.

P4-08 DI9 function selection

Address:	0xF408		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11:NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16:Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25:Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enable
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI9.
The setting is similar to that of P4-00.

P4-09 DI10 function selection

Address:	0xF409		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Motor selection
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Winding diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of DI10.
The setting is similar to that of P4-00.

P4-10 DI filter time

Address:	0xF40A		
Min.:	0	Unit:	s
Max.:	1	Data type:	UInt16
Default:	0.01	Change:	In real time

Value Range:

0.000s to 1.000s

Description

It is used to set the software filter time of DI terminal status. If DI terminals are liable to be interfered, which may cause malfunction, increase the value of this parameter to enhance the anti-interference capability. However, increasing the DI filter time will slow the response of DI terminals.

P4-11 Terminal control mode

Address:	0xF40B		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Two-wire mode 1

1: Two-wire mode 2

2: Three-wire mode 1

3: Three-wire mode 2

Description

This parameter defines the mode in which the AC drive is controlled by external terminals.

0: Two-wire mode 1

Two DI terminals are connected. One is used to start/stop the AC drive in forward run mode, and the other is used to start/stop the AC drive in reverse run mode.

1: Two-wire mode 2

Two DI terminals are connected. One is used to start/stop the AC drive, and the other is used to control the running direction.

2: Three-wire mode 1

Three DI terminals are connected. One is used to start/stop the AC drive, and the other two are used to control the running direction.

3: Three-wire mode 2

Three DI terminals are connected. One is used to start the AC drive, one is used to stop the AC drive, and the last one is used to control the running direction.

P4-12 Terminal UP/DOWN change rate

Address:	0xF40C		
Min.:	0.001	Unit:	Hz/s
Max.:	65.535	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.001 Hz/s to 65.535 Hz/s

Description

This parameter defines the change rate when the frequency is adjusted through terminal UP/DOWN.
When the DI terminal function is set to the function of terminal UP or DOWN, this parameter must be set (values of P4-00 to P4-09 are 6 or 7).

P4-13 AI curve 1 minimum input

Address:	0xF40D		
Min.:	-10	Unit:	V
Max.:	P4-15	Data type:	Int16
Default:	-10	Change:	In real time

Value Range:
-10.00 V to P4-15
Description
When the main frequency is set by analog input, the AI terminals are used as frequency sources. Five types of AI curves can be set for each AI terminal. The AI curve is used to set the mapping between the analog input voltage (or current) and the percentage corresponding to the maximum frequency (P0-10). The x axis of the AI curve represents the analog input voltage or current. The y axis represents the set value corresponding to the analog input, that is, the percentage corresponding to the maximum frequency (P0-10). Five AI curves are provided. Curves 1 to 3 are two-point curves, and their relevant parameters are P4-13 to P4-27. Curves 4 and 5 are four-point curves, and their relevant parameters are A6-00 to A6-15. The two points on curves 1 to 3 are the minimum input point and the maximum input point. P4-13 corresponds to the x axis of the AI curve 1 minimum input, that is, the minimum analog input voltage or current.

P4-14 Percentage corresponding to AI curve 1 minimum input

Address:	0xF40E		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	-100	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
P4-14 corresponds to the y axis of the AI curve 1 minimum input, that is, the set value corresponding to the minimum analog input.

P4-15 AI curve 1 maximum input

Address:	0xF40F		
Min.:	P4-13	Unit:	V
Max.:	10	Data type:	Int16

Default: 10 Change: In real time

Value Range:

P4-13 to 10.00 V

Description

P4-15 corresponds to the x axis of AI curve 1 maximum input, that is, the maximum analog input voltage or current.

P4-16 Percentage corresponding to AI curve 1 maximum input

Address: 0xF410

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	100	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

P4-16 corresponds to the y axis of the AI curve 1 maximum input, that is, the set value corresponding to the maximum analog input.

P4-17 AI1 fitter time

Address: 0xF411

Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.00s to 10.00s

Description

Indicates the software filter time of AI1.

The longer the AI filter time, the stronger the anti-interference ability and the slower the response speed to the analog detection. The shorter the AI filter time, the weaker the anti-interference ability and the faster the response speed to analog detection.

When the field analog signal is easy to be interfered, the stability of the analog signal can be enhanced by increasing the AI filtering time.

P4-18 AI curve 2 minimum input

Address: 0xF412

Min.:	-10	Unit:	V
Max.:	P4-20	Data type:	Int16
Default:	-10	Change:	In real time

Value Range:

-10.00 V to P4-20

Description
P4-18 corresponds to the x axis of the AI curve 2 minimum input, that is, the minimum analog input voltage or current.

P4-19 Percentage corresponding to AI curve 2 minimum input

Address:	0xF413		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	-100	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
P4-19 corresponds to the y axis of the AI curve 2 minimum input, that is, the set value corresponding to the minimum analog input.

P4-20 AI curve 2 maximum input

Address:	0xF414		
Min.:	P4-18	Unit:	V
Max.:	10	Data type:	Int16
Default:	10	Change:	In real time

Value Range:
P4-18 to 10.00 V
Description
P4-20 corresponds to the x axis of the AI curve 2 maximum input, that is, the maximum analog input voltage or current.

P4-21 Percentage corresponding to AI curve 2 maximum input

Address:	0xF415		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	100	Change:	In real time

Value Range:
-100.0% to 100.0%
Description
P4-21 corresponds to the y axis of AI curve 2 maximum input, that is, the set value corresponding to the maximum analog input.

P4-22 AI2 fitter time

Address:	0xF416		
Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16

Default: 0.1 Change: In real time

Value Range:

0.00s to 10.00s

Description

Indicates the software filter time of AI2.

The longer the AI filter time, the stronger the anti-interference ability and the slower the response speed to the analog detection. The shorter the AI filter time, the weaker the anti-interference ability and the faster the response speed to analog detection.

When the field analog signal is easy to be interfered, the stability of the analog signal can be enhanced by increasing the AI filtering time.

P4-23 AI curve 3 minimum input

Address: 0xF417

Min.: -10 Unit: V

Max.: P4-25 Data type: Int16

Default: -10 Change: In real time

Value Range:

-10.00 V to P4-25

Description

P4-23 corresponds to the x axis of the AI curve 3 minimum input, that is, the minimum analog input voltage or current.

P4-24 Percentage corresponding to AI curve 3 minimum input

Address: 0xF418

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: -100 Change: In real time

Value Range:

-100.0% to +100.0%

Description

P4-24 corresponds to the y axis of AI curve 3 minimum input, that is, the set value corresponding to the minimum analog input.

P4-25 AI curve 3 maximum input

Address: 0xF419

Min.: P4-23 Unit: V

Max.: 10 Data type: Int16

Default: 10 Change: In real time

Value Range:

P4-23 to 10.00 V

Description

P4-25 corresponds to the x axis of AI curve 3 maximum input, that is, the maximum analog input voltage or current.

P4-26 Percentage corresponding to AI curve 3 maximum input

Address: 0xF41A

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	100	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

P4-26 corresponds to the y axis of AI curve 3 maximum input, that is, the set value corresponding to the maximum analog input.

P4-27 AI3 filter time

Address: 0xF41B

Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.00s to 10.00s

Description

Indicates the software filter time of AI3.

The longer the AI filter time, the stronger the anti-interference ability and the slower the response speed to the analog detection. The shorter the AI filter time, the weaker the anti-interference ability and the faster the response speed to analog detection.

When the field analog signal is easy to be interfered, the stability of the analog signal can be enhanced by increasing the AI filtering time.

P4-28 Pulse minimum input

Address: 0xF41C

Min.:	0	Unit:	kHz
Max.:	P4-30	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00 kHz to P4-30

Description

When the DI5 high-speed pulse is used to set the main frequency, the relationship curve between the pulse frequency and the frequency reference must be defined. The frequency reference is the percentage corresponding to the maximum frequency (P0-10). The x axis of the curve represents the DI5 pulse frequency and the y axis represents the percentage corresponding to the maximum frequency (P0-10). The curve is a two-point curve, which includes the minimum pulse input and maximum pulse input points.
P4-28 corresponds to the x axis of the minimum pulse input, that is, the minimum input frequency of the pulse.

P4-29 Percentage corresponding to pulse minimum input

Address: 0xF41D

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
P4-29 corresponds to the y axis of the minimum pulse input, that is, the set value corresponding to the minimum pulse input.

P4-30 Pulse maximum input

Address: 0xF41E

Min.:	P4-28	Unit:	kHz
Max.:	100	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:
P4-28 to 100.00 kHz
Description
P4-30 corresponds to the x axis of the maximum pulse input, that is, the maximum input frequency of the pulse.

P4-31 Percentage corresponding to pulse maximum input

Address: 0xF41F

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	100	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
P4-31 corresponds to the y axis of the maximum pulse input, that is, the set value corresponding to the maximum pulse input.

P4-32 Pulse filter time

Address: 0xF420

Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.00s to 10.00s

Description

Indicates the filter time of the frequency reference.

P4-33 AI curve selection

Address: 0xF421

Min.:	0x111	Unit:	-
Max.:	0x555	Data type:	UInt16
Default:	0x321	Change:	In real time

Value Range:

Ones: AI1

1: Curve 1 (2 points, see P4-13 to P4-16)

2: Curve 2 (2 points, see P4-18 to P4-21)

3: Curve 3 (2 points, see P4-23 to P4-26)

4: Curve 4 (4 points, see A6-00 to A6-07)

5: Curve 5 (4 points, see A6-08 to A6-15)

Tens: AI2

1: Curve 1 (2 points, see P4-13 to P4-16)

2: Curve 2 (2 points, see P4-18 to P4-21)

3: Curve 3 (2 points, see P4-23 to P4-26)

4: Curve 4 (4 points, see A6-00 to A6-07)

5: Curve 5 (4 points, see A6-08 to A6-15)

Hundreds: AI3

1: Curve 1 (2 points, see P4-13 to P4-16)

2: Curve 2 (2 points, see P4-18 to P4-21)

3: Curve 3 (2 points, see P4-23 to P4-26)

4: Curve 4 (4 points, see A6-00 to A6-07)

5: Curve 5 (4 points, see A6-08 to A6-15)

Description

The curves for AI1 to AI3 are set through the ones, tens, and hundreds positions of this parameter. The three AI terminals can be allocated with any of the five curves. When the main frequency is set by analog input, the AI terminals are used as frequency sources. Five types of different AI curves can be set for each AI terminal.

P4-34 Selection of AI smaller than the minimum input setting

Address: 0xF422

Min.:	0	Unit:	-
Max.:	0x111	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

Ones (position): AI1

0: Percentage corresponding to minimum input

1: 0.0%

Tens (position): AI2

0: Percentage corresponding to minimum input

1: 0.0%

Hundreds (position): AI3

0: Percentage corresponding to minimum input

1: 0.0%

Description

The settings for AI1 to AI3 less than minimum input are set through the ones, tens, and hundreds positions of this parameter. When the analog input voltage is less than the minimum input set by P4-13, the corresponding setting value is calculated according to the minimum input or 0.0% defined by this parameter.

P4-35 DI1 delay

Address:	0xF423		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 3600.0s

Description

This parameter defines the delay of the DI state change. The delay setting function is available only for DI1, DI2, and DI3 currently.

P4-36 DI2 delay

Address:	0xF424		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 3600.0s

Description

This parameter defines the delay of the DI state change. The delay setting function is available only for DI1, DI2, and DI3 currently.

P4-37 DI3 delay

Address:	0xF425		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 3600.0s

Description

This parameter defines the delay of the DI state change. The delay setting function is available only for DI1, DI2, and DI3 currently.

P4-38 DI valid mode selection 1

Address:	0xF426		
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones: DI1 valid mode selection
0: Active high
1: Active low
Tens: DI2 valid mode selection
0: Active high
1: Active low
Hundreds: DI3 valid mode selection
0: Active high
1: Active low
Thousands: DI4 valid mode selection
0: Active high
1: Active low
Ten thousands: DI5 valid mode selection
0: Active high
1: Active low

Description

The active mode for terminals DI1 to DI5 are set by ones, tens, hundreds, thousands, and ten thousands of this parameter.
0: Active high
The DI terminals (DI1 to DI5) are active when connected to COM and inactive when disconnected from COM.
1: Active low
The DI terminals (DI1 to DI5) are inactive when connected to COM and active when disconnected from COM.

P4-39 DI valid mode selection 2

Address:	0xF427		
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones: DI6 valid mode selection
0: Active high
1: Active low
Tens: DI7 valid mode selection
0: Active high
1: Active low
Hundreds: DI8 valid mode selection
0: Active high
1: Active low
Thousands: DI9 valid mode selection
0: Active high
1: Active low
Ten thousands: DI10 valid mode selection
0: Active high
1: Active low

Description

The active mode for terminals DI6 to DI10 are set by ones, tens, hundreds, thousands, and ten thousands of this parameter.
0: Active high
The DI terminals (DI6 to DI10) are active when connected to COM and inactive when disconnected from COM.
1: Active low
The DI terminals (DI6 to DI10) are inactive when connected to COM and active when disconnected from COM.

P4-42 AI input range selection

Address:	0xF42A		
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: -10 V to +10 V
1: 0 V to 10 V

Description

0: -10 V to +10 V, applicable to new control boards
1: 0 V to 10 V, applicable to old control boards

6.6 P5 Output Terminal

P5-01 **Expansion card relay output function selection**

Address:	0xF501		
Min.:	0	Unit:	-
Max.:	51	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: No output
1: Running
2: Fault output (stop upon fault)
3: Frequency-level detection FDT1 output
4: Frequency reached
5: Zero speed running (no output at stop)
6: Motor overload pre-warning
7: AC drive overload pre-warning
8: Set count value reached
9: Designated count value reached
10: Length reached
11: PLC cycle completed
12: Accumulative running time reached
13: Frequency limited
14: Torque limited
15: Ready for run

16: AI1 > AI2
17: Frequency upper limit reached
18: Frequency lower limit reached (operation related)
19: Undervoltage status output
20: Communication setting
21: Reserved
22: Reserved
23: Zero-speed running 2 (at stop)
24: Accumulative power-on time reached
25: Frequency-level detection FDT2 output
26: Frequency 1 reach output
27: Frequency 2 reach output
28: Current 1 reach output
29: Current 2 reach output
30: Timing reach output
31: AI1 input limit exceeded
32: AC drive output load loss
33: Reverse running
34: Zero current status
35: Module temperature reached
36: Output current limit exceeded
37: Frequency lower limit reached (having output at stop)
38: Alarm output (direct output at fault or alarm)
39: Current over-temperature pre-warning
40: Current running time reached
41: Fault output 2
42: Fault output 3

Description

This parameter is used to set the relay terminal function of the expansion card.
0: No output
The output terminal has no function.
1: Running
When the AC drive is running with output frequency (can be 0), the terminal outputs an active signal.
2: Fault output (stop upon fault)
When the AC drive stops upon fault, an active signal is output.
3: Frequency-level detection FDT1 output
When the running frequency is higher than the detected value, the DO outputs an active signal. When the running frequency is lower than the result of the detected value minus the FDT hysteresis value (P8-19 x P8-20), the active signal is canceled.

4: Frequency reached
When the running frequency of the AC drive is within a certain range (target frequency ± P8-21 x maximum frequency), the DO outputs an active signal.
5: Zero speed running (no output at stop)
When the output frequency is 0 during AC drive running, an active signal is output. When the AC drive is in the stop state, the signal is inactive.
6: Motor overload pre-warning
The AC drive determines whether the motor load exceeds the overload pre- warning threshold according to the overload pre-warning coefficient (P9-02) before performing the protection action. The terminal outputs an active signal when the overload pre-warning threshold is exceeded.
7: AC drive overload pre-warning
The terminal outputs an active signal 10s before the AC drive performs overload protection.
8: Set count value reached
The terminal outputs an active signal when the count value reaches the value of PB-08.
9: Designated count value reached
The terminal outputs an active signal when the count value reaches the value of PB-09.
10: Length reached
The terminal outputs an active signal when the detected actual length exceeds the value of PB-05.
11: Simple PLC cycle completed
The terminal outputs a pulse signal with the width of 250 ms when the simple PLC completes one cycle.
12: Accumulative running time reached
The terminal outputs an active signal when the accumulative running time of the AC drive exceeds the value of P8-17 (Accumulative power-on time threshold).
13: Frequency limited
The terminal outputs an active signal when the frequency reference exceeds the frequency upper or lower limit, and the output frequency of AC drive reaches the upper or lower limit.
14: Torque limited
The terminal outputs an active signal when the output torque of the AC drive reaches the toque limit in speed control mode.
15: Ready to run
The terminal outputs an active signal when the AC drive is ready for running without any fault after power-on.
16: AI1 > AI2
The terminal outputs an active signal when the AI1 input is higher than the AI2 input.

17: Frequency upper limit reached
The terminal outputs an active signal when the running frequency reaches the frequency upper limit (P0-12).
18: Frequency lower limit reached (no output at stop)
If P8-14 (running mode when frequency reference lower than lower limit) is set to 1 (stop), the terminal outputs an inactive signal no matter whether the running frequency reaches the frequency lower limit.
When P8-14 is set to 0 (run at the lower limit frequency) or 2 (run at zero speed) and the running frequency reaches the lower limit, the terminal outputs an active signal.
19: Undervoltage state
The terminal outputs an active signal when undervoltage occurs on the AC drive.
20: Communication setting
Whether the terminal is active or inactive is determined by communication address 0x2001.
21: Reserved
22: Reserved
23: Zero-speed running 2 (at stop)
When the output frequency is 0 during AC drive running, an active signal is output. When the AC drive stops, the active signal is retained.
24: Accumulative power-on time reached
The terminal outputs an active signal when the accumulative power-on time of the AC drive (P7-13) exceeds the value of P8-16 (Accumulative power-on time threshold).
25: Frequency-level detection FDT2 output
When the running frequency is higher than the detected value, the DO outputs an active signal. When the running frequency is lower than the result of the detected value minus the frequency detection hysteresis value (P8-28 x P8-29), the active signal is canceled.
26: Frequency 1 reached
When the running frequency of the AC drive is within the detection range of P8-30 (Frequency detection value 1), the DO outputs an active signal.
Frequency detection range: P8-30 - P8-31 x P0-10 (Maximum frequency) to P8-30 + P8-31 x P0-10
27: Frequency 2 reached
When the running frequency of the AC drive is within the detection range of P8-32 (Frequency detection value 2), the DO outputs an active signal.
Frequency detection range: P8-32 - P8-33 x P0-10 (Maximum frequency) to P8-32 + P8-33 x P0-10
28: Current 1 reached
When the output current of the AC drive is within the detection range of P8-38
(Detection level of current 1), the DO outputs an active signal.

Current detection range = P8-38 - P8-39 x P1-03 (Rated motor current) to P8-38 + P8-39 x P1-03.
29: Current 2 reached
When the output current of the AC drive is within the detection range of P8-40
(Detection level of current 2), the DO outputs an active signal.
Current detection range = P8-40 - P8-41 x P1-03 (Rated motor current) to P8-40 + P8-41 x P1-03.
30: Timing reached
With the timing function (P8-42) enabled, when the current running time of the AC drive reaches the set time, the terminal outputs an active signal. The timing duration is set by P8-43 and P8-44.
31: AI1 input limit exceeded
The terminal outputs an active signal when AI1 input is higher than the value of P8-46 (AI1 input voltage upper limit) or lower than the value of P8-45 (AI1 input voltage lower limit).
32: AC drive output load loss
The terminal outputs an active signal when load loss occurs.
33: Reverse running
The terminal outputs an active signal when the AC drive runs in the reverse direction.
34: Zero current state
When the output current of the AC drive is within the zero-current range for a time exceeding P8-35 (Zero current detection delay), the DO outputs an active signal. Zero current detection range = 0 to P8-34 x P1-03
35: Module temperature reached
The terminal outputs an active signal when the inverter heatsink temperature
(P7-07) reaches the value of P8-47 (IGBT temperature reach).
36: Output current limit exceeded
When the output current of the AC drive is greater than P8-36 (Output overcurrent threshold) for a time exceeding P8-37 (Output overcurrent detection delay), the DO outputs an active signal.
37: Frequency lower limit reached (having output at stop)
The terminal outputs an active signal when the running frequency reaches the frequency lower limit (P0-14). The terminal also outputs the active signal when the AC drive stops.
38: Alarm output (direct output at fault or alarm)
If a fault occurs on the AC drive and the AC drive continues to run upon fault, the DO outputs an active signal.
For details about the fault protection action, see P9-47 to P9-50.

39: Motor overtemperature
The terminal outputs an active signal when the motor temperature reaches the value of P9-58 (Motor over-temperature pre-warning threshold). You can check the motor temperature using U0-34.
40: Current running time reached
The terminal outputs an active signal when the current operation time of the AC drive is longer than the value of P8-53 (current running time threshold).
41: Fault output 2
When a fault occurs on the AC drive (undervoltage excluded), the DO terminal outputs an active signal.
42: Fault output 3
When a fault occurs on the AC drive, the DO terminal outputs an active signal.
43 to 51: Reserved

P5-02 Control board relay 1 function selection (T/A1-T/B1-T/C1)

Address:	0xF502		
Min.:	0	Unit:	-
Max.:	51	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:
0: No output
1: Running
2: Fault output (stop upon fault)
3: Frequency-level detection FDT1 output
4: Frequency reached
5: Zero speed running (no output at stop)
6: Motor overload pre-warning
7: AC drive overload pre-warning
8: Set count value reached
9: Designated count value reached
10: Length reached
11: PLC cycle completed
12: Accumulative running time reached
13: Frequency limited
14: Torque limited
15: Ready for run

16: AI1 > AI2
17: Frequency upper limit reached
18: Frequency lower limit reached (operation related)
19: Undervoltage status output
20: Communication setting
21: Reserved
22: Reserved
23: Zero-speed running 2 (at stop)
24: Accumulative power-on time reached
25: Frequency-level detection FDT2 output
26: Frequency 1 reach output
27: Frequency 2 reach output
28: Current 1 reach output
29: Current 2 reach output
30: Timing reach output
31: AI1 input limit exceeded
32: AC drive output load loss
33: Reverse running
34: Zero current status
35: Module temperature reached
36: Output current limit exceeded
37: Frequency lower limit reached (having output at stop)
38: Alarm output (direct output at fault or alarm)
39: Current over-temperature pre-warning
40: Current running time reached
41: Fault output 2
42: Fault output 3

Description

Used to set the terminal function of the control board relay (T/A1-T/B1-T/C1).
The setting is similar to that of P5-01.

P5-03 **Control board relay 2 function selection (T/A2-T/C2)**

Address:	0xF503		
Min.:	0	Unit:	-
Max.:	51	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: No output
1: Running
2: Fault output (stop upon fault)
3: Frequency-level detection FDT1 output
4: Frequency reached
5: Zero speed running (no output at stop)
6: Motor overload pre-warning
7: AC drive overload pre-warning
8: Set count value reached
9: Designated count value reached
10: Length reached
11: PLC cycle completed
12: Accumulative running time reached
13: Frequency limited
14: Torque limited
15: Ready for run

16: AI1 > AI2
17: Frequency upper limit reached
18: Frequency lower limit reached (operation related)
19: Under-voltage status output
20: Communication setting
21: Reserved
22: Reserved
23: Zero-speed running 2 (at stop)
24: Accumulative power-on time reached
25: Frequency-level detection FDT2 output
26: Frequency 1 reach output
27: Frequency 2 reach output
28: Current 1 reach output
29: Current 2 reach output
30: Timing reach output
31: AI1 input limit exceeded
32: AC drive output load loss
33: Reverse running
34: Zero current status
35: Module temperature reached
36: Output current limit exceeded
37: Frequency lower limit reached (having output at stop)
38: Alarm output (direct output at fault or alarm)
39: Current over-temperature pre-warning
40: Current running time reached
41: Fault output 2
42: Fault output 3

Description

Used to set the terminal function of the control board relay (T/A2-T/C2). The setting is similar to that of P5-01.

P5-04 DO1 function selection

Address:	0xF504		
Min.:	0	Unit:	-
Max.:	51	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0: No output
1: Running
2: Fault output (stop upon fault)
3: Frequency-level detection FDT1 output
4: Frequency reached
5: Zero speed running (no output at stop)
6: Motor overload pre-warning
7: AC drive overload pre-warning
8: Set count value reached
9: Designated count value reached
10: Length reached
11: PLC cycle completed
12: Accumulative running time reached
13: Frequency limited
14: Torque limited
15: Ready for run

16: AI1 > AI2
17: Frequency upper limit reached
18: Frequency lower limit reached (operation related)
19: Undervoltage status output
20: Communication setting
21: Reserved
22: Reserved
23: Zero-speed running 2 (at stop)
24: Accumulative power-on time reached
25: Frequency-level detection FDT2 output
26: Frequency 1 reach output
27: Frequency 2 reach output
28: Current 1 reach output
29: Current 2 reach output
30: Timing reach output
31: AI1 input limit exceeded
32: AC drive output load loss
33: Reverse running
34: Zero current status
35: Module temperature reached
36: Output current limit exceeded
37: Frequency lower limit reached (having output at stop)
38: Alarm output (direct output at fault or alarm)
39: Current over-temperature pre-warning
40: Current running time reached
41: Fault output 2
42: Fault output 3

Description

Used to set the function of DO1.
The setting is similar to that of P5-01.

P5-05 **Expansion card DO2 output selection**

Address:	0xF505		
Min.:	0	Unit:	-
Max.:	51	Data type:	UInt16
Default:	4	Change:	In real time

Value Range:

0: No output
1: Running
2: Fault output (stop upon fault)
3: Frequency-level detection FDT1 output
4: Frequency reached
5: Zero speed running (no output at stop)
6: Motor overload pre-warning
7: AC drive overload pre-warning
8: Set count value reached
9: Designated count value reached
10: Length reached
11: PLC cycle completed
12: Accumulative running time reached
13: Frequency limited
14: Torque limited
15: Ready for run

16: AI1 > AI2
17: Frequency upper limit reached
18: Frequency lower limit reached (operation related)
19: Undervoltage status output
20: Communication setting
21: Reserved
22: Reserved
23: Zero-speed running 2 (at stop)
24: Accumulative power-on time reached
25: Frequency-level detection FDT2 output
26: Frequency 1 reach output
27: Frequency 2 reach output
28: Current 1 reach output
29: Current 2 reach output
30: Timing reach output
31: AI1 input limit exceeded
32: AC drive output load loss
33: Reverse running
34: Zero current status
35: Module temperature reached
36: Output current limit exceeded
37: Frequency lower limit reached (having output at stop)
38: Alarm output (direct output at fault or alarm)
39: Current over-temperature pre-warning
40: Current running time reached
41: Fault output 2
42: Fault output 3

Description

Used to set the function of DO2 on the expansion card.
The setting is similar to that of P5-01.

P5-06 FMP output function selection

Address:	0xF506		
Min.:	0	Unit:	-
Max.:	22	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Running frequency
1: Frequency reference
2: Output current
3: Output torque
4: Output power
5: Output voltage
6: Pulse input (100.0% corresponds to 100.00 kHz)
7: AI1
8: AI2
9: AI3
10: Length
11: Count value
12: Communication
13: Motor speed
14: Output current (100.0% corresponds to 1000.0 A)
15: Output voltage (100.0% corresponds to 1000.0 V)
16: Output torque (directional)
19: Taper output
20: Roll diameter output
21: Tension output
22: Encoder feedback frequency

Description

This parameter takes effect only when P4-41 is set to 1.

0: Running frequency (100.0% corresponding to the maximum frequency P0-10)
1: Frequency reference
2: Output current (100.0% corresponding to 2 times the rated motor current)
3: Motor output torque (100.0% corresponding to 2 times the rated motor torque)(absolute value, percentage of the rated motor torque)
4: Output power (100.0% corresponding to 2 times the rated motor power)
5: Output voltage (100.0% corresponding to 1.2 times the rated motor voltage)
6: Pulse input (100.0% corresponding to 100.0 kHz)
7: AI1 (100.0% corresponding to 10 V)
8: AI2 (100.0% corresponding to 10 V)
9: AI3 (100.0% corresponding to 10 V)
10: Length (100.0% corresponding to PB-05)
11: Count value (100.0% corresponding to PB-08)
12: Communication setting (100.0% corresponding to the AO communication setting)
13: Motor speed (100.0% corresponding to the maximum frequency P0-10)
14: Output current (100.0% corresponding to 1000.0 A)
15: Output voltage (100.0% corresponding to 1000.0 V)
16: Motor output torque (100.0% corresponding to 2 times the rated motor torque in one direction; 50% corresponding to 2 times the rated motor torque in the other direction)
(actual value, percentage of the rated motor torque)
19: Taper output
20: Roll diameter output (100.0% corresponding to the maximum roll diameter B0-08)
21: Tension output (100.0% corresponding to the maximum tension B1-02)
22: Encoder feedback frequency (100.0% corresponding to the maximum frequency P0-10)

P5-07 AO1 function selection

Address:	0xF507		
Min.:	0	Unit:	-
Max.:	22	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Running frequency
1: Frequency reference
2: Output current
3: Output torque
4: Output power
5: Output voltage
6: Pulse input (100.0% corresponds to 100.00 kHz)
7: AI1
8: AI2
9: AI3
10: Length
11: Count value
12: Communication
13: Motor speed
14: Output current (100.0% corresponds to 1000.0 A)
15: Output voltage (100.0% corresponds to 1000.0 V)
16: Output torque (directional)
19: Taper output
20: Roll diameter output
21: Tension output
22: Encoder feedback frequency

Description

0: Running frequency (100.0% corresponding to the maximum frequency P0-10)
1: Frequency reference
2: Output current (100.0% corresponding to 2 times the rated motor current)
3: Motor output torque (100.0% corresponding to 2 times the rated motor torque)(absolute value, percentage of the rated motor torque)
4: Output power (100.0% corresponding to 2 times the rated motor power)
5: Output voltage (100.0% corresponding to 1.2 times the rated motor voltage)
6: Pulse input (100.0% corresponding to 100.0 kHz)
7: AI1 (100.0% corresponding to 10 V)
8: AI2 (100.0% corresponding to 10 V)
9: AI3 (100.0% corresponding to 10 V)
10: Length (100.0% corresponding to PB-05)
11: Count value (100.0% corresponding to PB-08)
12: Communication setting (100.0% corresponding to the AO communication setting)
13: Motor speed (100.0% corresponding to the maximum frequency P0-10)
14: Output current (100.0% corresponding to 1000.0 A)
15: Output voltage (100.0% corresponding to 1000.0 V)
16: Motor output torque (100.0% corresponding to 2 times the rated motor torque in one direction; 50% corresponding to 2 times the rated motor torque in the other direction)
(actual value, percentage of the rated motor torque)
19: Taper output
20: Roll diameter output (100.0% corresponding to the maximum roll diameter B0-08)
21: Tension output (100.0% corresponding to the maximum tension B1-02)
22: Encoder feedback frequency (100.0% corresponding to the maximum frequency P0-10)

P5-08 AO2 output selection

Address:	0xF508		
Min.:	0	Unit:	-
Max.:	22	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0: Running frequency
1: Frequency reference
2: Output current
3: Output torque
4: Output power
5: Output voltage
6: Pulse input (100.0% corresponds to 100.00 kHz)
7: AI1
8: AI2
9: AI3
10: Length
11: Count value
12: Communication
13: Motor speed
14: Output current (100.0% corresponds to 1000.0 A)
15: Output voltage (100.0% corresponds to 1000.0 V)
16: Output torque (directional)
19: Taper output
20: Roll diameter output
21: Tension output
22: Encoder feedback frequency

Description

0: Running frequency (100.0% corresponding to the maximum frequency P0-10)
1: Frequency reference
2: Output current (100.0% corresponding to 2 times the rated motor current)
3: Motor output torque (100.0% corresponding to 2 times the rated motor torque)
(absolute value, percentage of the rated motor torque)
4: Output power (100.0% corresponding to 2 times the rated motor power)
5: Output voltage (100.0% corresponding to 1.2 times the rated motor voltage)
6: Pulse input (100.0% corresponding to 100.0 kHz)
7: AI1 (100.0% corresponding to 10 V)
8: AI2 (100.0% corresponding to 10 V)
9: AI3 (100.0% corresponding to 10 V)
10: Length (100.0% corresponding to PB-05)
11: Count value (100.0% corresponding to PB-08)
12: Communication setting (100.0% corresponding to the AO communication setting)
13: Motor speed (100.0% corresponding to the maximum frequency P0-10)
14: Output current (100.0% corresponding to 1000.0 A)
15: Output voltage (100.0% corresponding to 1000.0 V)
16: Motor output torque (100.0% corresponding to 2 times the rated motor torque in one direction; 50% corresponding to 2 times the rated motor torque in the other direction)
(actual value, percentage of the rated motor torque)
19: Taper output
20: Roll diameter output (100.0% corresponding to the maximum roll diameter B0-08)
21: Tension output (100.0% corresponding to the maximum tension B1-02)
22: Encoder feedback frequency (100.0% corresponding to the maximum frequency P0-10)

P5-09 **Maximum FMP output frequency**

Address: 0xF509

Min.:	0.01	Unit:	kHz
Max.:	100	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:

0.01 kHz to 100.00 kHz

Description

This parameter indicates the maximum frequency (0.01 kHz to 100.00 kHz) of the FMP terminal output pulse.

P5-10 **AO1 zero offset coefficient**

Address: 0xF50A

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to 100.0%

Description

On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is kX plus b (Y = kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment.

Zero offset = Zero offset coefficient x 10 V (20 mA)

The AC drive supports two AOs, namely, AO1 and AO2. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by P5-07 and P5-08.

P5-11 **AO1 gain**

Address:	0xF50B		
Min.:	-10	Unit:	-
Max.:	10	Data type:	Int16
Default:	1	Change:	In real time

Value Range:

–10.00 to +10.00

Description

On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is kX plus b (Y = kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment.

Zero offset = Zero offset coefficient x 10 V (20 mA)

The AC drive supports two AOs, namely, AO1 and AO2. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by P5-07 and P5-08.

P5-12 **AO2 zero offset coefficient**

Address:	0xF50C		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is kX plus b (Y = kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment.
Zero offset = Zero offset coefficient x 10 V (20 mA)
The AC drive supports two AOs, namely, AO1 and AO2. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by P5-07 and P5-09.

P5-13 AO2 gain

Address:	0xF50D		
Min.:	-10	Unit:	-
Max.:	10	Data type:	Int16
Default:	1	Change:	In real time

Value Range:

–10.00 to +10.00

Description

On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is kX plus b (Y = kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment.
Zero offset = Zero offset coefficient x 10 V (20 mA)
The AC drive supports two AOs, namely, AO1 and AO2. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by P5-07 and P5-10.

P5-17 Expansion card relay output delay

Address:	0xF511		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 3600.0s

Description

This parameter indicates the output delay of relay on the expansion card. P5-01 outputs an active signal after the set delay.

P5-18 Control board relay 1 output delay

Address: 0xF512

Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 3600.0s
Description
This parameter indicates the output delay of relay 1 on the control board. P5-02 outputs an active signal after the set delay.

P5-19 Control board relay 2 output delay

Address:	0xF513		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 3600.0s
Description
This parameter indicates the output delay of relay 2 on the control board. P5-03 outputs an active signal after the set delay.

P5-20 DO1 output delay

Address:	0xF514		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 3600.0s
Description
This parameter indicates the delay of DO1 output. P5-04 outputs an active signal after the set delay.

P5-21 Expansion card DO2 output delay

Address:	0xF515		
Min.:	0	Unit:	s
Max.:	3600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 3600.0s
Description
This parameter indicates the expansion card DO2 output delay. P5-05 outputs an active signal after the set delay.

P5-22 **DO active mode selection**

Address:	0xF516		
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

Ones (position): Expansion card relay
0: Positive logic
1: Negative logic
Tens (position): Control board relay 1
0: Positive logic
1: Negative logic
Hundreds (position): Control board relay 2
0: Positive logic
1: Negative logic
Thousands (position): Control board DO1
0: Positive logic
1: Negative logic
Ten thousands (position): Extension card DO2
0: Positive logic
1: Negative logic

Description

The ones, tens, hundreds, thousands, and ten thousands positions of this parameter are used to set the DOs to which P5-01 to P5-05 correspond.
0: Positive logic (same as NO contact)
Active state: The DO and the COM/ CME terminal are internally connected.
Inactive state: The DO terminal is disconnected from the COM/CME terminal.
1: Negative logic (same as NC contact)
Active state The DO terminal is disconnected from the COM/CME terminal.
Inactive state: The DO terminal and the COM/CME terminal are internally connected.

6.7 P6 Start/Stop Control

P6-00 **Start mode**

Address:	0xF600		
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Direct startup
1: Flying start
2: Vector pre-excitation startup (asynchronous motor)

Description

0: Direct start
This mode is applicable to most loads. Startup with the startup frequency is applicable to load hoisting applications such as elevators and cranes.
1: Flying start
In some applications, the motor rotates before the AC drive is started. With this setting, the AC drive can automatically follow the motor speed and direction, which realizes smooth startup of the spinning motor without impact. For example, during the operation of the AC drive, due to the instantaneous power failure of the power grid, the AC drive is powered down and restarted. Due to inertia, the motor is in a rotating state. In this case, to recover control on the asynchronous motor, the AC drive must detect the current speed of the motor to avoid overcurrent, overvoltage, and even burn-out of the power transistor of the AC drive.
2: Pre-excitation start (asynchronous motor)
This mode applies only to asynchronous motors in SVC or FVC mode. Performing pre-excitation on the motor before start improves the responsiveness of the motor and reduces the starting current. The time sequence of the pre-excitation start is the same as that of the DC braking restart.

P6-01 Flying start mode

Address:	0xF601		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: From stop frequency
1: From 50 Hz
2: From the maximum frequency
3: Reserved

Description

In different modes, the initial frequency of flying start is different upon restart.
The motor running direction cannot be searched upon flying start. Therefore, the motor running direction in the current startup command must be the same as that upon the previous motor stop. If the direction is different, the flying start fails.
The search mode from the stop frequency is to search for a speed of 0 Hz from the previous stop frequency. If an external force drives the motor to a higher speed than the stop speed, this mode is not applicable.

P6-02 Flying start speed

Address: 0xF602
Min.: 1 Unit: -
Max.: 100 Data type: UInt16
Default: 20 Change: In real time

Value Range:
1 to 100
Description

P6-03 Startup frequency

Address: 0xF603
Min.: 0 Unit: Hz
Max.: 10 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00 Hz to 10.00 Hz
Description
This parameter defines the startup frequency for direct start of the AC drive. When the startup frequency is higher than the frequency reference, the AC drive will not start but stay standby.

P6-04 Startup frequency hold time

Address: 0xF604
Min.: 0 Unit: s
Max.: 100 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0.0s to 100.0s
Description
This parameter defines the hold time during which the output frequency remains at the startup frequency. After this hold time elapses, the AC drive will accelerate to the reference frequency.

P6-05 DC braking current/Pre-excitation current at startup

Address: 0xF605
Min.: 0 Unit: %
Max.: 150 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0% to 150%
Description

When startup with DC braking is enabled, the AC drive starts only after DC braking upon receiving the start command. A greater DC braking current indicates greater braking force. 100% corresponds to the rated motor current. The upper limit of the current is 80% of the rated current of the AC drive.
The current upper limit can be set through P6-34, and the upper current limit can be set to 135% of the rated current of the AC drive.

P6-06 Startup DC braking time/pre-excitation time

Address:	0xF606		
Min.:	0	Unit:	s
Max.:	100	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0.0s to 100.0s
Description
This parameter defines the time for DC braking at startup, which is valid only when the startup mode is direct start.

P6-07 Acceleration/Deceleration mode

Address:	0xF607		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Linear acceleration/deceleration
1: S-curve acceleration/deceleration
Description
This parameter defines the frequency change mode during the AC drive start and stop process.
0: The output frequency increases or decreases linearly.
1: The output frequency increases or decreases according to the S-curve when the target frequency changes dynamically. This mode is applicable to applications requiring supreme riding comfort and real-time fast response.

P6-08 Time proportion of S-curve start segment

Address:	0xF608		
Min.:	0	Unit:	%
Max.:	70	Data type:	UInt16
Default:	30	Change:	At stop

Value Range:
0.0% to 70.0%

Description
The sum of P6-08 (Time proportion of S-curve start segment) and P6-09 (Time proportion of S-curve end segment) must be less than or equal to 100%.

P6-09 **Time proportion of S-curve end segment**

Address:	0xF609		
Min.:	0	Unit:	%
Max.:	70	Data type:	UInt16
Default:	30	Change:	At stop

Value Range:
0.0% to 70.0%
Description
The sum of P6-08 (Time proportion of S-curve start segment) and P6-09 (Time proportion of S-curve end segment) must be less than or equal to 100%.

P6-10 **Stop mode**

Address:	0xF60A		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Decelerate to stop
1: Coast to stop
Description
0: Decelerate to stop
Upon receiving the stop command, the AC drive decreases the output frequency to 0 based on the deceleration time and then stops.
1: Coast to stop
Upon receiving the stop command, the AC drive immediately stops output. The motor then coasts to stop according to the mechanical inertia.

P6-11 **Starting frequency of DC braking at stop**

Address:	0xF60B		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
The AC drive starts DC braking when the running frequency decreases to the value of this parameter during deceleration to stop.

P6-12 Waiting time of DC braking at stop

Address: 0xF60C

Min.:	0	Unit:	s
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 100.0s

Description

When the running frequency decreases to the start frequency of DC braking at stop, the AC drive stops output for a period of time and then starts DC braking. Such delay is intended to prevent faults such as overcurrent from occurring when DC braking starts at a high speed.

P6-13 DC braking current at stop

Address: 0xF60D

Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0% to 150%

Description

When startup with DC braking is enabled, the AC drive starts only after DC braking upon receiving the start command. A greater DC braking current indicates greater braking force. 100% corresponds to the rated motor current. The upper limit of the current is 80% of the rated current of the AC drive.

The current upper limit can be set through P6-34, and the upper current limit can be set to 135% of the rated current of the AC drive.

P6-14 DC braking time at stop

Address: 0xF60E

Min.:	0	Unit:	s
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 100.0s

Description

This parameter indicates the hold time of DC braking. If this parameter is set to 0, DC braking is disabled.

P6-15 Brake usage rate

Address: 0xF60F

Min.:	0	Unit:	%

Max.: 100 Data type: UInt16
Default: 100 Change: At stop

Value Range:

0% to 100%

Description

Indicates the braking usage rate.

P6-16 Closed loop current Kp of flying start

Address: 0xF610
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 500 Change: In real time

Value Range:

0–1000

Description

This parameter defines the proportional gain of the current suppression PI regulator during speed tracking of flying start. It is valid when P6-01 is set to 0, 1, or 2.

P6-17 Closed-loop current Ki of torque tracking

Address: 0xF611
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 800 Change: In real time

Value Range:

0–1000

Description

This parameter defines the integral gain of the current suppression PI regulator during speed tracking of flying start. It is valid when P6-01 is set to 0, 1, or 2.

P6-18 Flying start current

Address: 0xF612
Min.: 30 Unit: -
Max.: 200 Data type: UInt16
Default: 100 Change: In real time

Value Range:

30 to 200

Description

Overcurrent may occur on the asynchronous motor during flying start due to large slip. The current must be limited for preventing overcurrent. This parameter defines the motor current to be suppressed during speed tracking of flying start.

P6-21 Demagnetization time

Address: 0xF615
Min.: 0 Unit: s
Max.: 10 Data type: UInt16
Default: 1 Change: In real time

Value Range:

0.00s to 10.00s

Description

In the vector mode, when flying start is enabled (P6-00 = 1), the AC drive cannot be started when the motor has residual magnetism. The AC drive can only be started after the voltage output of the AC drive is disconnected for at least the demagnetization time set by P6-21.

P6-22 Startup pre-torque setting

Address: 0xF616
Min.: 0 Unit: %
Max.: 200 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.0% to 200.0%

Description

P6-26 Electromagnetic shorting current

Address: 0xF61A
Min.: 0 Unit: %
Max.: 200 Data type: UInt16
Default: 100 Change: In real time

Value Range:

0% to 200%

Description

P6-27 Electromagnetic shorting time upon startup

Address: 0xF61B
Min.: 0 Unit: s
Max.: 100 Data type: UInt16
Default: 0 Change: At stop

Value Range:

0.0s to 100.0s

Description

P6-28 Electromagnetic shorting time upon stop

Address: 0xF61C

Min.:	0	Unit:	s
Max.:	100	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0s to 100.0s

Description

P6-29 Electromagnetic shorting voltage reserve

Address: 0xF61D

Min.:	20	Unit:	V
Max.:	100	Data type:	UInt16
Default:	20	Change:	At stop

Value Range:

20.0 V to 100.0 V

Description

P6-30 Trial current for synchronous motor speed tracking

Address: 0xF61E

Min.:	5	Unit:	-
Max.:	50	Data type:	UInt16
Default:	10	Change:	At stop

Value Range:

5.0 to 50.0

Description

P6-31 Minimum tracking frequency for synchronous motor speed tracking

Address: 0xF61F

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0–100.0

Description

P6-32 Angle compensation for synchronous motor speed tracking

Address: 0xF620

Min.: 0 Unit: -
Max.: 360 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0–360
Description

P6-33 Proportion of synchronous motor speed tracking

Address: 0xF621
Min.: 0.1 Unit: -
Max.: 10 Data type: UInt16
Default: 1 Change: At stop

Value Range:
0.1–10.0
Description

P6-34 Integral of synchronous motor speed tracking

Address: 0xF622
Min.: 0.1 Unit: -
Max.: 10 Data type: UInt16
Default: 1 Change: At stop

Value Range:
0.1–10.0
Description

P6-35 Maximum current limit for DC braking

Address: 0xF623
Min.: 80 Unit: %
Max.: 135 Data type: UInt16
Default: 80 Change: At stop

Value Range:
80% to 135%
Description
The base value is the rated current of the AC drive. The DC braking current set by P6-05 and P6-13 is restricted by this parameter.

P6-36 Speed loop feedforward

Address: 0xF624

Min.:	-200	Unit:	%
Max.:	200	Data type:	Int16
Default:	0	Change:	In real time

Value Range:
-200.0% to +200.0%
Description

6.8 P7 Key and Display

P7-01 MF.K key function selection

Address:	0xF701		
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: MF.K key disabled
1: Switchover between operating panel control and remote control (terminal or communication
2: Switchover between forward and reverse run
3: Forward jog
4: Reverse jog
Description
The MF.K key is a multi-functional key. This parameter is used to set the function of the MF.K key.
0: MF.K key disabled
The MF.K key does not work.
1: Switchover between remote control (terminal or communication) and operating panel control. When P0-02 is set to 0 (operating panel), the MF.K does not work. When P0-02 is set to 1 (terminal), the MF.K key is used for switchover between the terminal control and operating panel control. When P0-02 is set to 2 (communication, the MF.K key is used for switchover between the communication control and operating panel control.
2: Switchover between forward and reverse run
The MF.K key is used for changing the direction of the frequency reference. This function is valid only when the operating panel is set as the command source.

3: Forward jog
The MF.K key is used for enabling forward jog (FJOG). This function is valid only when the operating panel is set as the command source.
4: Reverse jog
The MF.K key is used for enabling reverse jog (RJOG). This function is available only when the operating panel is set as the command source.

P7-02 STOP/RES key function

Address:	0xF702		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: STOP/RESET key enabled only in operating panel control mode
1: STOP/RESET key enabled in any operating mode
Description
The STOP/RESET key on the operating panel is used for stop/reset. This parameter is used for setting the function of this key.
0: STOP/RESET key enabled only in operating panel control mode
The STOP/RESET key is valid only in operating panel control mode.
1: STOP/RESET key enabled in any operating mode
The STOP/RESET key is valid in any operating mode.

P7-03 LED running display parameter 1

Address:	0xF703		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x1F	Change:	In real time

Value Range:

Bit00: Running frequency (Hz)
Bit01: Frequency reference (Hz)
Bit02: Bus voltage (V)
Bit03: Output voltage (V)
Bit04: Output current (A)
Bit05: Output power (kW)
Bit06: Output torque (%)
Bit07: DI status
Bit08: DO status
Bit09: AI1 voltage (V)
Bit10: AI2 voltage (V)
Bit11: AI3 voltage (V)
Bit12: Count value
Bit13: Length value
Bit14: Load speed display
Bit15: PID reference

Description

If a parameter needs to be displayed during running, set its corresponding bit to 1. After converting this binary number to a hexadecimal number, set it in P7-03.

P7-04 LED running display parameter 2

Address:	0xF704		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

Bit00: PID feedback
Bit01: PLC stage
Bit02: Pulse input reference (kHz)
Bit03: Running frequency 2 (Hz)
Bit04: Remaining running time
Bit05: AI1 voltage before correction (V)
Bit06: AI2 voltage before correction (V)
Bit07: AI3 voltage before correction (V)
Bit08: Linear speed
Bit09: Current power-on time (h)
Bit10: Current running time (min.)
Bit11: Pulse input reference (Hz)
Bit12: Communication setting
Bit13: Encoder feedback speed (Hz)
Bit14: Roll diameter (mm)
Bit15: Tension after taper (N)

Description

If a parameter needs to be displayed during running, set its corresponding bit to 1. After converting this binary number to a hexadecimal number, set it in P7-04

P7-05 LED stop display parameter

Address:	0xF705		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x33	Change:	In real time

Value Range:

Bit00: Frequency reference (Hz)
Bit01: Bus voltage (V)
Bit02: DI state
Bit03: DO state
Bit04: AI1 voltage (V)
Bit05: AI2 voltage (V)
Bit06: AI3 voltage (V)
Bit07: Count value
Bit08: Length value
Bit09: PLC stage
Bit10: Load speed display
Bit11: PID reference
Bit12: Pulse input frequency (kHz)
Bit13: Roll diameter (mm)
Bit14: Tension (N)

Description

If a parameter needs to be displayed when the AC drive stops, set its corresponding bit to 1. After converting this binary number to a hexadecimal number, set it in P7-05.

P7-06 Load speed display coefficient

Address:	0xF706		
Min.:	0	Unit:	-
Max.:	6.5	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.0000 to 6.5

Description

This parameter defines the ratio of the actual speed with load to motor speed.

P7-07 Inverter heatsink temperature

Address: 0xF707

Min.:	-20	Unit:	℃
Max.:	120	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:

-20℃ to +120℃

Description

Indicates the inverter heatsink temperature.

P7-08 Product No.

Address: 0xF708

Min.:	0	Unit:	-
Max.:	999	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0–999

Description

This parameter shows the product No. of the AC drive.

P7-09 Accumulative running time

Address: 0xF709

Min.:	0	Unit:	h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 h to 65535 h

Description

This parameter shows the accumulative running time of the AC drive.

P7-10 Performance software version

Address: 0xF70A

Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.00 to 0.00

Description

Indicates the performance software version of the AC drive.

P7-11 Function software version

Address: 0xF70B

Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.00 to 0.00

Description

Indicates the function software version of the AC drive.

P7-12 Number of decimal places for load speed display

Address: 0xF70C

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0: 0 decimal place

1: 1 decimal place

2: 2 decimal places

3: 3 decimal places

Description

This parameter is used to set the number of decimal places of U0-14 (Load speed).

0: 0 decimal places

No decimal places are retained.

1: 1 decimal place

One decimal place is retained after the decimal point.

2: 2 decimal places

Two decimal places are retained after the decimal point.

3: 3 decimal places

Three decimal places are retained after the decimal point.

P7-13 Accumulative power-on time

Address: 0xF70D

Min.:	0	Unit:	h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 h to 65535 h

Description

This parameter shows the accumulative power-on duration of the AC drive.

P7-14 Accumulative power consumption

Address: 0xF70E

Min.:	0	Unit:	kWh
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 kWh to 65535 kWh
Description
This parameter shows the accumulative power consumption of the AC drive.

P7-15 Temporary performance software version

Address:	0xF70F		
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0.00 to 0.00
Description
Indicates the temporary performance software version of the AC drive.

P7-16 Temporary function software version

Address:	0xF710		
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0.00 to 0.00
Description
Indicates the temporary function software version of the AC drive.

6.9 P8 Auxilliary Function

P8-00 Jog frequency

Address:	0xF800		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
This parameter defines the running frequency of the AC drive in the jogging mode.

P8-01 Jog acceleration time

Address: 0xF801
Min.: 0 Unit: s
Max.: 6500 Data type: UInt16
Default: 20 Change: In real time

Value Range:
0.0s to 6500.0s
Description
This parameter defines the acceleration time of the AC drive in the jogging mode.

P8-02 Jog deceleration time

Address: 0xF802
Min.: 0 Unit: s
Max.: 6500 Data type: UInt16
Default: 20 Change: In real time

Value Range:
0.0s to 6500.0s
Description
This parameter defines the deceleration time of the AC drive in the jogging mode.

P8-03 Acceleration time 2

Address: 0xF803
Min.: 0 Unit: s
Max.: 6500 Data type: UInt16
Default: 20 Change: In real time

Value Range:
0.0s to 6500.0s
Description
The AC drive provides four groups of acceleration time, which can be switched by using the DI. This parameter defines the second group of acceleration time.

P8-04 Deceleration time 2

Address: 0xF804
Min.: 0 Unit: s
Max.: 6500 Data type: UInt16
Default: 20 Change: In real time

Value Range:
0.0s to 6500.0s
Description
The AC drive provides four groups of deceleration time, which can be switched by using the DI. This parameter defines the second group of deceleration time.

Default: 200 Change: In real time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is higher than P8-36 (Output current threshold) for a period exceedingP8-37 (Output overcurrent detection delay), the DO outputs an active signal.

P8-37 Software overcurrent detection delay

Address: 0xF825

Min.:	0	Unit:	s
Max.:	600	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00s to 600.00s

Description

When the output current of the AC drive is higher than P8-36 (Output current threshold) for a period exceeding P8-37 (Output overcurrent detection delay), the DO outputs an active signal.

P8-38 Detection level of current 1

Address: 0xF826

Min.:	0	Unit:	%
Max.:	300	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is in the range of P8-38 (Detection level of current 1) ± P8-39 (Detection width of current 1) x P1-03 (Rated motor current), the DO outputs an active signal.

P8-39 Detection width of current 1

Address: 0xF827

Min.:	0	Unit:	%
Max.:	300	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 300.0%

Description

Detection width of current 1 = P9-39 (detection width of current 1) x P1-03 (Rated motor current)

P8-40 Detection level of current 2

Address: 0xF828

Min.:	0	Unit:	%

Max.:	300	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is in the range of P8-40 (Detection level of current 2) ± P8-41 (Detection width of current 2) x P1-03 (Rated motor current), the DO outputs an active signal.

P8-41 Detection width of current 2

Address: 0xF829

Min.:	0	Unit:	%
Max.:	300	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 300.0%

Description

Detection width of current 2 = P8-41 (detection width of current 2) x P1-03 (Rated motor current)

P8-42 Timing function

Address: 0xF82A

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Enabled

Description

When P8-42 is set to 1 and the current running of the AC drive reaches the specified timing duration, the DO outputs an active signal. The timing duration is set by P8-43 and P8-44.

P8-43 Scheduled running time selection

Address: 0xF82B

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Set by P8-44 (Timing duration)

1: AI1

2: AI2

3: AI3

Description

When this parameter is set to 0, the scheduled running time is set by P8-44.
When this parameter is set to 1, the scheduled running time equals to the result of (AI1 voltage/10 V) x P8-44. 100% of analog input corresponds to the value of P8-44.
When this parameter is set to 2, the scheduled running time equals to the result of (AI2 voltage/10 V) x P8-44 100% of analog input corresponds to the value of P8-44.

P8-44 Scheduled running time

Address: 0xF82C

Min.:	0	Unit:	min
Max.:	6500	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0.0 min to 6500.0 min

Description

The scheduled running time is set by P8-43 and P8-44

P8-45 AI1 input voltage lower limit

Address: 0xF82D

Min.:	0	Unit:	V
Max.:	P8-46	Data type:	UInt16
Default:	3.1	Change:	In real time

Value Range:

0.00 V to P8-46

Description

When the AI1 input is higher than P8-46 (AI1 input voltage upper limit) or lower than P8-45 (AI1 input voltage lower limit), the DO outputs an "AI1 input limit exceeded" active signal to indicate whether the AI1 input voltage is in the setting range.

P8-46 AI1 input voltage upper limit

Address: 0xF82E

Min.:	F8-45	Unit:	V
Max.:	11	Data type:	UInt16
Default:	6.8	Change:	In real time

Value Range:

P8-45 to 11.00 V

Description

When the AI1 input is higher than P8-46 (AI1 input voltage upper limit) or lower than P8-45 (AI1 input voltage lower limit), the DO outputs an "AI1 input limit exceeded" active signal to indicate whether the AI1 input voltage is in the set range.

P8-47 Module temperature reached

Address: 0xF82F

Min.:	0	Unit:	°C
Max.:	100	Data type:	UInt16
Default:	75	Change:	In real time

Value Range:

0°C to 100°C

Description

When the heatsink temperature reaches the value of P8-47, the DO outputs an active signal.

P8-48 Cooling Fan control

Address:	0xF830		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Working during drive running

1: Working continuously

Description

When this parameter is set to 0, the fan works when the AC drive is running. When the AC drive stops, the fan works if the heatsink temperature is higher than 40°C and stops if the heatsink temperature is lower than 40°C.

When this parameter is set to 1, the fan keeps working after power-on.

P8-49 Wakeup frequency

Address:	0xF831		
Min.:	P8-51	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

P8-51 to P0-10

Description

In hibernating state, when the frequency reference is equal to or larger than P8-49 (Wakeup frequency) and the current running command is valid, the AC drive wakes up after the time set by F8-50 (Wakeup delay) expires.

P8-50 Wakeup delay

Address:	0xF832		
Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

In hibernating state, when the frequency reference is equal to or larger than P8-49 (Wakeup frequency) and the current running command is valid, the AC drive wakes up after the time set by F8-50 (Wakeup delay) expires.

P8-51 Hibernation frequency

Address: 0xF833

Min.:	0	Unit:	Hz
Max.:	P8-49	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00 Hz to value of P8-49

Description

During AC drive running, when the frequency reference is lower than or equal to P8-51 (Hibernating frequency), the AC drive enters the hibernating state and coasts to stop after the time set by P8-52 (Hibernating delay) expires.

P8-52 Hibernation delay time

Address: 0xF834

Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

During AC drive running, when the frequency reference is lower than or equal to P8-51 (Hibernating frequency), the AC drive enters the hibernating state and coasts to stop after the time set by P8-52 (Hibernating delay) expires.

P8-53 Current running time reached

Address: 0xF835

Min.:	0	Unit:	min
Max.:	6500	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0 min to 6500.0 min

Description

When the current running time reaches the value of P8-53, the DO outputs an active signal. It is valid only for the current AC drive running. The previous running time is not added.

P8-55 Deceleration time for emergency stop

Address: 0xF837

Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

This parameter defines the deceleration time for emergency stop.

P8-57 Accumulative power consumption cleared

Address:	0xF839		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Enabled

Description

When this parameter is set to 1, the accumulative output power consumption of the AC drive will be cleared.

P8-58 Output power correction coefficient

Address:	-		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	At stop

Value Range:

0.0% to +200.0%

Description

When the output power (U0-05) is not equal to expected value, perform linear correction on the output power via this parameter.

-.10 P9 Fault and Protection

P9-00 AC drive overload suppression

Address:	0xF900		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Disabled

1: Enabled

Description

This parameter indicates the troubleshooting when the AC drive overloads. When this parameter is set to 0, the AC drive will report a fault upon overload and the output will be blocked. When this parameter is set to 1, in case that the drive is about to be overloaded, the AC drive automatically lowers down the output current to about the rated current. This can avoid overload; however, the running speed may be reduced or block may occur.

For lifting load, set this parameter to 0.

P9-01 Motor overload protection gain

Address: 0xF901

Min.:	0.2	Unit:	-
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.2 to 10.00

Description

The motor overload protection gain is calculated according to the percentage of time during which the motor runs continuously at a certain overload threshold without reporting an overload fault.

This parameter is used to adjust the actual overload fault report time of the AC drive when motor overload occurs.

P9-02 Motor overload pre-warning coefficient

Address: 0xF902

Min.:	50	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	In real time

Value Range:

50% to 100%

Description

The motor overload pre-warning coefficient is calculated according to the percentage of time during which the motor runs continuously at a certain overload threshold without reporting overload pre-warning. This function is used to give a pre-warning signal to the control system through DO before motor overload protection.

This signal is used to determine how long in advance to send the pre-warning signal before the motor overload protection is triggered. A larger coefficient means later transmission of the pre-warning signal.

When the accumulative output current of the AC drive is higher than the value of the overload time (value Y of motor overload protection inverse time-lag curve) multiplied by F9-02 (Motor overload pre-warning coefficient), the multi-functional DO of the AC drive outputs a motor overload pre-warning signal.

P9-04 Overvoltage threshold

Address: 0xF904

Min.:	350	Unit:	V
Max.:	820	Data type:	UInt16
Default:	820	Change:	In real time

Value Range:

350.0 V to 820.0 V

Description

When the bus voltage is higher than the value of P9-04, the AC drive reports E05.00 to E07.00.

P9-06 Output phase loss detection before startup

Address: 0xF906

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16

Default: 0 Change: In real time

Value Range:

0: Disabled

1: Enabled

Description

It takes about several seconds to detect output phase loss during running. For low-frequency running applications or applications where risks exist during startup, this function enables quick detection of output phase loss during startup. However, it is not suitable for applications that have strict requirements on startup time.

P9-07 Detection of software short-circuited to ground

Address: 0xF907

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 1 Change: At stop

Value Range:

0: No detection

1: Detection before power-on

2: Detection before running

3: Detection before power-on and running

Description

P9-08 Braking unit applied voltage

Address: 0xF908

Min.: 200 Unit: V

Max.: 2000 Data type: UInt16

Default: 760 Change: In real time

Value Range:

200.0 V to 2000.0 V

Description

Used to adjust the energy consumption efficiency of the braking resistor. When the motor is in the power generation state, the voltage of the DC bus in the AC drive will rise. The braking unit can be used to control the voltage of the DC bus to consume the regenerative electric energy generated by the motor through the braking resistor or send back the regenerative electric energy to the power supply.

Application scenarios:

In the V/f control mode, if the actual deceleration time of the motor is far longer than the set deceleration time, the motor decelerates too slowly. To enable the motor to decelerate quickly by enhancing the energy consumption of the braking resistor, you can set P9-08 (Braking unit applied voltage) to 690 V if the following conditions are met: The AC drive is equipped with a braking resistor or an energy feedback unit; The input voltage of the AC drive is 360 V to 420 V.

P9-09 Fault automatic reset times

Address: 0xF909

Min.: 0 Unit: -

Max.: 20 Data type: UInt16

Default: 0 Change: In real time

Value Range:
0–20
Description
This parameter defines the number of auto fault reset attempts of the AC drive. If the number of reset attempts exceeds the value of this parameter, the AC drive will remain in the faulty state.

P9-10 DO action during auto fault reset

Address:	0xF90A		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Not act
1: Act
Description
Used to determine whether the fault output function of the DO takes effect during the automatic fault reset of the AC drive. The fault output function of the DO is defined by setting P5-04 to 2.

P9-11 Fault auto reset interval

Address:	0xF90B		
Min.:	0.1	Unit:	s
Max.:	100	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:
0.1s to 100.0s
Description
This parameter defines the delay of auto fault reset after the AC drive reports a fault.

P9-12 Input phase loss/Contactor pickup protection

Address:	0xF90C		
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	11	Change:	In real time

Value Range:
Ones (position): Input phase loss protection selection
0: Input phase loss detection inhibited
1: Input phase loss detected by software and hardware
2: Input phase loss detected by software
3: Input phase loss detected by hardware
Tens (position): Contactor pickup/Fan fault protection
0: Inhibited
1: Enabled
Description
This function parameter determines whether to perform input phase loss or contactor pickup protection through the ones and tens position.
After the input phase loss protection function is enabled, if the three-phase input power supply is abnormal, or the driver board, lightning protection board, main control board, or rectifier bridge is abnormal, the AC drive will report E12.00 (input phase loss).
For models of 450 kW and below, the tens position is used to set the contactor pickup protection function. For for models of 500 kW and above, the tens position is used to set the fan fault selection.

P9-13 Restart interval upon fault reset

Address: 0xF90D

Min.:	0	Unit:	s
Max.:	600	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:

0.0s to 600.0s

Description

Restart interval upon fault reset

P9-14 1st fault type

Address: 0xF90E

Min.:	0	Unit:	-
Max.:	99	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0–99

Description

This parameter shows the fault codes of the latest three (1st, 2nd, and 3rd (latest)) faults. The host controller reads the communication address to obtain the fault code of the AC drive and triggers the AC drive to report the fault. The fault code can be viewed on the operating panel.

P9-15 2nd fault type

Address: 0xF90F

Min.:	0	Unit:	-
Max.:	99	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0–99

Description

This parameter shows the fault codes of the latest three (1st, 2nd, and 3rd (latest)) faults. The host controller reads the communication address to obtain the fault code of the AC drive and triggers the AC drive to report the fault. The fault code can be viewed on the operating panel.

P9-16 3rd (latest) fault type

Address: 0xF910

Min.:	0	Unit:	-
Max.:	99	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0–99

Description

This parameter shows the fault codes of the latest three (1st, 2nd, and 3rd (latest)) faults. The host controller reads the communication address to obtain the fault code of the AC drive and triggers the AC drive to report the fault. The fault code can be viewed on the operating panel.

P9-17 Frequency upon the 3rd fault (latest)

Address: 0xF911

Min.:	0	Unit:	Hz
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 Hz to 65535 Hz

Description

This parameter shows the frequency of the AC drive upon the latest fault.

P9-18 Current upon the 3rd fault (latest)

Address: 0xF912

Min.:	0	Unit:	A
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0 A to 6553.5 A

Description

This parameter shows the current of the AC drive upon the latest fault.

P9-19 Bus voltage upon 3rd fault (latest)

Address: 0xF913

Min.:	0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0 V to 6553.5V

Description

This parameter shows the bus voltage of the AC drive upon the latest fault.

P9-20 Input terminal state upon the 3rd fault (latest)

Address: 0xF914

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the input terminal state of the AC drive upon the latest fault.

N9-21 Output terminal state upon the 3rd fault (latest)

Address: 0xF915

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the output terminal state of the AC drive upon the latest fault.

N9-22 AC drive state upon the 3rd fault (latest)

Address: 0xF916

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the state of the AC drive upon the latest fault.

N9-23 Power-on time upon the 3rd fault (latest)

Address: 0xF917

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the power-on duration of the AC drive upon the latest fault.

N9-24 Running time upon the 3rd fault (latest)

Address: 0xF918

Min.:	0	Unit:	-
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0–6553.5

Description

This parameter shows the operation time of the AC drive upon the latest fault.

P9-25 IGBT temperature upon the 3rd fault (latest)

Address: 0xF919

Min.:	-20	Unit:	°C
Max.:	120	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:

-20°C to +120°C

Description

This parameter shows the IGBT temperature of the AC drive upon the latest fault.

P9-26 Fault subcode upon the 3rd fault (latest)

Address: 0xF91A
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description

P9-27 Frequency upon the 2nd fault

Address: 0xF91B
Min.: 0 Unit: Hz
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 Hz to 65535 Hz
Description
This parameter shows the frequency of the AC drive upon the second fault.

P9-28 Current upon the 2nd fault

Address: 0xF91C
Min.: 0 Unit: A
Max.: 6553.5 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0.0 A to 6553.5 A
Description
This parameter shows the current of the AC drive upon the second fault.

P9-29 Bus voltage upon the 2nd fault

Address: 0xF91D
Min.: 0 Unit: V
Max.: 6553.5 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0.0 V to 6553.5V
Description
This parameter shows the bus voltage of the AC drive upon the second fault.

P9-30 Input terminal state upon the 2nd fault

Address: 0xF91E

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the input terminal state of the AC drive upon the second fault.

P9-31 Output terminal state upon the 2nd fault

Address: 0xF91F

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter show the output terminal state of the AC drive upon the second fault.

P9-32 AC drive state upon 2nd fault

Address: 0xF920

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the state of the AC drive upon the second fault.

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the state of the AC drive upon the second fault.

P9-33 Power-on time upon the 2nd fault

Address: 0xF921

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the power-on duration of the AC drive upon the second fault.

P9-34 Running time upon the 2nd fault

Address: 0xF922

Min.:	0	Unit:	-
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0–6553.5

Description

This parameter shows the operation time of the AC drive upon the second fault.

P9-35 IGBT temperature upon the 2nd fault

Address: 0xF923

Min.:	-20	Unit:	℃
Max.:	120	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:

-20°C to +120°C

Description

This parameter shows the IGBT temperature of the AC drive upon the second fault.

P9-36 Fault subcode upon the 2nd fault

Address: 0xF924

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

N9-37 Frequency upon the 1st fault

Address: 0xF925

Min.:	0	Unit:	Hz
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 Hz to 65535 Hz

Description

This parameter shows the frequency of the AC drive upon the first fault.

N9-38 Current upon the 1st fault

Address: 0xF926

Min.:	0	Unit:	A
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0 A to 6553.5 A

Description

This parameter shows the current of the AC drive upon the first fault.

N9-39 Bus voltage upon the 1st fault

Address: 0xF927

Min.:	0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0 V to 6553.5V

Description

This parameter shows the bus voltage of the AC drive upon the first fault.

N9-40 Input terminal state upon the 1st fault

Address: 0xF928

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter shows the input terminal state of the AC drive upon the first fault.

N9-41 Output terminal state upon the 1st fault

Address: 0xF929
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535

Description
This parameter shows the output terminal state of the AC drive upon the first fault.

N9-42 AC drive state upon the 1st fault

Address: 0xF92A
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535

Description
This parameter shows the state of the AC drive upon the first fault.

N9-43 Power-on time upon the 1st fault

Address: 0xF92B
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535

Description
This parameter shows the power-on duration of the AC drive upon the first fault.

N9-44 Running time upon the 1st fault

Address: 0xF92C
Min.: 0 Unit: -
Max.: 6553.5 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0.0–6553.5

Description
This parameter shows the operation time of the AC drive upon the first fault.

N9-45 IGBT temperature upon the 1st fault

Address: 0xF92D
Min.: -20 Unit: °C
Max.: 120 Data type: Int16
Default: 0 Change: Unchangeable

Value Range:
-20°C to +120°C

Description
This parameter shows the IGBT temperature of the AC drive upon the first fault.

N9-46 Fault subcode upon the 1st fault

Address: 0xF92E
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description

N9-47 Fault protection action selection 0

Address: 0xF92F
Min.: 0 Unit: -
Max.: 22022 Data type: UInt16
Default: 0 Change: At stop

Value Range:
Ones (position): Value of E02, E03, and E04
0: Coast to stop
2: Restart upon fault
Tens (position): Value of E05, E06, and E07
0: Coast to stop
2: Restart upon fault
Hundreds (position): Value of E08
0: Coast to stop
Thousands (position): Value of E09
0: Coast to stop
2: Restart upon fault
Ten thousands (position): Value of E10
0: Coast to stop
2: Restart upon fault
Description
The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.
0: Coast to stop
The AC drive coasts to stop.
2: Restart upon fault
The AC drive will restart upon faults.

P9-48 Fault protection action selection 1

Address:	0xF930		
Min.:	0	Unit:	-
Max.:	50555	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones (position): Value of E11
0: Coast to stop
1: Decelerate to stop
2: Restart upon fault
4: Warning
5: Canceled
Tens (position): Value of E12
0: Coast to stop
1: Decelerate to stop
2: Restart upon fault
4: Warning
5: Canceled
Hundreds (position): Value of E13
0: Coast to stop
1: Decelerate to stop
2: Restart upon fault
4: Warning
5: Canceled
Thousands (position): Value of E14
0: Coast to stop
Ten thousands (position): Value of E15
0: Coast to stop
1: Decelerate to stop
3: Electromagnetic shorting
4: Warning
5: Canceled

Description

The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.
0: Coast to stop
The AC drive coasts to stop.
1: Decelerate to stop
The AC drive decelerates to stop.
2: Restart upon fault
The AC drive will restart upon faults.
3: Electromagnetic shorting
The AC drive enters the electromagnetic shorting state.
4: Warning
The AC drive continues to run.
5: Disabled
Fault detection is disabled.

P9-49 Fault protection action selection 2

Address:	0xF931		
Min.:	0	Unit:	-
Max.:	55055	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones (position): Value of E16
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Tens (position): Value of E17
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Hundreds (position): Value of E18
0: Coast to stop
Thousands (position): Value of E19
0: Coast to stop
3: Electromagnetic shorting
4: Warning
5: Canceled
Ten thousands (position): Value of E20
0: Coast to stop
3: Electromagnetic shorting
4: Warning
5: Canceled

Description

The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.
0: Coast to stop
The AC drive coasts to stop.
1: Decelerate to stop
The AC drive decelerates to stop.
2: Restart upon fault
The AC drive will restart upon faults.
3: Electromagnetic shorting
The AC drive enters the electromagnetic shorting state.
4: Warning
The AC drive continues to run.
5: Disabled
Fault detection is disabled.

N9-50 Fault protection action selection 3

Address: 0xF932

Min.:	0	Unit:	-
Max.:	55550	Data type:	UInt16
Default:	5040	Change:	At stop

Value Range:

Ones (position): Reserved

0: Coast to stop

Tens (position): Value of E63

0: Coast to stop

1: Decelerate to stop

4: Warning

5: Canceled

Hundreds (position): Value of E23

0: Coast to stop

5: Canceled

Thousands (position): Value of E24

0: Coast to stop

5: Canceled

Ten thousands (position): Value of E25

0: Coast to stop

1: Decelerate to stop

4: Warning

5: Canceled

Description

The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.

0: Coast to stop

The AC drive coasts to stop.

1: Decelerate to stop

The AC drive decelerates to stop.

2: Restart upon fault

The AC drive will restart upon faults.

3: Electromagnetic shorting

The AC drive enters the electromagnetic shorting state.

4: Warning

The AC drive continues to run.

5: Disabled

Fault detection is disabled.

N9-51 Fault protection action selection 4

Address: 0xF933

Min.:	0	Unit:	-
Max.:	55555	Data type:	UInt16
Default:	51111	Change:	At stop

Value Range:
Ones (position): Value of E26
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Tens position: Value of E27
0: Coast to stop
1: Decelerate to stop
3: Electromagnetic shorting
4: Warning
5: Canceled
Hundreds (position): Value of E28
0: Coast to stop
1: Decelerate to stop
3: Electromagnetic shorting
4: Warning
5: Canceled
Thousands (position): Value of E29
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Ten thousands (position): Value of E30
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Description
The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.
0: Coast to stop
The AC drive coasts to stop.
1: Decelerate to stop
The AC drive decelerates to stop.
2: Restart upon fault
The AC drive will restart upon faults.
3: Electromagnetic shorting
The AC drive enters the electromagnetic shorting state.
4: Warning
The AC drive continues to run.
5: Disabled
Fault detection is disabled.

P9-52 Fault protection action selection 5

Address: 0xF934

Min.:	0	Unit:	-
Max.:	55525	Data type:	UInt16
Default:	101	Change:	At stop

Value Range:

Ones (position): Value of E31
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Tens (position): Value of E40
0: Coast to stop
2: Restart upon fault
Hundreds (position): Value of E41
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Thousands (position): Value of E42
0: Coast to stop
1: Decelerate to stop
2: Restart upon fault
3: Electromagnetic shorting
4: Warning
5: Canceled
Ten thousands (position): Value of E43
0: Coast to stop
1: Decelerate to stop
3: Electromagnetic shorting
4: Warning
5: Canceled

Description

The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.
0: Coast to stop
The AC drive coasts to stop.
1: Decelerate to stop
The AC drive decelerates to stop.
2: Restart upon fault
The AC drive will restart upon faults.
3: Electromagnetic shorting
The AC drive enters the electromagnetic shorting state.
4: Warning
The AC drive continues to run.
5: Disabled
Fault detection is disabled.

P9-53 Fault protection action selection 6

Address: 0xF935

Min.:	0	Unit:	-
Max.:	55555	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones (position): Value of E45
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Tens (position): Value of E60
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Hundreds (position): Value of E61
0: Coast to stop
1: Decelerate to stop
4: Warning
5: Canceled
Thousands (position): Value of E62
0: Coast to stop
5: Canceled
Ten thousands (position): Reserved
5: Canceled

Description

The fault protection actions are set by the ones, tens, hundreds, thousands, and ten thousands places of this parameter.
0: Coast to stop
The AC drive coasts to stop.
1: Decelerate to stop
The AC drive decelerates to stop.
2: Restart upon fault
The AC drive will restart upon faults.
3: Electromagnetic shorting
The AC drive enters the electromagnetic shorting state.
4: Warning
The AC drive continues to run.
5: Disabled
Fault detection is disabled.

P9-54 Frequency for continuing to run upon fault

Address:	0xF936		
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0: Current running frequency
1: Frequency reference
2: Frequency upper limit
3: Frequency lower limit
4: Alternative frequency upon exception

Description

This parameter defines the frequency at which the AC drive continues to run when it is faulty. If a fault occurs during the running of the AC drive and the fault protection action is set to "Continue to run", the AC drive displays A** and continues to run at the frequency set by P9-54.

P9-55 Backup frequency upon fault

Address:	0xF937		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 100.0%

Description

This parameter defines the alternative frequency of the AC drive upon fault. If a fault occurs during running and the fault protection action is to run at the alternative frequency upon error (P9-54 = 4), the AC drive displays A** and continues running at the alternative frequency.

P9-56 Motor temperature sensor type

Address: 0xF938

Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: No sensor (AI3 input)

1: PT100

2: PT1000

3:KTY84

4:PTC130

Description

AI3 can be used to for input of the motor temperature sensor. Four sensors, including PT100, PT1000, PTC130, and KTY84 are supported. The sensor is connected to the AI3 and GND terminals. To use the sensor, set the sensor type correctly. The motor temperature is displayed by U0-34.

P9-57 Motor overtemperature protection threshold

Address: 0xF939

Min.:	0	Unit:	℃
Max.:	200	Data type:	UInt16
Default:	110	Change:	In real time

Value Range:

0°C to 200°C

Description

Used to set the motor overtemperature protection threshold. When the motor temperature exceeds the value of P9-57 (Motor overheat protection threshold), the AC drive reports a motor overheat fault (Err45) and acts as selected by P9-48.

P9-58 Motor overtemperature pre-warning threshold

Address: 0xF93A

Min.:	0	Unit:	℃
Max.:	200	Data type:	UInt16
Default:	90	Change:	In real time

Value Range:

0°C to 200°C

Description

Used to set the motor overtemperature pre-warning threshold. When the motor temperature exceeds the value of P9-58 (Motor overheat pre-waring threshold), the DO allocated with function 39 (Motor overheat) outputs an active signal.

P9-59 Selection of power dip ride-through action

Address:	0xF93B		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Decelerate

2: Decelerate to stop

3: Voltage dip suppression

Description

This parameter defines whether the AC drive runs continuously upon instantaneous power failure. When instantaneous power failure occurs, the AC drive keeps the motor in the power generating state to keep the bus voltage at a value around the "voltage threshold for enabling power dip ride-through". This prevents the AC drive from stopping due to undervoltage.

0: Disabled

The power dip ride-through function is disabled.

1: Decelerate

When power failure occurs, the bus voltage stays at a value around the "voltage threshold for enabling power dip ride-through". In this mode, when the grid voltage recovers, the AC drive accelerates to the target frequency based on the acceleration time.

2: Decelerate to stop

When power failure occurs, the AC drive decelerates to stop. In this mode, when the grid voltage recovers, the AC drive decelerates to 0 Hz and stops. The AC drive will start again only when a new startup command is received.

3: Voltage dip suppression

In this mode, the AC drive will not stop due to undervoltage caused by voltage dip. The voltage dip suppression time is set by P9-66.

P9-60 Voltage to determine the pause of power dip ride-through

Address:	0xF93C		
Min.:	80	Unit:	%
Max.:	100	Data type:	UInt16
Default:	85	Change:	In real time

Value Range:

80% to 100%

Description

This parameter defines the voltage threshold for recovering from power dip ride-through. 100% corresponds to 540 V. This value is slightly lower than the bus voltage before power failure.
Upon power loss, the bus voltage is maintained at about P9-62 (Threshold of power dip ride-through function enabled). When the power supply recovers, the bus voltage rises from P9-62 (Threshold of power dip ride-through function enabled) to P9-60 (Threshold of power dip ride-through function disabled). During this period, the output frequency of the AC drive keeps decreasing until the bus voltage reaches P9-60 (Threshold of power dip ride-through function disabled).

P9-61 Duration for judging voltage recovery from power dip ride-through

Address:	0xF93D		
Min.:	0	Unit:	s
Max.:	100	Data type:	UInt16
Default:	0.5	Change:	In real time

Value Range:
0.0s to 100.0s
Description
Used to set the time required for the bus voltage to rise from P9-60 (Threshold of power dip ride-through function disabled) to the voltage before power loss.

P9-62 Voltage to determine the action of power dip ride-through

Address:	0xF93E		
Min.:	60	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	In real time

Value Range:
60% to 100%
Description
This parameter defines the bus voltage level upon power failure. When a power loss occurs, the bus voltage is retained at a value around P9-62 (Threshold of power dip ride-through function enabled).

P9-63 Runaway protection time in FVC mode

Address:	0xF93F		
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0 to 10000
Description

P9-64 Load loss detection level

Address: 0xF940

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:

0.0% to 100.0%

Description

When the output current of the AC drive falls below P9-64 (Load loss detection level) for longer than the time set by P9-65 (Load loss detection time), the AC drive performs load loss protection action (selected through P9-49, coast to stop by default).

Once the load recovers during protection, the AC drive will restore to run at the frequency reference.

P9-65 Load loss detection time

Address: 0xF941

Min.:	0	Unit:	s
Max.:	60	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.0s–60.0s

Description

When the output current of the AC drive falls below P9-64 (Load loss detection level) for longer than the time set by P9-65 (Load loss detection time), the AC drive performs load loss protection action (selected through P9-49, coast to stop by default).

Once the load recovers during protection, the AC drive will restore to run at the frequency reference.

P9-66 Voltage dip suppression time

Address: 0xF942

Min.:	0	Unit:	s
Max.:	600	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0.0s to 600.0s

Description

P9-67 Overspeed detection level

Address: 0xF943

Min.:	0	Unit:	%
Max.:	50	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0.0% to 50.0%

Description

During overspeed protection, when the detected motor speed exceeds F0-10 (Maximum frequency) for a percentage higher than P9-67 (Overspeed detection level) and for longer than the time set by P9-68 (Overspeed detection time), the AC drive reports a motor overspeed fault (Err43) and acts as selected by P9-50 (Fault protection action selection 4).

When P9-68 (Overspeed detection time) is set to 0.0s, the overspeed detection function is disabled.

The overspeed protection is valid only in the FVC mode (P0-01 = 1).

P9-68 Overspeed detection time

Address: 0xF944

Min.:	0	Unit:	-
Max.:	60	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.0–60.0

Description

During overspeed protection, when the detected motor speed exceeds P0-10 (Maximum frequency) for a percentage higher than P9-67 (Overspeed detection level) and for longer than the time set by P9-68 (Overspeed detection time), the AC drive reports a motor overspeed fault (Err43) and acts as selected by P9-50 (Fault protection action selection 4).

When P9-68 (Overspeed detection time) is set to 0.0s, the overspeed detection function is disabled.

The overspeed protection is valid only in the FVC mode (P0-01 = 1).

P9-69 Excessive speed deviation threshold

Address: 0xF945

Min.:	0	Unit:	%
Max.:	50	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0.0% to 50.0%

Description

When the detected motor speed is larger than the value of P9-69 (Detection level of speed error) for longer than the time set by P9-70 (Detection time of speed error), the AC drive reports the excessive speed deviation fault (E42.00) and acts as selected by P9-50 (Fault protection action selection 4).
If P9-70 (Detection time of speed error) is set to 0.0s, the excessive speed deviation detection function is s disabled.
The excessive speed deviation detection function is valid only in the FVC mode.

P9-70 Excessive speed deviation detection time

Address: 0xF946

Min.:	0	Unit:	s
Max.:	60	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0.0s–60.0s

Description

When the detected motor speed is larger than the value of P9-69 (Detection level of speed error) for longer than the time set by P9-70 (Detection time of speed error), the AC drive reports the excessive speed deviation fault (E42.00) and acts as selected by P9-50 (Fault protection action selection 4).
If P9-70 (Detection time of speed error) is set to 0.0s, the excessive speed deviation detection function is disabled.
The excessive speed deviation detection function is valid only in the FVC mode.

P9-71 Power dip ride-through gain

Address: 0xF947

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	In real time

Value Range:

0–100

Description

This parameter is valid only in the "keep bus voltage constant" mode (P9-59 = 1).
If undervoltage occurs frequently during power dip ride-through, increase the power dip ride-through gain and integral coefficient.

P9-72 Power dip ride-through integral

Address: 0xF948

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:
0–100
Description
This parameter is valid only in the "keep bus voltage constant" mode (P9-59 = 2). If undervoltage occurs frequently during power dip ride-through, increase the power dip ride-through gain and integral coefficient.

P9-73 **Deceleration time of power dip ride-through**

Address:	0xF949		
Min.:	0	Unit:	s
Max.:	300	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:
0.0s to 300.0s
Description
This parameter is valid only in the "decelerate to stop" mode (P9-59 = 2).
When the bus voltage is lower than the value of P9-62, the AC drive decelerates to stop. The deceleration time is determined by this parameter instead of P0-18.

6.11 PA Process Control PID

PA-00 **PID reference source**

Address:	0xFA00		
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: PID digital setting (PA-01)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Communication setting (1000H)
6: Multi-reference
Description
This parameter specifies the PID reference source. The PID reference source is a relative value. The value 100% corresponds to 100% of the feedback signal of the controlled system.
0: PID digital setting of (PA-01)
The PID reference source is set by PA-01 (PID reference value).

1: AI1
The PID reference source is set by AI1.
2: AI2
The PID reference source is set by AI2.
3: AI3
The PID reference source is set by AI3.
4: Pulse reference (DI5)
The PID reference is set by the pulse frequency through the DI5. The frequency is calculated according to the corresponding relationship curve between the pulse frequency and running frequency.
5: Communication setting (1000H)
The PID reference source is set by remote communication.
6: Multi-reference
In the multi-reference mode, different combinations of DI states correspond to different frequency references. The four multi-reference terminals provide 16 state combinations, corresponding to 16 target frequency values. Note: When NA-00 is set to 6 (Multi-reference), NC-51 (Reference 0 source) cannot be set to 5 (PID reference).

NA-01 PID digital reference

Address: 0xFA01

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:
0.0% to 100.0%
Description
When FA-00 (PID reference setting channel) is set to 0, this parameter must be set. When the parameter value is set to 100%, it corresponds to the maximum feedback value.

NA-02 PID feedback source

Address: 0xFA02

Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: AI1
1: AI2
2: AI3
3: AI1 – AI2
4: Pulse reference (DI5)
5: Communication
6:AI1 + AI2
7: Max. (|AI1|, |AI2|)
8: Min. (|AI1|, |AI2|)
Description
This parameter defines the PID feedback source.

PA-03 PID action direction

Address: 0xFA03

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Forward

1: Reverse

Description

0: Forward

When the feedback value is lower than the PID reference, the output frequency of the AC drive increases.

1: Reverse

When the feedback value is lower than the PID reference, the output frequency of the AC drive decreases.

PA-04 PID reference and feedback range

Address: 0xFA04

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	In real time

Value Range:

0 to 65535

Description

This parameter is used for display of the PID reference and feedback, which are dimensionless. For example, if this parameter is set to 1000, the PID reference (0% to 100%) corresponds linearly to the feedback value (0 to 1000).

PA-05 Proportional gain Kp1

Address: 0xFA05

Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0.0–1000.0

Description

This parameter defines the proportional gain Kp in PID control. The deviation reduction speed depends on the proportional coefficient Kp. A larger Kp value tends to reduce the deviation faster, but may cause system oscillation, especially at large hysteresis. A smaller Kp value indicates lower possibility of oscillation but also slower deviation reduction.

PA-06 Integral time Ti1

Address:	0xFA06		
Min.:	0.01	Unit:	s
Max.:	100	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:

0.01s to 100.00s

Description

This parameter defines the integral time Ti in PID control. It determines the integral adjustment intensity of the PID controller. Shorter integral time indicates greater adjustment intensity.

PA-07 Derivative time Td1

Address:	0xFA07		
Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.000s to 10.000s

Description

This parameter defines the derivative time Td in PID control. It determines the deviation variation adjustment intensity of the PID controller. Longer derivative time indicates greater adjustment intensity.

PA-08 PID cut-off frequency in reverse run

Address:	0xFA08		
Min.:	0	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:

0.00 Hz to value of P0-10

Description

When the frequency source is only the PID, the PID cut-off frequency in reverse direction is the minimum value of the current PID output. When the frequency source is main frequency + PID, FA-08 acts on the main frequency + PID and outputs the minimum frequency value after "main frequency + PID" operation.

PA-09 PID deviation limit

Address: 0xFA09

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 100.0%

Description

When the deviation is within the PID deviation limit, no adjustment is required. This parameter helps balance the accuracy and stability of the system output.

PA-10 PID differential limit

Address: 0xFA0A

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.00% to 100.00%

Description

It is used to set the PID differential output range. In PID control, the differential operation may easily cause system oscillation. Therefore, the PID differential regulation is restricted to a small range.

PA-11 PID reference change time

Address: 0xFA0B

Min.:	0	Unit:	s
Max.:	650	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00s to 650.00s

Description

This parameter defines the time required for the PID reference to change from 0.0% to 100.0%.

PA-12 PID feedback filter time

Address: 0xFA0C
Min.: 0 Unit: s
Max.: 60 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00s to 60.00s

Description
This parameter defines the filter time of PID feedback. The filter helps to reduce interference on the feedback but degrades the responsiveness of the process closed-loop system.

PA-13 PID deviation gain

Address: 0xFA0D
Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 100 Change: In real time

Value Range:
0.0% to 100.0%

Description

PA-14 PID optimization

Address: 0xFA0E
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0–100

Description

PA-15 Proportional gain Kp2

Address: 0xFA0F
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 20 Change: In real time

Value Range:
0.0–1000.0

Description
This parameter defines the proportional gain Kp in PID control. The deviation reduction speed depends on the proportional coefficient Kp. A larger Kp tends to reduce the deviation faster, but may cause system oscillation, especially at large hysteresis. A smaller Kp indicates lower possibility of oscillation but also slower deviation reduction.

PA-16 Integral time Ti2

Address:	0xFA10		
Min.:	0.01	Unit:	s
Max.:	100	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:

0.01s to 100.00s

Description

This parameter defines the integral time Ti in PID control. It determines the integral adjustment intensity of the PID controller. Shorter integral time indicates greater adjustment intensity.

PA-17 Derivative time Td2

Address:	0xFA11		
Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.000s to 10.000s

Description

This parameter defines the derivative time Td in PID control. It determines the deviation variation adjustment intensity of the PID controller. Longer derivative time indicates greater adjustment intensity.

PA-18 PID parameter switchover condition

Address:	0xFA12		
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: No switchover
1: Switchover by DI
2: Automatic switchover based on deviation
3: Switchover based on running frequency
6: Automatic adjustment based on roll diameter
7: Automatic adjustment based on maximum roll diameter percentage

Description

This parameter defines the switchover between two groups of PID parameters. 0: No switchover

No switchover is performed.

1: Switchover by DI

To use this function, the DI must be assigned with function 43 (PID parameter switchover). If the DI is inactive, parameter group 1 (PA-05 to PA-07) is selected. If the DI is active, parameter group 2 (PA-15 to PA-17) is selected.

2: Auto switchover based on deviation

If the absolute value of the deviation between the setting and the feedback is less than PA-19 (PID parameter switchover deviation 1), parameter group 1 is selected. If the absolute value of the deviation between the setting and the feedback is greater than PA-20 (PID parameter switchover deviation 2), parameter group 2 is selected. If the absolute value of the deviation between the setting and the feedback is between PA-19 (PID parameter switchover deviation 1) and PA-20 (PID parameter switchover deviation 2), the PID parameters are linear interpolation values of the two sets of PID parameters.

3: Switchover based on running frequency

PID parameters are switched automatically based on the running frequency of the AC drive.

6: Automatic adjustment based on roll diameter

When the current roll diameter changes between the maximum roll diameter (B0-08) and the minimum roll diameter (B0-09), the PID parameters are the linear interpolation values of the two sets of PID parameters. The minimum roll diameter corresponds to parameter group 1 (PA-05 to PA-07), and the maximum roll diameter corresponds to parameter group 2 (PA-15 to PA-17).

7: Automatic adjustment based on maximum roll diameter percentage

When the current roll diameter changes between the maximum roll diameter (B0-08) x PA-20 and the maximum roll diameter (B0-08) x PA-19, the PID parameters are the linear interpolation values of the two sets of PID parameters.

PA-19 PID parameter switchover deviation 1

Address:	0xFA13		
Min.:	0	Unit:	%
Max.:	PA-20	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0.0% to PA-20

Description

The value 100% corresponds to the maximum deviation between the reference and feedback. The setting range is 0.0% to PA-20 (PID parameter switchover deviation 2).

PA-20 PID parameter switchover deviation 2

Address:	0xFA14		
Min.:	PA-19	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	In real time

Value Range:

PA-19 to 100.0%

Description

The value 100% corresponds to the maximum deviation between the reference and feedback. The setting range is PA-19 (PID parameter switchover deviation 1) to 100.0%.

PA-21 PID initial value

Address: 0xFA15

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 100.0%

Description

When the AC drive starts up, the PID starts closed-loop algorithm only after the PID output is fixed to the PID initial value (PA-21) and lasts the time longer than the value of PA-22 (PID initial value active time).

PA-22 PID initial value holding time

Address: 0xFA16

Min.:	0	Unit:	s
Max.:	650	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00s to 650.00s

Description

When the AC drive starts up, the PID starts closed-loop algorithm only after the PID output is fixed to the PID initial value (PA-21) and lasts the time longer than the value of PA-22 (PID initial value active time).

PA-23 Maximum deviation between two PID outputs in forward direction

Address: 0xFA17

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.00% to 100.00%

Description

PA-24 Maximum deviation between two PID outputs in reverse direction

Address: 0xFA18

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.00% to 100.00%

Description

PA-25 PID integral property

Address: 0xFA19

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Disabled

1: Enabled

Description

0: Disabled. When the integral pause is disabled, it remains inactive no matter whether the multi-functional DI is active.

1: Enabled. When the integral pause is enabled and the DI allocated with the PID integral pause function is active (P4-00 = 22), the PID integral operation stops. In this case, only proportional and differential operations take effect.

PA-26 **Detection level of PID feedback loss**

Address: 0xFA1A

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 100.0%

Description

This parameter is used to determine whether the PID feedback is lost. If the PID feedback is lower than the value of PA-26 (Detection level of PID feedback loss) and the lasting time exceeds the value of PA-27 (Detection time of PID feedback loss), the AC drive reports E31.00.

When this parameter is set to 0, feedback loss detection is disabled.

PA-27 **Detection time of PID feedback loss**

Address: 0xFA1B

Min.:	0	Unit:	s
Max.:	20	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 20.0s

Description

This parameter is used to determine whether the PID feedback is lost. If the PID feedback is lower than the value of PA-26 (Detection level of PID feedback loss) and the lasting time exceeds the value of PA-27 (Detection time of PID feedback loss), the AC drive reports E31.00.

PA-21 **PID Operation at Halt**

Address: 0xFA1C

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Halt without Operation

1: Halt with Operation

Description

PA-22 **PID Anti-Windowup Integration**

Address: 0xFA1D

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Halt without Operation

1: Halt with Operation

Description

6.12 FB Wobble, Fixed Length, and Count

PB-00 Wobble setting mode

Address: 0xFB00

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Relative to the center frequency

1: Relative to the maximum frequency

Description

0: Relative to the central frequency (P0-07, frequency reference superposition). It is a variable wobble system and the wobble changes with the central frequency (frequency reference).

1: Relative to the maximum frequency (P0-10, maximum frequency). It is a fixed wobble system, and the wobble is calculated based on the maximum frequency.

PB-01 Wobble amplitude

Address: 0xFB01

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 100.0%

Description

When PB-01 is set to 0, the wobble amplitude is 0 and the wobble function does not work. When the wobble is related to the central frequency (PB-00 = 0), the wobble is calculated based on the following formula: wobble = P0-07 x PB-01. When the wobble is related to the maximum frequency (PB-00 = 1), the wobble is calculated based on the following formula: wobble = P0-10 x PB-01.

PB-02 Jump frequency amplitude

Address: 0xFB02

Min.:	0	Unit:	%
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0% to 50.0%

Description

This parameter and the wobble are used to define the jump frequency, namely, jump frequency = wobble x PB-02. The wobble running frequency is limited by the frequency upper limit and frequency lower limit.

PB-03 Wobble cycle

Address: 0xFB03

Min.:	0.1	Unit:	s
Max.:	3,000	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:

0.1s to 3000.0s

Description

This parameter defines the time of a complete wobble cycle.

PB-04 Triangular wave rising time coefficient

Address: 0xFB04

Min.:	0.1	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:
0.1% to 100.0%
Description
It is the percentage of triangular wave rising time to PB-03 (Wobble cycle).

PB-05 Set length

Address: 0xFB05

Min.:	0	Unit:	m
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	In real time

Value Range:
0 m to 65535 m
Description
This parameter specifies the length value to be controlled in fixed length control mode.

PB-06 Actual length

Address: 0xFB06

Min.:	0	Unit:	m
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 m to 65535 m
Description
The actual length is a monitored value. Actual length (PB-06) = Number of pulses sampled by terminal/Number of pulses each meter (PB-07)

PB-07 Number of pulses per meter

Address: 0xFB07

Min.:	0.1	Unit:	-
Max.:	6553.5	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
0.1–6553.5
Description
Indicates the number of pulses output per 1 m. The length pulse is sampled by DI5. DI5 must be allocated with the length count input function (P4-04 = 27).

PB-08 Set count value

Address: 0xFB08

Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	In real time

Value Range:
1 to 65535
Description
When the count value reaches PB-08, the DO outputs an active signal indicating that the count value has reached.

PB-09 Designated count value

Address: 0xFB09
Min.: 1 Unit: -
Max.: 65535 Data type: UInt16
Default: 1000 Change: In real time

Value Range:

1 to 65535

Description

When the count value reaches PB-09, the DO outputs an active signal indicating that the designated count value has reached. PB-09 must be lower than or equal to PB-08 (Set count value).

PB-10 Revolution count reset mode

Address: 0xFB0A
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: Rising edge triggered
1: Level triggered

Description

Used to set the revolution counting reset mode.
0: Rising edge triggered
1: Level triggered

PB-11 Revolution count reset signal

Address: 0xFB0B
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: Disable
1: Enable

Description

Clear the number of revolutions. When this parameter is set to 1, the number of revolutions is cleared.

PB-12 Revolution count retention upon power failure

Address: 0xFB0C
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: No
1: Yes

Description

When this parameter is set to 0, the number of revolutions is not retentive upon power failure. When this parameter is set to 1, the number of revolutions is retentive upon power failure.

PB-13 Revolution count clear

Address: 0xFB0D

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Indicates the original value of resolution count.

PB-14 Transmission ratio numerator

Address: 0xFB0E

Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

1 to 65535

Description

PB-15 Transmission ratio denominator

Address: 0xFB0F

Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

1 to 65535

Description

PB-16 Actual running revolutions

Address: 0xFB10

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

Indicates the number of revolutions after PB-13 is superposed.

PB-17 Running revolutions

Address: 0xFB11

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
Indicates the number of running resolutions upon last count reset.

PB-18 Running revolution accuracy

Address:	0xFB12		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: 1 revolution
1: 0.1 revolution
Description
0 indicates that the unit of revolution count is 1, and 1 indicates that the unit of revolution count is 0.1.

PB-19 Revolution count direction

Address:	0xFB13		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Forward
1: Reverse
Description
0 indicates that the directions are consistent, and 1 indicates that the directions are reverse.

6.13 Multi-referenceandSimplePLC

PC-00 **Multi-reference 0**

Address: 0xFC00
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 0 Change: In real time

Value Range:
-100.0% to +100.0%

Description
This parameter indicates the frequency reference of each speed. PC-00 to PC-15 correspond to 16 (from 0 to 15) frequency setting values. The frequency setting values are calculated as percentages corresponding to the maximum frequency. The value 100% corresponds to P0-10 (Maximum frequency). The AC drive provides four multi-reference terminals, which have 16 state combinations, corresponding to 16 frequency setting values.
When the simple PLC is used as the main frequency source, you need to set parameters in group PC. In some industrial applications, the AC motor is only used to realize the functions of start/stop, time- and segment-based speed regulation, and simple automatic forward and reverse run. A PLC is required for other control functions. However, the simple PLC is able to provide the control functions without a PLC. Simple PLCs are typically used in industrial equipment such as mixture mixing and industrial washing machines. When the simple PLC is used as the main frequency (P0-03 = 7),
the parameters in group FC need to be set.

P9-01 **Multi-reference 1**

Address: 0xFC01
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 0 Change: In real time

Value Range:
-100.0% to +100.0%

Description
Same as FC-00

PC-02 **Multi-reference 2**

Address: 0xFC02
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 0 Change: In real time

Value Range:
-100.0% to +100.0%

Description
Same as PC-00

PC-03 **Multi-reference 3**

Address: 0xFC03
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 0 Change: In real time

Value Range:
-100.0% to +100.0%

Description
Same as PC-00

PC-04 **Multi-reference 4**

Address: 0xFC04

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

FC-05 Multi-reference 5

Address: 0xFC05

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

FC-06 Multi-reference 6

Address: 0xFC06

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-07 Multi-reference 7

Address: 0xFC07

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-08 Multi-reference 8

Address: 0xFC08

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-09 Multi-reference 9

Address: 0xFC09

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-10 Multi-reference 10 Address: 0xFC0A

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-11 Multi-reference 11

Address: 0xFC0B

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-12 Multi-reference 12

Address: 0xFC0C

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-13 Multi-reference 13

Address: 0xFC0D

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-14 Multi-reference 14

Address: 0xFC0E

Min.: -100 Unit: %

Max.: 100 Data type: Int16

Default: 0 Change: In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-15 Multi-reference 15

Address: 0xFC0F

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

Same as PC-00

PC-16 Simple PLC running mode

Address: 0xFC10

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Stop after running for one cycle

1: Keep final values after running for one cycle

2: Repeat after running for one cycle

Description

When the simple PLC is used as the main frequency source, the running mode of the simple PLC is set by PC-16. PC-17 is used to determine whether the running stage and running frequency of the PLC before power failure are memorized upon power failure or shutdown.

0: Stop after running for one cycle

The AC drive stops automatically after running for one cycle and starts again only after receiving a running command.

1: Keep the final value after running for one cycle

The AC drive keeps the final running frequency and direction after running for one cycle and starts to run from the initial PLC state upon restart.

2: Repeat after running for one cycle

The AC drive automatically starts another cycle after running for one cycle and stops only after receiving a stop command.

PC-17 Simple PLC retention selection upon power failure

Address: 0xFC11

Min.:	0	Unit:	-

Max.: 11 Data type: UInt16
Default: 0 Change: In real time

Value Range:

Ones (position: Retention selection upon power failure)
0: No
1: Yes
Tens (position: Retention selection upon stop)
0: No
1: Yes

Description

When the simple PLC is used as the main frequency, the running mode of the simple PLC is set by PC-16.
PC-17 is used to determine whether the running stage and running frequency of the PLC before power failure are memorized upon power failure or shutdown.
Ones (position): Retention selection upon power failure
This parameter defines whether the PLC process starts all over again upon power-on. When it is set to 1, the AC drive retains the PLC running stage and running frequency before power failure and continues to run from the retained values after the drive is powered on again.
Tens: Retention selection upon stop
This parameter defines whether the PLC process starts all over again upon startup. When it is set to 1, the AC drive retains the PLC running stage and running frequency before stop and continues to run from the retained values after the drive is started again.

PC-18 Running time of speed reference 0 set by simple PLC

Address: 0xFC12

Min.: 0 Unit: s (h)
Max.: 6553.5 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-19 Acceleration/deceleration time of speed reference 0 set by simple PLC

Address: 0xFC13

Min.: 0 Unit: -

Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-20 Running time of speed reference 1 by simple PLC

Address:	0xFC14		
Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-21 Acceleration/deceleration time of speed reference 1 set by simple PLC

Address:	0xFC15		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (N0-17 and N0-18)
1: Group 2 acceleration/deceleration time (N8-03 and N8-04)
2: Group 3 acceleration/deceleration time (N8-05 and N8-06)
3: Group 4 acceleration/deceleration time (N8-07 and N8-08)

Description

NC-18 to NC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-22 Running time of speed reference 2 by simple PLC

Address: 0xFC16

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-23 Acceleration/deceleration time of speed reference 2 set by simple PLC

Address: 0xFC17

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-24 Running time of speed reference 3 by simple PLC

Address: 0xFC18

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-25 Acceleration/deceleration time of speed reference 3 set by simple PLC

Address: 0xFC19

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-26 Running time of speed reference 4 by simple PLC

Address: 0xFC1A

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-27 Acceleration/deceleration time of speed reference 4 set by simple PLC

Address: 0xFC1B

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-28 Running time of speed reference 5 by simple PLC

Address:	0xFC1C		
Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-29 Acceleration/deceleration time of speed reference 5 set by simple PLC

Address:	0xFC1D		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-30 Running time of speed reference 6 set by simple PLC

Address:	0xFC1E		
Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-31 Acceleration/deceleration time of speed reference 6 set by simple PLC

Address: 0xFC1F

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-32 Running time of speed reference 7 set by simple PLC

Address: 0xFC20

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-33 Acceleration/deceleration time of speed reference 7 set by simple PLC

Address: 0xFC21

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-34 Running time of speed reference 8 set by simple PLC

Address:	0xFC22		
Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-35 Acceleration/deceleration time of speed reference 8 set by simple PLC

Address:	0xFC23		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-36 Running time of speed reference 9 set by simple PLC

Address: 0xFC24

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-37 Acceleration/deceleration time of speed reference 9 set by simple PLC

Address: 0xFC25

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-38 Running time of speed reference 10 set by simple PLC

Address: 0xFC26

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-39 Acceleration/deceleration time of speed reference 10 set by simple PLC

Address: 0xFC27

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-40 Running time of speed reference 11 set by simple PLC

Address: 0xFC28

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-41 Acceleration/deceleration time of speed reference 11 set by simple PLC

Address: 0xFC29

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-42 Running time of speed reference 12 set by simple PLC

Address: 0xFC2A

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-43 Acceleration/deceleration time of speed reference 12 set by simple PLC

Address: 0xFC2B

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-44 Running time of speed reference 13 set by simple PLC

Address: 0xFC2C

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-45 Acceleration/deceleration time of speed reference 13 set by simple PLC

Address: 0xFC2D

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-46 Running time of speed reference 14 set by simple PLC

Address: 0xFC2E

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-47 Acceleration/deceleration time of speed reference 14 set by simple PLC

Address: 0xFC2F

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-48 Running time of the 15th speed reference set by simple PLC

Address: 0xFC30

Min.:	0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s (h) to 6553.5s (h)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of the 16 multi-speed references. The running time of each reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

PC-49 **Acceleration/ deceleration time of speed reference 15 set by simple PLC** Address: 0xFC31

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Group 1 acceleration/deceleration time (P0-17 and P0-18)
1: Group 2 acceleration/deceleration time (P8-03 and P8-04)
2: Group 3 acceleration/deceleration time (P8-05 and P8-06)
3: Group 4 acceleration/deceleration time (P8-07 and P8-08)

Description

PC-18 to PC-49 respectively define the running time and acceleration and deceleration time of each of 16 multi-speed references. The running time of each speed reference is the sum of acceleration or deceleration time and running time at constant speed and target frequency.

P9-50 **PLC running time unit**

Address: 0xFC32

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: s (second)
1: h (hour)

Description

This parameter defines the unit of the PLC running time for each speed.

PC-51 **Multi-reference 0 setting mode**

Address: 0xFC33

Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Multi-reference 0 (PC-00)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: PID
6: Preset frequency (P0-08 that can be changed by pressing UP or DOWN key)

Description

Multi-reference 0 can be selected through seven ways, including digital setting, analog input, pulse frequency, PID, and preset frequency.

0: Multi-reference 0 (PC-00)

The frequency reference of multi-reference 0 is set by PC-00.

1: AI1

The frequency reference of multi-reference 0 is set by AI1.

2: AI2

The frequency reference of multi-reference 0 is set by AI2.

3: AI3

The frequency reference of multi-reference 0 is set by AI3 input.

4: Pulse reference (DI5)

The frequency reference of multi-reference 0 is set by pulse frequency.

5: PID

The frequency reference of multi-reference 0 is set by PID.

6: Preset frequency (P0-08)

The frequency reference of multi-reference 0 is set by P0-08 (preset frequency).

6.14 P D Communication Parameters

PD-00 Baud rate

Address: 0xFD00

Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0: 300 bit/s
1: 600 bit/s
2: 1200 bit/s
3: 2400 bit/s
4: 4800 bit/s
5: 9600 bit/s
6: 19200 bit/s
7: 38400 bit/s
8: 57600 bit/s
9: 115200 bit/s

Description

This parameter defines the speed of data transmission between the host controller and the AC drive. A higher baud rate indicates faster communication. Note that the baud rate of the host controller must be the same as that of the AC drive. Otherwise, communication will fail.

PD-01 Modbus data format

Address: 0xFD01

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: No check (8-N-2) 1: Even parity check (8-E-1)
2: Odd parity check (8-O-1)
3: No check (8-N-1)

Description

This parameter defines the format of Modbus data transmitted between the host controller and the AC drive. The data format set in the host controller must be the same as that set in the AC drive. Otherwise, communication will fail.

PD-02 Local address

Address: 0xFD02

Min.:	1	Unit:	-
Max.:	247	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

1 to 247

Description

When the local address is set to 0 (broadcast address), host controller broadcast is enabled.
The local address must be unique in the range of 1 to 247, which is the basis for point-point communication between the AC drive and the host controller.

PD-03 Response delay

Address: 0xFD03
Min.: 0 Unit: ms
Max.: 20 Data type: UInt16
Default: 2 Change: In real time

Value Range:

0 ms to 20 ms

Description

This parameter defines the interval from the end of data receiving by the AC drive to the start of data transmission to the host controller.
If the response delay is shorter than the system processing time, the system processing time prevails, which means the system sends data to the host controller immediately after data processing is completed. If the response delay is longer than the system processing time, the AC drive sends data to the host controller only after the response delay elapses.

PD-04 Modbus communication timeout time

Address: 0xFD04
Min.: 0 Unit: s
Max.: 60 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.0s–60.0s

Description

When it is set to 0.0s, the Modbus communication timeout time is invalid. It is set to 0.0s under normal circumstances. This parameter is used to monitor communication status in a system with continuous communication.
When it is set to an effective value, if the time interval between the current communication and the next communication exceeds PD-04 (Modbus communication interruption detection time), the system reports a communication fault (Err16).

PD-06 Communication fault reset

Address: 0xFD06
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: At stop

Value Range:

0: Disabled
1: Enabled

Description

This parameter defines whether to reset the communication fault.

PD-00 Programming/Console Baud Rate

Address: 0xFD07
Min.: 0 Unit: -
Max.: 9 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: 300bps
1: 600bps
2: 1200bps
3: 2400bps
4: 4800bps
5: 9600bps
6: 19200bps
7: 38400bps
8: 57600bps
9: 115200bps

Description

PD-09 CANopen/CANlink communication state

Address: 0xFD09
Min.: 0 Unit: -
Max.: 999 Data type: UInt16
Default: 2 Change: Unchangeable

Value Range:

Ones: CANopen
0: Stop
1: Initialized
2: Pre-running
8: Running
Tens: CANlink
0: Stop
1: Initialized
2: Pre-running
8: Running
Hundreds position: Reserved

Description

This read-only parameter is used to monitor the communication status.

PD-10 CANopen/CANlink switchover

Address: 0xFD0A
Min.: 1 Unit: -
Max.: 2 Data type: UInt16
Default: 1 Change: At stop

Value Range:

1: CANopen
2: CANlink

Description

Used to select the CAN communication protocol for the CANlink expansion card.

If it is set to 1, CANopen communication is selected.
If it is set to 2, CANlink communication is selected.

PD-12 CAN baud rate

Address: 0xFD0C
Min.: 0 Unit: -
Max.: 6 Data type: UInt16
Default: 5 Change: At stop

Value Range:

0: 20 kbit/s
1: 50 kbit/s
2: 100 kbit/s
3: 125 kbit/s
4: 250 kbit/s
5: 500 kbit/s
6: 1 Mbit/s

Description

This parameter defines the baud rate for CAN communication, including CANlink and CANopen communication. In the same network, baud rates of all stations must be consistent. Otherwise, communication will fail.
It is valid only for the CANlink communication expansion card.

PD-13 CAN station number

Address: 0xFD0D
Min.: 1 Unit: -
Max.: 127 Data type: UInt16
Default: 1 Change: At stop

Value Range:

1 to 127

Description

This parameter defines the CAN station number, including station numbers for CANlink and CANopen communication. In the same network, all station numbers must be unique. Otherwise, communication will fail.
It is valid only for the CANlink communication expansion card.

PD-14 Number of CAN frames received per unit of time

Address: 0xFD0E
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

This parameter is used to monitor the bus load. It defines the number of CAN frames received by the station per second.
It is valid only for the CANlink communication expansion card.

PD-15 Maximum value of error counters received by the node

Address: 0xFD0F
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

This parameter is used to monitor bus errors. It defines the maximum value of error counters received by the node through CAN.
It is valid only for the CANlink communication expansion card.

PD-16 Maximum value of error counters sent by the node

Address: 0xFD10
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

This parameter is used to monitor bus errors. This parameter defines the maximum value of error counters sent by the node through CAN.
It is valid only for the CANlink communication expansion card.

PD-17 **Bus disconnection times per unit of time**

Address: 0xFD11

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

This parameter is used to monitor bus errors. This parameter defines the CAN bus disconnection times of the node.
It is valid only for the CANlink communication expansion card.

PD-19 **CAN communication disconnection coefficient**

Address: 0xFD13

Min.:	1	Unit:	-
Max.:	15	Data type:	UInt16
Default:	3	Change:	At stop

Value Range:

1 to 15

Description

PD&+- Timeout disconnection time for UP/DOWN function

Address: 0xFD18

Min.:	1	Unit:	s
Max.:	10	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

1 to 15

Description

PD-37 DHCP function

Address: 0xFD25

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Enabled

Description

PD-38 IP address highest byte

Address: 0xFD26

Min.:	0	Unit:	-
Max.:	255	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0 to 255

Description

PD-39 IP address second highest byte

Address: 0xFD27

Min.:	0	Unit:	-
Max.:	255	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0 to 255

Description

PD-40 IP address third byte

Address: 0xFD28
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to 255
Description

PD-41 IP address lowest byte

Address: 0xFD29
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to 255
Description

PD-42 Subnet mask highest byte

Address: 0xFD2A
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to 255
Description

PD-43 Subnet mask second highest byte

Address: 0xFD2B
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to 255
Description

PD-44 Subnet mask third byte

Address: 0xFD2C

Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop
Value Range:
0 to 255
Description

PD-45 Subnet mask lowest byte
Address: 0xFD2D
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop
Value Range:
0 to 255
Description

PD-46 Gateway highest byte
Address: 0xFD2E
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop
Value Range:
0 to 255
Description

PD-47 Gateway second highest byte
Address: 0xFD2F
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop
Value Range:
0 to 255
Description

PD-48 Gateway third highest byte
Address: 0xFD30
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop
Value Range:
0 to 255
Description

PD-49 Gateway lowest byte

Address: 0xFD31
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to 255
Description

PD-58 Internet IP extension card error code

Address: 0xFD3A
Min.: 0 Unit: -
Max.: 255 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 255
Description

PD-61 MAC address high byte

Address: 0xFD3D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to value of 0xFFFF
Description

PD-62 MAC address middle byte

Address: 0xFD3E
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to value of 0xFFFF
Description

FD-63 MAC address low byte

Address: 0xFD3F
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: At stop

Value Range:
0 to value of 0xFFFF
Description

FD-63 MAC address low byt

eAddress: 0xFD3F

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0 to value of 0xFFFF

Description

PD-94 Modbus software version

Address: 0xFD5E

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

PD-95 CANlink software version

Address: 0xFD5F

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

PD-96 CANopen software version

Address: 0xFD60

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

6.15 PE User-defined Parameters

PE-00 User-defined parameter 0

Address: 0xFE00

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	7017	Change:	In real time

Value Range:

0 to 65535

Description

Group FE consists of user-defined parameters. Users can add commonly used parameters to group FE for easier check and modification.

PE-01 **User-defined parameter 1**

Address: 0xFE01
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 7016 Change: In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-02 **User-defined parameter 2**

Address: 0xFE02
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-03 **User-defined parameter 3**

Address: 0xFE03
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-04 **User-defined parameter 4**

Address: 0xFE04
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-05 **User-defined parameter 5**

Address: 0xFE05

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Same as PE-00

PE-06 **User-defined parameter 6**

Address: 0xFE06

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Same as PE-00

PE-07 **User-defined parameter 7**

Address: 0xFE07

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Same as PE-00

PE-08 User-defined parameter 8

Address: 0xFE08

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Same as PE-00

PE-09 User-defined parameter 9

Address: 0xFE09

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Same as PE-00

PE-10 User-defined parameter 10

Address: 0xFE0A

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Same as PE-00

PE-11 User-defined parameter 11

Address: 0xFE0B

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

0 to 65535
Description
Same as PE-00

PE-12 **User-defined parameter 12**

Address: 0xFE0C

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-13 **User-defined parameter 13**

Address: 0xFE0D

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-14 **User-defined parameter 14**

Address: 0xFE0E

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-15 **User-defined parameter 15**

Address: 0xFE0F

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535

Description
Same as PE-00

PE-16 **User-defined parameter 16**

Address: 0xFE10

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-17 **User-defined parameter 17**

Address: 0xFE11

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-18 **User-defined parameter 18**

Address: 0xFE12

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-19 **User-defined parameter 19**

Address: 0xFE13

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535

Description
Same as PE-00

PE-20 **User-defined parameter 20**

Address: 0xFE14

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	6768	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-21 **User-defined parameter 21**

Address: 0xFE15

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	6769	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-22 **User-defined parameter 22**

Address: 0xFE16

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535
Description
Same as PE-00

PE-23 **User-defined parameter 23**

Address: 0xFE17

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to 65535

Description
Same as PE-00

PE-24 **User-defined parameter 24**
Address: 0xFE18
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as PE-00

PE-25 **User-defined parameter 25**
Address: 0xFE19
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as PE-00

PE-26 **User-defined parameter 26**
Address: 0xFE1A
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as PE-00

PE-27 **User-defined parameter 27**
Address: 0xFE1B
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535

Description
Same as PE-00

NE-28 **User-defined parameter 28**
Address: 0xFE1C
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as NE-00

NE-29 **User-defined parameter 29**
Address: 0xFE1D
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as NE-00

NE-30 **User-defined parameter 30**
Address: 0xFE1E
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as NE-00

NE-31 **User-defined parameter 31**
Address: 0xFE1F
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to 65535
Description
Same as PE-00

6.16 PP User Parameters

PP-00 **User password**

Address: 0x1F00

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to 65535

Description

Used to set the user password.

PP-01 **Parameter initialization**

Address: 0x1F01

Min.:	0	Unit:	-
Max.:	503	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: No operation

1: Restore to factory parameter mode 1

2: Clear records

4: Recover user backup parameters

501: Back up current user parameters

503: Restore to factory parameter mode 2

Description

This parameter is used to set the corresponding action upon parameter initialization of the AC drive.

0: No operation

The AC drive does not perform any operation.

1: Restore to factory parameter mode 1

Most of the AC drive parameters are restored to factory settings. However, motor parameters, P0-22 (decimal places of frequency reference), fault records, P7-09 (accumulative running time), P7-13 (accumulative power-on time), P7-14 (accumulative power consumption), and P7-07 (IGBT heatsink temperature) are not restored.

2: Clear records

The fault records, P7-09 (accumulative running time), P7-13 (accumulative power-on time), and P7-14 (accumulative power consumption) are cleared.

4: Back up current user parameters

The current parameter settings are backed up.

501: Restore user backup parameters

Parameters backed up by setting PP-01 to 4 are restored.

503: Restore to factory parameter mode 2

All AC drive parameters, excluding manufacturer parameters in group FF, PP-00, and FP-01, are restore to default settings.

PP-02 Parameter display selection

Address: 0x1F02
Min.: 0 Unit: -
Max.: 1111 Data type: UInt16
Default: 111 Change: In real time

Value Range:

Ones position: Group U
0: Hide
1: Display
Tens position: Group A
0: Hide
1: Display
Hundreds position: Group B
0: Hide
1: Display
Thousands position: Reserved

Description

This parameter is used to determine whether the parameters of groups U, A, B, and C are displayed on the operating panel.

PP-03 Display selection of customized parameters

Address: 0x1F03
Min.: 0 Unit: -
Max.: 11 Data type: UInt16
Default: 11 Change: In real time

Value Range:

Ones (position): Display of user-defined parameter groups
0: Hide
1: Display
Tens (position): Display of user-modified parameter groups
0: Hide
1: Display

Description

This parameter is used to determine whether the user-customized parameter group and the user-modified parameter group are displayed on the operating panel.

PP-04 Parameter modification property

Address: 0x1F04
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: Modification allowed
1: Modification prohibited

Description

Used to determine whether the parameters can be modified.

6.17 A0 Torque Control and Restricting Parameters

A0-00 Speed/Torque control mode

Address:	0xA000		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Speed control

1: Torque control

Description

Two control modes, speed control and torque control, are provided under vector control (FVC or SVC).

A0-01 Torque setting source selection

Address:	0xA001		
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Digital setting (A0-03)

1: AI1

2: AI2

3: AI3

4: Pulse reference (DI5)

5: Communication setting (1000H)

6: Min. (AI1, AI2)

7: Max. (AI1, AI2)

Description

This parameter is used to set the torque setting source. Eight torque setting sources are available.

A0-03 Torque digital setting

Address:	0xA003		
Min.:	-200	Unit:	%
Max.:	200	Data type:	Int16
Default:	100	Change:	In real time

Value Range:

-200.0% to +200.0%

Description

This parameter defines digital setting of the torque in torque control mode. The torque reference is a relative value. The value 100.0% corresponds to the rated motor torque. Check U0-06 to obtain the motor output torque, and the value 100% corresponds to the rated motor torque. The value ranges from- 200.0% to +200.0%.

When the parameter value is positive, the AC drive runs in the forward direction. When the parameter value is negative, the AC drive runs in the reverse direction.

A0-04 Torque filter time

Address: 0xA004

Min.:	0	Unit:	s
Max.:	5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.000s to 5.000s

Description

This parameter specifies the torque filter time.

A0-05 Speed limit digital setting

Address: 0xA005

Min.:	-120	Unit:	%
Max.:	120	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-120.0% to +120.0%

Description

In torque control mode,the upper frequency limit can be set digitally via speed limit;the percentage is relative to the maximum frequency(P0-10).

A0-06 Frequency modulation coefficient in window mode

Address: 0xA006

Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0–50.0

Description

A0-07 Torque acceleration time

Address: 0xA007

Min.:	0	Unit:	s
Max.:	650	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.00s to 650.00s

Description

A0-08 Torque deceleration time

Address: 0xA008

Min.:	0	Unit:	s
Max.:	650	Data type:	UInt16
		Change:	In real time

Default: 1

Value Range:

0.00s to 650.00s

Description

A0-09 Speed limit reference source

Address:	0xA009		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: A0-05

1: Frequency source

Description

Frequency limit setting source under torque mode.

0:Set digitally via A0-05

1:The frequency limit is the current operating target frequency.

A0-10 Speed limit offset/Windows frequency

Address:	0xA00A		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0.00Hz to value of P0-10

Description

Speed limit offset; if the actual speed exceeds the speed limit offset, the output torque will be restricted.

A0-11 Effective mode of speed limit offset

Address:	0xA00B		
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: Bidirectional offset valid

1: Unidirectional offset valid

2: Windows mode

Description

0:Bidirectional offset valid

Increase the speed limit offset frequency in both forward and reverse directions.

1:Unidirectional offset valid

Only increase the speed limit offset frequency in the reverse direction.

2:Windows mode

The torque transmitted from the master only serves as the torque limit of the slave. The slave torque setpoint is regulated and calculated by the speed loop.

In window mode, the window frequency needs to be set to increase or decrease the available limit torque after the slave receives the torque signal.

A0-12 **Frequency acceleration time**

Address: 0xA00C

Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

A0-13 **Frequency deceleration time**

Address: 0xA00D

Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

0.0s to 6500.0s

Description

A0-14 **Torque mode switchover**

Address: 0xA00E

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: Not switched

1: Switched to speed mode upon stop

2: Target torque changed to 0 upon stop

Description

6.18 A1 Virtual DI and DO Parameters

A1-00 **VDI1 function selection**

Address:	0xA100		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/Three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of VDI1.

0: No function

The DI terminal has no function.

1: Forward run

The operation mode of the AC drive is forward run. FWD indicates forward run. In two-wire mode 1 (P4-11=0), activating the terminal sets the AC drive to forward run. In two-wire mode 2 (P4-11=1), activating the terminal gives a running command.

2: Reverse run
The operation mode of the AC drive is reverse run. REV indicates reverse run. In three-wire mode 1 (P4-11=2), activating the terminal sets the AC drive to reversely run. In three-wire mode 2 (P4-11=3), activating the terminal sets the forward/ reverse run direction.
3: Three-wire operation control
The AC drive operation mode is three-wire control mode. To set the running command through the terminal, set P4-11 (Terminal control mode) to 2 (Three-wire mode 1) or 3 (three-wire mode 2), and set this parameter to 3. The three-wire control modes include three-wire mode 1 and three-wire mode 2.
4: Forward jog (FJOG)
The terminal is used to set the AC drive to FJOG mode. In the jog mode, the AC drive runs at low speed for a short time, which is generally used for maintenance and commissioning of field equipment.
5: Reverse jog (RJOG)
The terminal is used to set the AC drive to RJOG mode.
6: Terminal UP
The terminal is used to increase the frequency when the frequency is set through the terminal. When this terminal is active, it works as if the increment key is pressed and held. When this terminal is inactive, it works as if the increment key is released.
7: Terminal DOWN
The terminal is used to decrease the frequency when the frequency is set through the terminal. When this terminal is active, it works as if the decrement key is pressed and held. When this terminal is inactive, it works as if the decrement key is released.
8: Coast to stop
Once the AC drive receives a stop command, it immediately stops output and the load then coasts to stop based on the mechanical inertia. The AC drive stops by stopping the output. At this time, the power supply of the motor is cut off and the drive system is in a free braking state. Since the stop time is determined by the inertia of the system, this is also called inertia stop.
9: Fault reset (RESET). Used to reset the fault of the AC drive, which functions the same as the STOP/RES key on the operating panel. This function can remotely reset the AC drive upon a fault.
10: Running pause
By selecting this function, the AC drive decelerates to stop with all running parameters memorized (such as PLC, wobble, and PID parameters). When the terminal is inactive, the AC drive resumes its status before stop.
11: NO input of external fault
The AC drive reports Err15 upon receiving an external signal.

12-15: Multi-reference terminals 1–4
The AC drive selects the multi-reference as the main frequency. The settings of 16 speeds or 16 references can be implemented through combinations of 16 states of these four terminals. It is suitable for applications where the running frequency of the AC drive does not require continuous adjustment, and only several frequency values need to be used.
16-17: Terminal 1 to 2 for acceleration/deceleration selection
Four groups of acceleration and deceleration time can be switched through four states of these two terminals. The acceleration time indicates the time required by the AC drive to accelerate from 0 Hz to the acceleration/deceleration time base frequency (P0-25). The deceleration time indicates the time required by the AC drive to decelerate from the acceleration/deceleration base frequency (P0-25) to 0 Hz.
18: Frequency source switchover
Used to select the frequency reference input mode. The frequency reference is set by P0-07 (Final frequency reference setting selection).
19: UP and DOWN setting clear
When the main frequency is set through the operating panel and this terminal is active, the frequency (set through the increment/decrement keys on the operating panel) can be cleared, and the frequency will be reset to the value of P0-08.
20: Command source switchover terminal 1
When the running command is set through the terminal (P0-02=1) and this terminal is active, the control mode can be switched between the terminal and the operating panel.
When the running command is set through communication (P0-02=2) and this terminal is active, the control mode can be switched between the communication and the operating panel.
21: Acceleration/Deceleration inhibited
The terminal is used to maintain the current running frequency of the AC drive regardless of changes of the external input frequency (unless a stop command is received).
22: PID pause
PID is invalid temporarily. The AC drive maintains the current output frequency without supporting PID adjustment of frequency source.
23: PLC state reset
The terminal is used to restore the AC drive to the initial state of the simple PLC.
24: Wobble pause
In the wobble process, when this terminal is active, the wobble function pauses (the AC drive outputs at the center frequency).
25: Counter input
In the count process, when the terminal is active, a count pulse is input.

26: Counter reset
In the count process, when the terminal is active, the counter status is cleared.
27: Length count input
In the fixed length process, when the terminal is active, the length count is input.
28: Length reset
In the fixed length process, when the terminal is active, the length is cleared.
29: Torque control prohibited
When the terminal is active, the AC drive switches from the torque control mode to the speed control mode. When the terminal is inactive, the AC drive switches back to the torque control mode.

30: Pulse input
When DI5 is used as the pulse input terminal, DI5 must be allocated with this function.
32: Immediate DC braking
The terminal is used to directly switch the AC drive to the DC braking state. DC braking means that the AC drive outputs DC to the stator winding of the asynchronous motor to form a static magnetic field to enable the motor to brake with energy consumption. In this state, the rotor cuts the static magnetic field to generate braking torque, which stops the motor quickly.

33: NC input of external fault
The AC drive reports Err15 upon receiving an external signal.
34: Frequency modification enabled
When the terminal is active, the frequency can be modified. When the terminal is inactive, the frequency cannot be modified.
35: PID action direction reversal
The PID action direction is reversed to the direction set by PA-03 (PID action direction).
36: External stop terminal 1
When the running command is set through the operating panel (P0-02 = 0), this terminal is used to stop the AC drive, which functions the same as the STOP/RES key on the operating panel.
37: Command source switchover terminal 2
Used for switchover between terminal control and communication control.
If the command source is set to terminal control, the terminal being active switches the system to communication control.
If the command source is set to communication control, the terminal being active switches the system to terminal control.
38: PID integral pause
The integral adjustment function pauses when the terminal is active. However, the proportional and derivative adjustment functions are still valid.

39: Switchover between main frequency reference X and preset frequency
Used to switch from main frequency reference X to P0-08 (Preset frequency).
40: Switchover between auxiliary frequency reference Y and preset frequency
Used to switch from auxiliary frequency reference Y to P0-08 (Preset frequency).
41: Reserved
42: Position lock enabled
When the terminal is active, the AC drive decelerates to 0 Hz and then enters the position lock state.
43: PID parameter switchover
If PID parameters are switched over through the DI terminal (PA-18 = 1), the following conditions are true. When the terminal is inactive, the PID parameters are FA-05 to PA-07 (proportional gain Kp1, integral time Ti1, and differential time Td1). When the terminal is active, the PID parameters are PA-15 to PA-17 (PID gain Kp2, integral time Ti2, and differential time Td2).
44: User-defined fault 1
When the AC drive reports Err27, the AC drive will take measures according to the value of P9-49 (Fault protection action selection).
45: User-defined fault 2
When the AC drive reports Err28, the AC drive will take measures according to the value of P9-49 (Fault protection action selection).
46: Speed control/Torque control switchover
The terminal is used to switch between speed control and torque control.
When A0-00 (speed/torque control mode) is set to 0, the torque control mode is used when the terminal is active, and the speed control mode is used when the terminal is inactive.
When A0-00 (speed/torque control mode) is set to 1, the speed control mode is used when the terminal is active, and the torque control mode is used when the terminal is inactive.

47: Emergency stop
When the system is in the emergency state, the AC drive decelerates according to P8-55 (Terminal deceleration time for emergency stop). When the deceleration time for emergency stop is 0s in V/f mode, the AC drive decelerates according to the minimum unit time. The terminal does not need to be kept in the closed state. Even if it stays closed only for a short moment, the AC drive will come to an emergency stop. Different from general deceleration, if the emergency stop input terminal is opened after the deceleration time for emergency stop expires and the running signal is still active on the AC drive terminal, the AC drive will not restart. To restart the AC drive in this case, disconnect the running terminal and input the running command.

48: External stop terminal 2
The terminal is used to make the AC drive decelerate to stop in any control mode (operating panel, terminal, or communication control). In this case, the deceleration time is fixed to deceleration time 4 (P8-08).
49: Deceleration DC braking
The AC drive decelerates to F6-11 (Shutdown DC injection braking start frequency) and then enters the DC braking state.
50: Clear the current running time
The terminal is used to clear the current running time of the AC drive. If the current running time is shorter than the set value (greater than 0) of P8-53 (Current running time reached) and the terminal is active, the current running timing is cleared. If the current running time is longer than the set value (greater than 0) of P8-53 and the terminal is active, and the current running time is not cleared.
51: Two-wire/Three-wire control switchover
Used to switch between two- wire and three-wire control.
When P4-11 is set to 0 (Two-wire mode 1) and the terminal is active, the AC drive switches to three-wire mode 1. When the terminal is inactive, two-wire mode 1 is used.
When P4-11 is set to 1 (Two-wire mode 2) and the terminal is active, the AC drive switches to three-wire mode 2.
When P4-11 is set to 2 (Three-wire mode 1) and the terminal is active, the AC drive switches to two-wire mode 1.
When P4-11 is set to 3 (Three-wire mode 2) and the terminal is active, the AC drive switches to two-wire mode 2.
52: Electromagnetic shorting
When the terminal is active, the AC drive enters the electromagnetic shorting state.
53 Thickness overlaying
When the roll diameter is calculated based on accumulative thickness, this terminal records the number of revolutions.
54: Roll diameter reset
When this terminal is active, the initial roll diameter is reset. When the roll is replaced in the tension mode, the initial roll diameter must be reset.
55: Initial roll diameter 1
56: Initial roll diameter 2
In the tension mode, B0-11/12/13 is selected as the initial roll diameter through terminal combinations. When these two terminals are inactive, the minimum roll diameter (B0-09) is used as the initial roll diameter. When only the terminal for initial roll diameter 1 selection is active, B0-11 is used as the initial roll diameter. When only the terminal for initial roll diameter 2 selection is active, B0-12 is used as the initial roll diameter. When these two terminals are active, B0-13 is used as the initial roll diameter.

57: Pre-drive
When the terminal is active, the AC drive switches to the pre-drive speed control mode. This function is used to synchronize the linear speed for the axis that requires automatic reel replacement when the tension mode is used. When the terminal is deactivated after reel replacement, the tension control can function properly.
58: Winding/Unwinding switchover
This terminal is used for winding/unwinding switchover in the tension mode.
59: Roll diameter calculation disabled
When this terminal is active, the roll diameter calculation is disabled. In the tension mode, if automatic roll replacement and pre-drive are required, winding diameter calculation can be disabled to avoid influence on the winding diameter calculation.
60: Exit tension mode
Used to exit the tension control mode.
61: Terminal tension rise
When the terminal is activated, the tension torque is increased by certain ratio. After the DI terminal is deactivated, the boost part will be canceled gradually based on time.
62: Thickness selection 1
63: Thickness selection 2
In the tension mode, B0-32/33/34/35 is selected as the material thickness through terminal combinations. When these two terminals are inactive, B0-32 is selected as the material thickness. When only the terminal for thickness selection 1 is active, B0-33 is selected as the material thickness. When only the terminal for thickness selection 2 is active, B0-34 is selected as the initial roll diameter. When these two terminals are active, B0-35 is selected as the material thickness.
64-89: Reserved
90: Water cooling system fault
When the water cooling system of T13 models encounters a fault, the terminal receives the signal and the AC drive reports the E64 alarm.
91: Low liquid level fault
When the liquid in the water tank of T13 models is too low, the terminal receives the signal and the AC drive reports the A63 alarm.
92: Revolution count reset
The number of revolutions counted will be cleared after this terminal is activated.
93: Reserved

A1-01 VDI2 function

Address:	0xA101		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16

Default: 0 Change: At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of VDI2 terminal. The setting is similar to that of A1-00.

A1-02 VDI3 function selection

Address:	0xA102		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of VDI3 terminal. The setting is similar to that of A1-00.

A1-03 VDI4 function

Address:	0xA103		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of VDI4 terminal. The setting is similar to that of A1-00.

A1-04 VDI5 function selection

Address:	0xA104		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Used to set the function of VDI5 terminal. The setting is similar to that of A1-00.

A1-05 VDI state setting mode

Address:	0xA105		
Min.:	0	Unit:	-
Max.:	22222	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones: VDI1
0: Set by A1-06
1: DO state
2: DI state
Tens: VDI2
0: Set by A1-06
1: DO state
2: DI state
Hundreds: VDI3
0: Set by A1-06
1: DO state
2: DI state
Thousands: VDI4
0: Set by A1-06
1: DO state
2: DI state
Ten thousands: VDI5
0: Set by A1-06
1: DO state
2: DI state

Description

The VDI state can be set in two modes, which is selected in A1-05.
When A1-05 is set to 0, the VDI state is determined by the state of the VDO and VDIx is uniquely bound to VDOx (x ranges from 1 to 5).
When A1-05 is set to 1, the VDI state is determined by the binary bit of A1-06.

A1-06 VDI state selection

Address:	0xA106		
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

Ones: VDI1
0: Invalid
1: Valid
Tens: VDI2
0: Invalid
1: Valid
Hundreds: VDI3
0: Invalid
1: Valid
Thousands: VDI4
0: Invalid
1: Valid
Ten thousands: VDI5
0: Invalid
1: Valid

Description

This parameter defines whether VDIx (x ranges from 1 to 5) is active or inactive.

A1-07 AI1 function selection (used as DI)

Address:	0xA107		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 163: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Same as F4-00

A1-08 AI2 function selection (used as DI)

Address:	0xA108		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Same as F4-00

A1-09 AI3 function selection (used as DI)

Address:	0xA109		
Min.:	0	Unit:	-
Max.:	93	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: No function
1: Forward run (FWD)
2: Reverse run (REV)
3: Three-wire control
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6:Terminal (UP)
7:Terminal (DOWN)
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: NO input of external fault
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Terminal 1 for acceleration/deceleration selection
17: Terminal 2 for acceleration/deceleration selection
18: Frequency source switchover
19: UP and DOWN setting clear (terminal, operating panel)
20: Command source switchover terminal
21: Acceleration/Deceleration inhibited
22: PID pause
23: PLC state reset
24: Wobble pause
25: Counter input (DI5)
26: Counter reset
27: Length count input (DI5)
28: Length reset
29: Torque control inhibited
30: Pulse input
31: Reserved
32: Immediate DC braking
33: NC input of external fault
34: Frequency modification enabled
35: PID action direction reversal

36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency source X and preset frequency
40: Switchover between auxiliary frequency source Y and preset frequency
41: Reserved
42: Position lock enabled
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Speed control/Torque control switchover
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Clear the current running time
51: Two-wire/three-wire control switchover
52: Electromagnetic shorting
53: Thickness overlaying
54: Roll diameter reset
55: Initial roll diameter 1
56: Initial roll diameter 2
57: Pre-drive
58: Winding/Unwinding switchover
59: Roll diameter calculation disabled
60: Exit tension control
61: Terminal tension rise
62: Thickness selection 1
63: Thickness selection 2
90: Water cooling system fault
91: Low liquid level fault
92: Revolution count reset
93: Reserved

Description

Same as P4-00

A1-10 Active state selection for AI used as DI

Address:	0xA10A		
Min.:	0	Unit:	-
Max.:	111	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

Ones: AI1
0: Active high
1: Active low
Tens: AI2
0: Active high
1: Active low
Hundreds: AI3
0: Active high
1: Active low

Description

0: Active high

If the AI terminal is a high level terminal, this terminal is active when the value of the corresponding bit of A1-10 is set to 0 and inactive when set to 1.

0: Active low

If the AI terminal is a low level terminal, this terminal is inactive when the value of the corresponding bit of A1-10 is set to 0 and active when set to 1.

6.22 A5 Control Optimization Parameters

A5-00 DPWM switchover frequency upper limit

Address:	0xA500		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	12	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
The AC drive has two PWM modes, including CPWM and DPWM. When the running frequency is higher than A5-00 (Switchover frequency), the DPWM mode is used. When the running frequency is lower than A5-00 (Switchover frequency), the CPWM mode is used. The DPWM mode is used to improve the AC drive efficiency, and the CPWM mode is used to reduce the motor noise.
Increasing A5-00 to the maximum frequency will reduce the motor noise.

A5-01 PWM modulation mode

Address:	0xA501		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Asynchronous modulation
1: Synchronous modulation
Synchronous modulation mode 2
Synchronous modulation mode 3
Description
When the result of the carrier frequency divided by the running frequency is smaller than 10, output current oscillation or large current harmonic waves may occur. To address the problem, set this parameter to 1 (synchronous modulation).
0: Asynchronous modulation
In this mode, the carrier frequency and signal wave frequency are not synchronized. Usually, the carrier frequency keeps unchanged. When the signal wave frequency changes, the carrier ratio will change accordingly.
2: Synchronous modulation mode 2
3: Synchronous modulation mode 3

A5-02 Dead zone compensation mode selection

Address:	0xA502		
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	At stop

Value Range:
0: Disabled
1: Enabled
Description
A dead zone must be reserved for the switch signals of the upper and lower switch transistors on the same bridge arm of the AC drive. Dead zone compensation can improve the current waveform when the motor runs at low frequency.

A5-03 Random PWM depth

Address:	0xA503		
Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0–10
Description
If the motor noise is loud, setting A5-03 to a non-zero value can improve the motor noise. The higher the value, the better the effect. However, if the value is too high, the motor control may be affected. Therefore, set this parameter to 1 first during commissioning and then increase it by 1 each time according to the field application.

A5-04 Fast current limit

Address: 0xA504

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Disabled

1: Enabled

Description

This function is used to minimize the possibility of overcurrent faults, ensuring normal operation of the AC drive.

Disable this function in hoist applications such as cranes.

A5-05 Sampling delay

Address: 0xA505

Min.:	1	Unit:	-
Max.:	13	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

1 to 13

Description

A5-06 Undervoltage threshold

Address: 0xA506

Min.:	150	Unit:	V
Max.:	700	Data type:	UInt16
Default:	350	Change:	In real time

Value Range:

150.0V to 700.0V

Description

When the bus voltage is lower than the value set by A5-06, the AC drive reports E09.00.

A5-13 **Bus voltage in function part**

Address: 0xA50D

Min.:	100	Unit:	-
Max.:	20000	Data type:	UInt16
Default:	5310	Change:	Unchangeable

Value Range:

100 to 20000

Description

A5-14 **Temperature correction**

Address: 0xA50E

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0–1

Description

A5-16 **Display parameter address 1**

Address: 0xA510

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0–100

Description

A5-17 **Display parameter address 2**

Address: 0xA511

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	1	Change:	Unchangeable

Value Range:
0–100
Description

A5-18 Display parameter address 3

Address: 0xA512
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 2 Change: Unchangeable

Value Range:
0–100
Description

A5-19 Display parameter address 4

Address: 0xA513
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 3 Change: Unchangeable

Value Range:
0–100
Description

A5-21 Low speed carrier frequency

Address: 0xA515
Min.: 0 Unit: -
Max.: 16 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.0–16.0
Description
This parameter is used to set the carrier frequency of the motor at low speed to lower the motor noise in the V/f or FVC mode. The carrier frequency is the smaller one between P0-15 and A5-21. When the value of A5-21 is greater than or equal to 4 kHz, the value of A5-21 is active. When the value of A5-21 is lower than 4 kHz, 4 kHz is used.

A5-22 Dead-zone compensation auto-tuning

Address: 0xA516

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled
Description

6.23 A6 AI Curve

A6-00 Curve 4 minimum input

Address:	0xA600		
Min.:	-10	Unit:	V
Max.:	A6-02	Data type:	Int16
Default:	0	Change:	In real time

Value Range:
-10.00 V to A6-02
Description
This parameter defines the x axis of the minimum input point on AI curve 4, that is, the minimum analog input voltage or current.

A6-01 Percentage corresponding to curve 4 minimum input

Address:	0xA601		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
This parameter defines the y axis of the minimum input point on AI curve 4, that is, the setting value that the AI minimum input corresponds.

A6-02 Curve 4 inflexion 1 input

Address:	0xA602		
Min.:	A6-00	Unit:	V
Max.:	A6-04	Data type:	Int16
Default:	3	Change:	In real time

Value Range:
Value of A6-00 to value of A6-04
Description
This parameter defines the x axis of inflexion 1 on AI curve 4, that is, the analog input voltage or current at inflexion 1.

A6-03 Percentage corresponding to curve 4 inflexion point 1 input

Address:	0xA603		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	30	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
This parameter defines the y axis of inflexion 1 on AI curve 4, that is, the setting value at inflexion 1.

A6-04 Curve 4 inflexion 2 input

Address: 0xA604
Min.: A6-02 Unit: V
Max.: A6-06 Data type: Int16
Default: 6 Change: In real time

Value Range:
A6-02 to A6-06

Description
This parameter defines the x axis of inflexion 2 on AI curve 4, that is, the analog input voltage or current at inflexion 2.

A6-05 Corresponding setting of curve 4 inflexion 2 input

Address: 0xA605
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 60 Change: In real time

Value Range:
-100.0% to +100.0%

Description
This parameter defines the y axis of inflexion 2 on AI curve 4, that is, the setting value at inflexion 2.

A6-06 Curve 4 maximum input

Address: 0xA606
Min.: A6-04 Unit: V
Max.: 10 Data type: Int16
Default: 10 Change: In real time

Value Range:
A6-04 to 10.00 V

Description
This parameter defines the x axis of the maximum input point on AI curve 4, that is, the maximum analog input voltage or current.

A6-07 Percentage corresponding to curve 4 maximum input

Address: 0xA607
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 100 Change: In real time

Value Range:
-100.0% to +100.0%

Description
This parameter defines the y axis of the maximum input point on AI curve 4, that is, the setting value that the AI maximum input corresponds.

A6-08 Curve 5 minimum input

Address: 0xA608
Min.: -10 Unit: V
Max.: A6-10 Data type: Int16
Default: -10 Change: In real time

Value Range:
-10.00 V to A6-10
Description
This parameter defines the x axis of the minimum input on AI curve 5, that is, the minimum analog input voltage or current.

A6-09 Percentage corresponding to curve 5 minimum input

Address:	0xA609		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	-100	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
This parameter defines the y axis of the minimum input point on AI curve 5, that is, the setting value that the AI minimum input corresponds.

A6-10 Curve 5 inflexion 1 input

Address:	0xA60A		
Min.:	A6-08	Unit:	V
Max.:	A6-12	Data type:	Int16
Default:	-3	Change:	In real time

Value Range:
A6-08 to A6-12
Description
This parameter defines the x axis of inflexion 1 on AI curve 5, that is, the analog input voltage or current at inflexion 1.

A6-11 Corresponding setting of curve 5 inflexion 1 input

Address:	0xA60B		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	-30	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
This parameter defines the y axis of inflexion 1 on AI curve 5, that is, the setting value at inflexion 1.

A6-12 Curve 5 inflexion 2 input

Address:	0xA60C		
Min.:	A6-10	Unit:	V
Max.:	A6-14	Data type:	Int16
Default:	3	Change:	In real time

Value Range:
A6-10 to A6-14
Description
This parameter defines the x axis of inflexion 2 on AI curve 5, that is, the analog input voltage or current at inflexion 2.

A6-13 Corresponding setting of curve 5 inflexion 2 input

Address:	0xA60D		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	30	Change:	In real time

Value Range:
-100.0% to +100.0%

Description
This parameter defines the y axis of inflexion 2 on AI curve 5, that is, the setting value at inflexion 2.

A6-14 Curve 5 maximum input

Address: 0xA60E

Min.:	A6-12	Unit:	V
Max.:	10	Data type:	Int16
Default:	10	Change:	In real time

Value Range:
A6-12 to 10.00 V
Description
This parameter defines the x axis of the maximum input point on AI curve 5, that is, the maximum analog input voltage or current.

A6-15 Percentage corresponding to curve 5 maximum input

Address: 0xA60F

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	100	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
This parameter defines the y axis of the maximum input point on AI curve 5, that is, the setting value that the AI maximum input value corresponds.

A6-16 AI1 gain

Address: 0xA610

Min.:	-10	Unit:	-
Max.:	10	Data type:	Int16
Default:	1	Change:	In real time

Value Range:
–10.00 to +10.00
Description
This parameter defines the AI1 voltage correction gain.

A6-17 AI1 offset

Address: 0xA611

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
This parameter defines the zero offset coefficient for AI1 voltage correction.

A6-18 AI2 gain

Address: 0xA612
Min.: -10 Unit: -
Max.: 10 Data type: Int16
Default: 1 Change: In real time

Value Range:
–10.00 to +10.00

Description
This parameter defines the AI2 voltage correction gain.

A6-19 AI2 offset

Address: 0xA613
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 0 Change: In real time

Value Range:
-100.0% to +100.0%

Description
This parameter defines the zero offset coefficient for AI2 voltage correction.

A6-20 AI3 gain

Address: 0xA614
Min.: -10 Unit: -
Max.: 10 Data type: Int16
Default: 1 Change: In real time

Value Range:
–10.00 to +10.00

Description
This parameter defines the AI3 voltage correction gain.

A6-21 AI3 offset

Address: 0xA615
Min.: -100 Unit: %
Max.: 100 Data type: Int16
Default: 0 Change: In real time

Value Range:
-100.0% to +100.0%

Description
This parameter defines the zero offset coefficient for AI3 voltage correction.

A6-22 AI disconnection detection threshold

Address: 0xA616
Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.0% to 100.0%

Description
This parameter indicates the AI disconnection detection threshold. 100% corresponds to 10 V.

A6-23 AI disconnection detection time

Address:	0xA617		
Min.:	0	Unit:	s
Max.:	6553.5	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 6553.5s

Description

This parameter indicates the AI disconnection detection time in the unit of 0.1s.

A6-24 Jump point set through AI1

Address:	0xA618		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

This parameter defines the jump point set through AI1.

A6-25 Jump amplitude set through AI1

Address:	0xA619		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.0% to 100.0%

Description

This parameter defines the jump amplitude set through AI1.

A6-26 Jump point set through AI2

Address:	0xA61A		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

This parameter defines the jump point set through AI2.

A6-27 Jump amplitude set through AI2

Address:	0xA61B		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.0% to 100.0%

Description

This parameter defines the jump amplitude set through AI2.

A6-28 Jump point set through AI3

Address:	0xA61C		
Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to +100.0%

Description

This parameter defines the jump point set through AI3.

A6-29 Jump amplitude set through AI3

Address:	0xA61D		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.0% to 100.0%

Description

This parameter defines the jump amplitude set through AI3.

A6-30 Analog disconnection detection

Address:	0xA61E		
Min.:	0	Unit:	-
Max.:	111	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

Ones position: AI1 disconnection detection

0: Disabled

1: Enabled

Tens position: AI2 disconnection detection

0: Disabled

1: Enabled

Hundreds position: AI3 disconnection detection

0: Disabled

1: Enabled

Description

After AI1 disconnection detection is enabled, when the voltage detected at AI1 is lower than the threshold set by A6-22 for over the time set by A6-23, the AC drive reports fault E48.01.

After AI2 disconnection detection is enabled, when the voltage detected at AI2 is lower than the threshold set by A6-22 for over the time set by A6-23, the AC drive reports fault E48.02.

After AI3 disconnection detection is enabled, when the voltage detected at AI3 is lower than the threshold set by A6-22 for over the time set by A6-23, the AC drive reports fault E48.03.

6.25 A9 Vector Control Supplementary Parameters

A9-00 Online auto-tuning of rotor time constant for asynchronous motors

Address: 0xA900
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0: Disabled

1: Enabled

Description

A9-01 Auto-tuning of rotor resistance gain for asynchronous motors in FVC mode

Address: 0xA901
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 5 Change: In real time

Value Range:

0–100

Description

A9-02 Start frequency auto-tuning of the rotor resistance for asynchronous motors in FVC mode

Address: 0xA902
Min.: 2 Unit: Hz
Max.: 100 Data type: UInt16
Default: 7 Change: In real time

Value Range:

2 Hz to 100 Hz

Description

A9-03 Observed magnetic field coefficient of asynchronous motors in FVC mode

Address: 0xA903
Min.: 30 Unit: -
Max.: 150 Data type: UInt16
Default: 40 Change: In real time

Value Range:
30 to 150
Description

A9-04 Maximum torque limit coefficient in the field-weakening range for asynchronous motors

Address: 0xA904
Min.: 30 Unit: -
Max.: 150 Data type: UInt16
Default: 80 Change: In real time

Value Range:
30 to 150
Description

A9-05 Speed filter time of asynchronous motor in SVC mode

Address: 0xA905
Min.: 5 Unit: ms
Max.: 32 Data type: UInt16
Default: 15 Change: In real time

Value Range:
5 ms to 32 ms
Description

A9-06 Speed feedback handling in speed control of asynchronous motor in SVC mode

Address: 0xA906
Min.: 0 Unit: -
Max.: 4 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0: No operation
1: Minimum synchronization frequency limited based on load change
2: Fixed current output during low-speed running
3: Fixed current output during low-speed running and light load
4: Low torque optimization
Description

A9-07 Magnetic field regulation bandwidth of asynchronous motor in SVC mode

Address: 0xA907
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 2 Change: In real time

Value Range:
0.0–8.0
Description

A9-08 Low-speed running current of asynchronous motor in SVC mode

Address: 0xA908

Min.:	30	Unit:	-
Max.:	170	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
30–170
Description

A9-09 Switchover frequency of output fixed current for asynchronous motor in SVC mode

Address: 0xA909

Min.:	0.1	Unit:	Hz
Max.:	1	Data type:	UInt16
Default:	0.3	Change:	At stop

Value Range:
0.1 Hz to 1.0 Hz
Description

A9-10 Speed fluctuation suppression coefficient of asynchronous motor in SVC mode

Address: 0xA90A

Min.:	80	Unit:	-
Max.:	100	Data type:	UInt16
Default:	95	Change:	At stop

Value Range:
80 to 100
Description

A9-11 Acceleration/Deceleration time of asynchronous motor in SVC mode

Address: 0xA90B

Min.:	10	Unit:	s
Max.:	3000	Data type:	UInt16
Default:	200	Change:	At stop

Value Range:
10s to 3000s
Description

A9-12 Quick auto-tuning of stator resistance before asynchronous motor startup

Address: 0xA90C

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled

Description
After A9-12 is set to 1 for enable, when SVC speed tracking starts (P6-00 set to 1), if the motor runs in reverse rotation (e.g., fan driven reversely by external force), the drive fails to detect the actual motor speed.
When using the SVC speed tracking start function and expecting the motor to rotate forward while abnormal reverse rotation occurs, enable A9-12 parameter.

A9-13 Quick auto-tuning of stator resistance coefficient 1 for the asynchronous motor

Address: 0xA90D

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	10	Change:	At stop

Value Range:
0 to 65535
Description

A9-14 Quick auto-tuning of stator resistance coefficient 2 for the asynchronous motor

Address: 0xA90E

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	10	Change:	At stop

Value Range:
0 to 65535
Description

A9-17 Synchronous motor real-time angle

Address: 0xA911

Min.:	0	Unit:	-
Max.:	359.9	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0.0–359.9
Description

A9-18 Initial position angle detection of synchronous motor

Address: 0xA912

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Detected upon running

1: Not detected

2: Detected upon initial running after power-on

Description

A9-20 Flux weakening mode

Address: 0xA914

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: Automatic mode

1: Synchronous motor adjustment mode

2: Synchronous motor hybrid mode

3: Disabled

Description

A9-21 Flux weakening gain of synchronous motor

Address: 0xA915

Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0–50

Description

A9-22 Upper limit margin of synchronous motor output voltage

Address: 0xA916

Min.:	0	Unit:	%
Max.:	50	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:

0% to 50%

Description

A9-23 Maximum force adjustment gain of synchronous motor

Address: 0xA917

Min.:	20	Unit:	%
Max.:	300	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

20% to 300%

Description

A9-24 Exciting current adjustment gain calculated by synchronous motor

Address: 0xA918

Min.:	40	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

40% to 200%

Description

A9-25 Estimated speed integral gain of synchronous motor in SVC mode

Address: 0xA919

Min.:	5	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:

5% to 1000%

Description

A9-26 Estimated speed proportional gain of synchronous motor in SVC mode

Address: 0xA91A

Min.:	5	Unit:	%
Max.:	300	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

5% to 300%

Description

A9-27 Estimated synchronous motor speed filter in SVC mode

Address:	0xA91B		
Min.:	10	Unit:	-
Max.:	2000	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

10–2000

Description

A9-28 Minimum carrier frequency of synchronous motor in SVC mode

Address:	0xA91C		
Min.:	0.8	Unit:	-
Max.:	F0-15	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:

0.8 to F0-15

Description

A9-29 Low speed excitation current of synchronous motor in SVC mode

Address:	0xA91D		
Min.:	0	Unit:	%
Max.:	80	Data type:	UInt16
Default:	30	Change:	In real time

Value Range:

0% to 80%

Description

A9-30 Low-speed closed-loop current (for VVC)

Address:	0xA91E		
Min.:	0	Unit:	%
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0% to 65535%

Description

A9-31 Oscillation suppression damping coefficient (for VVC)

Address: 0xA91F
Min.: 0 Unit: %
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0% to 65535%
Description

A9-32 Reserved parameter 8 for synchronous motor control

Address: 0xA920
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to 65535
Description

A9-33 Reserved parameter 9 for synchronous motor control

Address: 0xA921
Min.: 0 Unit: -
Max.: 5 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0–5
Description

A9-34 Reserved parameter 10 for synchronous motor control

Address: 0xA922
Min.: 0 Unit: %
Max.: 65535 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0% to 65535%

Description

A9-35 Performance fault subcode upon 1st fault

Address: 0xA923
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description

A9-36 Performance fault subcode upon 2nd fault

Address: 0xA924
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description

A9-37 Performance fault subcode upon 3rd fault

Address: 0xA925
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description

A9-40 Low-speed closed-loop current selection (for VVC)

Address: 0xA928
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: At stop
Value Range:
0: Disabled
1: Enabled

Description

A9-41 Low-speed closed-loop current (for VVC)

Address: 0xA929

Min.:	30	Unit:	%
Max.:	200	Data type:	UInt16
Default:	50	Change:	At stop

Value Range:

30% to 200%

Description

A9-42 Oscillation suppression damping coefficient (for VVC)

Address: 0xA92A

Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0% to 500%

Description

A9-43 Initial position compensation angle (for VVC)

Address: 0xA92B

Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0–5

Description

A9-44 Initial position compensation angle of synchronous motor

Address: 0xA92C

Min.:	0	Unit:	-
Max.:	360	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0–360.0

Description

A9-45 Synchronous motor low-speed handling

Address: 0xA92D
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: At stop

Value Range:

0: Disabled
1: Enabled

Description

A9-46 Switchover frequency for synchronous motor low-speed handling

Address: 0xA92E
Min.: 0.01 Unit: -
Max.: F0-10 Data type: UInt16
Default: 5 Change: At stop

Value Range:

0.01 to value of F0-10

Description

A9-47 Synchronous motor low-speed handling current

Address: 0xA92F
Min.: 10 Unit: -
Max.: 200 Data type: UInt16
Default: 100 Change: At stop

Value Range:

10 to 200

Description

A9-48 Synchronous motor low-speed handling feedback suppression coefficient

Address: 0xA930
Min.: 0 Unit: -
Max.: 300 Data type: UInt16
Default: 32 Change: At stop

Value Range:

0–300

Description

A9-49 Synchronous motor energy-saving control

Address: 0xA931

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Enabled

Description

A9-50 Maximum flux weakening current limit margin

Address: 0xA932

Min.:	200	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	1000	Change:	At stop

Value Range:

200 to 1000

Description

A9-51 Advanced settings for asynchronous motor parameter auto-tuning

Address: 0xA933

Min.:	0	Unit:	-
Max.:	1111	Data type:	UInt16
Default:	111	Change:	At stop

Value Range:

Ones: Rotor resistance and leakage inductance DC offset

0: Standard offset

1: Large offset

Tens: New rotor resistance and leakage inductance auto-tuning algorithm

0: Disabled

1: Enabled

Hundreds: New mutual inductance static auto-tuning algorithm

0: Disabled

1: Enabled

Thousands: Stator resistance auto-tuning algorithm

0: Current open loop

1: Current closed loop

Description

A9-52 U0-06 feedback torque selection

Address: 0xA934
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: In real time

Value Range:

0: Motoring torque being positive and generating torque being negative
1: Torque direction being positive in the case of positive speed direction; torque direction being negative in the case of negative speed direction

Description

A9-54 Transistor voltage drop

Address: 0xA936
Min.: 0 Unit: -
Max.: 10000 Data type: UInt16
Default: 700 Change: At stop

Value Range:

0 to 10000

Description

A9-55 Dead-zone time 0

Address: 0xA937
Min.: 0 Unit: -
Max.: 10000 Data type: UInt16
Default: 352 Change: At stop

Value Range:

0 to 10000

Description

A9-56 Dead-zone time 1

Address: 0xA938
Min.: 0 Unit: -
Max.: 10000 Data type: UInt16
Default: 1052 Change: At stop

Value Range:

0 to 10000
Description

A9-57 **Dead-zone time 2**

Address:	0xA939		
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1270	Change:	At stop

Value Range:
0 to 10000
Description

A9-58 **Dead-zone time 3**

Address:	0xA93A		
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1358	Change:	At stop

Value Range:
0 to 10000
Description

A9-59 **Dead-zone time 4**

Address:	0xA93B		
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1404	Change:	At stop

Value Range:
0 to 10000
Description

A9-60 **Dead-zone time 5**

Address:	0xA93C		
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1449	Change:	At stop

Value Range:
0 to 10000

Description

A9-61 **Dead-zone time 6**

Address: 0xA93D

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1661	Change:	At stop

Value Range:

0 to 10000

Description

A9-62 **Dead-zone time 7**

Address: 0xA93E

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1689	Change:	At stop

Value Range:

0 to 10000

Description

A9-63 **Dead-zone compensation current 0**

Address: 0xA93F

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	94	Change:	At stop

Value Range:

0 to 10000

Description

A9-64 **Dead-zone compensation current 1**

Address: 0xA940

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	376	Change:	At stop

Value Range:

0 to 10000

Description

A9-65 Dead-zone compensation current 2

Address: 0xA941

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	658	Change:	At stop

Value Range:

0 to 10000

Description

A9-66 Dead-zone compensation current 3

Address: 0xA942

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	940	Change:	At stop

Value Range:

0 to 10000

Description

A9-67 Dead-zone compensation current 4

Address: 0xA943

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1222	Change:	At stop

Value Range:

0 to 10000

Description

A9-68 Dead-zone compensation current 5

Address: 0xA944

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1504	Change:	At stop

Value Range:

0 to 10000

Description

A9-69 Dead-zone compensation current 6

Address: 0xA945

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	3478	Change:	At stop

Value Range:

0 to 10000

Description

A9-70 Dead-zone compensation current 7

Address: 0xA946

Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	5452	Change:	At stop

Value Range:

0 to 10000

Description

A9-71 Elastic oscillation suppression

Address: 0xA944

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled

1: Self-adaptive based on the target frequency

2: Frequency reference

Description

A9-72 Elastic oscillation suppression filter time

Address: 0xA945

Min.:	20	Unit:	ms
Max.:	1000	Data type:	UInt16
Default:	300	Change:	In real time

Value Range:

20 ms to 1000 ms

Description

A9-73 Elastic oscillation suppression gain

Address: 0xA946

Min.:	10	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
10 to 1000
Description

6.26 AC AI/AO Correction

AC-00 AI1 measured voltage 1

Address: 0xAC00

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:
-10.000 V to +10.000 V
Description
When analog voltage correction is conducted on AI1, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI1 voltage before correction (U0-21).

AC-01 AI1 displayed voltage 1

Address: 0xAC01

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:
-10.000 V to +10.000 V
Description
When analog voltage correction is conducted on AI1, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI1 voltage before correction (U0-21).

AC-02 AI1 measured voltage 2

Address: 0xAC02

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16

Default: 8 Change: In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI1, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI1 voltage before correction (U0-21).

AC-03 AI1 displayed voltage 2

Address: 0xAC03

Min.: -10 Unit: V

Max.: 10 Data type: Int16

Default: 8 Change: In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI1, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI1 voltage before correction (U0-21).

AC-04 AI2 measured voltage 1

Address: 0xAC04

Min.: -10 Unit: V

Max.: 10 Data type: Int16

Default: 2 Change: In real time

Value Range:

-10.000 V to 10.000 V

Description

When analog voltage correction is conducted on AI2, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI2 voltage before correction (U0-22).

AC-05 AI2 displayed voltage 1

Address: 0xAC05

Min.: -10 Unit: V

Max.: 10 Data type: Int16

Default: 2 Change: In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI2, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI2 voltage before correction (U0-22).

AC-06 AI2 measured voltage 2

Address:	0xAC06		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI2, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI2 voltage before correction (U0-22).

AC-07 AI2 displayed voltage 2

Address:	0xAC07		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI2, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI2 voltage before correction (U0-22).

AC-08 AI3 measured voltage 1

Address:	0xAC08		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI3, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI3 voltage before correction (U0-23).

AC-09 AI3 displayed voltage 1

Address: 0xAC09

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI3, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI3 voltage before correction (U0-23).

AC-10 AI3 measured voltage 2

Address: 0xAC0A

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI3, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI3 voltage before correction (U0-23).

AC-11 AI3 displayed voltage 2

Address: 0xAC0B

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is conducted on AI3, a correction curve is obtained based on two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the AI3 voltage before correction (U0-23).

AC-12 AO1 measured voltage 1

Address:	0xAC0C		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO1 terminal, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-13 AO1 target voltage 1

Address:	0xAC0D		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO1 terminal, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-14 AO1 measured voltage 2

Address:	0xAC0E		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO1 terminal, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-15 AO1 target voltage 2

Address: 0xAC0F

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO1 terminal, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-16 AO2 measured voltage 1

Address: 0xAC10

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO2 terminal, a correction curve is formed through two points, and each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-17 AO2 target voltage 1

Address: 0xAC11

Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	2	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO2 terminal, a correction curve is formed through two points, and each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-18 AO2 measured voltage 2

Address:	0xAC12		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO2 terminal, a correction curve is formed through two points, and each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-19 AO2 target voltage 2

Address:	0xAC13		
Min.:	-10	Unit:	V
Max.:	10	Data type:	Int16
Default:	8	Change:	In real time

Value Range:

-10.000 V to +10.000 V

Description

When analog voltage correction is carried out on the AO2 terminal, a correction curve is formed through two points, and each point corresponds to a target voltage and a measured voltage. The target voltage is the expected output voltage, and the measured voltage is the output voltage actually measured.

AC-20 PT100 measured voltage 1

Address:	0xAC14		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	0.44	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT100 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-21 PT100 displayed voltage 1

Address:	0xAC15		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	0.44	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT100 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-22 PT100 measured voltage 2

Address:	0xAC16		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	2.16	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT100 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-23 PT100 displayed voltage 2

Address:	0xAC17		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	2.16	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT100 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-24 PT1000 measured voltage 1

Address:	0xAC18		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	0.44	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT1000 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-25 Voltage 1 display on the PT1000

Address:	0xAC19		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	0.44	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT1000 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-26 PT1000 measured voltage 2

Address:	0xAC1A		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	2.16	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT1000 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-27 PT1000 displayed voltage 2

Address:	0xAC1B		
Min.:	0	Unit:	V
Max.:	3.3	Data type:	Int16
Default:	2.16	Change:	In real time

Value Range:

0.000 V to 3.3 V

Description

When PT1000 analog voltage correction is carried out on AI3, a correction curve is formed through two points. Each point corresponds to a measured voltage and a displayed voltage. The measured voltage is the voltage measured using a meter, and the displayed voltage is the PTC voltage before correction (U0-47).

AC-28 AO1 measured current 1

Address:	0xAC1C		
Min.:	0	Unit:	mA
Max.:	20	Data type:	UInt16
Default:	4	Change:	In real time

Value Range:

0.000 mA to 20.000 mA

Description

When analog current correction is carried out on the AO1, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured current. The target current is the expected output current, and the measured voltage is the output current actually measured.

AC-29 AO1 target current 1

Address:	0xAC1D		
Min.:	0	Unit:	mA
Max.:	20	Data type:	UInt16
Default:	4	Change:	In real time

Value Range:

0.000 mA to 20.000 mA

Description

When analog current correction is carried out on the AO1, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured current. The target current is the expected output current, and the measured voltage is the output current actually measured.

AC-30 AO1 measured current 2

Address:	0xAC1E		
Min.:	0	Unit:	mA
Max.:	20	Data type:	UInt16
Default:	16	Change:	In real time

Value Range:

0.000 mA to 20.000 mA

Description

When analog current correction is carried out on the AO1, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured current. The target current is the expected output current, and the measured voltage is the output current actually measured.

AC-31 AO1 target current 2

Address:	0xAC1F		
Min.:	0	Unit:	mA
Max.:	20	Data type:	UInt16
Default:	16	Change:	In real time

Value Range:

0.000 mA to 20.000 mA

Description

When analog current correction is carried out on the AO1, a correction curve is formed through two points. Each point corresponds to a target voltage and a measured current. The target current is the expected output current, and the measured voltage is the output current actually measured.

6.27 AF Process Data Address Mapping Parameters

AF-00 RPDO1-SubIndex0-H

Address:	0xAF00		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

AF-01 RPDO1-SubIndex0-L

Address: 0xAF01
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-02 RPDO1-SubIndex1-H

Address: 0xAF02
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-03 RPDO1-SubIndex1-L

Address: 0xAF03
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-04 RPDO1-SubIndex2-H

Address: 0xAF04
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-05 RPDO1-SubIndex2-L

Address: 0xAF05
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-06 RPDO1-SubIndex3-H

Address: 0xAF06
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16

Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-07 RPDO1-SubIndex3-L
Address: 0xAF07
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-08 RPDO2-SubIndex0-H
Address: 0xAF08
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-09 RPDO2-SubIndex0-L
Address: 0xAF09
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-10 RPDO2-SubIndex1-H
Address: 0xAF0A
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-11 RPDO2-SubIndex1-L
Address: 0xAF0B
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-12 RPDO2-SubIndex2-H
Address: 0xAF0C

Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-13 RPDO2-SubIndex2-L
Address: 0xAF0D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-14 RPDO2-SubIndex3-H
Address: 0xAF0E
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-15 RPDO2-SubIndex3-L
Address: 0xAF0F
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-16 RPDO3-SubIndex0-H
Address: 0xAF10
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-17 RPDO3-SubIndex0-L
Address: 0xAF11
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-18 RPDO3-SubIndex1-H

Address: 0xAF12

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-19 RPDO3-SubIndex1-L

Address: 0xAF13

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-20 RPDO3-SubIndex2-H

Address: 0xAF14

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-21 RPDO3-SubIndex2-L

Address: 0xAF15

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF
Description

AF-22 RPDO3-SubIndex3-H

Address: 0xAF16
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-23 RPDO3-SubIndex3-L

Address: 0xAF17
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-24 RPDO4-SubIndex0-H

Address: 0xAF18
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-25 RPDO4-SubIndex0-L

Address: 0xAF19
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF

Description

AF-26 RPDO4-SubIndex1-H

Address: 0xAF1A
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-27 RPDO4-SubIndex1-L

Address: 0xAF1B
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-28 RPDO4-SubIndex2-H

Address: 0xAF1C
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-29 RPDO4-SubIndex2-L

Address: 0xAF1D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-30 RPDO4-SubIndex3-H

Address: 0xAF1E
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-31 RPDO4-SubIndex3-L

Address: 0xAF1F
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-32 TPDO1-SubIndexO-H

Address: 0xAF20
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-33 TPDO1-SubIndexO-L

Address: 0xAF21
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-34 TPDO1-SubIndex1-H

Address: 0xAF22

Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-35 TPDO1-SubIndex1-L
Address: 0xAF23
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-36 TPDO1-SubIndex2-H
Address: 0xAF24
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-37 TPDO1-SubIndex2-L
Address: 0xAF25
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-38 TPDO1-SubIndex3-H
Address: 0xAF26
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-39 TPDO1-SubIndex3-L

Address: 0xAF27

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-40 TPDO2-SubIndex0-H

Address: 0xAF28

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-41 TPDO2-SubIndex0-L

Address: 0xAF29

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-42 TPDO2-SubIndex1-H

Address: 0xAF2A

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF
Description

AF-43 TPDO2-SubIndex1-L

Address: 0xAF2B
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-44 TPDO2-SubIndex2-H

Address: 0xAF2C
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-45 TPDO2-SubIndex2-L

Address: 0xAF2D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-46 TPDO2-SubIndex3-H

Address: 0xAF2E
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF

Description

AF-47 TPDO2-SubIndex3-L

Address: 0xAF2F
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-48 TPDO3-SubIndex0-H

Address: 0xAF30
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-49 TPDO3-SubIndex0-L

Address: 0xAF31
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-50 TPDO3-SubIndex1-H

Address: 0xAF32
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description

AF-51 TPDO3-SubIndex1-L

Address: 0xAF33

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

AF-52 TPDO3-SubIndex2-H

Address: 0xAF34

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

AF-53 TPDO3-SubIndex2-L

Address: 0xAF35

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

AF-54 TPDO3-SubIndex3-H

Address: 0xAF36

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

AF-55 TPDO3-SubIndex3-L

Address: 0xAF37

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

AF-56 TPDO4-SubIndex0-H

Address: 0xAF38

Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-57 TPDO4-SubIndex0-L
Address: 0xAF39
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-58 TPDO4-SubIndex1-H
Address: 0xAF3A
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-59 TPDO4-SubIndex1-L
Address: 0xAF3B
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-60 TPDO4-SubIndex2-H
Address: 0xAF3C
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time
Value Range:
0 to value of 0xFFFF
Description

AF-61 TPDO4-SubIndex2-L
Address: 0xAF3D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-62 TPDO4-SubIndex3-H

Address: 0xAF3E

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-63 TPDO4-SubIndex3-L

Address: 0xAF3F

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

AF-66 Number of valid RPDOs

Address: 0xAF42

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to value of 0xFFFF

Description

AF-67 Number of valid TPDOs

Address: 0xAF43

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to value of 0xFFFF

Description

6.28 B0 Control Mode, Linear Speed, and Roll Diameter Parameters

B0-00 Tension control mode

Address: 0xB000

Min.: 0 Unit: -

Max.: 4 Data type: UInt16

Default: 0 Change: At stop

Value Range:

0: Disabled

1: Open loop torque control

2: Closed loop speed control

3: Closed loop torque control

4: Constant linear speed control

Description

Used to select the tension control mode.

0: Disabled
Used for direction judgment and parameter auto-tuning.
1: Open-loop torque control
Tension/position detection and feedback are not required in the torque mode. The AC drive controls the output torque and tension on the material. The FVC mode is recommended to achieve better control effect.
2: Closed-loop speed control
Tension/position detection and feedback are required in the speed mode. Based on the given main frequency calculated from linear speed and winding diameter, the AC drive adjusts the output frequency by superposing the PID closed-loop operation to achieve stable tension or position. The SVC, V/f control, or FVC mode can be used.
3: Closed-loop torque control
Tension/position detection and feedback are required in the torque mode. Based on the given torque in the open-loop torque control mode, the AC drive controls the output torque to obtain the required tension by superposing the PID closed-loop operation. Use FVC to achieve optimal control effect.
4: Constant linear speed control
In the speed mode, the AC drive adjusts its own operating frequency according to the change of winding diameter to ensure that the system runs at a constant linear speed. The SVC, V/f control, or FVC mode can be used.

B0-01 **Winding mode**

Address:	0xB001		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Winding
1: Unwinding
Description
Used with the DI function 58 (winding/unwinding switchover terminal) to determine the winding mode. When the terminal assigned with function 58 is inactive, the winding mode is consistent with that set by this parameter. When the terminal assigned with function 58 is active, the winding mode is reverse to that set by this parameter.

B0-02 **Unwinding reverse tightening selection**

Address:	0xB002		
Min.:	0	Unit:	m/min
Max.:	500	Data type:	UInt16

Default: 0 Change: In real time

Value Range:

0.0 m/min to 500.0 m/min

Description

When B0-02 is set to 0, at zero material speed, the unwinding reel has no output and the material is not tightened. When B0-02 is set to a value between 0.1 m/min to 500.0 m/min, under no-load conditions or if the material is in loose state, the unwinding reel runs at the set linear speed in the reverse direction; at zero material speed, the unwinding real maintains output and the material is tightened.

B0-03 Mechanical transmission ratio

Address: 0xB003

Min.: 0.01 Unit: -

Max.: 300 Data type: UInt16

Default: 1 Change: In real time

Value Range:

0.01 to 300.00

Description

This parameter specifies the ratio of motor speed to reel speed. Set B0-03 based on the mechanical transmission structure. When the roll diameter is calculated based on linear speed (B0-07 is set to 0), a larger value of B0-03 means a larger roll diameter, and vice versa. According to this rule, the parameter can be corrected according to the deviation between the calculated roll diameter and the actual value.

B0-04 Linear speed input source

Address: 0xB004

Min.: 0 Unit: -

Max.: 6 Data type: UInt16

Default: 0 Change: At stop

Value Range:

0: No input

1: AI1

2: AI2

3: AI3

4: Pulse input (DI5)

5: Communication setting (1000H)

6: Communication setting (731AH)

Description

1: No input

1–6: When the linear speed is input through the preceding channels, the maximum linear speed (B0-05) must be set according to the per unit relationship. The 1000H address is set according to the percentage. The 731AH address is directly set by digit, and the digital setting range is from 0 to B0-05.

B0-05 Maximum linear speed

Address:	0xB005		
Min.:	0	Unit:	m/min
Max.:	6500	Data type:	UInt16
Default:	1000	Change:	In real time

Value Range:

0.0 m/min to 6500.0 m/min

Description

Used to set the maximum linear speed.

It corresponds to the actual linear speed when 100.0% is input for channel 1 to 5 of B0-04. (It differs from the maximum linear speed required by production. Verify them during settings.) When the linear speed is used to calculate the winding diameter (B0-07 = 0), the larger the parameter is, the larger the calculated winding diameter is, and vice versa. According to this rule, the parameter can be corrected according to the deviation between the calculated roll diameter and the actual value.

B0-06 Minimum linear speed for winding diameter calculation

Address:	0xB006		
Min.:	0	Unit:	m/min
Max.:	6500	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:

0.0 m/min to 6500.0 m/min

Description

This parameter takes effect only when B0-07 is set to 0.

When the linear speed is lower than the value of B0-06, the current roll diameter is maintained. When the linear speed is higher than the value of B0-06, the roll diameter is calculated. This parameter can be used to address inaccurate roll diameter calculation for low-frequency operation and acceleration.

B0-07 Winding diameter calculation method

Address:	0xB007		
Min.:	0	Unit:	-

Max.: 7 Data type: UInt16
Default: 0 Change: At stop

Value Range:

0: Calculated based on linear speed
1:Calculated based on accumulative thickness
2: AI1
3: AI2
4: AI3
5: Pulse input (DI5)
6: Communication
7: Specified by B0-14

Description

0: Calculated based on linear speed
This mode is irrelevant with the material thickness. The winding diameter is calculated in real time based on the linear speed and running frequency and the error is not accumulated.
1: Calculated based on the accumulative thickness
The linear speed is not required in this mode. The winding diameter is calculated based on the material thickness and revolution count signal accumulation. The calculation result is stable, but the error is accumulated.
2–6: The winding diameter can be obtained through channels 2 to 6 to meet the situation that the winding diameter is directly measured by sensors or the winding diameter operation is performed outside the AC drive. When the preceding calculation methods are used, the maximum roll diameter (B0-08) must be set correctly based on the per-unit relationship. When AI1 is enabled (B0-07 is set to 2), 100.0% AI1 input must correspond to the maximum roll diameter (B0-08).
7: Set by B0-14
When the winding diameter channel is set to 7, the winding diameter is set directly by B0-14, which can be used as an additional communication address or used when the winding diameter is manually set during commissioning.

B0-08 Maximum roll diameter

Address: 0xB008
Min.: 0.1 Unit: mm
Max.: 6000 Data type: UInt16
Default: 500 Change: In real time

Value Range:

0.1 mm to 6000.0 mm

Description

Actual full roll diameter

B0-09 Reel diameter

Address: 0xB009
Min.: 0.1 Unit: mm
Max.: 6000 Data type: UInt16
Default: 100 Change: In real time

Value Range:

0.1 mm to 6000.0 mm

Description

Actual reel diameter

B0-10 Initial roll diameter source

Address: 0xB00A

Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: B0-11 to B0-13 setting
1: AI1 setting
2: AI2 setting
3: AI3 setting
4: Communication setting (1000H)

Description

This parameter is used to select the input channel of the initial roll diameter. The source of initial roll diameter is dependent on functions 55 and 56 (initial roll diameter selection terminal) of the DI and related to the winding mode.
0: B0-11 to B0-13
By default, the initial roll diameter source is determined to be B0-08 or B0-09 based on the winding mode.
1 to 4: The initial roll diameter can be obtained through channels 1 to 4. When using the preceding channels, the maximum roll diameter (B0-08) must be set correctly according to the per unit relationship.

B0-11 Initial roll diameter 1

Address:	0xB00B		
Min.:	0.1	Unit:	mm
Max.:	6000	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.1 mm to 6000.0 mm

Description

For details about initial roll diameters 1 to 3, see B0-10.

B0-12 Initial roll diameter 2

Address:	0xB00C		
Min.:	0.1	Unit:	mm
Max.:	6000	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.1 mm to 6000.0 mm

Description

For details about initial roll diameters 1 to 3, see B0-10.

B0-13 Initial roll diameter 3

Address:	0xB00D		
Min.:	0.1	Unit:	mm
Max.:	6000	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.1 mm to 6000.0 mm

Description

For details about initial roll diameters 1 to 3, see B0-10.

B0-14 Current roll diameter

Address:	0xB00E		
Min.:	0.1	Unit:	mm
Max.:	6000	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
0.1 mm to 6000.0 mm
Description
This parameter shows the current roll diameter in real time. Modifying this parameter can modify the current roll diameter, and the result of roll diameter calculation will override this parameter (except B0-07 = 7). It can also be used as a way to reset the roll diameter.

B0-15 Roll diameter filter time

Address:	0xB00F		
Min.:	0	Unit:	s
Max.:	10	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:
0.00s to 10.00s
Description
This parameter takes effect only when B0-07 is set to 0.
You can set B0-15 to filter roll diameter calculation results and suppress roll diameter jitter. A larger value of B0-15 means smoother calculated roll diameter and longer delay in roll diameter changes. Rule: When the roll diameter changes linearly, the time that the calculated roll diameter lags behind the actual roll diameter is basically equal to this parameter value.

B0-16 Winding diameter change rate

Address:	0xB010		
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0–1000.0
Description
This parameter takes effect only when B0-07 is set to 0.
You can set B0-16 to a non-zero value to limit the change of roll diameter per unit of time and prevent abnormal fast change. An excessively low roll diameter change rate may result in large delay in roll diameter calculation. Set the change rate properly based on the actual conditions, for example, based on the maximum change rate corresponding to the linear speed of 100.0 m/min.

B0-17 Roll diameter change direction limit

Address:	0xB011		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Disabled
1: Decrease disabled during winding, and increase disabled during unwinding
Description
This parameter takes effect only when B0-07 is set to 0.
Set this parameter to limit the direction change of the roll diameter. Use it under the condition of setting B0-16 reasonably. Otherwise, if there is abnormal fluctuation of roll diameter, excessive deviation of winding diameter calculation result will be caused.

B0-18 Roll diameter reset during running

Address:	0xB012		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16

Default: 0 Change: In real time

Value Range:

0–1

Description

This parameter can be used to enable roll diameter reset during operation.

B0-19 Pre-drive speed gain

Address: 0xB013

Min.:	-100	Unit:	%
Max.:	200	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-100.0% to +200.0%

Description

For pre-drive, the running frequency is automatically calculated based on the linear speed and roll diameter to ensure matching with the linear speed of the material. For small deviation of linear speed, set B0-19 to increase or decrease the running frequency during pre-drive, ensuring accurate linear speed matching.

B0-20 Pre-drive torque limit source

Address: 0xB014

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	At stop

Value Range:

0: Set by F2-09

1: Set based on tension control torque

Description

In the torque control tension mode, the target torque is automatically generated to meet the material tension demand. In the normal operation mode, the target torque can also be set according to the channel selected by F2-09. This parameter provides the preceding options for the source of the target torque in the pre-drive mode. You can set it as required. 0: The target torque is set by the channel selected by F2-09. 1: The target torque is set according to the tension control open-loop torque (for mode 1 and mode 3 only).

B0-21 Pre-drive torque correction

Address: 0xB015

Min.:	-100	Unit:	%
Max.:	100	Data type:	Int16
Default:	0	Change:	In real time

Value Range:
-100.0% to +100.0%
Description
The parameter takes effect when B0-20 is set to 1 and is used to correct the tension control torque in pre-drive mode. To avoid too slow pre-drive acceleration due to low torque limit when B0-20 is set to 1, the minimum torque limit in pre-drive mode can be limited.

B0-23 Pre-drive acceleration time

Address:	0xB017		
Min.:	0	Unit:	s
Max.:	6000	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:
0.0s to 6000.0s
Description
B0-23, B0-24, and B0-40 are used to set the time as a group. B0-23 and B0-40 correspond to the acceleration and deceleration time when the winding diameter is the minimum winding diameter. With the increase of winding diameter, the acceleration and deceleration time increase in proportion to avoid the impact caused by excessive acceleration and deceleration in large winding.

B0-24 Pre-drive deceleration time

Address:	0xB018		
Min.:	0	Unit:	s
Max.:	6000	Data type:	UInt16
Default:	20	Change:	In real time

Value Range:
0.0s to 6000.0s
Description
B0-23, B0-24, and B0-40 are used to set the time as a group. B0-23 and B0-24 correspond to the acceleration and deceleration time when the winding diameter is the minimum winding diameter. With the increase of winding diameter, the acceleration and deceleration time increase in proportion to avoid the impact caused by excessive acceleration and deceleration in large winding.

B0-25 Pre-drive winding diameter calculation function

Address:	0xB019		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Disabled
1: Enabled
Description
This parameter takes effect only when B0-07 is set to 1.
When the winding diameter is calculated by thickness accumulation, the winding diameter increases/decreases with the number of revolutions of the reel. At this time, this parameter can be set to 1 to avoid the cumulative error caused by the failure of winding diameter calculation during pre-driving. You can set this parameter according to the actual operations.

B0-26 Tension frequency limit

Address:	0xB01A		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:
0.0% to 100.0%
Description
Limit percentage (a percentage of the linear speed synchronous frequency)

B0-27 Tension frequency limit offset

Address:	0xB01B		
Min.:	0	Unit:	Hz
Max.:	100	Data type:	UInt16
Default:	5	Change:	In real time

Value Range:
0.00 Hz to 100.00 Hz
Description
Limit offset (fixed frequency)

B0-28 Tension frequency limit

Address:	0xB01C		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Disabled
1: Enabled
Description
B0-00=2: B0-28 is used to enable the speed closed-loop PID adjustment limit.

B0-00=0: Limit the tension frequency according to B0-26 and B0-27 (limited by upper limit frequency)
B0-00=1: Limit the tension frequency to the fixed frequency set by B0-27.
In speed mode, when open-loop reference and closed-loop adjustment are used, closed-loop adjustment must be limited to avoid system shock and ensure system stability. For this reason, in the speed closed-loop adjustment, based on the synchronization frequency (the running frequency that the rewinder matches the current linear speed) and the speed closed-loop limiter offset, the closed-loop adjustment frequency upper limit can be obtained according to the following formula by default (B0-28=0).
Closed-loop adjustment frequency upper limit = synchronous frequency x B0-26 + B0-27
When B0-28 is set to 1, the upper limit of the closed-loop adjustment frequency is the fixed frequency B0-27.
B0-00≠2: B0-28 is used to limit the speed limit (effective for winding).
0: No limit (limited by the upper limit frequency)
1: Limit the frequency according to B0-26 and B0-27.
In the torque mode, by default (B0-28=0), the upper limit of the winding frequency is not limited. To prevent material breaking and runaway, the above parameters can be set to limit the upper limit of the winding frequency. When B0-28 is set to 1, the upper limit of the winding frequency is obtained according to the following formula based on the synchronization frequency (the running frequency that the rewinder matches the current linear speed) and the frequency limit offset.
Winding frequency upper limit = Synchronous frequency x (1 + B0-26) + B0-27

B0-29 Pulses per revolution

Address:	0xB01D		
Min.:	1	Unit:	-
Max.:	60000	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:
1 to 60000
Description
This parameter specifies the number of pulses per revolution of the reel.

B0-30 Revolutions per layer

Address:	0xB01E		
Min.:	1	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:

1 to 10000

Description

This parameter specifies the number of revolutions for each layer of winded materials, generally used for wire rods. For wire rods, set B0-30 to 1.

B0-31 Material thickness reference source

Address:	0xB01F		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Digital setting

1: AI1

2: AI2

3: AI3

Description

You can set B0-31 to select an input channel of material thickness.

0: Digital setting

The material thickness is affected by the DI functions 62 and 63 (material thickness selection terminal).

1 to 3: The initial roll diameter can be obtained through channels 1 to 3. When the preceding channels are used, the maximum material thickness (B0-36) must be set correctly based on the per-unit relationship.

B0-32 Material thickness 0

Address:	0xB020		
Min.:	0.01	Unit:	mm
Max.:	100	Data type:	UInt16
Default:	0.01	Change:	In real time

Value Range:

0.01 mm to 100.00 mm

Description

For details about the material thickness 0 to 3, see B0-31.

B0-33 Material thickness 1

Address:	0xB021		
Min.:	0.01	Unit:	mm
Max.:	100	Data type:	UInt16
Default:	0.01	Change:	In real time

Value Range:

0.01 mm to 100.00 mm

Description
For details about the material thickness 0 to 3, see B0-31.

B0-34 Material thickness 2

Address:	0xB022		
Min.:	0.01	Unit:	mm
Max.:	100	Data type:	UInt16
Default:	0.01	Change:	In real time

Value Range:
0.01 mm to 100.00 mm
Description
For details about the material thickness 0 to 3, see B0-31.

B0-35 Material thickness 3

Address:	0xB023		
Min.:	0.01	Unit:	mm
Max.:	100	Data type:	UInt16
Default:	0.01	Change:	In real time

Value Range:
0.01 mm to 100.00 mm
Description
For details about the material thickness 0 to 3, see B0-31.

B0-36 Maximum thickness

Address:	0xB024		
Min.:	0.01	Unit:	mm
Max.:	100	Data type:	UInt16
Default:	1	Change:	In real time

Value Range:
0.01 mm to 100.00 mm
Description
For details about the material thickness, see B0-31.

B0-37 Winding diameter not reset upon stop

Address:	0xB025		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0: Disabled
1: Enabled

Description
When this parameter is set to 1, the roll diameter is automatically reset to the initial roll diameter upon stop, which is similar to the function 54 of the DI.

B0-38 Closed-loop tension torque mode selection

Address:	0xB026		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Torque calculated only through PID
1: Torque calculated through main + PID
Description
The main torque is the torque calculated when B0-00 is set to 1.
In pure PID mode, the set friction and inertia compensation are still valid, but the tension torque is invalid.
When the main + PID mode is used, accurately configure the tension corresponding to 100.0% of PID feedback value, and set parameter B1-02.

B0-40 Minimum pre-drive torque limit

Address:	0xB028		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0% to 100.0%
Description
B0-23, B0-24, and B0-40 are used to set the time as a group. B0-23 and B0-24 correspond to the acceleration and deceleration time when the winding diameter is the minimum winding diameter. With the increase of winding diameter, the acceleration and deceleration time increase in proportion to avoid the impact caused by excessive acceleration and deceleration in large winding.

B0-41 Constant linear speed source selection

Address:	0xB029		
Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: AI1
1: AI2
2: AI3
3: Pulse setting (DI5)
Communication setting (1000H)
5: Communication setting (731AH)
Description
0 to 2: AI channel
3: Pulse
4: Communication address (1000H); set by percentage
5: Communication address (731AH); set by digital with the range from 0 to B0-05

-.20 B1 Tension Settings

B1-00 Tension reference source

Address: 0xB100

Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: B0-01 setting
1: AI1 setting
2: AI2 setting
AI3 setting
4: Pulse setting (DI5)
5: Communication setting (1000H)

Description

0: Set by B1-01
1–5: These channel inputs indicate the percentage of the target tension relative to the maximum tension, and the maximum tension (B1-02) must be set correctly according to the per unit relationship.

B1-01 Tension digital setting

Address: 0xB101

Min.:	0	Unit:	N
Max.:	65000	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:

0 N to 65000 N

Description

See channel 0 of B1-00.

B1-02 Maximum tension

Address: 0xB102

Min.:	0	Unit:	N
Max.:	65000	Data type:	UInt16
Default:	500	Change:	In real time

Value Range:

0 N to 65000 N

Description

Used to set the maximum tension, corresponding to the tension value when 100.0% is input for channels 1 to 5 of B1-00. When the actual tension does not meet requirements, corrections can be performed by editing this parameter without changing AI, pulse input signals, or curves.

B1-03 Zero-speed threshold

Address: 0xB103

Min.:	0	Unit:	%
Max.:	20	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0% to 20.0%
Description
If the running frequency is lower than the value of this parameter, startup friction tension compensation will be carried out according to B1-04. If the running frequency is higher than the value of this parameter, startup friction tension compensation will not be carried out.

B1-04 Zero-speed tension rise

Address:	0xB104		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0% to 100.0%
Description
This parameter corresponds to the percentage of tension reference and must be set properly according to the range of allowable material tension. Set this parameter to a possible minimal value on the premise of ensuring normal startup.

B1-05 Frequency acceleration time in torque control mode

Address:	0xB105		
Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 6500.0s
Description
Set B1-05 and B1-06 to change the slope of the frequency upper limit with time. In tension mode, the frequency upper limit affects the motor output. Generally, it does not need to be set. In special cases, B1-05 and B1-06 can be set according to output requirements.

B1-06 Frequency deceleration time in torque control mode

Address:	0xB106		
Min.:	0	Unit:	s
Max.:	6500	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0s to 6500.0s
Description
Set B1-05 and B1-06 to change the slope of the frequency upper limit with time. In tension mode, the frequency upper limit affects the motor output. Generally, it does not need to be set. In special cases, B1-05 and B1-06 can be set according to output requirements.

B1-07 Friction force compensation

Address:	0xB107		
Min.:	0	Unit:	%
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0% to 50.0%
Description
In tension control mode, the AC drive automatically sets the target torque according to the tension reference and roll diameter. The target torque is increased (winding)/decreased (unwinding) according to B1-07 to offset the effect of friction on material tension. This parameter corresponds to the percentage of rated torque of the AC drive.

B1-08 Mechanical inertia compensation coefficient

Address:	0xB108		
Min.:	0	Unit:	N•m2
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 N m^2 to 65535 N m^2
Description
Set B1-08 based on the actual mechanical flywheel inertia. For general cylindrical mechanical reels, the theoretical value of mechanical flywheel inertia can be obtained according to the following formula: GD_m^2=πg/(8i^2) γb (D^4-D_0^4), where g is gravity acceleration 9.8 m/ M4, γ is mechanical material density, b is mechanical shaft length, D is mechanical shaft outer diameter, D0 is mechanical shaft inner diameter (0 for solid shaft), I is transmission ratio, and the unit refers to international system of units. The setting value can be adjusted according to the actual change of material tension during acceleration or deceleration.

B1-09 Correction coefficient of acceleration inertia compensation

Address:	0xB109		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
0.0% to 200.0%
Description
An inevitable deviation exists between the theoretical inertia and the actual inertia, so the inertia compensation effect may not be ideal even after the inertia parameters are set. To address this, set B1-09 and B1-10 for fine tuning to optimize the control effect. Taking the winding acceleration as an example, if the material tension is small, B1-09 can be increased to strengthen the compensation effect, otherwise, the parameter can be reduced. It works the same for deceleration. This set of parameters facilitates commissioning.

B1-10 Correction coefficient of deceleration inertia compensation

Address:	0xB10A		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:
0.0% to +200.0%

Description

An inevitable deviation exists between the theoretical inertia and the actual inertia, so the inertia compensation effect may not be ideal even after the inertia parameters are set. To address this, set B1-09 and B1-10 for fine tuning to optimize the control effect. Take the winding acceleration as an example. If the material tension is small, B1-09 can be increased to strengthen the compensation effect, otherwise, the parameter can be reduced. It works the same for deceleration. This set of parameters facilitates commissioning.

B1-11 Material density

Address: 0xB10B

Min.:	0	Unit:	kg/m^3
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 kg/m^3 to 65535 kg/m^3

Description

Set this set of parameters with reference to the actual material properties, and set the exact mechanical transmission ratio (B0-03) at the same time. The AC drive automatically calculates the flywheel inertia according to the material density, material width, reel diameter, and material roll diameter.

B1-12 Material width

Address: 0xB10C

Min.:	0	Unit:	mm
Max.:	65535	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 mm to 65535 mm

Description

Set this set of parameters with reference to the actual material properties, and set the exact mechanical transmission ratio (B0-03) at the same time. The AC drive automatically calculates the flywheel inertia according to the material density, material width, reel diameter, and material roll diameter.

B1-13 Inertia compensation exit delay

Address: 0xB10D

Min.:	0	Unit:	ms
Max.:	1000	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 ms to 1000 ms

Description

Used to set the inertia compensation exit delay.

B1-14 Transition frequency for zero speed compensation

Address: 0xB10E

Min.:	0	Unit:	Hz
Max.:	20	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:

0.00 Hz to 20.00Hz

Description

This parameter supports smooth switchover of zero-speed tension rise at the threshold.

B1-15 Open-loop torque reverse

Address:	0xB10F		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0: Disabled

1: Enabled

Description

This parameter takes effect only when B0-00 is set to 1 or 3.

When friction compensation and inertia compensation are added, the calculated torque value is likely to be negative. You can set B1-15 to select the solution for reverse torque. Torque direction is controlled by default. You can set B1-15 to 1 to enable reverse torque.

B1-16 Tension closed-loop torque control limit

Address:	0xB110		
Min.:	0	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 200.0%

Description

Used to limit the ratio (in percentage) of the closed-loop torque control value to the open-loop control torque reference in the closed-loop torque control mode (B0-00 is set to 3).

B1-17 Friction force compensation correction coefficient

Address:	0xB111		
Min.:	-50	Unit:	-
Max.:	50	Data type:	Int16
Default:	0	Change:	In real time

Value Range:

-50.0 to 50.0

Description

In most scenarios, friction may vary with running frequency. Using B1-07 may not achieve ideal friction compensation effect, so it can be used with this parameter. See B1-18 for details. This parameter corresponds to the percentage of rated torque of the AC drive.

B1-18 Friction force compensation curve

Address:	0xB112		
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Frequency
1: Linear speed
2: Multi-friction compensation curve 1
3: Multi-friction compensation curve 2
Description
Five friction compensation modes are available to meet the complex friction change rule.
0: Compensation is performed according to the running frequency. In some cases, the friction force will change with the running frequency of the system. When this mode is set, the friction force compensation value is determined by the following formula: Friction compensation torque = B1-07 x (1 + Linear speed conversion frequency/Maximum frequency x B1-17).
1: Compensation is performed according to the linear speed, which is similar to Mode 0. The compensation correction is based on the linear speed, and the value of friction compensation is determined by the following formula: Friction compensation torque = B1-07 x (1 + Linear speed/Maximum linear speed x B1-17).
2. Multi-friction force compensation curve 1. In some cases, the friction force does not change linearly with frequency. At this time, the frequency can be converted based on the linear speed in the multi-section curve to obtain dynamic friction force compensation. For details, see B1-19 to B1-24.
3. Multi-friction compensation curve 2. Compared with the compensation curve 1, the compensation curve 2 is more flexible, but more parameters need to be set. For details, see B1-19 to B1-30.

B1-19 Multi-friction force compensation torque 1

Address:	0xB113		
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0–50.0
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-20 Multi-friction force compensation torque 2

Address:	0xB114		
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0–50.0
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-21 Multi-friction force compensation torque 3

Address:	0xB115		
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.0–50.0
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-22 Multi-friction force compensation torque 4

Address:	0xB116		
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0–50.0

Description

Used for multi-section friction force compensation curves 1 and 2.

When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-23 Multi-friction force compensation torque 5

Address:	0xB117		
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0–50.0

Description

Used for multi-section friction force compensation curves 1 and 2.

When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-24 Multi-friction force compensation torque 6

Address:	0xB118		
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0–50.0

Description

Used for multi-section friction force compensation curves 1 and 2.

When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-25 Multi-friction force compensation inflection point 1

Address:	0xB119		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00 Hz to value of P0-10

Description

Used for multi-section friction force compensation curves 1 and 2.

When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-26 Multi-friction force compensation inflection point 2

Address:	0xB11A		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-27 Multi-friction force compensation inflection point 3

Address:	0xB11B		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-28 Multi-friction force compensation inflection point 4

Address:	0xB11C		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-29 Multi-friction force compensation inflection point 5

Address:	0xB11D		
Min.:	0	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to B1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-30 Multi-friction force compensation inflection point 6

Address:	0xB11E		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00 Hz to value of P0-10
Description
Used for multi-section friction force compensation curves 1 and 2.
When B1-18 is set to 2, parameters B1-19 to b1-24 take effect. When B1-18 is set to 3, B1-19 to B1-30 take effect.

B1-31 Tension establishment

Address:	0xB11F		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Disabled
1: Enabled
Description
In closed-loop control mode, when B1-31 is set to 0, the pre-speed tensioning function is disabled. When B1-31 is set to 1, the pre-speed tensioning function is enabled.

B1-32 Tension establishment dead zone

Address:	0xB120		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	2	Change:	In real time

Value Range:
0.0% to 100.0%
Description
The PID operation stops when the pre-speed tensioning function is enabled and the PID feedback is lower than the value of B1-32.

B1-33 Tension establishment frequency

Address:	0xB121		
Min.:	0	Unit:	Hz
Max.:	P0-10	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:

0.00 Hz to value of P0-10

Description

Used to set the running frequency in scenarios where the tension setup at pre-speed function is enabled but the system is not in the tension setup dead zone.

B1-34 Terminal torque boost proportion

Address:	0xB122		
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	50	Change:	In real time

Value Range:

0.0% to 500.0%

Description

When the DI terminal (assigned with function 61) is activated, the tension torque is boosted by certain ratio. After the DI terminal is deactivated, the boost part is canceled gradually.

B1-35 Terminal torque boost cancel time

Address:	0xB123		
Min.:	0	Unit:	s
Max.:	50	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.0s to 50.0s

Description

When the DI terminal (assigned with function 61) is activated, the tension torque is boosted by certain ratio. After the DI terminal is deactivated, the boost part is canceled gradually.

B1-37 Initial roll diameter auto-tuning selection

Address:	0xB125		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: Disabled
1: Enabled
Description
When the tension setup at pre-speed function is enabled, you can also enable the initial roll diameter auto-tuning function for the AC drive to automatically tune the initial roll diameter. This function is applicable to rod control only. This function is enabled when B1-37 is set to 1, and disabled when B1-37 is set to 0.

B1-38 Rod length

Address:	0xB126		
Min.:	1	Unit:	mm
Max.:	65535	Data type:	UInt16
Default:	300	Change:	At stop

Value Range:
1mm to 65535mm
Description
Rod length after the initial roll diameter is auto-tuned.

B1-39 Rod angle

Address:	0xB127		
Min.:	0.1	Unit:	°
Max.:	360	Data type:	UInt16
Default:	40	Change:	At stop

Value Range:
0.1° to 360.0°
Description
Rod angle after the initial roll diameter is auto-tuned.

6.30 B2 Taper

B2-00 Taper curve

Address:	0xB200		
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:
0: Curve taper
1: Multi-liner taper
Description
Used to select the taper curve generation mode.

0: The taper curve is generated based on the taper setting and the correction coefficient of taper compensation (B2-03). For details, see B2-03.
1: For details of the multi-linear taper, see descriptions of B2-08 to B2-19.

B2-01 Tension taper source selection

Address: 0xB201
Min.: 0 Unit: -
Max.: 4 Data type: UInt16
Default: 0 Change: At stop

Value Range:
0: B2-02 setting
1: AI1 setting
2: AI2 setting
3: AI3 setting
4: Communication setting (1000H)

Description
0: Set by B2-02
1–3: Set by analog channels 1 to 3
4: Communication setting (1000H)

B2-02 Digital setting of taper

Address: 0xB202
Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.0% to 100.0%

Description
Used to set the taper through digital setting. For details, see value 0 of B2-01.

B2-03 Correction coefficient of taper compensation

Address: 0xB203
Min.: 0 Unit: mm
Max.: 10000 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0mm to 10000mm

Description

Used to set the correction coefficient of taper compensation. This parameter and the taper setting can be used to set the curve taper. The taper value can be determined by using the following formula (multiple modes are available and the following gives a typical example): F=F_0*{1-K*[1-(D_0+D_1)/(D+D_1)]}.
Where, F is the tension after taper is set; F_0 is the tension before taper is set, determined by B1-00; K is the taper value, determined by B2-01; D_0 is the reel diameter set by B0-09; D is the current roll diameter set by B0-14; D1 is the correction coefficient of taper compensation.

B2-05 U**Setting channel of external taper AO**

Address: 0xB205

Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	At stop

Value Range:

0: B2-06 setting

1: AI1 setting

2: AI2 setting

AI3 setting

4: Communication setting (1000H)

Description

In some scenarios, material tension is determined by external actuators. The external taper output function can be use to control the external actuators to achieve proper tension taper. The maximum external taper value determines the maximum taper output value when the external taper output (DO function 19) is selected for FMP or AO (F5-06 to F5-08), that is, the corresponding output value when the roll is empty. Its value setting channel is determined by this parameter.

0: Set by b2-06

1–3: Set by analog channels 1 to 3

4: Communication setting (1000H)

B2-06 **External taper setting**

Address: 0xB206

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 100.0%

Description

Used to set the maximum external taper (digital setting). For details, see value 0 of B2-05.

B2-08 **Minimum winding diameter taper**

Address: 0xB208

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 100.0%

Description

Taper corresponding to the minimum winding diameter

B2-09 Linear taper switchover point 1

Address: 0xB209

Min.:	B0-09	Unit:	mm
Max.:	B0-08	Data type:	UInt16
Default:	150	Change:	In real time

Value Range:

B0-09 to B0-08

Description

Winding diameter 1 set by multi-point linear taper curve

B2-10 Taper of switchover point 1

Address: 0xB20A

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	100	Change:	In real time

Value Range:

0.0% to 100.0%

Description

Taper 1 set by multi-point linear taper curve

B2-11 Linear taper switchover point 2

Address: 0xB20B

Min.:	B2-09	Unit:	mm
Max.:	B0-08	Data type:	UInt16
Default:	200	Change:	In real time

Value Range:

B2-09 to B0-08

Description

Winding diameter 2 set by multi-point linear taper curve

B2-12 Taper of switchover point 2

Address: 0xB20C

Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	90	Change:	In real time

Value Range:
0.0% to 100.0%
Description
Taper 2 set by multi-point linear taper curve

B2-13 Linear taper switchover point 3

Address:	0xB20D		
Min.:	B2-11	Unit:	mm
Max.:	B0-08	Data type:	UInt16
Default:	250	Change:	In real time

Value Range:
B2-11 to B0-08
Description
Winding diameter 3 set by multi-point linear taper curve

B2-14 Taper of switchover point 3

Address:	0xB20E		
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	In real time

Value Range:
0.0% to 100.0%
Description
Taper 3 set by multi-point linear taper curve

B2-15 Linear taper switchover point 4

Address:	0xB20F		
Min.:	B2-13	Unit:	mm
Max.:	B0-08	Data type:	UInt16
Default:	300	Change:	In real time

Value Range:
B2-13 to B0-08
Description
Winding diameter 4 set by multi-point linear taper curve

B2-16 Taper of switchover point 4

Address:	0xB210		
Min.:	0	Unit:	%

Max.: 100 Data type: UInt16
Default: 70 Change: In real time
Value Range:
0.0% to 100.0%
Description
Taper 4 set by multi-point linear taper curve

B2-17 Linear taper switchover point 5
Address: 0xB211
Min.: B2-15 Unit: mm
Max.: B0-08 Data type: UInt16
Default: 400 Change: In real time
Value Range:
B2-15 to B0-08
Description
Winding diameter 5 set by multi-point linear taper curve

B2-18 Taper of switchover point 5
Address: 0xB212
Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 50 Change: In real time
Value Range:
0.0% to 100.0%
Description
Taper 5 set by multi-point linear taper curve

B2-19 Taper at maximum roll diameter
Address: 0xB213
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 30 Change: In real time
Value Range:
0.0–100.0
Description
Taper corresponding to the maximum roll diameter.

6.31 B6 Communication Free Mapping Configuration Parameters

B6-00 Source address 1
Address: 0xB600
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0xE012 Change: In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping source address 1.

B6-01 Mapping address 1

Address:	0xB601		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x500E	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 1.

B6-02 Write gain 1

Address:	0xB602		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the write coefficient 1 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-03 Read gain 1

Address:	0xB603		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0.1	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the read coefficient 1 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times the original read coefficient.
When this parameter is set to 0.10, the read coefficient will be reduced to 10% of the original read coefficient.

B6-04 Source address 2

Address:	0xB604		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping source address 2.

B6-05 Mapping address 2

Address: 0xB605
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 2.

B6-06 Write gain 2

Address: 0xB606
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 2 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-07 Read gain 2

Address: 0xB607
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 2 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-08 Source address 3

Address: 0xB608
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 3.

B6-09 Mapping address 3

Address: 0xB609
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 3.

B6-10 Write gain 3

Address: 0xB60A
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00
Description
Indicates the write coefficient 3 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-11 Read gain 3

Address: 0xB60B
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00
Description
Indicates the read coefficient 3 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-12 Source address 4

Address: 0xB60C
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping source address 4.

B6-13 Mapping address 4

Address: 0xB60D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 4.

B6-14 Write gain 4

Address: 0xB60E
Min.: 0 Unit: -
Max.: 100 Data type: UInt16

Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 4 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-15 Read gain 4

Address: 0xB60F

Min.: 0 Unit: -

Max.: 100 Data type: UInt16

Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 4 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-16 Source address 5

Address: 0xB610

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 5.

B6-17 Mapping address 5

Address: 0xB611

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 5.

B6-18 Write gain 5

Address: 0xB612
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00

Description
Indicates the write coefficient 5 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-19 Read gain 5

Address: 0xB613
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00

Description
Indicates the read coefficient 5 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-20 Source address 6

Address: 0xB614
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF

Description
Indicates the communication free mapping source address 6.

B6-21 Mapping address 6

Address: 0xB615
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 6.

B6-22 Write gain 6

Address: 0xB616

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 6 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-23 Read gain 6

Address: 0xB617

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 6 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-24 Source address 7

Address: 0xB618

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 7.

B6-25 Mapping address 7

Address: 0xB619

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 7.

B6-26 Write gain 7

Address: 0xB61A

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 7 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-27 Read gain 7

Address: 0xB61B

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 7 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-28 Source address 8

Address: 0xB61C

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 8.

B6-29 Mapping address 8

Address: 0xB61D

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 8.

B6-30 Write gain 8

Address: 0xB61E

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 8 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-31 Read gain 8

Address: 0xB61F

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 8 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-32 Source address 9

Address: 0xB620

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping source address 9.

B6-33 Mapping address 9

Address:	0xB621		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 9.

B6-34 Write gain 9

Address:	0xB622		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the write coefficient 9 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-35 Read gain 9

Address:	0xB623		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the read coefficient 9 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-36 Source address 10

Address: 0xB624
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 10.

B6-37 Mapping address 10

Address: 0xB625
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 10.

B6-38 Write gain 10

Address: 0xB626
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 10 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-39 Read gain 10

Address: 0xB627
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 10 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-40 Source address 11

Address: 0xB628
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 11.

B6-41 Mapping address 11

Address: 0xB629
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 11.

B6-42 Write gain 11

Address: 0xB62A
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 11 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-43 Read gain 11

Address: 0xB62B
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 11 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-44 Source address 12

Address: 0xB62C
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 12.

B6-45 Mapping address 12

Address: 0xB62D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 12.

B6-46 Write gain 12

Address: 0xB62E
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 12 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-47 Read gain 12

Address: 0xB62F
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 12 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-48 Source address 13

Address: 0xB630
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 13.

B6-49 Mapping address 13

Address: 0xB631
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 13.

B6-50 Write gain 13

Address: 0xB632
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 13 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-51 Read gain 13

Address: 0xB633
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 13 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-52 Source address 14

Address: 0xB634
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 14.

B6-53 Mapping address 14

Address: 0xB635
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 14.

B6-54 Write gain 14

Address: 0xB636

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 14 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-55 Read gain 14

Address: 0xB637

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 14 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-56 Source address 15

Address: 0xB638

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 15.

B6-57 Mapping address 15

Address: 0xB639

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 15.

B6-58 Write gain 15

Address: 0xB63A

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 15 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-59 Read gain 15

Address: 0xB63B

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 15 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-60 Source address 16

Address: 0xB63C

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 16.

B6-61 Mapping address 16

Address: 0xB63D

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 16.

B6-62 Write gain 16

Address:	0xB63E		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 16 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-63 Read gain 16

Address:	0xB63F		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 16 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-64 Source address 17

Address:	0xB640		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:

0 to value of 0xFFFF

Description
Indicates the communication free mapping source address 17.

B6-65 Mapping address 17

Address:	0xB641		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 17.

B6-66 Write gain 17

Address:	0xB642		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the write coefficient 17 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-67 Read gain 17

Address:	0xB643		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the read coefficient 17 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-68 Source address 18
Address: 0xB644

Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 18.

B6-69 Mapping address 18

Address: 0xB645
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 18.

B6-70 Write gain 18

Address: 0xB646
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 18 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-71 Read gain 18

Address: 0xB647
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 18 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-72 Source address 19

Address:	0xB648		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping source address 19.

B6-73 Mapping address 19

Address:	0xB649		
Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 19.

B6-74 Write gain 19

Address:	0xB64A		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the write coefficient 19 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-75 Read gain 19

Address:	0xB64B		
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16

Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 19 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-76 Source address 20

Address: 0xB64C

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 20.

B6-77 Mapping address 20

Address: 0xB64D

Min.: 0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 20.

B6-78 Write gain 20

Address: 0xB64E

Min.: 0 Unit: -

Max.: 100 Data type: UInt16

Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 20 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-79 Read gain 20

Address: 0xB64F
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 20 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-80 Source address 21

Address: 0xB650
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 21.

B6-81 Mapping address 21

Address: 0xB651
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 21.

B6-82 Write gain 21

Address: 0xB652
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 21 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-83 Read gain 21

Address: 0xB653
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 21 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-84 Source address 22

Address: 0xB654
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 22.

B6-85 Mapping address 22

Address: 0xB655
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 22.

B6-86 Write gain 22

Address: 0xB656
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 22 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-87 Read gain 22

Address: 0xB657
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00

Description
Indicates the read coefficient 22 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-88 Source address 23

Address: 0xB658
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF

Description
Indicates the communication free mapping source address 23.

B6-89 Mapping address 23

Address: 0xB659
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF

Description
Indicates the communication free mapping target address 23.

B6-90 Write gain 23

Address: 0xB65A
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00

Description
Indicates the write coefficient 23 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-91 Read gain 23

Address: 0xB65B
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:
0.00–100.00

Description
Indicates the read coefficient 23 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-92 Source address 24

Address: 0xB65C
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping source address 24.

B6-93 Mapping address 24

Address: 0xB65D
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:

0 to value of 0xFFFF

Description

Indicates the communication free mapping target address 24.

B6-94 Write gain 24

Address: 0xB65E
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the write coefficient 24 for communication free mapping.

When this parameter is set to 10.00, the write coefficient will be magnified 10 times.

When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-95 Read gain 24

Address: 0xB65F
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 0 Change: In real time

Value Range:

0.00–100.00

Description

Indicates the read coefficient 24 for communication free mapping.

When this parameter is set to 10.00, the read coefficient will be magnified 10 times.

When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

B6-96 Source address 25

Address: 0xB660
Min.: 0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0 Change: In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping source address 25.

B6-97 **Mapping address 25**
Address: 0xB661

Min.:	0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0 to value of 0xFFFF
Description
Indicates the communication free mapping target address 25.

B6-98 **Write gain 25**
Address: 0xB662

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the write coefficient 25 for communication free mapping.
When this parameter is set to 10.00, the write coefficient will be magnified 10 times.
When this parameter is set to 0.10, the write coefficient will be reduced by 10%.

B6-99 **Read gain 25**
Address: 0xB663

Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	In real time

Value Range:
0.00–100.00
Description
Indicates the read coefficient 25 for communication free mapping.
When this parameter is set to 10.00, the read coefficient will be magnified 10 times.
When this parameter is set to 0.10, the read coefficient will be reduced by 10%.

6.36 U0 Basic Monitoring Parameters

U0-00 Running frequency

Address: 0x7000

Min.:	-	Unit:	Hz
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter shows the running frequency (Hz) of the AC drive.

U0-01 Frequency reference

Address: 0x7001

Min.:	-	Unit:	Hz
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter shows the frequency reference (Hz) of the AC drive.

U0-02 Bus voltage

Address: 0x7002

Min.:	-	Unit:	V
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter defines the bus voltage (V) of the AC drive.

U0-03 Output voltage

Address: 0x7003

Min.:	-	Unit:	V
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter shows the output voltage (V) of the AC drive.

U0-04 Output current

Address: 0x7004

Min.:	-	Unit:	A
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter shows the output current (A) of the AC drive.

U0-05 **Output power**

Address: 0x7005

Min.:	-	Unit:	kW
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter shows the output power (kW) of the AC drive.

U0-06 **Output torque**

Address: 0x7006

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter shows the output torque (%) of the AC drive.

U0-07 **DI state**

Address: 0x7007

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

Display the input status of each DI terminal in hexadecimal format. After converting to binary, each bit represents the status of a corresponding DI terminal. The value of each bit corresponds to the status as follows:
1:The DI terminal is in an active state.
0:The DI terminal is in an inactive state.
The functions corresponding to each bit are as follows:
bit0:DI1
bit1:DI2
bit2:DI3
bit3:DI4
bit4:DI5
bit5:DI6
bit6:DI7
bit7:DI8
bit8:DI9
bit9:DI10
bit10:DI11
bit11:DI12
bit12:DI13
bit13:DI14
bit14:DI15
bit15:Reserved

U0-08 DO state

Address:	0x7008		
Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

Description

Display the output status of each DO terminal in hexadecimal format. After converting to binary, each bit represents the status of a corresponding DO terminal.

The value of each bit corresponds to the status as follows:

1:

0:

The functions corresponding to each bit are as follows:

bit0：FMR

bit1：DO3(Built-in control board relay)

bit2：DO4(MD38IO extension board relay)

bit3：DO1(Built-in control board)

bit4：DO2(MD38IO extension board)

bit5：VDO1

bit6：VDO2

bit7：VDO3

bit8：VDO4

bit9：VDO5

bit10~bit15：Reserved

U0-09 AI1 voltage

Address: 0x7009

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

0.00V~0.00V

Description

U0-10 AI2 voltage

Address: 0x700A

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

0.00V~0.00V

Description

U0-11 AI3 voltage

Address: 0x700B

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

0.00V~0.00V

Description

U0-12 Count value

Address: 0x700C

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

Display count value in counting mode

U0-13 **Length value**

Address: 0x700D

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

Display length in fixed-length function

U0-14 **Load speed displa**

yAddress: 0x700E

Min.:	-	Unit:	Hz
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

0rpm~65535rpm

Description

Rotational speed calculated using the set frequency (formula: n=50f/p, where f is the frequency corresponding to U0-01, and p is the number of motor pole pairs).
When stopped, this parameter displays the set frequency *coefficient (set value of P7-36).
When running, this parameter displays the set frequency *coefficient (set value of P7-36).

U0-15 **PID reference**

Address: 0x700F

Min.:	-	Unit:	%
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter (PID setpoint) = PID setpoint (percentage) PA-04 (PID reference & feedback range).

U0-16 **PID feedback**

Address: 0x7010

Min.:	-	Unit:	%
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

This parameter (PID feedback) = PID setpoint (percentage) PA-04 (PID reference & feedback range).

U0-17 PLC stage

Address: 0x7011

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

Displays the PLC stage; 16 fixed speeds in total.

U0-18 Pulse input frequency

Address: 0x7012

Min.:	-	Unit:	kHz
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

Displays the high-speed pulse sampling frequency of DI5

U0-19 Feedback speed

Address: 0x7013

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description3

When the tens digit of parameter P7-12 (decimal places for load speed display) is set to 1, U0-19 will have 1 decimal place, with a display range of -500.0Hz ~ +500.0Hz.
When the tens digit of parameter P7-12 is set to 2, U0-19 will have 2 decimal places, with a display range of -320.00Hz ~ +320.00Hz.

U0-20 Remaining running time

Address: 0x7014

Min.:	-	Unit:	min
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

Displays the remaining running time during timed operation.

U0-21 AI1 voltage before correction

Address: 0x7015

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-22 AI2 voltage before correction

Address: 0x7016

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-23 AI3 voltage before correction

Address: 0x7017

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-24 Linear speed

Address: 0x7018

Min.:	-	Unit:	m/min
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-25 Current power-on time

Address: 0x7019

Min.:	-	Unit:	min
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-26 Current running time

Address: 0x701A

Min.:	-	Unit:	min
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-27 Pulse input frequency

Address: 0x701B

Min.:	-	Unit:	Hz
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-28 Reference value set through communication

Address: 0x701C

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-29 Encoder feedback speed

Address: 0x701D

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-30 Display of main frequency X

Address: 0x701E

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-31 Display of auxiliary frequency Y

Address: 0x701F

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-32 Check of any memory address

Address: 0x7020

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-33 Synchronous motor rotor position

Address: 0x7021

Min.:	-	Unit:	°
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-34 Motor temperature

Address: 0x7022

Min.:	-	Unit:	℃
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-35 Target torque

Address: 0x7023

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-36 Resolver position

Address: 0x7024

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-37 Power factor angle

Address: 0x7025

Min.:	-	Unit:	°
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-38 ABZ position

Address: 0x7026

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-39 Target voltage upon V/f separation

Address: 0x7027

Min.:	-	Unit:	V
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-40 Output voltage upon V/f separation

Address: 0x7028

Min.:	-	Unit:	V
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-41 DI state display

Address: 0x7029

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-42 DO state display

Address: 0x702A

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-43 DI state display

Address: 0x702B

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-44 DO function state display

Address: 0x702C

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-45 Fault subcode

Address: 0x702D

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-46 Inverter unit temperature

Address: 0x702E

Min.:	-	Unit:	°C
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-47 PTC channel voltage before correction

Address: 0x702F

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-48 PTC channel voltage after correction

Address: 0x7030

Min.:	-	Unit:	V
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-49 Number of offset pulses of position lock

Address: 0x7031

Min.:	-	Unit:	-
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-50 Roll diameter

Address: 0x7032

Min.: - Unit: mm
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-51 Tension (after taper setting)
Address: 0x7033
Min.: - Unit: N
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-58 Z signal counting
Address: 0x703A
Min.: - Unit: -
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-59 Frequency reference (%)
Address: 0x703B
Min.: - Unit: -
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-60 Running frequency (%)
Address: 0x703C
Min.: - Unit: -

Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-61 AC drive state
Address: 0x703D
Min.: - Unit: -
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-62 Current fault code
Address: 0x703E
Min.: - Unit: -
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-63 Running frequency (after droop)
Address: 0x703F
Min.: - Unit: Hz
Max.: - Data type: Int16
Default: - Change: Unchangeable
Value Range:
-
Description

U0-64 Back EMF
Address: 0x7040
Min.: - Unit: V
Max.: - Data type: UInt16
Default: - Change: Unchangeable

U0-64 Back EMF

Address: 0x7040

Min.:	-	Unit:	V
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-65 Stator resistance auto-tuning upon startup

Address: 0x7041

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-66 Communication expansion card model

Address: 0x7042

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-67 Communication expansion card version

Address: 0x7043

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-68 AC drive state

Address: 0x7044

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
		Change:	Unchangeable

Default: -

Value Range:

-

Description

U0-69 Motor running frequency/0.01 Hz

Address: 0x7045

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-70 Motor speed/RPM

Address: 0x7046

Min.:	-	Unit:	RPM
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-71 Current display for communication card

Address: 0x7047

Min.:	-	Unit:	A
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-72 Communication card error state

Address: 0x7048

Min.:	-	Unit:	-
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-73 Target torque before filter

Address: 0x7049

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-74 Target torque after filter

Address: 0x704A

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-75 Torque reference after acceleration/deceleration

Address: 0x704B

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-76 Torque upper limit in the motoring state

Address: 0x704C

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-77 Torque upper limit in the generating state

Address: 0x704D

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-80 EtherCAT slave name

Address: 0x7050

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-81 EtherCAT slave alias

Address: 0x7051

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-82 EtherCAT ESM transmission fault code

Address: 0x7052

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-83 EtherCAT XML file version

Address: 0x7053

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-84 Times of EtherCAT synchronization loss

Address: 0x7054

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-85 Maximum error value and invalid frames of EtherCAT port 0 per unit time

Address: 0x7055

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-86 Maximum error value and invalid frames of EtherCAT port 1 per unit time

Address: 0x7056

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-87 Maximum forwarding error of EtherCAT port per unit time

Address: 0x7057

Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 0

Description

U0-88 Maximum EtherCAT data frame processing unit error per unit time

Address: 0x7058

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-89 Maximum link loss of EtherCAT port per unit time

Address: 0x7059

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-96 No-load current of asynchronous motor vector online observation

Address: 0x7060

Min.:	-	Unit:	A
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U0-97 Mutual inductance of asynchronous motor vector online observation

Address: 0x7061

Min.:	-	Unit:	mH
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

6.37 U1 Tension Control Monitoring Parameters

U1-00 Linear speed

Address: 0x7100

Min.:	-	Unit:	m/min
Max.:	-	Data type:	UInt16
		Change:	Unchangeable

Default: -

Value Range:

-

Description

U1-01 Current roll diameter

Address: 0x7101

Min.:	-	Unit:	mm
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-02 Linear speed synchronous frequency

Address: 0x7102

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-03 PID output frequency

Address: 0x7103

Min.:	-	Unit:	Hz
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-04 Current tension reference

Address: 0x7104

Min.:	-	Unit:	N
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-05 Tension reference after taper setting

Address: 0x7105

Min.:	-	Unit:	N
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-06 Torque reference in tension control

Address: 0x7106

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-07 PID output torque

Address: 0x7107

Min.:	-	Unit:	%
Max.:	-	Data type:	Int16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-08 Tension control mode

Address: 0x7108

Min.:	-	Unit:	-
Max.:	-	Data type:	UInt16
Default:	-	Change:	Unchangeable

Value Range:

-

Description

U1-09 Tension PID setting

Address: 0x7109

Min.: - Unit: %
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U1-10 Tension PID feedback
Address: 0x710A
Min.: - Unit: %
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U1-11 Tension PID proportional gain
Address: 0x710B
Min.: - Unit: -
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U1-12 Tension PID integral time Ti
Address: 0x710C
Min.: - Unit: s
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U1-13 Tension PID differential time Td
Address: 0x710D

Min.: - Unit: s
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U1-14 Tension time
Address: 0x710E
Min.: - Unit: s
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

U1-15 Winding mode
Address: 0x710F
Min.: - Unit: -
Max.: - Data type: UInt16
Default: - Change: Unchangeable
Value Range:
-
Description

Chapter 7 Diagnosis and Troubleshooting

7.1 Safety Instructions

Safety Instructions

Danger

- Wiring is prohibited with power applied. Keep all circuit breakers OFF to prevent electric shock.

Warning

- Ground the inverter per local regulations to prevent electric shock and fire.
- Do not disassemble or touch internal circuits when powered on. Risk of electric shock.
- Fault inspection and maintenance must be performed by qualified personnel only. Risk of electric shock or fire.
- Install in enclosed cabinet with adequate cooling to keep inlet temp below 50°C. Risk of overheating or fire.
- Tighten all screws to specified torque. Risk of fire or electric shock.
- Ensure input voltage is within rated range on nameplate. Risk of electric shock or fire
- Keep flammable and explosive materials away from the inverter.

Caution

- Cover the inverter during installation to prevent metal chips, oil or water from entering. Foreign matter may cause failure.
- Remove covers after installation. Poor ventilation will cause overheating.
- Follow ESD procedures when operating the inverter. Static electricity may damage internal circuits.

7.2 Commissioning Pre-Adjustment Guide

- V/f Control Mode（P0-01=2）
  This mode is used for applications without encoder speed feedback. It is insensitive to motor parameters; only rated voltage and rated frequency need to be set correctly.

Problems and Faults	Solutions
Motor oscillation during operation	Decrease V/f oscillation gain (P3-11) by 5 steps (min. 5).
Overcurrent at high-power start	Lower torque boost (P3-01) by 0.5% steps
High current during operation	Set motor rated voltage (P1-02) and frequency (P1-04).Reduce torque boost (P3-01), adjust by 0.5% step.
Loud motor noise	Increase carrier frequency (P3-15) in 1.0kHz steps. 1、Higher carrier frequency reduces inverter derating capacity. 2、Higher carrier frequency increases motor leakage current.
Overvoltage on sudden load dump / deceleration	Enable overvoltage stall prevention (P3-23). Increase overvoltage stall gain (P3-24/P3-25) in steps of 10 (max 100).Decrease overvoltage stall threshold (P3-22, default 110V) in steps of 10V (min 700V).
Overcurrent on load surge / acceleration	Increase overcurrent stall gain (P3-20) in steps of 10 (max 100). Decrease overcurrent stall current (P3-18, default 150%) in steps of 10% (min 50%).

- Open-loop vector control (P0-01, factory default)

  This control mode is used for motor speed and torque control in applications without encoder speed feedback.
- This control mode requires motor parameter identification and automatic tuning.

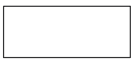
Problems and Faults	Solutions
Overload or overcurrent fault during motor startup	Set motor parameters (P1-01~P1-05) per nameplate. Perform parameter identification (P1-37).Full dynamic identification preferred if possible.
Slow torque/speed response and motor vibration below 5Hz.	To improve torque & speed response:Increase speed loop proportional gain (P2-00) in steps of 10.Decrease speed loop integral time (P2-01) in steps of 0.05.Reduce P2-01 if vibration occurs.
Slow torque/speed response and motor vibration above 5Hz.	Improve torque & speed response:Increase P2-03 in steps of 10,decrease P2-04 in steps of 0.05.If vibration occurs, lower P2-03 and raise P2-04.
Poor speed accuracy	Increase slip compensation gain (P2-06) in 10% steps if speed deviation is excessive under load.
Large speed fluctuation	Increase speed filter time (A9-05) in 0.001s steps if speed fluctuates abnormally.
High motor noise	Increase carrier frequency (P0-15) in 1.0kHz steps.(Note:1、Higher carrier frequency reduces inverter capacity (consult manufacturer).2、Higher carrier frequency increases motor leakage current.
Insufficient motor torque or output	Check if torque limit is restricted.Increase torque limit (P2-10) in speed mode;Increase torque command in torque mode.

- Closed-loop vector control (P0-01=1)

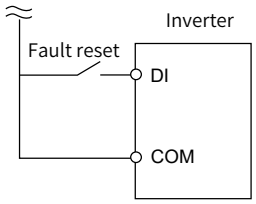
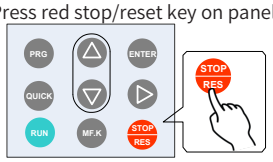
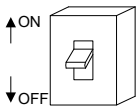
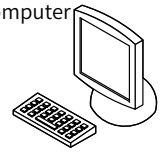
  For encoder feedback applications:Set encoder lines, type and direction correctly,then perform auto-tuning of motor parameters.

Problems and Faults	Solutions
Overcurrent/overload on startup	Set encoder lines, type and direction correctly.
Overcurrent/overload during operation	Set P1-01~P1-05 per motor nameplate. Perform parameter identification (P1-37).Full dynamic identification preferred if available.
Slow response & vibration below 5Hz	To improve torque and speed response, increase P2-00 by 10 or decrease P2-01 by 0.05.Reduce P2-00 and P2-01 if vibration occurs.
Slow response & vibration above 5Hz	To improve torque and speed response, increase P2-03 in steps of 10 or decrease P2-04 in steps of 0.05.If vibration occurs, lower P2-03 and P2-04 accordingly.
Excessive speed fluctuation	If motor speed fluctuates abnormally, increase speed filter time (P2-07) in steps of 0.001s.
High motor noise	Increase carrier frequency (P0-15) by 1.0kHz steps. 1、Inverter derating may occur (consult manufacturer). 2、Motor leakage current will rise.
Insufficient torque / output	Check if torque limit is restricted. Increase P2-10 in speed mode; raise torque command in torque mode.

7.3 Common Fault Troubleshooting

No.	Fault Symptom	Possible Causes	Solutions
1	 No display at power-on	No or low mains voltage	Check input power
		Switching power supply fault	Check 24V and 10V output on control board
		Inter-board cable broken	Replug keypad cable
		Buffer resistor damaged	Contact manufacturer service
		Control board & keypad fault	
		Rectifier bridge damaged	
2	 HC displayed continuously at power-on	Poor connection between drive & control board	Replug keypad core and cable
		Control board components faulty	Contact manufacturer service
		Motor or cable short to ground	
		Hall fault	
		Low mains voltage	
3	Power on with E23.00 alarm 	Motor short to ground	Megger test motor & output cable insulation
		Inverter faulty	Contact manufacturer service
4	Runs then HC alarm & shutdown 	Fan faulty or blocked	Replace fan
		Control terminal short circuit	Eliminate external short circuit
5	Frequent E14.00 (Module Overheat) Alarm	Carrier frequency too high	Lower carrier frequency (P0-15)
		Fan faulty or air duct blocked	Replace fan, clean air duct.
		Internal components faulty (thermistor, etc.)	Contact manufacturer service
6	Motor does not rotate after inverter running	Inverter-motor wiring error	Verify inverter-motor wiring.
		Incorrect setting of inverter parameters (motor parameters)	Restore defaults, reset parameters.
			Check encoder and motor rated parameters (frequency, speed).
			Check and set P0-01 (control mode) and P0-02 (operation mode) correctly.
			In V/f mode, adjust P3-01 (torque boost) for heavy-load starting.
		Drive-control connection poor	Replug cables for secure connection
		Drive board fault	Contact manufacturer service
7	DI terminal failure	Parameter setting error	Check and reset P4 group parameters
		External signal error	Reconnect external signal wires
		Loose OP-+24V jumper	Verify OP & +24V jumper and secure firmly.
		Control board fault	Contact manufacturer service
8	Motor speed cannot increase in closed-loop vector control	Encoder fault	Replace encoder and recheck wiring.
		Encoder wiring fault	Rewire for good contact.
		PG card fault	Replace PG card
		Drive board failure	Contact manufacturer service
9	Frequent overcurrent & overvoltage alarms	Motor parameter error	Reset motor parameters or auto-tune
		Accel/decel time error	Set proper acceleration/deceleration time.
		Load fluctuation	Contact manufacturer service
10	E17.00 alarm at power-on / running	Soft start contactor not closed	Check contactor cable for looseness
			Check contactor
			Check 24V power supply for contactor
			Contact manufacturer service
11	Motor freewheels / no braking during deceleration	Encoder wire break or overvoltage stall protection activated	With speed sensor vector control (P0-01=1), check encoder wiring
			If braking resistor is installed, set P3-23=0 to disable overvoltage stall protection

7.4 Fault reset

Stage	Measure	Remark
Fault Condition	Check records on the operation panel.	View via P9-14 ~ P9-44 
Before reset	Identify cause from fault code on panel, eliminate fault, then reset.	See 7.5 Fault Code Troubleshooting
Fault reset methods for contact issues	1) Set DI to function 3 (P4-00~P4-09=9 for fault reset). After confirming inverter run command is removed, reset terminal is active.	
	2) After canceling the inverter run command, press the red stop/reset key on the panel to reset.	Press red stop/reset key on panel 
	3) Reset automatically after power cycling the inverter.Temporarily cut off main circuit power; reconnect after display goes off.	
	4) For inverters with Modbus-RTU serial communication, reset via communication. When P0-02=2 (communication control), cancel run command first, then write "7"(fault reset) to address 2000H via host compu ter to reset after fault removed. [> RVI]	Host computer 

◆ 【Note】 Refer to “Appendix A：Modbus Communication Protocol”.

7.5 Fault Code Troubleshooting

The following faults may occur during inverter operation.Refer to the methods below for basic troubleshooting.

Fault Code	Fault Code Name	Fault Cause	Corrective Action
E01.01	Hardware Fault	Hardware Fault	Contact the manufacturer
E02.00	Acceleration Overcurrent	Output circuit grounded / shorted	Check for short circuit in motor or contactor.
		FVC/SVC control without parameter identification	Set motor parameters per nameplate and perform motor ID.
		Acceleration time too short	Increase acceleration time (P0-17).
		Improper stall prevention setting during overcurrent	Ensure overcurrent stall prevention (P3-19) is enabled.Overcurrent stall level (P3-18) set too high; adjust to 120%–160%.Overcurrent stall gain (P3-20) set too low; adjust to 20–40.
		Improper torque boost / V/f curve	Adjust torque boost or V/f curve.
		Start the rotating motor.	Speed tracking start or restart after stop.
		Affected by external disturbance	Check fault current (P3–18) via history records.If no overcurrent, eliminate external interference.If no interference, replace drive board or Hall sensor; contact manufacturer.
E03.00	Deceleration Overcurrent	Output ground/short fault	Check motor for open or short circuit.
		Control mode FVC/SVC without parameter identification	Set motor parameters per nameplate and perform motor parameter identification.
		Decel time too short	Increase deceleration time (P0–18).
		Overcurrent stall suppression set improperly	Ensure overcurrent stall suppression (P3-19) is enabled.Adjust overcurrent stall current (P3-18) to 120%–150%.Increase stall suppression gain (P3-20) to 20–40.
		No brake unit / resistor installed	Install brake unit and resistor.
		Affected by external disturbance	Check fault current from history against P3–18.If no overcurrent, troubleshoot external interference.If no interference, replace drive board or Hall sensor; contact manufacturer.
E04.00	Constant speed overcurrent	Affected by external disturbance	Check fault current from history against P3–18.If no overcurrent, troubleshoot external interference.If no interference, replace drive board or Hall sensor; contact manufacturer.
		Output ground/short fault	Check for motor short or open circuit.
		Control mode FVC/SVC without parameter identification	Set motor parameters according to nameplate and perform motor parameter tuning.
		Overcurrent stall setup improper	Verify overcurrent stall suppression (P3-19) is enabled.Adjust overcurrent stall current (P3-18) to 120%–150%.Set stall suppression gain (P3-20) to 20–40.
		Inverter undersized	During stable operation, if the running current exceeds the motor rated current or inverter rated output current, use a higher power inverter.

Fault Code	Fault Code Name	Fault Cause	Corrective Action
E05.00	Acceleration Overvoltage	Input grid voltage is high	Adjust voltage to normal range.
		During acceleration, the motor is driven by external force.	Remove external force or install braking resistor.Adjust overvoltage suppression max rise frequency (P3-26) within 5–15 Hz for applications with external dragging.
		Overvoltage suppression setting is inappropriate.	Ensure overvoltage suppression (P3-23) is enabled. Adjust overvoltage suppression voltage (P3-22) within 700V-770V.Adjust overvoltage suppression gain(P3-24) within 30-50.
		No braking unit or resistor installed	Install braking unit and resistor.
		Acceleration time too short	Increase acceleration time.
E06.00	Deceleration overvoltage	Improper overvoltage suppression setting	Ensure overvoltage suppression (P3-23) is enabled. Adjust P3-22 to 700V–770V if set too high. Adjust P3-24 to 30–50 if set too low.
		Motor driven by external force during deceleration	Remove external force or install braking resistor.Set P3-26 (max rise frequency) to 5–15Hz for externally dragged loads.
		Deceleration time too short	Increase deceleration time.
		No braking unit or resistor fitted	Install braking unit and resistor.
E07.00	Constant speed overvoltage	Improper overvoltage suppression setting	Ensure P3-23 overvoltage suppression is enabled.Adjust P3-22 to 700–770V if set excessively high.Adjust P3-24 to 30–50 if set too low.
		Motor driven by external force during operation	Remove external force or install braking resistor.Adjust P3-26 (max rise frequency) to 5–15Hz for applications with external drag.
E08.00	Buffer resistor fault	Input voltage out of range,causing contactor to repeatedly engage and disconnect	Check input grid voltage for excessive fluctuation. Adjust voltage to the rated range to avoid bus voltage fluctuating near the contactor pick-up level.
E09.00	Undervoltage fault	Instantaneous power failure	Enable instantaneous power keep-running (P9-59) to avoid undervoltage faults during momentary outages.
		Inverter input voltage out of range	Adjust voltage to normal range.
		Abnormal bus voltage	Contact technical support.
		Abnormal rectifier, inverter drive board or control board	Contact technical support.
E10.00	Inverter overload	Excessive load or motor stalling.	Reduce load and check motor and machinery.
E11.00	Motor overload	F9-01 setting improper	Set correctly, increase P9-01 to extend overload time.
		Load too large / motor locked-rotor	Reduce load and check motor and machinery.
E12.00	Input phase loss	Abnormal 3-phase input power	Check RST input wiring and three-phase voltage.
			Check if RST input is incorrectly connected to ground.
		Drive/lightning/main/rectifier board abnormal	Contact technical support.

Fault Code	Fault Code Name	Fault Cause	Corrective Action
E13.00	Output phase loss	Motor fault	Check motor open circuit
		Motor cable abnormal	Eliminate peripheral faults
		Output unbalance	Check motor three-phase windings and troubleshoot.
		Driver & IGBT abnormal	Contact technical support.
E14.00	Inverter overheat	Ambient over temperature	Reduce the ambient temperature.
		Duct blocked	Air duct cleaning
		Fan fault	Replace the fan
		Module thermistor fault	Contact technical support.
		Module fault	Contact technical support.
E15.01	External device normally open fault	External fault (DI NO input)	Check peripheral faults, confirm machinery ready (P8-18), reset and run.
		External fault (virtual IO NO)	Check virtual IO Group A1 parameters, reset and run.
E15.02	External device fault	External fault (DI NC input)	Troubleshoot peripherals, confirm restart permitted (P8-18), reset and run.
		External fault (virtual IO NC)	Verify A1 virtual IO parameters, reset and run.
E16.01	Modbus communication timeout	Modbus communication timeout	Check RS485 cable connection; verify Pd-04 setting and PLC communication cycle.
E16.02	Warning: Three-way terminal cover not installed	PDO mapping mismatch	Check PDO mapping for PE/AF group parameters.
E16.11	CANopen communication timeout	CANopen communication timeout	Check CAN cable connection; verify parameters Fd-15~17 for interference.
E16.15	Communication timeout fault	Sync control communication timeout	Check sync control parameters or set timeout > 0.
E16.21	CANlink heartbeat timeout	CANlink heartbeat timeout	Check CAN cable connection; verify parameters Pd-15~17 for interference.
E16.22	CANlink station ID conflict	CANlink station conflict	Change duplicate CAN station IDs on the network; parameter PD-13.
E16.41	CANlink station ID conflict	Communication timeout	Check DP cable connection.
E17.00	Contactor fault	Drive & power fault	Replace driver board or power board.
		Contactor fault	Replace contactor.
		Lightning protection fault	Replace surge protection board.
E18.00	Current detection circuit fault	Current sampling fault	Check main circuit power supply.
		Current sampling fault	Hall sensor or current sampling circuit damaged, contact manufacturer.
E19.02	Pole position identification fault	Pole position ID fault	Motor may not be connected or output phase loss.
E19.06	Fast stator resistance identification fault	Stator resistance ID fault	Motor not connected. Please set motor rated current (P1-03) according to the motor nameplate.
E19.07	Stator resistance identification fault	Stator resistance ID fault	Motor not connected. Please set motor rated current (P1-03) according to the motor nameplate.
E19.08	Stator resistance identification cannot be completed	Stator resistance ID fault	Motor not connected. Please set motor rated current (P1-03) according to the motor nameplate.
E19.09	Transient leakage inductance ID fault	Transient leakage inductance ID fault	Motor disconnected or phase loss; check connection.
E19.10	Leakage inductance ID fault	Transient leakage inductance ID fault	Motor disconnected or phase loss; check connection.

Fault Code	Fault Code Name	Fault Cause	Corrective Action
E19.11	Motor parameter identification failure	Inertia ID fault	Check P1-03 per motor nameplate; increase P2-43.
E19.20	Motor parameter identification fault	PMSM no-load zero angle ID timeout	Check Z signal.
E19.23	PMSM pole position angle identification fault (cycle-by-cycle current limiting)	PMSM pole position ID fault	Check P1-03 per motor nameplate;Decrease P2-29;Check motor rotation at startup;Check if P1-17(Ld) is too low(0.1mH).
E19.24	Induction motor leakage induct-ance ID fault (cycle current limit)	DP communication timeout	Inverter undersized; select proper inverter by motor power.
E20.00	ABZ encoder wire break fault	Encoder wire break	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.01	Encoder hardware wire break fault	Encoder fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.02	ABZ encoder software wire break fault	Encoder wire break fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.03	PMSM no-load ID fault: encoder AB signal error	PMSM no-load ID: encoder fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.04	PMSM no-load ID fault: encoder absolute position error	PMSM no-load ID encoder fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.06	PMSM ABZ encoder on-load ID fault: Z signal lost	PMSM on-load ID: encoder fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.07	PMSM ABZ encoder no-load ID fault: Z signal lost	PMSM no-load ID: encoder fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.08	Encoder line count error	PMSM no-load ID encoder fault	Repair broken wire;Check PG cable wiring;Verify PG cable power connection;Ensure encoder lines match P1-27 setting;Check AB signal wiring.
E20.09	PMSM on-load ID fault: encoder absolute position error	PMSM ID encoder fault	Encoder Z signal abnormal, check PG card wiring.
E20.10	PMSM encoder Z signal calibration fault	PMSM encoder fault	Encoder Z signal abnormal, check PG card connection.
E20.11	Induction motor no-load current ID fault: encoder error	Induction motor CLV no-load ID: encoder fault	Connect encoder correctly; ensure encoder lines match P1-27 setting.
E20.12	Encoder fault	Encoder speed vs SVC estimated speed deviation too large	Check encoder wiring; verify motor parameters; run motor ID.
E20.13	Encoder fault	Resolver wire break fault	Check encoder wiring.
E20.17	23-bit encoder wire break fault	23-bit encoder wire break fault	Check encoder wiring.

Fault Code	Fault Code Name	Fault Cause	Corrective Action
E21.01	EEPROM continuous operation timeout	EEPROM read/write error	When writing function codes via communication, ensure the correct RAM address is used. For address mapping, refer to parameter address rules.
		EEPROM read/write error	Damaged EEPROM: contact manufacturer to replace control board.
E21.02	EEPROM read error	EEPROM read/write error	When writing function codes via communication, verify the correct RAM address and refer to parameter address mapping rules.
		EEPROM read/write error	Damaged EEPROM: contact manufacturer to replace control board.
E21.03	EEPROM operation timeout	EEPROM read/write error	When writing function codes via communication, ensure the correct RAM address is used. For address mapping, refer to parameter address rules.
		EEPROM read/write error	Damaged EEPROM: contact manufacturer to replace control board.
E21.04	EEPROM buffer overflow	EEPROM read/write error	When writing function codes via communication, ensure the correct RAM address is used. For address mapping, refer to parameter address rules.
		EEPROM read/write error	Damaged EEPROM: contact manufacturer to replace control board.
E22.00	Stator resistance parameter identification result warning	Identified stator resistance out of valid range	Incorrect motor rated voltage/current settings. Set group F1 parameters correctly per nameplate: P1-02 (rated voltage), P1-03 (rated current).
E22.01	Rotor resistance identification result warning	Identified rotor resistance out of valid range	Ensure parameter identification is performed with the motor stationary.
E22.02	No-load current and mutual inductance identification result warning	Identified no-load current and mutual inductance out of range. Inverter calculates values automatically, which may not be optimal.	Set P1 motor parameters per nameplate; ensure motor unloaded before identification.
E22.03	Back EMF identification result warning	Identified back EMF of PMSM out of valid range	Verify motor rated voltage (P1-02) per nameplate; ensure motor unloaded during identification.
E22.04	Inertia identification result warning	Inertia identification fault	Ensure motor rated current (P1-03) is set per nameplate.
E23.00	Output ground short overcurrent	Motor ground short circuit	Check cables and motor for ground short circuit.
E24.00	Output phase short circuit	Motor phase short circuit	Short circuit between two phases in output UVW.
E25.00	Rectifier fault	Input voltage abnormal	Check input voltage for overvoltage or undervoltage.
		Rectifier unit abnormal	Contact the manufacturer for service.
E26.00	Total running time reached fault	Total running time reached set value	Use parameter initialization to clear recorded data.
E27.00	User defined fault 1	User-defined fault 1 signal input via multifunctional DI terminal.	Reset run.
		User-defined fault 1 signal input via virtual IO function.	Reset run.
E28.00	User defined fault 2	User-defined fault 2 signal input via multifunctional DI terminal.	Reset run.
		User-defined fault 2 signal input via virtual IO function.	Reset run.
E29.00	Accumulated power-on time fault	Total power-on time has reached the set value.	Use parameter initialization to clear recorded data.
E30.00	Output load loss	Inverter running current is less than P9-64.	Check if the load is disconnected, or if P9-64 / P9-65 match actual operating conditions.
E31.00	PID feedback lost	PID feedback below PA-26 set value	Check PID feedback signal or set PA-26 to an appropriate value.
E40.00	Cycle-by-cycle current limit fault	Excessive load or motor locked rotor	Reduce load and inspect motor and mechanical conditions.
		Inverter undersized	Use a higher power rated inverter.

Chapter 8 Maintenance and Upkeep

8.1 Maintenance

Safety Precautions

Danger

- No wiring while power is on — risk of electric shock.
- Before inspection, turn off all power. After cutting off the inverter input, wait several minutes until the indicator goes out due to residual capacitor voltage. Observe the specified interval before powering on again.
- Risk of electric shock. Do not change wiring or remove parts while powered on.
- Ground the motor terminal securely. Risk of electric shock if ungrounded.
- For qualified electricians only. No maintenance by non-professionals.
- Only qualified electrical professionals may install, wire, debug, repair and replace parts.

Warning

- Do not operate with inverter cover removed.
- For product details,Illustrations may show covers removed.
  Always operate with all covers fitted.
- Tighten terminals to specified torque to avoid overheating and fire.
- Do not mismatch input voltage. Avoid overvoltage to prevent abnormal operation.
- Keep flammables away from inverter. Do not mount on flammable surfaces.

Caution

- Replace fan as instructed. Ensure correct air outlet direction; wrong direction reduces cooling efficiency.
- Do not service motor during operation. Risk of shock and damage.
- Use shielded cable for control circuit wiring.
- Prevent inverter malfunction, and ground the shield securely at one end only.
- Do not modify inverter circuits, otherwise it will cause inverter damage.
- Connect inverter output terminals to motor correctly.
- Swap any two output leads to reverse motor direction.
- Do not operate damaged inverter. Risk of equipment damage.

8.1.1 Routine Inspection Items

Environmental factors such as temperature, humidity, dust and vibration,cause component aging, potential faults or reduced service life of the inverter.Therefore, perform daily and regular maintenance. Shorten inspection intervals in harsh environments.

To ensure normal operation and prevent damage, verify the following items daily.Make copies of this inspection checklist for use.Stamp "Verified" in the confirmation column after each inspection.

Items	Inspection content	Fault Countermeasures	Conf. Column
Motor	Motor: Abnormal noise/ vibration?	● Check for abnormal mechanical connections; ● Check for motor phase loss; ● Check for loose motor mounting screws.	
Fan	Inverter/Motor cooling fan: Abnormal?	● Check inverter cooling fan operation; ● Check motor cooling fan for abnormality; ● Check for blocked ventilation ducts; ● Check ambient temperature range.	
Installation Environment	Cabinet/cable tray: Abnormal?	● Check for damaged cable insulation; ● Check for mounting bracket vibration; ● Check for loose/corroded terminals.	
Load	Operating current: Exceeds rating?	● Check motor parameter settings; ● Check for motor overload; ● Check for excessive mechanical vibration(<0.6g).	
Input Voltage	Main/control circuit voltage: Normal?	● Check input voltage range; ● Check for nearby large load starts.	

8.2 Regular Inspection

8.2.1 Regular Inspection Items

Inspect inaccessible areas regularly; Keep inverter clean; Remove surface dust; Prevent dust (esp. metal dust) ingress;Clean cooling fan oil contamination.

Danger

- No live inspection. Shock hazard.
- Power off, wait ⩾10min. Residual voltage risk.

Items	Inspection content	Fault Countermeasures	Conf. Column
Whole Unit	Surface dirt, grime, dust accumulation.	● Power off cabinet; ● Vacuum debris; ● Wipe oil.	
Cable	Power line discoloration; Insulation damage.	● Replace cables; ● Replace terminals.	
Magnetic Contactor Periphery	Poor engagement/noise; Peripheral component damage .	● Replace faulty parts.	
Air Duct & Vent	Duct/heat sink blockage; Fan damage.	● Clean duct; ● Replace fan.	
Control Circuit	Control component contact issue;Terminal looseness; Cable insulation damage	● Clean terminals; ● Replace control cables.	

8.2.2 Main Circuit Insulation Test

● WARNING:
Megohmmeter: Use 500V DC only. Disconnect main circuit from inverter. No control circuit insulation test.
High voltage (>500V) test prohibited.

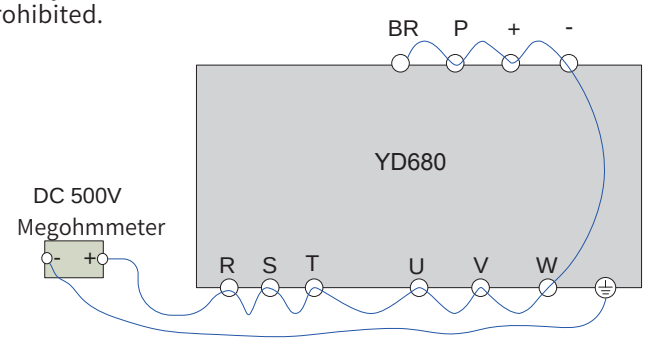


Fig. 8-1 Main Circuit Insulation Test Schematic

Measurement result must be > 5 MΩ.

Before test: Remove varistor screw, disconnect varistor connection.

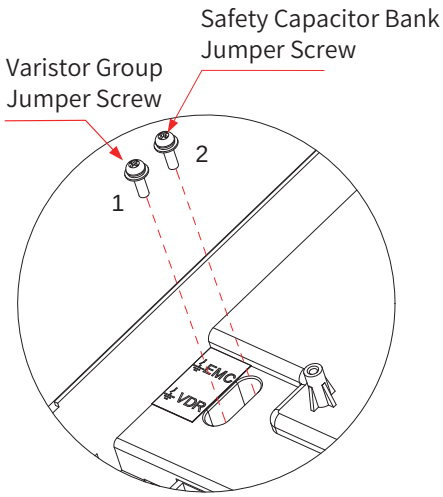


Fig. 8-2 VDR/EMC Ground Jumper Location

8.3 Inverter Consumable Parts Replacement

8.3.1 Consumable Parts Service Life

Main Consumables: Cooling Fan & Filter Capacitor. Life Related to Environment & Maintenance
Typical Service Life:

Component Name	Service Life [Note]
Fan	⩾ 5 Years
Electrolytic Capacitor	⩾ 5 Years

[Note]: Service life is specified under the following operating conditions. Users may determine replacement intervals based on actual operating hours.

1) Ambient Temperature: 40°C
2) Load Rate: 80%
3) Operation Rate: 24 hours/day

8.3.2 Cooling Fan Quantity

Table 3-16 Cooling Fan Quantity

Model	Cooling Fan
F1（0.7~5.5kW） F2（7.5kW） F4~F6（18.5~55kW）	1
F2（11kW） F3（15kW） F7~F9（75~220kW）	2
F10~F11（250~450kW）	3

Chapter 9 Specifications and Selections

9.1 YD680 Inverter Technical Specifications and Dimensions

9.1.1 Electrical Specifications

Table 9-1 YD680 Inverter Model & Technical Specifications (3-Phase 380V~480V)

Item		Specification					
Model：YD680T4-□G/□PB		0P7G/1P5P	1P5G/2P2P	2P2G/3P0P	3P0G/3P7P	3P7G/5P5P	5P5G/7P5P
External Structure		F1					
Output	Power(kW)	0.75/1.5	1.5/2.2	2.2/3.0	3.0/3.7	3.7/5.5	5.5/7.5
	Rated Output Current(A)	2.1/3.8	3.8/5.1	5.1/7.2	7.2/9.0	9.0/13	13/17
	Output Voltage(V)	3-Phase 0V~Input Voltage					
	Max. Output Frequency(Hz)	599Hz（Adjustable via parameters）					
	Carrier Frequency (kHz)	0.8kHz~8.0kHz（Auto-adjusted based on load characteristics）					
	Overload Capacity	150% of rated current for 60s					
Input	Rated Input Current(A)	2.4/4.6	4.6/6.3	6.3/9.0	9/12	12/17	17/22
	Rated Voltage(V)&Rated Frequency(Hz)	3-Phase 380V AC~480V AC, 50/60Hz					
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC					
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz					
	Power Capacity(kVA)	2.8/5.0	5.0/6.7	6.7/9.5	9.5/12	9.5/12	18/23
Cooling Design	Heat Dissipation(kW)	0.046/0.068	0.068/0.081	0.081/0.109	0.109/0.138	0.109/0.138	0.201/0.24
	Airflow(CFM)	9	9	9	13	13	24
Over-voltage Category		OVC III					
Mains Type		TN、TT、IT（Y）					
Pollution Degree		PD2					
Protection Class (Electrical)		Class Ⅰ					
IP Rating		IP20 (open type, for IEC products) Type1 (enclosed type, for UL products)					

Table 3-2 Electrical Parameters (3-Phase 380V~480V)

Item		Specification				
Model：YD680T4-□G/□PB		7P5G/11P	11G/15P	15G/18P5P	18P5G/22P	22G/30P
External Structure		F2		F3	F4	
Output	Power(kW)	7.5/11	11/15	15/18.5	18.5/22	22/30
	Rated Output Current(A)	17/25	25/32	32/37	37/45	45/60
	Output Voltage(V)	3-Phase 0V~Input Voltage				
	Max. Output Frequency(Hz)	599Hz (Adjustable via parameters)				
	Carrier Frequency (kHz)	0.8kHz~8.0kHz (Auto-adjusted based on load characteristics)				
	Overload Capacity	150% of rated current for 60s				
Input	Rated Input Current(A)	22/33	33/42	42/50	50/59	59/64
	Rated Voltage(V)&Rated Frequency(Hz)	3-Phase 380V AC~480V AC, 50/60Hz				
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC				
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz				
	Power Capacity(kVA)	23/34	34/43	43/45	45/54	54/58
Cooling Design	Heat Dissipation(kW)	0.24/0.355	0.355/0.454	0.454/0.478	0.478/0.551	0.551/0.694
	Airflow(CFM)	30	40	42	51.9	57.4
Overvoltage Category		OVC III				
Mains Type		TN、TT、IT（Y）				
Pollution Degree		PD2				
Protection Class (Electrical)		Class Ⅰ				
IP Rating		IP20 (open type, for IEC products) Type1 (enclosed type, for UL products)				

Table 3-3 Electrical Parameters (3-Phase 380V~480V)

Item		Specification				
Model：YD680T4-□G/□P(B)(-T)		30G	30G/37P	37G/45P	45G/55P	55G/75P
Enclosure (External Structure)		F5			F6	
Output	Power (kW)	30	30/37	37/45	45/55	55/75
	Rated Output(A)	60	60/75	75/91	91/112	112/150
	Output Voltage(V)	3-Phase 0V~Input Voltage				
	Max. Output Frequency(Hz)	599Hz (Adjustable via parameters)				
	Carrier Frequency(kHz)	0.8kHz~8.0kHz (Auto-adjusted based on load characteristics)				
	Overload Capacity	150% of rated current for 60s				
Input	Rated Input Current (A)	64	64/69	69/89	89/97	97/106
	Rated Voltage(V)Rated Frequency (Hz)	3-Phase 380V AC~480V AC, 50/60Hz				
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC				
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz				
	Power Capacity (kVA)	58	58/63	63/81	81/97	97/127
Cooling Design	Heat Dissipation (kW)	0.694	0.694/0.815	0.815/1.01	1.01/1.21	1.21/1.57
	Airflow (CFM)	118.5	118.5	118.5	122.2	122.2
Overvoltage Category		OVC III				
Mains Type		TN、TT、IT（Y）				
Pollution Degree		PD2				
Protection Class (Electrical)		Class Ⅰ				
IP Rating		IP20 (open type, for IEC products) Type1 (enclosed type, for UL products)				

Table 3-4 Electrical Parameters (3-Phase 380V~480V)

Item		Specification						
Model：YD680T4-□G/□P(B)-T		75G/90P	90G/110P	110G/132P	132G/160P	160G/200P	200G/250P	220G/280P
External Structure		F7			F8		F9	
Output	Power (kW)	75/90	90/110	110/132	132/160	160/200	200/250	220/280
	Rated Output(A)	150/176	176/210	210/253	253/304	304/377	377/465	426/520
	Output Voltage(V)	3-Phase 0V~Input Voltage						
	Max. Output Frequency(Hz)	599Hz (Adjustable via parameters)						
	Carrier Frequency(kHz)	0.8kHz~8.0kHz (Auto-adjusted based on load characteristics)			0.8kHz~6.0kHz (Auto-adjusted based on load characteristics)			
	Overload Capacity	150% of rated current for 60s						
Input	Rated Input Current (A)	139/164	164/196	196/240	240/287	287/365	365/441	410/495
	Rated Voltage(V)Rated Frequency (Hz)	3-Phase 380V AC~480V AC, 50/60Hz						
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC						
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz						
	Power Capacity (kVA)	127/150	150/179	179/220	220/263	263/334	334/404	375/453
Cooling Design	Heat Dissipation (kW)	1.57/1.81	1.81/2.14	2.14/2.85	2.85/3.56	3.56/4.15	4.15/5.06	4.55/5.33
	Airflow (CFM)	218.6	287.2	354.2	547	627	638.4	722.5
Overvoltage Category		OVC III						
Mains Type		TN、TT、IT（Y）						
Pollution Degree		PD2						
Protection Class (Electrical)		Class Ⅰ						
IP Rating		IP20 (open type, for IEC products)						

Table 3-5 Electrical Parameters (3-Phase 380V~480V)

Item		Specification		
Model：YD680T4-□G/□P-T		250G/315P	280G/355P	315G
External Structure		F10		
Output	Power (kW)	250/315	280/355	315
	Rated Output Current (A)	465/585	520/650	585
	Output Voltage (V)	3-Phase 0V~Input Voltage		
	Max. Output Frequency (Hz)	599Hz (Adjustable via parameters)		
	Carrier Frequency (kHz)	0.8kHz~6.0kHz (Auto-adjusted based on load characteristics)		
	Overload Capacity	150% of rated current for 60s(MD500T450G-PLUS: 130% of rated current for 60s)		
Input	Rated Input Current (A)	441/565	495/617	565
	Rated Voltage(V)&Rated Frequency(Hz)	3-Phase 380V AC~480V AC, 50/60Hz		
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC		
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz		
	Power Capacity (kVA)	404/517	453/565	517
Cooling Design	Heat Dissipation (kW)	5.06/5.69	5.33/6.31	5.69
	Airflow (CFM)	789.4	882	645
Overvoltage Category		OVC III		
Mains Type		TN、TT、IT（Y）		
Pollution Degree		PD2		
Protection Class (Electrical)		Class Ⅰ		
IP Rating		IP00 (open type, for IEC products)		

Table 3-6 Electrical Parameters (3-Phase 380V~480V)

Item		Specification			
Model：YD680T4-□G/□P-T		315G/400P	355G/450P	400G/500P	450G
External Structure		F11			
Output	Power (kW)	315/400	355/450	400/500	450
	Rated Output Current (A)	585/725	650/820	725/900	820
	Output Voltage (V)	3-Phase 0V~Input Voltage			
	Max. Output Frequency (Hz)	599Hz (Adjustable via parameters)			
	Carrier Frequency (kHz)	0.8kHz~6.0kHz (Auto-adjusted based on load characteristics)			
	Overload Capacity	150% of rated current for 60s			
Input	Rated Input Current (A)	565/687	617/782	687/838	782
	Rated Voltage (V) & Rated Frequency (Hz)	3-Phase 380V AC~480V AC, 50/60Hz			
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC			
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz			
	Power Capacity (kVA)	517/629	565/716	629/952	716
Cooling Design	Heat Dissipation (kW)	5.69/7.54	6.91/8.25	7.54/9.94	8.25
	Airflow (CFM)	860	860	860	860
Over-voltage Category		OVC III			
Mains Type		TN、TT、IT（Y）			
Pollution Degree		PD2			
Protection Class (Electrical)		Class Ⅰ			
IP Rating		IP00 (open type, for IEC products)			

Table 3-7 Electrical Parameters (3-Phase 380V~480V)

Item		Specification		
Model：YD680T4-□G/□P-T		500G/630P	560G	630G
External Structure		F12		
Output	Power (kW)	500/630	560	630
	Rated Output Current (A)	900/1120	1020	1120
	Output Voltage (V)	3-Phase 0V~Input Voltage		
	Max. Output Frequency (Hz)	599Hz (Adjustable via parameters)		
	Carrier Frequency (kHz)	0.8kHz~8.0kHz (Auto-adjusted based on load characteristics)		
	Overload Capacity	150% of rated current for 60s		
Input	Rated Input Current (A)	838/1044	953	1044
	Rated Voltage (V) & Rated Frequency (Hz)	3-Phase 380V AC~480V AC, 50/60Hz		
	Allowable Voltage Fluctuation Range	-15%~+10%, actual range: 323V AC~528V AC		
	Allowable Frequency Fluctuation Range	±5%, actual range: 47.5Hz~63Hz		
	Power Capacity (kVA)	952/1244	1071	1244
Cooling Design	Heat Dissipation (kW)	9.94/11.5	10.4	11.5
	Airflow (CFM)	2200	2200	2200
Overvoltage Category		OVC III		
Mains Type		TN、TT、IT（Y）		
Pollution Degree		PD2		
Protection Class (Electrical)		Class Ⅰ		
IP Rating		IP20		

Table 9-2 YD680 Series Inverter Tech. Specs

Item		Specification
Basic Functions	Input Frequency Resolution	Digital: 0.01Hz; Analog: 0.025% of max freq.
	Control Mode	SVC, FVC, V/F, PMVVC
	Starting Torque	0.25Hz/150%（SVC），0Hz/180%（FVC）。
	Speed Regulation Range	1:200 （SVC），1:1000 （FVC）。
	Speed Stability	±0.5%（SVC）。 ±0.02%（FVC）。
	Torque Control Accuracy	FVC：±3%; SVC：±5% above 5Hz.
	Torque Boost	Auto/Manual (0.1~30.0%)
	V/F Curve	4 modes (Linear/Curve/Multi-point/V/F Separation)
	Acc/Dec Curve	Linear or S-curve acceleration/deceleration 4 acceleration/deceleration times, range: 0.0s~6500.0s
	DC Braking	DC Braking Start Frequency: 0.00Hz~Max. Frequency Braking Time: 0.0s~36.0s Braking Current: 0.0%~100.0% of rated current
	Jog Operation	Jog Frequency Range: 0.00Hz~50.00Hz Jog Acc/Dec Time: 0.0s~6500.0s
	Simple PLC / Multi-step Speed Operation	Up to 16-step speed operation via built-in PLC or control terminals
	Built-in PID	Easy implementation of process closed-loop control system
	Automatic Voltage Regulation (AVR)	Automatically maintains constant output voltage when grid voltage fluctuates
	Speed Tracking	Auto current/voltage limit, prevent frequent over/under overvoltage trips.
	Fast Current Limiting	Minimizes overcurrent faults, protects normal inverter operation
	Torque Limit & Control	Excavator Feature: Auto torque limit, prevent overcurrent trips; Vector mode supports torque control.
Custom Functions	Ride-through	Momentary power loss ride-through
	Virtual I/O	5 sets of virtual DI/DO, supports simple logic control
	Timer	Timer function: Setting range 0.0min~6500.0min
	Fieldbus	Supports 7 fieldbuses: Modbus, PROFIBUS DP, CANlink, CANopen, PROFINET, EtherCAT, EtherNet/IP
	Encoder	Supports differential, open-collector, U/V/W, resolver, etc.
	Background Software	Supports inverter parameter operation and virtual oscilloscope function Virtual oscilloscope for real-time monitoring of internal inverter status
	Motor Overheat Protection	Analog input AI3 supports motor temperature sensor input (PT100, PT1000, KTY-84-130, PTC-130)

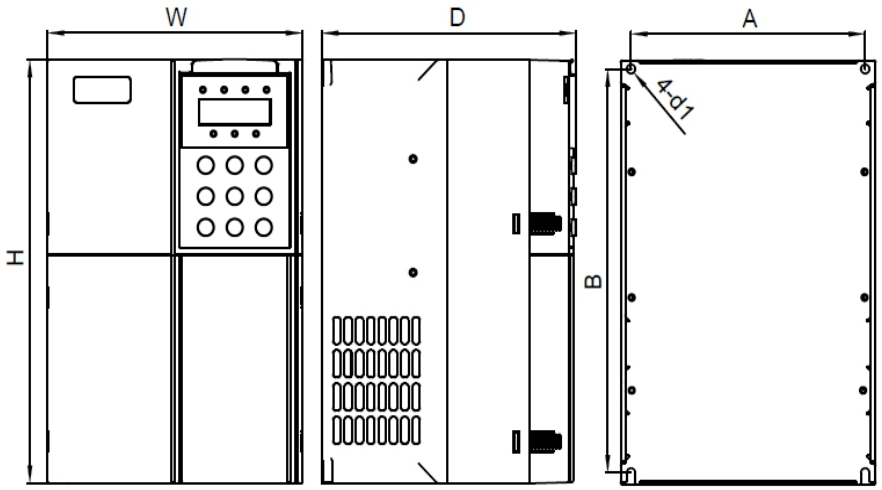
Item		Technical Specification
Operation	Run Command	Keypad, control terminals, serial communication; Multi-mode switchable
	Frequency Source	10 Frequency Sources: Digital, analog (AI1~AI3), pulse (DI5), multi-step, PLC, PID, comms; switchable.
	Aux. Freq.Command	10 auxiliary frequency commands, for fine tuning/frequency synthesis
	Input Terminals	Standard: 5 DI terminals 3 AI terminals (1×-10V~+10V only, 2×-10V~+10V or 0mA~20mA) Expansion: 5 additional DI terminals
	Output Terminals	Standard: 1 DO terminal 2 relay output terminals 2 AO terminals (0mA~20mA or 0V~10V) Expansion: 1 additional DO terminal 1 additional relay output terminal
Display & Keypad Operation	LED Display	Parameter display
	LCD Display	Optional, Chinese/English operation prompts
	Parameter Copy	Fast parameter copy via LCD keypad
	Key Lock	Partial/full key lock, custom key function range, prevent misoperation
Protection Functions	Phase loss	Input phase loss protection, output phase loss protection
	Overcurrent	Trip at >250% of rated output current peak
	Overvoltage	Trip at DC bus voltage >820V
	Undervoltage	Trip at DC bus voltage <350V
	Overheat	Inverter overheat protection
	Overload	150% rated current for 60s (YD680T4-450G: 130% rated current for 60s)
	Overcurrent	2.5× rated current peak shutdown protection
	Braking	Braking unit overload, braking resistor short circuit protection
	Short Circuit	Phase-to-phase, phase-to-ground short circuit protection
Environment	Application Site	Indoor, no direct sunlight, dust-free, no corrosive/flammable gas, no oil mist, steam, water, salt
	Altitude	Derate 1% per 100m above 1000m, max 3000m (F1: max 2000m, >2000m contact factory)
	Ambient Temperature	-10°C~+50°C, derate above 40°C (1.5% per 1°C rise)
	Humidity	≤95%RH, non-condensing
	Vibration	• Operation: IEC 60068-2-6 compliant. 3.5mm amplitude at 5Hz~8.4Hz, 1g acceleration at 8.4Hz~200Hz, 10 cycles/axis. • Transportation: IEC 60068-2-64 compliant. $0.01g^2$/Hz PSD at 5Hz~100Hz, $0.001g^2$/Hz PSD at 200Hz, Grms=1.14g.
	Shock	Op./Trans.:IEC 60664-2-27 compliant, 15g acceleration, 11ms pulse, 18 times
	Storage Temperature	-20°C~+60°C。

9.1.2 Outline and Mounting Dimensions

◆ YD680 Overall Dimensions

F1~F4 Overall Dimensions

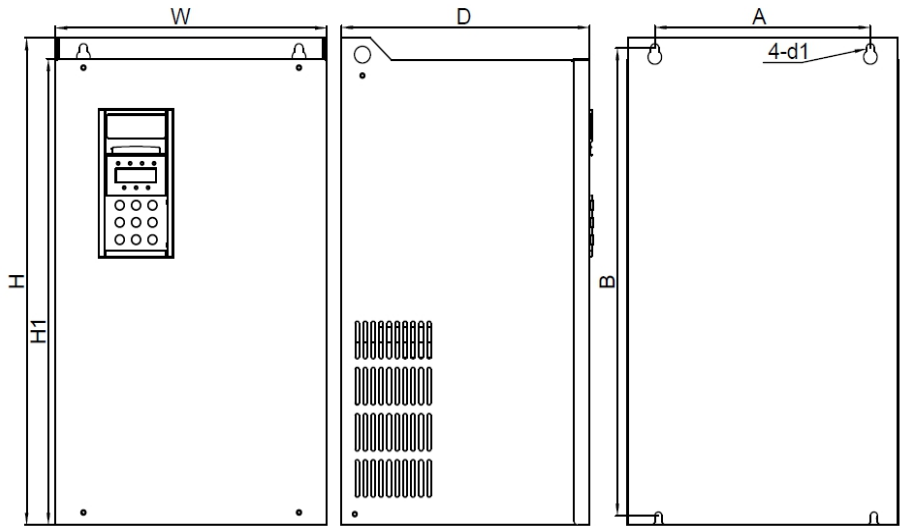
F1~F4



YD680T4-0P7G/1P5PB ~ YD680T4-22G/30PB
YD680T2-0P4GB ~ YD680T2-11GB

F5~F8 Overall Dimensions

F5~F8



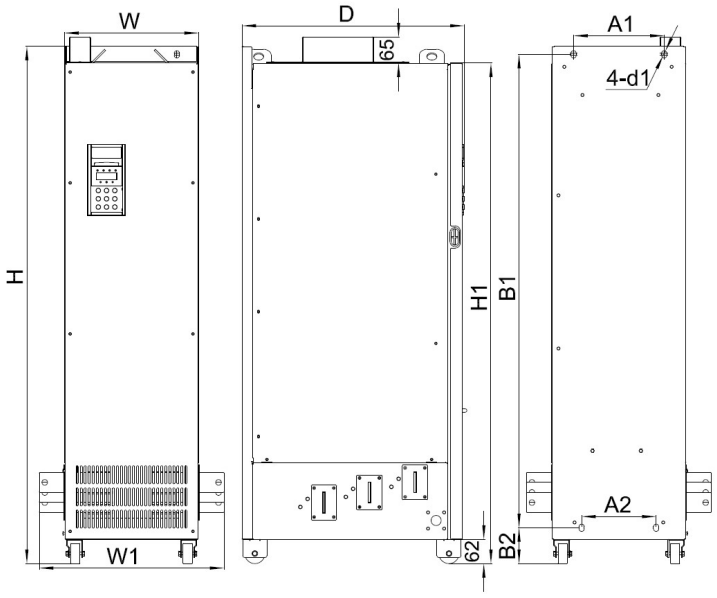
YD680T4-30G(B)(-T) ~ YD680T4-160G/200P-T
YD680T2-15G(B)-T ~ YD680T2-75G-T

Table 9-6 Outline & Mounting Hole Dimensions for YD680T4-0P7G/1P5PB ~ YD680T4-160G/200P-T (3-Phase 380V~480V)

Frame	Inverter Model	Outline Dimensions mm				Mounting Pos. mm		Hole Dia. mm
		W	H	H1	D	A	B	d1
F1	**YD680T4-0P7G/1P5PB**	130	200	/	172	119.4	189.4	φ5
	YD680T4-1P5G/2P2PB							
	YD680T4-2P2G/3P0PB							
	YD680T4-3P0G/3P7PB							
	YD580T4-3P7G/5P5PB							
	YD680T4-5P5G/7P5PB							
F2	**YD680T4-7P5G/11PB**	140	250	/	178	129	239	φ6
	YD680T4-11G/15PB							
F3	**YD680T4-15G/18P5PB**	180	280	/	180	165.4	266.7	φ6
F4	**YD680T4-18P5G/22PB**	225	360	/	225	206	341	Φ7
	YD680T4-22G/30PB							
F5	**YD680T4-30G(B)**	256	436	422	254	213	421	φ7
	YD680T4-30G/37P(B)-T							
	YD680T4-37G/45P(B)-T							
F6	**YD680T4-45G/55P(B)-T**	302	540	527	300	245	521	φ10
	YD680T4-55G/75P(B)-T							
F7	**YD680T4-75G/90P(B)-T**	340	581	556	331	270	560	φ10
	YD680T4-90G/110P(B)-T							
	YD680T4-110G/132P(B)-T							
F8	**YD680T4-132G/160P-T**	400	925	885	337	320	905	φ10
	YD680T4-160G/200P-T							

F9~F11 Overall Dimensions

F9~F11



YD680T4-200G/250P-T ~ YD680T4-450G-T

YD680T2-90G-T ~ YD680T2-200G-T

Table 9-8 Outline & Mounting Hole Dimensions for YD680T4-200G/250P-T ~ YD680T4-450G-T

YD680T4-200G/250P-T ~ YD680T4-450G-T Outline Dim. / Mounting Hole Dim.

Frame	Inverter Model	Outline Dimensions mm					Mounting Pos. mm				Hole Dia. mm
		W	W1	H	H1	D	A1	A2	B1	B2	d1
F9	**YD680T4-200G/250P-T**	303	426	1136	1091	523	240	150	1035	83	φ13
	YD680T4-220G/280P-T										
F10	**YD680T4-250G/315P-T**	333	459	1286	1245	568	225	185	1175	91	φ13
	YD680T4-280G/355P-T										
	YD680T4-315G-T										
F11	**YD680T4-315G/400P-T**	345	458	1404	1355	561	240	185	1291	91	φ16
	YD680T4-355G/450P-T										
	YD680T4-400G/500P-T										
	YD680T4-450G-T										

F12 Overall Dimensions

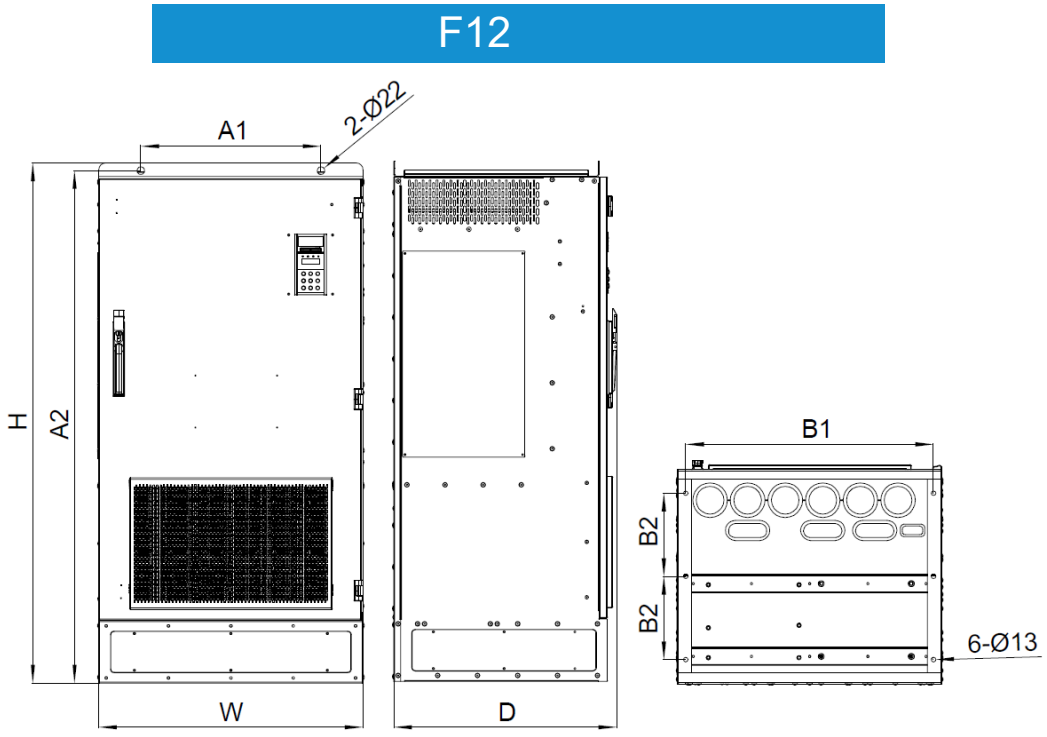


Figure 9-10 YD680T4-500G-T ~ YD680T4-630G-T Outline Dim. / Mounting Hole Dim.

Frame	Model	Outline Dimensions mm					Mounting mm				Hole mm
		W	W1	H	H1	D	A1	A2	B1	B2	d1
F12	**YD680T4-500G/630P-T**	763	-	1500	-	644	520	1478	715	240	φ13 φ22
	YD680T4-560G-T										
	YD680T4-630G-T										

9.2 Brake Unit Selection Guide

9.2.1 Brake Frequency in Typical Applications

Typical Applications	Elevator	Uncoiling & Coiling	Centrifuge	Occ. Brake Load	General
Brake Duty	20% ~30%	20 ~30%	50%~60%	5%	10%

9.2.2 Brake Component Selection Table (3-Phase 380~480V)

Inverter Model	Motor Power kW	Brake Unit		125% Braking Torque (10% ED, Max 10s)		Remarks	Min.Braking Res.(Ω)
		Type	Qty	Rec. Brake Res. Spec.	Qty of Res.		
YD680T4-0P7G/1P5PB	0.75	Built-in as Standard		140W 800Ω	1	Add "B" to model no.	96
YD680T4-1P5G/2P2PB	1.5			300W 380Ω	1		96
YD680T4-2P2G/3P0PB	2.2			440W 260Ω	1		64
YD680T4-3P0G/3P7PB	3.0			440W 200Ω	1		64
YD680T4-3P7G/5P5PB	3.7			740W 150Ω	1		32
YD680T4-5P5G/7P5PB	5.5			1100W 100Ω	1		32
YD680T4-7P5G/11PB	7.5			1500W 75Ω	1		32
YD680T4-11G/15PB	11			2200W 50Ω	1		20
YD680T4-15G/18P5PB	15			3000W 38Ω	1		20
YD680T4-18P5G/22PB	18.5			4000W 32Ω	1		24
YD680T4-22G/30PB	22			4500W 27Ω	1		24
YD680T4-30GB YD680T4-30G/37PB-T	30	Built-in Optional		6000W 20Ω	1		19.2
YD680T4-37G/45PB-T	37			7000W 16Ω	1		14.8
YD680T4-45G/55PB-T	45			9000W 13Ω	1		12.8
YD680T4-55G/75PB-T	55			11000W 10.5Ω	1		9.6
YD680T4-75G/90PB-T	75			15000W 7.7Ω	1		6.8
YD680T4-90G/110PB-T	90			18000W 6.2Ω	1		6.0
YD680T4-110G/132PB-T	110			22000W 5.3Ω	1		5.0

Chapter 10 Optional parts

10.1 I/O Expansion Card

10.1.1 Multi-function I/O Expansion Card（YD580-IO1）

(For use with 15kW and above models)

The YD580-IO1 expansion card is a multi-function I/O expansion card designed for use with this series of inverters. It provides 5 additional DI channels, 1 AI channel, 1 DO channel, 1 AO channel, and 1 relay output. It is also equipped with CAN and RS485 communication interfaces, enabling fieldbus control.

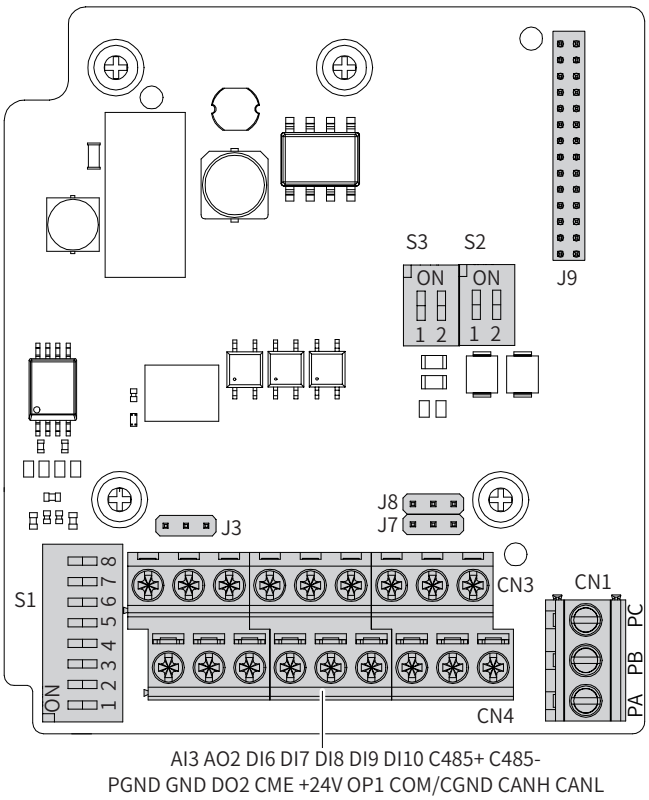


Figure 10-1 Terminal Distribution Schematic of YD580-IO1

Table 10-1 YD580-IO1 Expansion Card Terminal Function Description

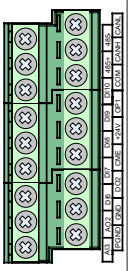
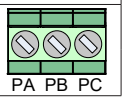
Terminal ID		Ter. Name	Function Description	Terminal Layout
CN4	+24V/COM/ CGND	+24V DC PWR	1、Provides +24V power supply for digital I/O terminals and external sensors. 2、Max output current: 200mA.	
	OP1	DI PWR	1、OP1 is connected to "+24V" via jumper J8 at factory. 2、For external power supply, connect OP1 to external power and remove J8.	
	DO2-CME	D O 2	1、Opto-isolated, bipolar open-collector output. 2、Output voltage range: 0V ~ 24V. 3、Output current range: 0mA ~ 50mA. Note: CME (digital output ground) is isolated from COM/CGND (digital input ground), connected via J7 by default. Disconnect J7 when using external power to drive DO2	
	CANH/ CANL/COM/ CGND	COMM	CANlink protocol communication input terminal, isolated input.	
CN3	AI3-PGND	7=,	1、Opto-isolated input, supports differential voltage and RTD (temperature sensor) input. 2、Input voltage range: DC -10V ~ +10V. 3、Support PT100, PT1000 temperature sensors. 4、Set via DIP S1; single function only.	
	AO2-GND	7? +	1、Output voltage specification: 0V ~ +10V. 2、Output current specification: 0mA ~ 20mA. 3、Output current load resistance specification: 0Ω ~ 500Ω.	
	DI6-OP1~ DI10-OP1	: =/\ : =*)	1、Opto-isolated, compatible with bipolar input. 2、Input impedance: 2.4kΩ. 3、High-level input voltage range: +9V ~ +30V.	
	C485+/ C485-/COM/ CGND	COMM	Modbus-RTU protocol communication input/output signal terminal, isolated input.	
CN1	PA- PB	> 9	Contact driving capacity: 250V AC，3A，COS ∅ =0.4 30V DC，1A	
	PA- PC	> ?		

Table 10-2 Jumper Description for YD580-IO1 Expansion Card

Terminal ID	Terminal NAME	Function Description	Jumper / DIP Switch Position
J3	AO2 Output Type Setting Jumper	Voltage Type: 0V ~ +10V	
		Current Type: 0mA ~ 20mA	
S1	AI, PT100, PT1000 Function Selection	AI3: Set pins 1, 2, 3 to ON	
		PT1000: Set pins 4, 5, 6 to ON	
		PT100: Set pins 6, 7, 8 to ON	-
S2	RS485 Termination Resistor Selection	Set pins 1 & 2 to ON for termination resistor matching	
		Set pins 1 & 2 to OFF to disable termination resistor matching	
S3	AI3、PT100、 PT1000 Function Selection	Set pins 1 & 2 to ON for termination resistor matching	-
		Set pins 1 & 2 to OFF to disable termination resistor matching	-

NOTE

◆ When using CAN communication for inverter master-slave operation, or RS485 communication between inverters and display screens, termination resistors must be matched for CAN and RS485 on the IO1 expansion cards of the first and last inverters (via S3 and S2). DIP switches on IO1 expansion cards of intermediate inverters shall remain in factory default state.

10.1.2 IO Function Expansion Card 2 (YD580-IO2)

(Applies to all models.)

Simplified version of the multi-function IO expansion card (YD580-IO1), with 3 DI channels.

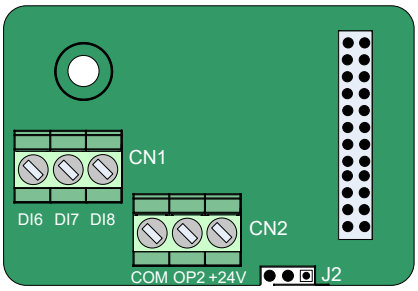


Figure 10-2 YD580-IO2 Terminal Layout Schematic

Table 10-3 YD580-IO2 Expansion Card Terminal Function Description

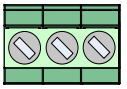
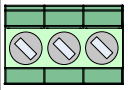
Terminal ID		Ter. Name	Function Description	Ter. Layout
CN2	+24V/COM	External +24V DC Power	1、Provides +24V power for digital I/O terminals and external sensors. 2、Maximum output current: 200mA.	
	OP2	Digital Input Power Terminal	Factory unconnected, connect to +24V/external power as needed	
CN1	DI6-OP2~ DI8-OP2	3-Channel Digital Input	1、Opto-isolated, bipolar input 2、Impedance: DI6/7=3.3kΩ, DI8=2.4kΩ 3、High le el: + V~+30V 4、 nput frequency 100Hz	

Table 10-4 YD580-IO2 Expansion Card Jumper Description

Terminal ID	Terminal Name	Function Description	Jumper Position
J2	DI Terminal Sink/ Source Wiring Setting Jumper	DI terminals in sink wiring, OP2 connected to +24V.	
		DI terminals in source wiring, OP2 connected to COM.	

NOTE

◆ Jumper settings are viewed from the top view with the main terminal block as the bottom. Follow the silkscreen on the board as standard.

10.1.3 YD580-IO3 Terminal Layout and Function Description

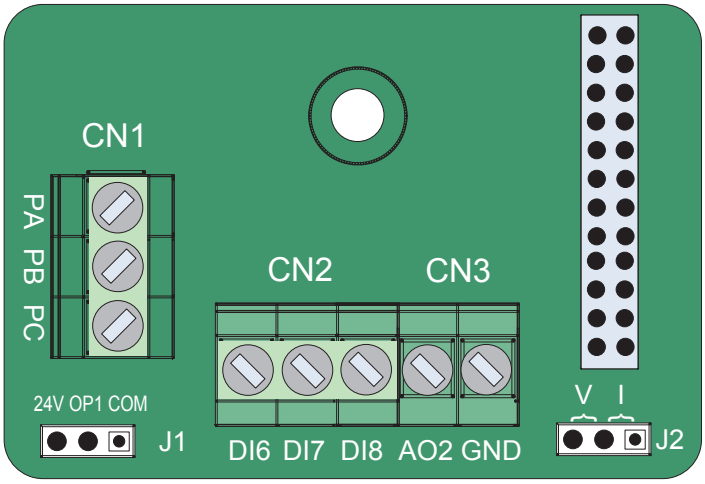


Figure 10-4 YD580-IO3 Terminal Layout Schematic

Table 10-6 YD580-IO3 Expansion Card Terminal Function Description

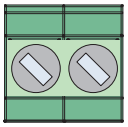
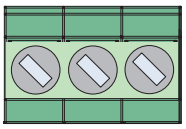
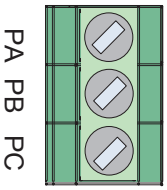
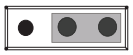
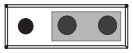
Terminal ID		Terminal NAME	Function Description	Terminal Layout
CN3	AO2	Analog Output P5-08: Parameter	1、Voltage output: 0V~10V (J2=V) 2、Current output: 0mA~20mA (J2=I)	 AO2 GND
	GND	Analog Ground		
CN2	DI6 ~ DI8	3-Channel Digital Input P4-05/06/07: Parameter	1、Opto-isolated, bipolar input, max input frequency 100Hz 2、Input impedance: 3.4kΩ 3、Input voltage range: 9~24V	 DI6 DI7 DI8
CN1	PA/PB/PC	Relay Output P5-03: Parameter	Contact rating: 250VAC/5A、30VDC/5A PB-PA;Normally Closed (NC) PC-PA;Normally Open (NO)	 PA PB PC

Table 10-7 YD580-IO3 Expansion Card Jumper Description

Terminal ID	Terminal Name	Function Description	Jumper / DIP Switch Position
J1	DI Sink/Source Wiring Setting Jumper	DI terminals in sink wiring, OP connected to 24V	
		DI terminals in source wiring, OP connected to COM	
J2	AO2 Output Type Setting Jumper	Voltage type: 0 V~10V	
		Current type: 0mA~20mA	

NOTE

● Jumper settings are observed from the top view with the main terminal block as the bottom side. Follow the silkscreen on the board as the standard.

10.1.4 Multi-function I/O Expansion Card (YD580-IO4)

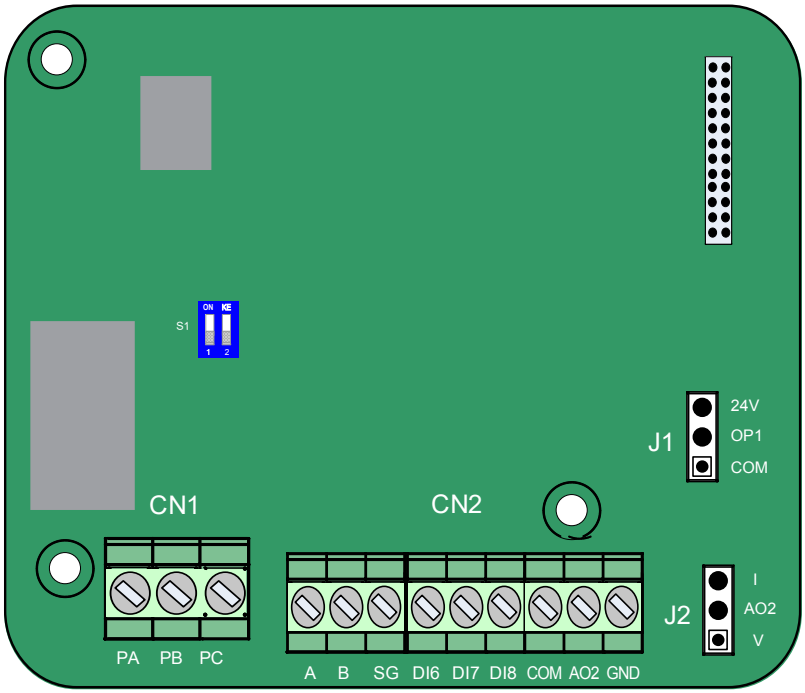


Table 10-9 YD580-IO4 Expansion Card Terminal Function Description

Terminal ID & Function		Parameter	Function Description	Terminal Layout
Analog Output	AO2~GND	P5-08	1、Voltage output: 0V~10V (J2=V) 2、Current output:0mA~20mA (J2=I)	
Relay Output Terminals	PB-PA PC-PA	P5-02	Contact rating: 250V AC，5A，COS ∅ =0.4 30V DC，1A	
Digital Input Terminals	DI6~COM DI7~COM DI8~COM	P4-05 P4-06 P4-07	Opto-isolated, bipolar input Input impedance: 2.4kΩ Input voltage range: +9V ~ +30V	
RS485 Communication	A B SG	P0-02 P0-03 Pd-00	It is recommended to use shielded twisted pair cable.	
DIP Switch	S1	RS485 Termination Resistor Sel.	Select RS485 communication termination resistor, factory default: disconnected	

Table 10-7 YD580-IO4 Expansion Card Jumper Description

Terminal ID	Terminal Name	Function Description	Jumper / DIP Switch Position
J1	DI Sink/Source Wiring Setting Jumper	DI terminals in sink wiring, OP connected to 24V	
		DI terminals in source wiring, OP connected to COM	
J2	AO2 Output Type Setting Jumper	Voltage type: 0 V~10V	
		Current type: 0mA~20mA	

NOTE

◆ Jumper settings are observed from the top view with the main terminal block as the bottom side. Follow the silkscreen on the board as the standard.

10.1.5 Multi-function I/O Expansion Card (YD580-IO5)

（For 15kW & above models）

Multi-function IO expansion card (YD580-IO5) provides 3 DI, 2 relay outputs, and 1 RS485 communication port.

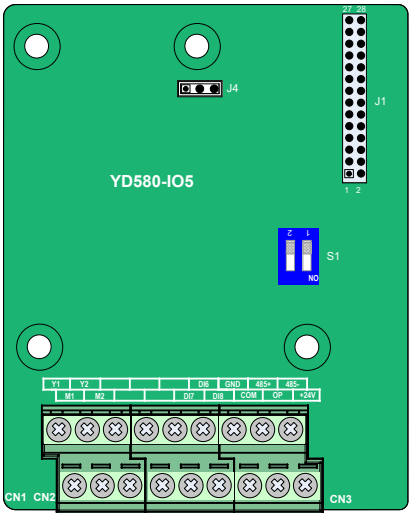
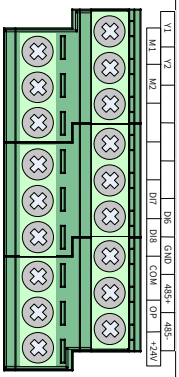


Figure 10-5 YD580-IO5 Terminal Layout Schematic

Table 10-9 YD580-IO5 Expansion Card Terminal Function Description

Terminal ID		Terminal Name	Function Description	Terminal Layout
Power	+24V~COM	External +24V Power	Provides +24V for digital I/O terminals and external sensors. max output current: 200mA	
	OP	Digital Input Power Terminal	OP is factory-connected to +24V via jumper. For external power, remove jumper and connect OP to external power.	
Relay Output Terminals	Y1~M1 Y2~M2	Relay Output	Contact rating: 250V AC，5A，COS ∅ =0.4 30V DC，1A	
Digital Input Terminals	DI6~OP DI7~OP DI8~OP	Digital Input	Opto-isolated, bipolar input Input impedance: 2.4kΩ Input voltage range: +9V ~ +30V	
RS485 Communication	A B SG	RS485 Communica-tion Terminals	It is recommended to use shielded twisted pair cable.	
DIP Switch	S1	RS485 Termination Resistor Sel.	Select RS485 termination resistor, factory default: disconnected	

NOTE

◆ Jumper settings are observed from the top view with the main terminal block as the bottom side. Follow the silkscreen on the board as the standard.

10.2 Communication Expansion Cards

10.2.1 CANopen Expansion Card (YD580-CAN) (Applicable to all series models)

The CANopen communication expansion card is specially designed for CANopen communication. It features as follows:

- Supports Node Guard protocol, allowing the master station to query device status.
- 4 Tx/Rx PDO channels, Tx PDO supports sync/async transmission.
- SDO only supports expedited transfer, max 4-byte transmission.
- TPDO/RPDO/SDO COB-IDs are device-ID related, pre-set, no modification needed.
- No emergency object support; CANopen electrical parameters meet international standards.

1、YD580-CAN Appearance

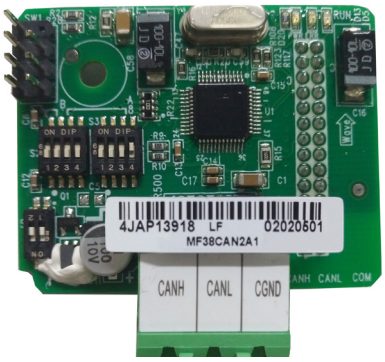


Figure 10-6 YD580-CAN Outline

2、Terminal Function Description:

Table 10-10 Terminal Function Description

Category	Terminal Symbol	Terminal Name	Function Description
CAN C o m m . (CN1)	CANH/CANL	Comm. Interface Terminals	CANopen Comm. Input, Isolated Input
	COM	CAN Comm. Power GND	CM Inductor Connection to +24V GND
Program Burning	SW1	ARM Program Burning Interface	

3、DIP Switch:

DIP switch S1 is a 2-position switch for CAN bus termination resistor configuration.
It is recommended to enable termination resistors at both ends of the network topology. "ON" = "1", down position = "0".

Table 10-11 YD580-CAN Termination Resistor

DIP Switch No.		Termination Resistor
1	2	
0	0	Termination resistor disabled
1	1	Termination resistor enabled

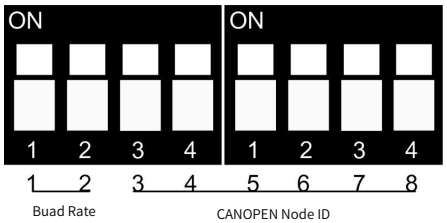
Figure 10-7 YD580-CAN DIP Switch

Bit No.	Function	Description		
1～2	CAN Bus Baud Rate	8 M/1	8 M/2	Baud Rate
		0	0	125kbps
		0	1	250kbps
		1	0	500kbps
		1	1	1Mbps
3～8	CANopen Node ID	6 binary bits provide 64 addresses in the range 0–63.		

Address	Switch Settings
0	00 0000
7	00 0111
20	01 0100

Note：When using CANopen communication, enable the termination resistor if the inverter is at the end of the bus.

DIP switches S2, S3 form an 8-position switch for CAN bus baud rate and device address setting.Bits 1~2: Baud rate; Bits 3~8: CANopen address. "ON" = "1", down position = "0".



4. PDO Data Definition and Function Code Address Definition

1) RPDO Data Definition

RPDO Definition			
RPDO1	Drive Command	bit0:Deceleration Stop, bit1:Freewheel Stop, bit2:Forward Run,bit3:Reverse Run	bit4:Fast Stop, bit5:Torque Control, bit6:Fault Reset, bit7:Command Valid,bit8~bit15:Reserved
	Target Frequency Setting	The frequency can be set in two modes via parameter bd.06: When bd.06 LSB is 0 (default), percentage mode is applied with range 0~10000 (0.00%~100.00% of max frequency, unsigned); when LSB is 1, actual frequency mode is applied with range 0Hz~max frequency (unsigned).	
	bd.11	These 10 data items write corresponding values to the RAM of a specified function code address. The target parameter address is defined by bd.11~bd.20. Example: Set bd.11 to b5.00 and write 500 to the third data of RPDO1,then the value of parameter b5.00 will be updated to 500. Note: All function code addresses in YD871 follow a unified rule:group number as high byte, index in hex as low byte.Examples: A0.05=0xa005, b3.18=0xb312, U0.18=0xd012. The YD871 EDS file supports direct PDO configuration.Please get the latest version from the manufacturer.	
	bd.12		
RPDO2	bd.13		
	bd.14		
	bd.15		
	bd.16		
RPDO3	bd.17		
	bd.18		
	bd.19		
	bd.10		

2) TPDO Data Definition

RPDO Definition		
TPDO1	Drive Status	bit0: Inverter Running, bit1: Inverter Forward Running bit2: Inverter Reverse Running, bit3: Inverter No Fault bit4: Freewheel Stop, bit5: No Communication with Inverter bit6: Frequency Reached, bit7: Torque Control Active bit8~bit15: Reserved
	Feedback Frequency	Returns the current operating frequency.
	bd.21	These 10 data items are used to read values from specified function codes.The parameter address is specified by bd.11~bd.20. Example: If bd.21 is set to b5.00,the third data of TPDO1 will be the real-time value of b5.00. Note: All function code addresses in YD871 follow a unified rule:group number as high byte, index in hex as low byte.Examples: A0.05=0xa005, b3.18=0xb312, U0.18=0xd012. The YD871 EDS file supports direct TPDO configuration.Please obtain the latest EDS file from the manufacturer.
	bd.22	
TPDO2	bd.23	
	bd.24	
	bd.25	
	bd.26	
TPDO3	bd.27	
	bd.28	
	bd.29	
	bd.30	

10.2.2 RS485 Expansion Card (YD580-RS485)

(Applicable to all series models)

The YD580-RS485 expansion card is specially developed to provide RS485 communication function. It adopts an isolation solution, and its electrical parameters meet international standards. Users can select it as needed to realize functions such as remotely controlling the inverter operation and setting parameters through the serial port.

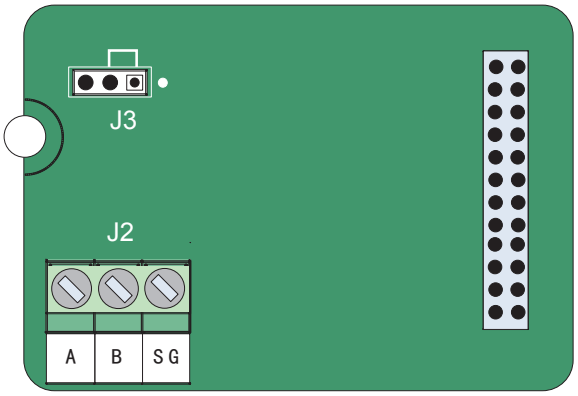


Figure 10-9 YD580-RS485 Terminal Distribution Schematic

Table 10-16 YD580-RS485 Expansion Card Terminal Function Description

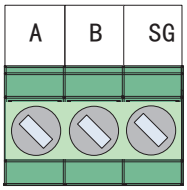
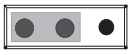
Terminal ID		Terminal Name	Function Description	Terminal Layout
J2	A	485 Signal +	Isolated 485 communication input terminal	
	B	485 Signal -	Isolated 485 communication input terminal	
	SG	485 Signal GND	Isolated power supply reference ground	

Table 10-17 YD580-RS485 Expansion Card Jumper Description

Terminal ID	Terminal Name	Function Description	Jumper / DIP Switch Position
J3	485 Termination Resistor Setting Jumper	Enable termination resistor matching	
		Disable termination resistor matching	

NOTE

● The jumper setting is viewed from the top with the main terminal side of the expansion card as the bottom. The jumper is also marked with silkscreen on the board, please refer to the silkscreen for the final standard.

10.2.3 PROFIBUS DP Expansion Card (YD580-DP) (For models of 15kW and above)

PROFIBUS DP Card: Connects YD871 inverter to PROFIBUS DP bus, supporting configuration, parameter update, control signal transmission, monitoring and diagnosis.

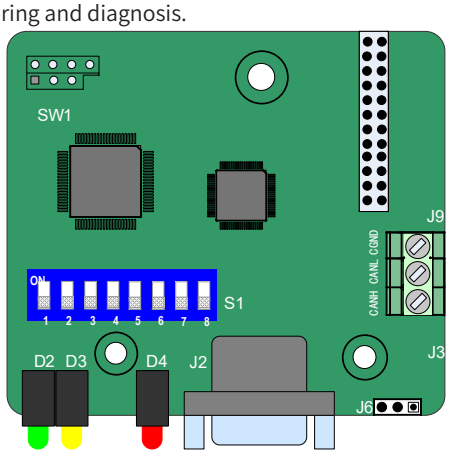


Figure 10-9 YD580-DP Terminal Distribution Schematic

Table 10-14 YD580-DP Expansion Card Terminal Function Description

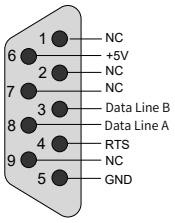
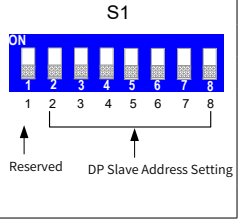
Terminal Name & ID	Pin No.	Pin Definition	Func.Description	Terminal Layout
PROFIBUS Communication Terminals (J2)	1、2、7、9	NC	Internal (Not Connected)	
	3	Data LineB	Data Line Positive	
	4	RTS	Request To Send	
	5	GND	Isolated 5V Power Ground	
	6	+5V	Isolated 5V Power Supply	
	8	Data LineA	Data Line Negative	

Table 10-15 YD580-DP Status Indicator Description

Indicator	Status	Description
Power Indicator (D4)	D4	On:Card-Inverter
	D4	Off:Power supply abnormal, check installation
DP Card-Master Communication Indicator (D3)	D3	On:Normal communication between DP card and PROFIBUS master
	D3	Flashing:Master inactive or DP card/master communication error.
	D3	Off:No communication with PROFIBUS master. (Check cable & station address).
DP Card-Inverter Communication Indicator (D2)	D2	On:Normal communication between DP card and inverter
	D2	Flashing: Communication failure between DP card and inverter. (Check baud rate setting).
	D2	Off:DP card-inverter comms interference, or expansion card address out of 1~125 range.

Table 10-16 YD580-DP Expansion Card DIP Switch Description

PROFIBUS DP Slave Address Setting								Slave Station Address	DIP Switch
1	2	3	4	5	6	7	8		
DP Card Type Switch (Factory Default: YD580-DP)	0	0	0	0	0	0	0	Reserved	
	0	0	0	0	0	0	1	1	
	0	0	0	0	0	1	0	2	
		0	0	0	0	1	1	3	
		...						...	
	1	1	1	1	1	0	1	123	
	1	1	1	1	1	1	0	124	
	1	1	1	1	1	1	1	125	

NOTE

- When DIP switch bit 1 is ON, it indicates YD580-DP.
- Changing this bit requires power cycle to take effect.Changing other slave station address bits does not require power cycle

10.2.4 PROFINET Communication Expansion Card (YD580-PN) (Applicable to all series models)

YD580-PN: PROFINET adapter complying with international standards.

Installed to enhance comms. efficiency, support networking, and act as slave under master control.

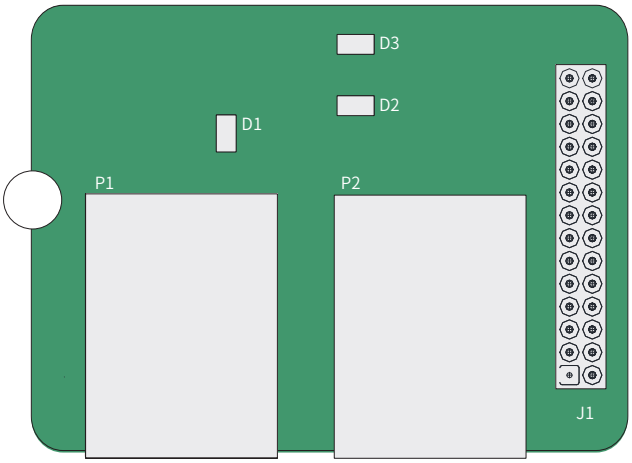


Figure 10-13 YD580-PN Card Terminal Distribution Schematic

Table 10-22 YD580-PN Card Terminal Function Description

Terminal ID	Terminal Name	Function Description
P1	Port 1	Wiring terminal, directionless. Either port can be connected to the PLC side.Isolated 485 communication input terminal
P2	Port 2	
J1	Pin Header (Rear)	Used for connection to the inverter

Table 10-23 YD580-PN Card Indicator Status Description

Indicator ID	Indicator Name	Status Description
D1	Power Indicator	On: Power supply normal; Off: Power supply abnormal, check installation
D2	Inverter Communication Status	Note
D3	PLC Communication Status	Note

NOTE

◆ After installing the YD580-PN card, facing the RJ45 port, the left side is J2 and the right side is J3. To ensure operational stability, it is recommended to use Cat5e shielded twisted pair Ethernet cables.

10.2.5 PZD PZD Process Data Description and Function Code Address Definition

1) PZD Area Data Definition

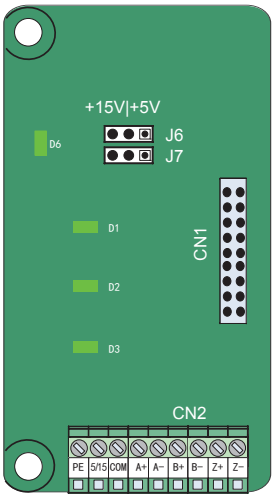
Master Transmitted Data PZD Description	
PZD1	bit0: Deceleration stop, bit1: Free stop bit2: Forward run, bit3: Reverse run bit4:Fast stop, bit5: Torque control bit6:Fault reset, bit7: Command valid bit8~bit15: Reserved Note: bit7 (Command valid) must be set to 1 for PZD1 commands to take effect.
PZD2	Fixed as inverter target frequency (frequency source = communication reference).Set via parameter bd.06: LSB=0 (default): Percentage mode, 0~10000 = 0.00%~100.00% of max frequency (sign irrelevant). LSB=1: Actual frequency mode, 0Hz ~ max frequency (sign irrelevant).
PZD3~PZD12	PZD3 ~ PZD12 need to be mapped to PLC registers via parameter addresses. For example, parameter B4.00 with address 16#B400 converts to 10#46080, which is written into the PLC mapping area.
	Slave Returned Data PZD Description
PZD1	bit0: Inverter running, bit1: Inverter forward running bit2: Inverter reverse running, bit3: Inverter no fault bit4: Free stop, bit5: No communication with inverter bit6: Frequency reached, bit7: Torque control active bit8~bit15: Reserved
PZD2	Inverter current operating frequency. If the returned value is 2500, the current operating frequency is 25.00Hz
PZD3~PZD12	Returns current value of the corresponding function code address.Addresses specified by bd.21 ~ bd.30.Example: bd.21 = B5.01, B5.01 = 25.00 → PZD3 returns 2500.Addresses can also be configured in PLC slave "Device-specific Parameters", which will override bd.21~bd.30. Refer to Section 4.

2) PKW Area Data Definition

Master Transmitted Data PKW Description	
PKE	High 4 bits: Command code 0: No request 1: Read function code parameters 2: Write function code parameters Low 4 bits: Reserved Low 8 bits: High byte of function code parameter address
IND	High 8 bits: Low byte of function code parameter address Low 8 bits: Reserved
PWE	High 16 bits: Reserved; Low 16 bits: Unused for read requests; represents parameter value for write requests
	Slave Transmitted Data PKW Description
PKE	High 4 bits: Response code 0: No request 1: Function code parameter operation successful 7: Execution failed Low 8 bits: High byte of function code parameter address
IND	High 8 bits: Low byte of function code parameter address Low 8 bits: Reserved
PWE	Request successful: Parameter value Request failed: Error code (consistent with standard Modbus): 1:Illegal function 2:Illegal data address 3:Illegal data value 4: Other errors

10.3 Encoder Expansion Card

10.3.1 YD580-ABZ Encoder Card Specifications



YD580-ABZ Specifications	
Encoder Power Supply	5V/200mA，15V/100mA
Maximum Input Frequency	Differential: 500kHz, Open Collector: 100kHz
Encoder Interface Type	Diff, OC, Push-Pull
Maximum Rate	100kHz
Wire Gauge	16~26AWG
Terminal Screw	Slotted (Flat-head)
Terminal Type	Angled Plug-in Terminal Block

Table 10-24 YD580-ABZ Terminal Function Description

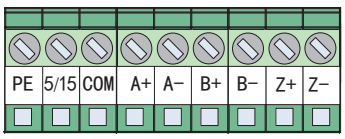
Terminal ID		Function Description	Terminal Layout
CN2	A+	Encoder A signal positive	
	A-	Encoder A signal negative	
	B+	Encoder B signal positive	
	B-	Encoder B signal negative	
	Z+	Encoder Z signal positive	
	Z-	Encoder Z signal negative	
	5V/15V	Encoder 5V/15V power supply	
	COM	Encoder power supply ground	
	PE	Shielding layer terminal	
CN1	18Pin DIP ribbon interface, connects to inverter control board J9.		

Table 10-20 YD580-ABZ Indicator Status Description

Indicator Name	Indicator Status	Status Description
D1/D2/D3 Encoder Input Signal Indicator		On/Flashing:Encoder has signal input D1：Phase A indicator D2：Phase B indicator D3：Phase C indicator
		Off:Encoder has no signal input
D6 Power Indicator Light		On:Normal
		Off:No power connection
J6，J7 Encoder Power Selection		+15V and +5V selection (switched simultaneously)

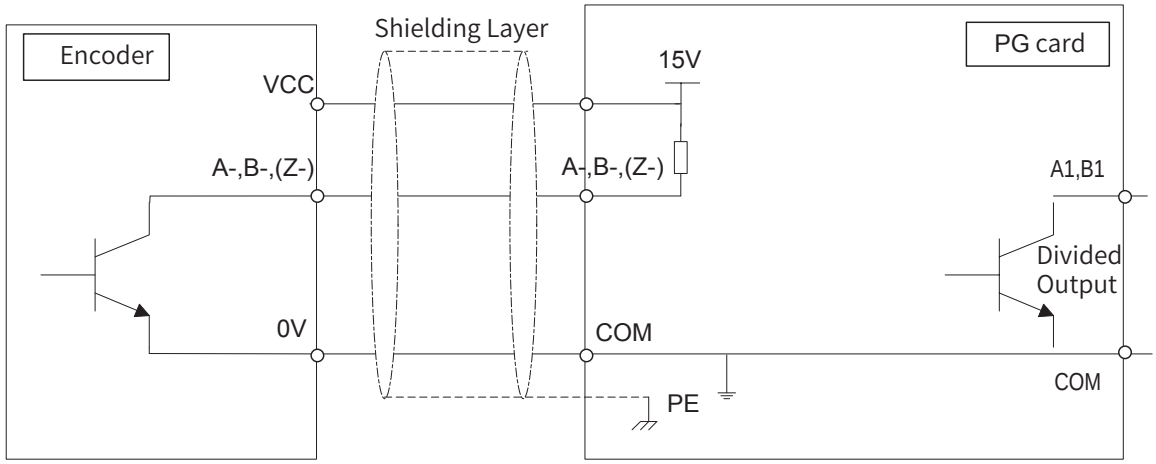


Figure 10-15 Interface Circuit 1

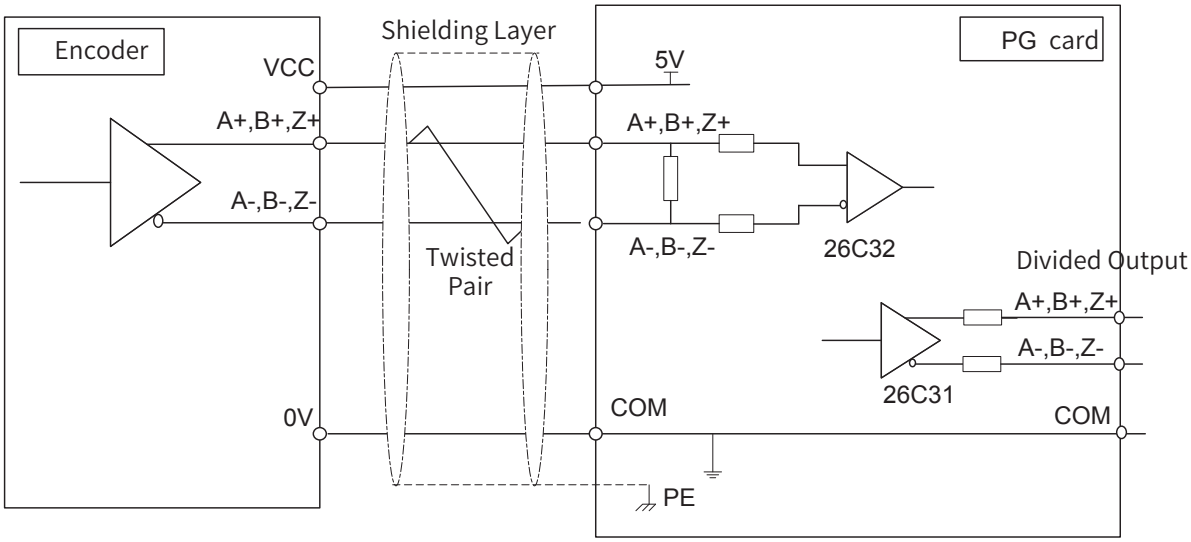


Figure 10-16 Interface Circuit 2

10.3.2 Resolver PG Card (YD580-RZV)

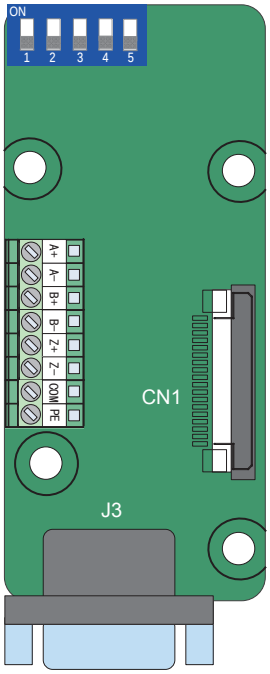


Table 10-27 YD580-RZV Terminal Function Description

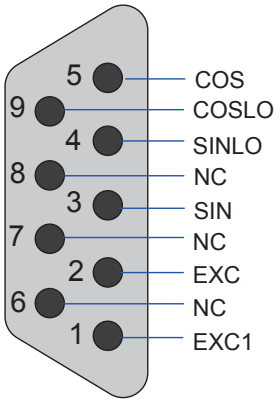
Terminal ID	Pin No.	Pin Definition	Function Description	Terminal Layout
J3	1	EXC1	Resolver excitation negative	
	2	EXC	Resolver excitation positive	
	3	SIN	Resolver feedback SIN positive	
	4	SINLO	Resolver feedback SIN negative	
	5	COS	Resolver feedback COS positive	
	6、7、8	NC	No connection (internal)	
	9	COSLO	Resolver feedback COS negative	
CN1	18Pin DIP ribbon cable interface, connected to J4 on the inverter control board			

Table 10-28 YD580-RZV Indicator Status Description

Fault Indicator	YD580-RZV Fault Status	Fault Cause & Countermeasures
	Normal	None
	Phase-locked loop unlock	Usually caused by excessive phase lag of the selected resolver.
	SIN/COS signal amplitude exceeds limit	D6 flashing is usually caused by interference. Fix by grounding&connecting PG card to inverter PE.
	SIN/COS signal amplitude too low	Usually caused by loose, wrong or broken DB9 connection. If normal, check resolver compatibility with YD58PG4.

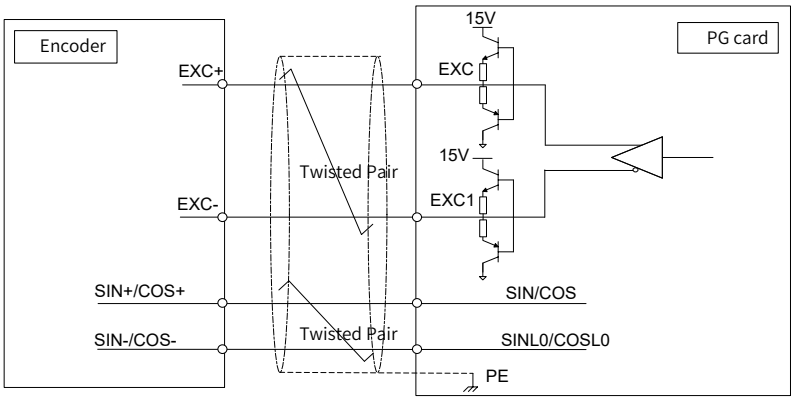
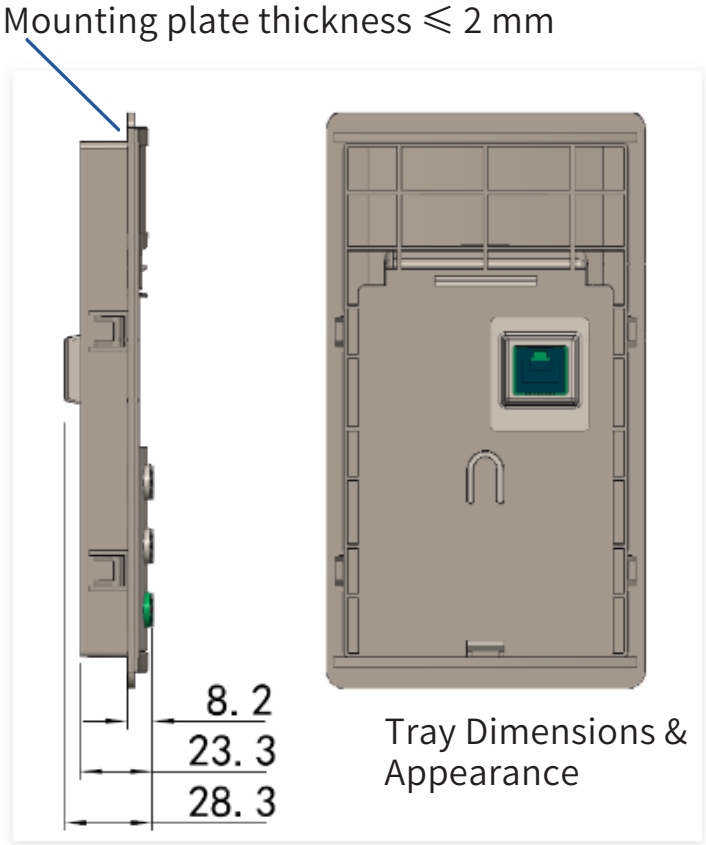


Figure 10-11 YD580-RZV Interface Circuit

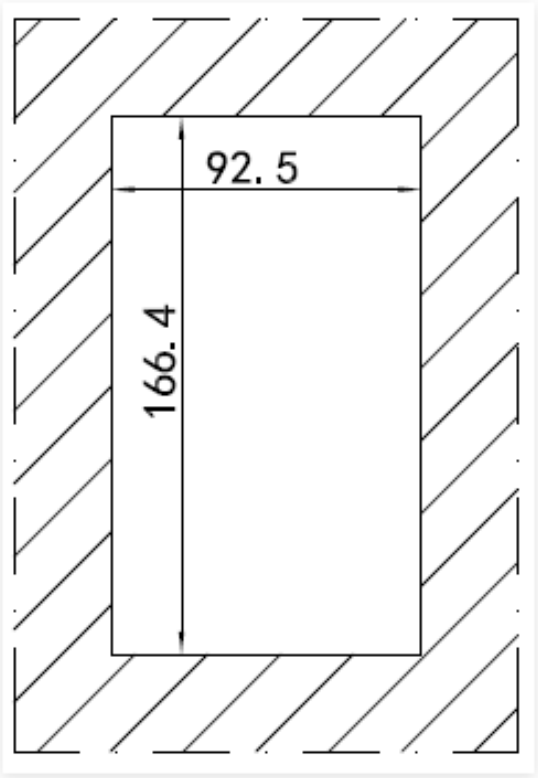
NOTE

- Resolver must meet YD580-RZV specs: excitation DC resistance >17Ω (multimeter test), else card fails.
- Do not use resolvers with >4 pole pairs to avoid YD580-RZV overload.

10.4 Keyboard Tray Dimensions



Tray Dimensions & Appearance



YD587 pallet cut-out size
unit (mm)

Chapter 11Communication

11.1 Parameter Communication Address

11.1.1 Reference Data Parameter Description

This inverter series supports RS485, CANlink, CANopen.User cards & P2P are CANlink derivatives.Host controls/monitors/edits parameters via these protocols.Data: parameter & non-parameter (commands, status, alarms, etc.).

Reference Data	Group P (Read/Write)	P0、P1、P2、P3、P4、P5、P6、P7、P8、P9、PA、PB、PC、PD、PE、 PF
	Group A (Read/Write)	A0、A1、A2、A3、A4、A5、A6、A7、A8、A9、AA、AB、AC、AD、 AE、AF
	Group B (Read/Write)	B0、B1、B2、B6

Parameter communication address definition:

1. Communication parameter reading

   For P0~PF and A0~AF group parameters:The high 8 bits of the communication address represent the function group number, and the low 8 bits represent the parameter sequence number.

   Examples:

   Parameter P0-16: communication address F010H (F0 = group number, 10 = parameter number, both in hexadecimal)

   Parameter AC-08: communication address AC08H (AC = group number, 08 = parameter number, both in hexadecimal)

2. When Writing Parameter Data via Communication

   For parameter data in groups P0~PF, the high 8 bits of the communication address are determined by whether to write to EEPROM (For parameters that require power-off retention in the inverter, the EEPROM write address format can be used. However, to protect the service life of the EEPROM chip, the host computer must strictly limit the write frequency. For parameters that do not require power-off retention, the non-EEPROM write address format can be used.) The high 8 bits are distinguished as 00~0F or P0~PF, and the low 8 bits directly represent the parameter sequence number in the function group. Examples are as follows:

   Writing function parameter P0-16:
   Without EEPROM write: communication address is 0010H.
   With EEPROM write: communication address is F010H.

   For parameter data in groups A0~AF, the high 8 bits of the communication address are also determined by whether to write to EEPROM (For parameters that require power-off retention in the inverter, the EEPROM write address format can be used. However, to protect the service life of the EEPROM chip, the host computer must strictly limit the write frequency. For parameters that do not require power-off retention, the non-EEPROM write address format can be used.) The high 8 bits are distinguished as 40~4F or A0~AF, and the low 8 bits directly represent the parameter sequence number in the function group. Examples are as follows:

   Writing function parameter AC-08:
   Without EEPROM write: communication address is 4C08H.
   With EEPROM write: communication address is AC08H.

Non-Parameter Data

Non-Parameter Data	Status Data (Read-Only)	Group U monitoring, fault & operating status
	Control Parameters (Write-Only)	Control commands, comm setpoints, DO terminal control, AO1/ AO2 control, FMP output control, parameter initialization

1. Status Data
Status data is divided into Group U monitoring parameters, inverter fault description, and inverter operating status.

- Group U Monitoring Parameters For U0~UF: Comm address high 8 bits = 70~7F, low 8 bits = parameter index. Example: U0-11 → 700BH.

  Inverter Fault Description

- Fault description address: fixed at 8000H. Host reads fault code here, refer to parameter F9-14 for details.

- Inverter Operating Status Operating status addr: fixed at 3000H. Host reads status info here, defined as follows:

Inverter Op Status Addr	Read Status Word Definition
3000H	1: Forward running
	2: Reverse running
	3: Stopped

2. Control Parameters
Control parameters include: control commands, communication setpoints, digital output terminal control, analog output AO1/AO2 control, and parameter initialization.

- Control Commands

  When P0-02 (Command Source) is set to 2: Communication Control, the host computer can control the inverter's start/stop and other related commands via this communication address. The control commands are defined as follows:

Inverter Op Status Addr	Read Status Word Definition
2000H	1: Forward run 2: Reverse run 3: Forward jog 4: Reverse jog 5: Free stop 6: Decelerate to stop 7: Fault reset

- Communication Setpoints

  Communication setpoints are used when the inverter's frequency source, torque source, torque limit source, V/f separation voltage source, PID setpoint source, PID feedback source, etc., are set to communication given.Communication address: 1000H.Data range: -10000 ~ 10000, corresponding to a relative setpoint of -100.00% ~ 100.00%

- Digital Output Terminal Control When the digital output terminal function is set to 20: Communication Control, the host computer can control the inverter's digital output terminals via this communication address. The definition is as follows:

DO Terminal Ctrl Comm Addr	Command Content
2001H	bit0: DO1 output control bit1: DO2 output control bit2: RELAY1 output control bit3: RELAY2 output control bit4: FMR output control

- Analog Output AO1/AO2 & High-Speed Pulse (FMP) Output Control
  When AO1/AO2 or high-speed pulse FMP output function is set to 12: Communication Setting, host controls inverter outputs via below comm addresses, defined as follows:

Output Control Comm Address		Command Content
AO1	2002H	0~7FFFH represents 0%~100%
AO2	2003H	
FMP	2004H	

- Parameter Initialization
  This function is used to perform parameter initialization on the inverter via the host computer.If PP-00 (User Password) is not 0, password verification via communication is required first. After verification, the host computer must perform the parameter initialization operation within 30 seconds.
  Password verification address: 1F00H (write the correct user password to this address to complete verification).Initialization address: 1F01H, with the following data definitions:

Param Init Comm Addr	Command Function
1F01H	0: No operation 1: Restore factory parameters (Mode 1) 2: Clear record information 4: Backup current user parameters 501: Restore user backup parameters 503: Restore factory parameters (Mode 2)

11.1.2 Modbus Communication Protocol

Overview

It provides an RS485 communication interface and supports the Modbus-RTU slave protocol. Users can achieve centralized control through computers or PLCs, set inverter operation commands, modify or read parameters via this protocol, as well as read the inverter's operating status and fault information.
This serial communication protocol defines the information content and usage format transmitted in serial communication, including master polling (or broadcast) format, master encoding methods (covering action parameters, transmission data, and error checking, etc.). The slave response adopts the same structure, including action confirmation, returned data, error checking, etc. If the slave encounters an error when receiving the information or fails to complete the action requested by the master, it will organize fault information as a response and feed it back to the master.

Application Mode

The inverter connects to a "one master, multiple slaves" PC/PLC control network with an RS485 bus, operating as a communication slave.

Hardware Interface

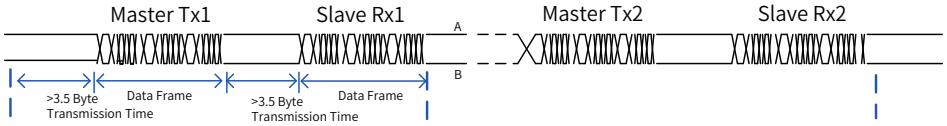
The RS485 expansion card YD580-RS485 must be installed on the inverter.

Topology Structure

It is a single-master, multiple-slave system. Each network device has a unique slave address (1~247, 0 = broadcast). One device acts as the master (typically a PC, PLC, HMI, etc.), initiating communication for slave parameter read/write operations. All other devices function as slaves, responding to the master's addressed inquiries/operations. Only one device can transmit data at a time, with others in a receiving state. All slave addresses on the network must be unique.

Communication Transmission Mode

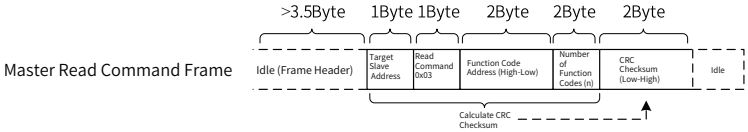
Asynchronous serial, half-duplex. Data is sent frame by frame. An idle time greater than 3.5 bytes marks the start of a new frame.



The built-in communication protocol is Modbus-RTU slave protocol, which can respond to the master's "queries/commands", perform corresponding actions, and make communication data responses. The master can be a PC, industrial control device or PLC. It can communicate with a single slave or broadcast to all slaves. The queried slave returns a response frame, but broadcasts require no response.

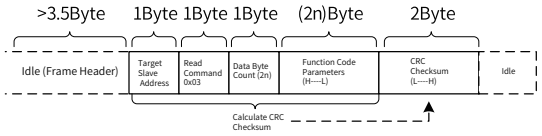
11.1.3 Communication Data Frame Structure

Modbus-RTU communication data format is shown below. The inverter only supports reading/writing Word-type parameters, with corresponding read command 0x03, write command 0x06, and multiple-write command 0x10. Byte/bit read/write is not supported.

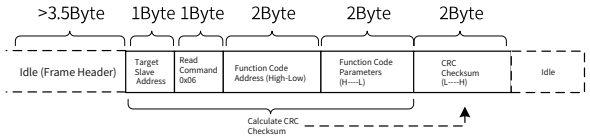


Theoretically, the host computer can read multiple consecutive parameters at one time (i.e., the maximum value of n is 12). However, it is important to note that the read operation must not exceed the last parameter of the current parameter group; otherwise, the response will be erroneous.

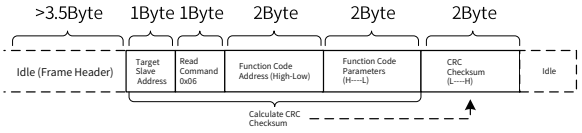
Slave Read Response Frame



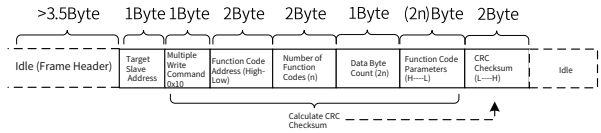
Master Write Command Frame



Slave Write Response Frame

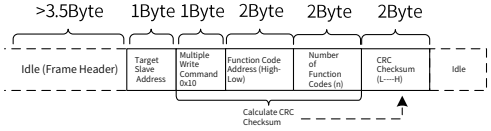


Master Multiple Write Command Frame



Multiple write operations, like multiple read operations, can only operate on a maximum of 12 consecutive parameters.

Slave Multiple Write Response Frame



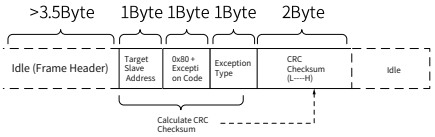
If the slave detects a communication frame error or fails to read/write due to other reasons, it will return an error frame.

Note

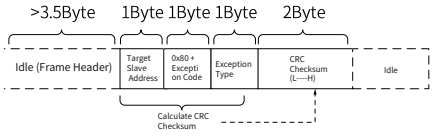
No response will be given for a CRC check error.

Modbus Mode:Standard Modbus protocol.

Slave Read Response Error Frame



Slave Write Response Error Frame



Slave Multiple Write Response Error Frame

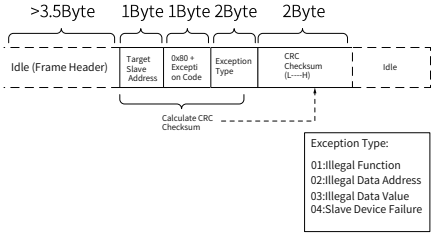


表16-1 数据帧字段说明表

Data Frame Field	Description
Frame Header (START)	Idle time greater than the transmission time of 3.5 bytes.
Slave Address (ADR)	Communication address range: 1~247; 0 = broadcast address.
Command Code (CMD)	03: Read slave params; 06: Write slave params; 10: Write multiple slave params.
Parameter Address H	Internal parameter addresses of the inverter, expressed in hexadecimal. Includes parameter-type and non-parameter-type parameters (such as operating status parameters, operation commands, etc.). See address definition for details. Transmitted with high byte first, low byte second.
Parameter Address L	
Parameter Count H	Number of parameters read in this frame (1 = 1 parameter). High byte first, low byte second.Not present in single-write commands.
Parameter Count L	
Data Byte Count	Length of the data, equal to twice the number of parameters.
Data H	Response data or data to be written. Transmitted with high byte first, low byte second.
Data L	
CRC Low Byte	Check value: CRC16 checksum. Transmitted with low byte first, high byte second. For calculation method, see the CRC check description in this section.
CRC High Byte	
END	3.5-byte transmission time.

CRC Check Method:

CRC (Cyclical Redundancy Check) is used in Modbus RTU frames for error detection. The 2-byte CRC field, calculated by the transmitter, verifies the entire message. The receiver recalculates the CRC; a mismatch indicates a transmission error.

CRC calculation initializes the register with 0xFFFF, then processes each consecutive 8-bit byte of the message with the current register value. Only the 8 data bits in each byte are valid for CRC; start bits, stop bits, and parity bits are ignored.

During CRC generation, each bit is XORed with the register content. The result is shifted right toward the least significant bit (LSB), with the most significant bit (MSB) filled with 0. The LSB is extracted for checking: if LSB = 1, the register is XORed with a preset polynomial; if LSB = 0, no operation is performed. This process repeats 8 times per byte. After the 8th bit, the next byte is XORed with the current register value. The final register value after processing all bytes is the CRC value.

When appending CRC to the message, the low byte is transmitted first, followed by the high byte. A simple CRC function is provided below:

```
unsigned int crc_chk_value（unsigned char *data_value, unsigned char length）
{
unsigned int crc_value=0xFFFF;
   int i;
   while（length- -）
     {
         crc_value^=*data_value++;
          for（i=0;i<8;i++）
         {
              if（crc_value&0x0001）
                  {
```

```
            crc_value=（crc_value>>1）^0xa001;
        }
        else
        {
            crc_value=crc_value>>1;
        }
}
}
return（crc_value）;
}
```

Communication Parameter Address Definition

Read/write parameters (some are read-only for factory/monitoring use).

11.1.4 Parameter Address Identification Rules

Parameter addresses are defined by parameter group number and label:

High Byte: F0~FF (Group P), A0~AF (Group A), 70~7F (Group U)

Low Byte: 00~FF

Example: To access parameter P3-12, the address is 0xF30C

Group PF: Neither readable nor writable; Group U: Read-only, not writable

Some parameters cannot be modified while the inverter is running; others are read-only in all states. When modifying parameters, also note their range, unit, and related instructions.

Parameter Group	Communication Access Address	Comm RAM Modification Address
P0~PE	0xF000~0xFEFF	0x0000~0x0EFF
A0~AC	0xA000~0xACFF	0x4000~0x4CFF
U0	0x7000~0x70FF	-
B0~B6	0xB000~0xB6FF	0x5000~0x56FF

Description

Frequent writes to EEPROM reduce its service life. Therefore, some parameters only need to modify the RAM value in communication mode, without EEPROM storage. The cycle of a single read/write function code is approximately 15ms. High-frequency, repeated EEPROM operations carry a risk of read/write failure.

For P-group parameters: To enable RAM-only modification, change the high byte of the address from F to 0.For A-group parameters: To enable RAM-only modification, change the high byte of the address from A to 4.

Corresponding address rules:
High Byte: 00~0F (F Group), 40~4F (A Group)

Low Byte: 00~FF

Example:

Parameter P3-12 is not stored in EEPROM, represented by address 030C; Parameter A0-05 is not stored in EEPROM, represented by address 4005. These addresses indicate RAM-only write operations (readback is invalid).

See the table below for shutdown/runtime parameters.

Parameter Address	Parameter Description	Parameter Address	Parameter Description
1000H	*Communication Setpoint (Decimal) (Write-only)10000~10000	1010H	PID Setup
1001H	Operating Frequency	1011H	PID Feedback
1002H	Bus Voltage	1012H	PLC Phase
1003H	Output Voltage	1013H	PULSE Input Pulse Frequency (Unit: 0.01kHz)
1004H	Output Current	1014H	Feedback Speed (Unit: 0.1Hz)
1005H	Output Power	1015H	Remaining Runtime
1006H	Output Torque	1016H	AI1 Pre-correction Voltage
1007H	Operating Speed	1017H	AI2 Pre-correction Voltage
1008H	DI Input Flag	1018H	AI3 Pre-correction Voltage
1009H	DO Output Flag	1019H	Linear Speed
100AH	AI1 Voltage	101AH	Current Power-on Time
100BH	AI2 Voltage	101BH	Current Runtime
100CH	AI3 Voltage	101CH	PULSE Input Pulse Frequency
100DH	Count Input	101DH	Current Communication Setpoint (Read-only)
100EH	Length Input	101EH	Actual Feedback Speed
100FH	Load Speed	101FH	Main Frequency X Display
–	–	1020H	Auxiliary Frequency Y Display

Description

The communication setpoint is a relative percentage: 10000 = 100.00%, -10000 = -100.00%. For frequency data, it is relative to max frequency (P0-10); for torque data, relative to torque limit (P2-10/A2-48 for motor 1/2).
Parameters like P0-03, P0-04, etc., when set to communication mode, are controlled by address 1000H. Only one parameter can use this mode at a time. For multiple parameters, use the specified method:
Example with P0-03 and P0-11: If P0-03 is set to 9 (controlled by 1000H for frequency), set P0-11 to 0 (not 5). Consistency can be achieved by modifying P0-12 via communication.

Control Command Input to Inverter (Write-only)

Command Address	Command Function
2000H	0001: Forward Run
	0002: Reverse Run
	0003: Forward Jog
	0004: Reverse Jog
	0005: Free Stop
	0006: Stop per P6-10 Setting
	0007: Fault Reset

Read Inverter Status (Read-only)

Status Address	Status Function
3000H	0001: Forward Run
	0002: Reverse Run
	0003: Stop

Parameter Lock Password Verification: If the actual password value is returned, the password verification is passed. (If there is no password, the password is 0, and the verification returns 0000H.)

Password Address	Input Password Content
1F00H	*****

Digital Output Terminal Control (Write-only)

Command Address	Command Content
2001H	bit0: DO1 Output Control bit1: DO2 Output Control bit2: RELAY1 Output Control bit3: RELAY2 Output Control bit4: FMR Output Control bit5: VDO1 bit6: VDO2 bit7: VDO3 bit8: VDO4 bit9: VDO5

Analog Output AO1 Control (Write-only)

Command Address	Command Content
2002H	0~7FFF represents 0%~100%

Analog Output AO2 Control (Write-only)

Command Address	Command Content
2003H	0~7FFF represents 0%~100%

Pulse (PULSE) Output Control (Write-only)

Command Address	Command Content
2004H	0~7FFF represents 0%~100%

Inverter Fault Description:

Inverter Fault Address	Inverter Fault Information	
8000H	0000: No Fault 0001: Reserved 0002: Acceleration Overcurrent 0003: Deceleration Overcurrent 0004: Constant Speed Overcurrent 0005: Acceleration Overvoltage 0006: Deceleration Overvoltage 0007: Constant Speed Overvoltage 0008: Buffer Resistor Overload Fault 0009: Undervoltage Fault 000A: Inverter Overload 000B: Motor Overload 000C: Input Phase Loss 000D: Output Phase Loss 000E: Module Overheating 000F: External Fault 0010: Communication Abnormal 0011: Contactor Abnormality 0012: Current Detection Fault 0013: Motor Parameter Identification Fault 0014: Encoder/PG Card Fault	0015: Parameter Read/Write Abnormality 0016: Inverter Hardware Fault 0017: Motor 对地 Short Circuit Fault 0018: Reserved 0019: Reserved 001A: Runtime Reached 001B: User-defined Fault 1 001C: User-defined Fault 2 001D: Power-on Time Reached 001E: Load Drop 001F: PID Feedback Lost During Run 0028: Quick Current Limiting Timeout Fault 0029: Motor Switching Fault During Run 002A: Speed Deviation Excessive 002B: Motor Overspeed 002D: Motor Overheating 005A: Encoder Line Count Setting Error 005B: Encoder Not Connected 005C: Initial Position Error 005E: Speed Feedback Error

11.1.5 PD Group Communication Parameter Description

PD-00 is used to set the data transmission rate between the host computer and the inverter. Note: The baud rate set by the host computer and the inverter must be consistent; otherwise, communication will fail. A higher baud rate results in faster communication.

Parameter	Parameter Name	Default Value	Setting Range
PD-00	Baud Rate	5005	0: 300bps 1: 600bps 2: 1200bps 3: 2400bps 4: 4800bps 5: 9600bps 6: 19200bps 7: 38400bps 8: 57600bps 9: 115200bps

Note: The data format set by the host computer and the inverter must be consistent; otherwise, communication will fail.

Parameter	Parameter Name	Default Value	Setting Range
PD-01	Modbus Data Format	0	0: No Parity (8-N-2) 1: Even Parity (8-E-1) 2: Odd Parity (8-O-1) 3: No Parity (8-N-1)

When the local address is set to 0, it acts as a broadcast address to enable host broadcast functionality. Local addresses (except broadcast) must be unique, which is the basis for point-to-point communication between the host and the inverter.

Parameter	Parameter Name	Default Value	Setting Range
PD-02	Local Address	1	1~247，0 = Broadcast

Response delay refers to the interval between the inverter finishing data reception and sending data back to the hostIf the response delay is shorter than the system processing time, the system processing time takes precedence. If the response delay is longer than the system processing time, the system waits until the delay expires before sending data.

Parameter	Parameter Name	Default Value	Setting Range
PD-03	Response Delay	2ms	0~20ms

When PD-04 is set to 0.0s, the communication timeout function is disabled.
When PD-04 is set to a valid value, if the interval between two consecutive communications exceeds the timeout, the system reports a communication fault (E16).Normally, this function is disabled. It can be used to monitor communication status in continuous communication systems.

Parameter	Parameter Name	Default Value	Setting Range
Pd-04	Communication Timeout	0.0s	0.0s(Disabled)； 0.1~60.0s

11.2 PROFINET NET Communication

11.2.1 Overview

This series of inverters supports the PROFINET communication protocol with the YD580-PN communication card.
For the introduction, technical specifications, dimensions, and interface description of the PROFINET communication card, please refer to the *Inverter Expansion Card Selection Manual*.
For the installation, wiring, communication parameters, and fault handling of the YD580-PN, please refer to the *YD580-PN Communication Expansion Card User Manual*.

11.2.2 Communication Configuration Example

PROFINET Communication Configuration Example: Inverter & S7-300

Prerequisites

- Log in to the official Yolico Electric website: http://www.yolico.com/product/32
  Download the YD580-PN manual and obtain the GSD file (configuration file) for Siemens PLC.

- Install Siemens TIA Portal V16 software.
- Prepare equipment: 1 inverter, 1 DP communication expansion card, 1 S7-300 PLC, Siemens PROFIBUS connector, cables, etc.

Wiring

1. Insert the YD580-PN card into the inverter's communication expansion interface, and tighten the screws on the card. Ensure the PE grounding screw hole is properly connected to the inverter's protective ground.



Technical Specifications

Item	Technical Specification
Real-Time Class	RT
Min Data Update Cycle	1ms
Number of Nodes	Max. 65535 (Depends on PLC Performance)
Baud Rate	100Mbps Full-Duplex
Transmission Medium	Cat5e (Enhanced Category 5) or Better Ethernet Cable
Transmission Distance	Max. 100m Between Two Nodes
Topology	Bus, Tree, Star
Ring Network (MRP)	Supported
Priority Startup (Fast Start)	Supported
Acyclic Read/Write	Not Supported
Cyclic Data	Max. 12 Function Codes for Read and Write Respectively

Interface Description

Table 1-1 YD580-PN Card Interface Function Description

Terminal ID	Terminal Name	Function Description
J2	Pin Header	Check if PD-00 is 9 and PD-01 is 3
J3	Ethernet Port	Standard RJ45 Ethernet socket (unidirectional). Use J3 to connect the PN card to the PLC for communication.
J4		
D1	Power Indicator	Power status indicator: On = Normal power supply; Off = Abnormal power supply. Check installation.
D3	PLC Communication Status Indicator	See Table1-2 on Page 11
D2	Inverter Comm Status Indicator	

Status Indicator Description

Table 1-2 YD580-PN Card Status Indicator Description

Indicator		Status Description	Troubleshooting
D1 (Power Indicator)	Steady On	Normal power-on	None
	Steady Off	Abnormal power-on	Check installation.
D2(Inverter Communication Status Indicator)	Steady On	Normal	None
	1 On, 1 Flash	Inverter fault	Clear inverter fault.
	2 On, 1 Flash	Inverter comm abnormal	Set P0-28 to 1, confirm inverter is connected to PN card.
	3 On, 1 Flash	Inverter communication timeout	Confirm inverter firmware supports PN card, restore factory settings.
D3 (PLC Communication Status Indicator)	Steady On	Normal	None
	Steady Off	Comm card internal error	Power cycle, replace PN card if needed.
	1 On, 1 Flash	Master station not found	Confirm group configuration, device name assigned, PLC connection.
	2 On, 1 Flash	Communication error	Check wiring, cable shielding.
	3 On, 1 Flash	Configuration error	Confirm GSD file, PLC configuration address.

Installation and Wiring

Installation

The YD580-PN card is designed for embedded use in YD580 series inverters.Before installation:Cut off the inverter's power supply. Wait approximately 10 minutes until the inverter's charging indicator is completely off before proceeding. After inserting the YD580-PN card into the inverter, secure it with the screws to prevent damage to the inter-board socket from external cable tension.
See Figure 2-1 on page 12 for the installation diagram.

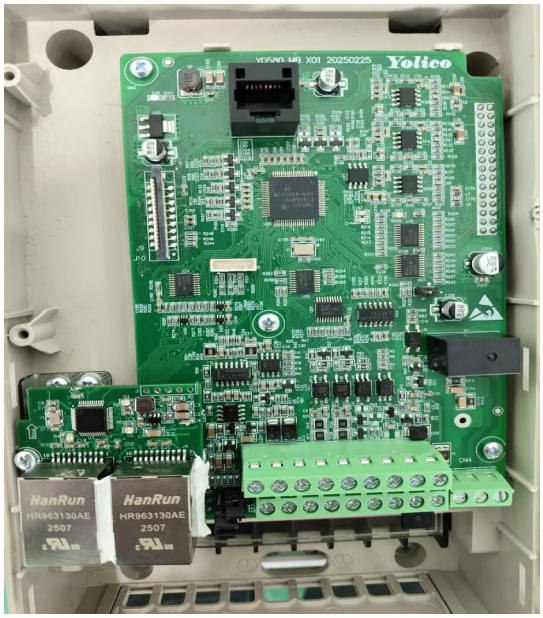


Figure 2-1 YD580-PN Card Installation Diagram

Wiring

PROFINET Connection Topology

PROFINET supports topologies including bus, star, and tree. By properly using switches, various network configurations can be implemented.

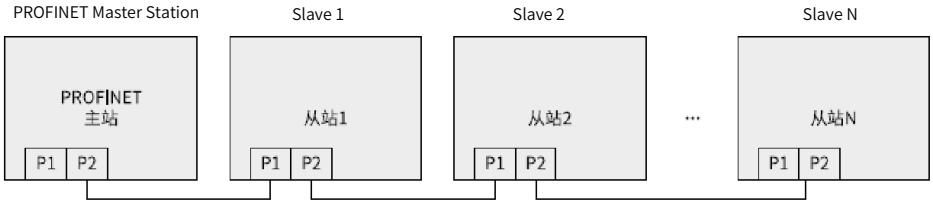


Figure 2-3 Bus Topology Connection Diagram

EMC Wiring Guidelines

- During on-site installation and commissioning, route communication signal lines and power lines in separate cable trays. Never bundle communication lines with power lines, as this easily causes communication interference.
- The motor housing must be connected to the inverter's PE (Protective Earth) terminal, and the ground wire on the motor housing side must be properly connected to ensure effective grounding.
- It is recommended to use shielded cables, with the shield layer connected to the inverter's PE terminal.
- The communication connection status can be checked via the status indicators on the card. For detailed indicator meanings, refer to Table 1-2 on Page 11.

Communication Description

PROFINET Communication Protocol Description

Data Transmission Format

The YD580-PN card supports PZD transmission formats of different lengths as required. Users can configure the function of each PZD in the PLC project.

Refer to the tables below for the functions supported by each data format.

master->slave		
Data Type	Data Length	Supported Functions
output telegram 1	PZD-2	Inverter command, frequency setting
output telegram 2	PZD-4	Inverter cmd, freq set; 2 func params for periodic write
output telegram 3	PZD-6	Inverter cmd, freq set; 4 func params for periodic write
output telegram 4	PZD-8	Inverter cmd, freq set; 6 func params for periodic write
output telegram 5	PZD-10	Inverter cmd, freq set; 8 func params for periodic write
output telegram 6	PZD-12	Inverter cmd, freq set; 10 func params for periodic write

slave->master		
Data Type	Data Length	Supported Functions
input telegram 1	PZD-2	Inverter status, operating frequency reading
input telegram 2	PZD-4	Inverter status, freq read; 2 func params for periodic read
input telegram 3	PZD-6	Inverter status, freq read; 4 func params for periodic read
input telegram 4	PZD-8	Inverter status, freq read; 6 func params for periodic read
input telegram 5	PZD-10	Inverter status, freq read; 8 func params for periodic read
input telegram 6	PZD-12	Inverter status, freq read; 10 func params for periodic read

Note:Input and output data types must be matched. For example, if output telegram 3 is selected, input telegram 3 must be selected accordingly.

PZD Area Data Description

Via PZD data, the master station can modify and read inverter data in real time, and perform periodic data exchange.he communication addresses are directly configured by the inverter. The specific functions are as follows:

- Real-time setting of inverter control commands and target frequency
- Real-time reading of inverter current status and operating frequency
- Real-time exchange of function parameters and monitoring data between the inverter and PROFINET master station

PZD process data enables periodic exchange between the master and inverter. See the table below for detailed data.

Master-Sent PZD Area		
Inverter Command	Inverter Target Frequency	Real-time Inverter Param Mod
PZD1	PZD2	PZD3~PZD12
Inverter Response PZD Area		
Inverter Status	Inverter Operating Frequency	Real-time Inverter Param Read
PZD1	PZD2	PZD3~PZD12

Master Transmit Data Description

The master transmit data description varies slightly for different inverter series, as follows:

- YD580, YD680 and Other Series Inverters

Master Transmit Data PZD Description		
PZD1	Command Word (Command source must be set to communication)	
	01: Forward Run 02: Reverse Run 03: Forward Jog 04: Reverse Jog	05: Free Stop 06: Stop per Stop Mode P6-10 07: Fault Reset
PZD2	Inverter Target Frequency (Freq source = communication). Range: Reverse limit (negative) to Forward limit (decimal-scaled, e.g. 2000 = 20.00Hz). Out-of-range values clamped to limit.	
PZD3 ~PZD12	Real-time modification of parameter values (Group P, Group A), without writing to EEPROM. PE-02 ~ PE-11 correspond to PZD3 ~ PZD12. Manual mapping configuration in Group FE of the inverter is invalid.	

Inverter Response Data Description

The response data description varies slightly for different inverter series, as follows:

- YD580、YD680系列变频器

Inverter Response Data PZD Description	
PZD1	Inverter Operation Status (Bit-defined): Bit0: 0 = Inverter Stopped; 1 = Inverter Running Bit1: 0 = Forward Running; 1 = Reverse Running Bit2: 0 = No Fault; 1 = Inverter Fault Bit3: 0 = Frequency Not Reached; 1 = Frequency Reached Bit4~Bit7: Reserved Bit8~Bit15: Drive Fault Code
PZD2	Inverter Operating Frequency (0.01Hz, 16-bit signed). Returns actual running frequency.
PZD3 ~PZD12	Real-time parameter read (Group P/A/U). PE-22~31 map to PZD3~12. FE Group manual mapping invalid.

Communication Related Function Codes

Inverter Communication Card Settings

The communication configuration varies slightly for different inverter series, as follows:

- YD580 Series Inverter Communication Card Settings

  After power-on, set function code P0-28 to 1 to enable normal communication between the YD580-PN card and the inverter.

Function Code	Name	Setting Range	Set Value	Description
P0-28	Serial Protocol Select	0:Modbus 1:Comm Card Bridge	1	Special Comm Card Bridge

- YD680 Series Inverter Communication Card Settings

  After power-on, set function codes PD-00=9 (Baud Rate: 115200bps) and PD-01=3 (No Parity, 8-N-1) to enable normal communication between the YD580-PN card and the inverter.

Function Code	Name	Setting Range	Set Value	Meaning
bd.07	Expansion Card Selection	0: Modbus 1: DP 2: CANopen/PN	2	Profinet Comm Expansion Card

Communication Control Related Function Codes

Function Code	Name	Setting Range		Decimal Address
U3-16	Frequency Setting	-327.68Hz~+327.67Hz		29456
U3-17	Control Command	0001: Forward Run 0002: Reverse Run 0003: Forward Jog 0004: Reverse Jog	0005: Free Stop 0006: Deceleration Stop 0007: Fault Reset	29457
U3-18	DO Control	BIT0: DO1 Output Control BIT1: DO2 Output Control BIT2: RELAY1 Output Control BIT3: RELAY2 Output Control BIT4: FMR Output Control	BIT5: VDO1 BIT6: VDO2 BIT7: VDO3 BIT8: VDO4 BIT9: VDO5	29458
U3-19	AO1 Control	0 ~ 7FFFrepresents0% ~ 100%		29459
U3-20	AO2 Control	0 ~ 7FFFrepresents0% ~ 100%		29460
U3-21	FMP Control	0 ~ 7FFFrepresents0% ~ 100%		29461
U3-22	Reserved	Reserved		
U3-23	Speed Control	Signed data, 1rpm		29463

When using the YD580-PN card, the written PZD1 is default-mapped to U3-17, and PZD2 is default-mapped to U3-16. If the command or frequency cannot be written to the inverter normally, but PZD3~PZD12 can be written, and P0-02=2 and P0-03=9, check whether PE-00 is set to U3-17 and PE-01 is set to U3-16 on the inverter. If not, manually modify them to the correct values.

Communication Monitoring Related Function Codes

Function Code	Name	Unit	Decimal Address
U0-00	Running Frequency	0.01Hz	28672
U0-01	Set Frequency	0.01Hz	28673
U0-02	Bus Voltage	0.1V	28674
U0-03	Output Voltage	1V	28675
U0-04	Output Current	0.01A	28676
U0-05	Output Power	0.1kW	28677
U0-06	Output Torque	0.10%	28678
U0-07	DI Input Status	1	28679
U0-08	DO Output Status	1	28680
U0-09	AI1 Voltage	0.01V	28681
U0-10	AI2 Voltage	0.01V	28682
U0-11	AI3 Voltage	0.01V	28683
U0-12	Count Value	1	28684
U0-13	Length Value	1	28685
U0-14	Load Speed Display	100.00%	28686
U0-15	PID Setting	1	28687
U0-16	PID Feedback	1	28688
U0-17	PLC Phase	1	28689
U0-18	PULSE Input Pulse Frequency	0.01kHz	28690
U0-19	Feedback Speed	0.01Hz	28691
U0-20	Remaining Runtime	0.1Min	28692
U0-21	AI1 Pre-correction Voltage	0.001V	28693
U0-22	AI2 Pre-correction Voltage	0.001V	28694
U0-23	AI3 Pre-correction Voltage	0.001V	28695
U0-24	Line Speed	1m/ Min	28696
U0-25	Current Power-on Time	1 Min	28697
U0-26	Current Runtime	0.1 Min	28698
U0-27	PULSE Input Pulse Frequency	1Hz	28699
U0-28	Communication Set Value	0.01%	28700
U0-29	Encoder Feedback Speed	0.01Hz	28701
U0-30	Main Frequency X Display	0.01Hz	28702
U0-31	Auxiliary Frequency Y Display	0.01Hz	28703
U0-32	View Any Internal Address Value	1	28704
U0-33	Synchronous Rotor Position	0.1°	28705
U0-34	Motor Temperature	1℃	28706
U0-35	Target Torque	0.10%	28707
U0-36	Rotary Position	1	28708
U0-37	Power Factor Angle	0.1°	28709
U0-38	ABZ Position	1	28710
U0-39	VF Separation Target Voltage	1V	28711
U0-40	VF Separation Output Voltage	1V	28712
U0-41	DI Input Status Intuitive Display	1	28713

Function Code	Name	Unit	Decimal Address
U0-42	DO Input Status Intuitive Display	1	28714
U0-43	DI Input Status Intuitive Display 1	1	28715
U0-44	DI Input Status Intuitive Display 2	1	28716
U0-45	Fault Information	1	28717
U0-58	Z Signal Counter	1	28730
U0-59	Set Frequency (%)	0.01%	28731
U0-60	Running Frequency (%)	0.01%	28732
U0-61	Inverter Status	1	28733
U0-62	Current Fault Code	1	28734
U0-63	Running Frequency After Sag Control	0.01Hz	38375
U0-64	Current Back EMF	0.1V	28736
U0-65	Reserved	-	-
U0-66	Expansion Card Model	100 : CANopen 200 : Profibus- DP 300 : CANlink 400 : Profinet 500 : EtherCAT	28738
U0-67	Expansion Card Version Number	0.01	28739
U0-68	Inverter Status	1	28740
U0-69	Running Frequency (Hz)	0.01Hz	28741
U0-70	Motor Speed	1rpm	28742
U0-71	Output Current	0.1A	28743

When using the YD580-PN card, the read PZD1 is default-mapped to U0-68, and PZD2 is default-mapped to U0-69.f the status or running frequency cannot be read normally, but PZD3~PZD12 can be read, check whether PE-20 is set to U0-68 and PE-21 is set to U0-69 on the inverter. If not, manually modify them to the correct values.

Note

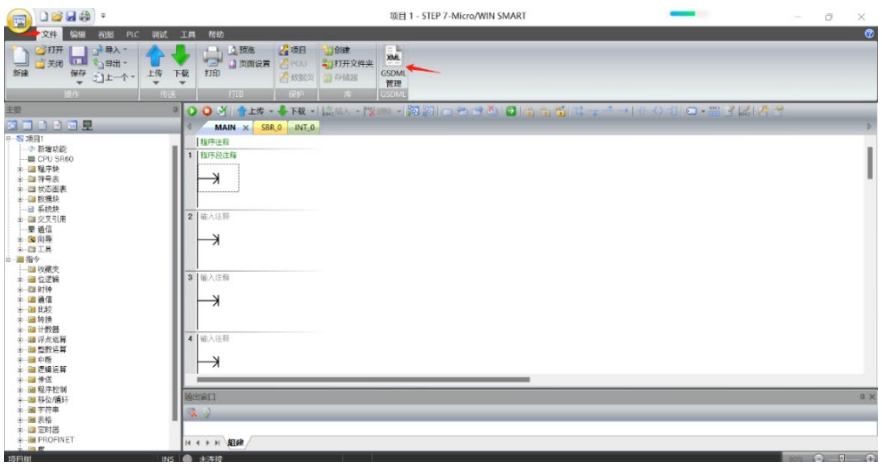
For the PZD definition of other types of inverters, please refer to their user manuals, which will not be repeated here.

Communication Example

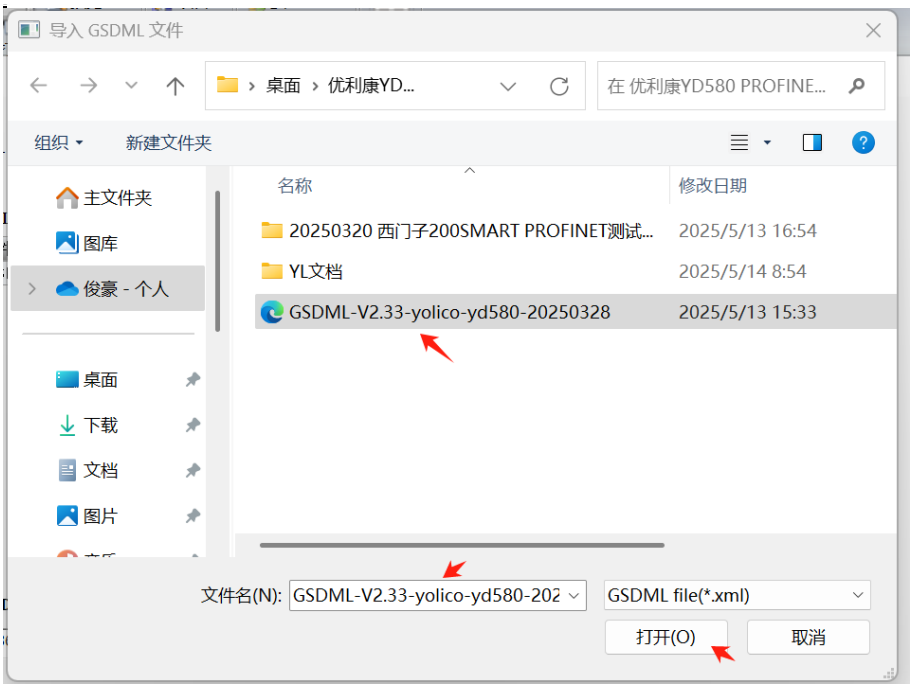
Configuring Slave Station in S7-200 SMART Master Station

When using a Profinet master, always configure the GSDML file of the slave station first to add the corresponding slave device to the master's system. If the GSDML file already exists, Step 2 can be omitted. The GSDML file can be obtained from the agent or the manufacturer.

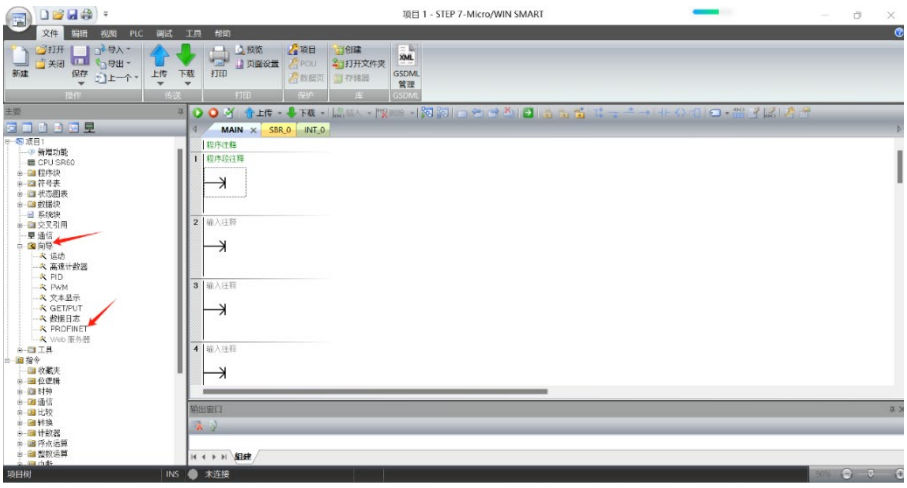
1.Select GSDML Management from the File menu



2. Select the corresponding GSD file saved on the computer and open it.



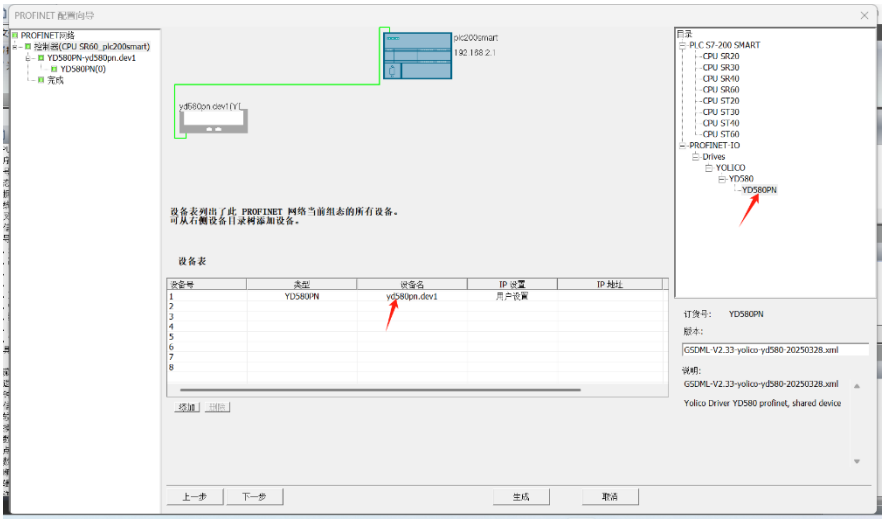
3. Double-click the Wizard(向导), then double-click Profinet.



4. Click Controller.



5. Drag the Yolico YD580-PN into the device table.



66. Click "Find Devices(查找设备)", verify that the device name matches the device name in the diagram. If not, click "Edit(编辑)" and set it to match.



11.2.3 YD580-PN Card Troubleshooting

Fault Indicators & Handling Methods for YD580-PN Card

Indicator		Status Description	Treatment Method
D1 Power Indicator	Solid On	Power Normal	None
	Off	Power Failure	Check if the installation is correct
D2 Comm Status Indicator	Solid On	Normal	None
	1 ON 1 OFF Blink	Inverter Fault	Clear the inverter fault
	2 ON 1 OFF Blink	Comm Error with Inverter	Set P0-28 to 1.verify if the inverter supports the PN card
	3 ON 1 OFF Blink	Communication Timeout	Verify if the inverter firmware version supports the PN card, and restore the inverter to factory defaults
D3 PLC Comm Status Indicator	Solid On	Normal	None
	Off	Internal Card Error	Power cycle the inverter, and replace the PN card
	1 ON 1 OFF Blink	Master Station Not Found	Verify the configuration, check if a device name is assigned to the slave, and confirm connection to the corresponding PLC
	2 ON 1 OFF Blink	Communication Error	Check the wiring connection, and verify if the Ethernet cable shield is properly grounded/connected
	3 ON 1 OFF Blink	Configuration Error	Verify if the GSD file is correct, and check if the PLC configuration address is valid

11.3 EtherNet/IP Communication

11.3.1 Overview

The EtherNet/IP communication protocol card supported by this series of inverters is the YD580-EN.

11.3.2 Communication Configuration Example

For the introduction, technical specifications, outline dimensions, and interface descriptions of the EtherNet/IP communication card, please refer to the *YD580-EN User Manual.*

Appendix A Parameter List

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P0-00	0xF000	G/P Type Display	1: G type (constant-torque load) 2: P type (fan and pump)	1	-	Stop Only	*Page71 "P0-00"*
P0-01	0xF001	Motor1controlmode	0: Sensorless vector control (SVC) 1: Feedback vector control (FVC) 2: V/f control 3: Reserved 4: Reserved 5: PMVVC(Only for the synchronous motor)	0	-	Stop Only	*Page71 "P0-01"*
P0-02	0xF002	Command source selection	0: Operation Panel Command Channel (LED Off) 1: Terminal Command Channel (LED On) 2: Communication Command Channel (LED Flashing)	0	-	Stop Only	*Page72 "P0-02"*
P0-03	0xF003	Main Frequency Source X Selection	0: Digital Setting (Preset Freq P0-08, UP/DOWN adjustable, non-volatile) 1: Digital Setting (Preset Freq P0-08, UP/DOWN adjustable, volatile) 2: AI1 3: AI2 4: AI3 5: PULSE Pulse Setting (DI5) 6: Multi-step Speed 7: Simple PLC 8: PID 9: Communication Setting 10: Reserved	0	-	Stop Only	*Page72 "P0-03"*
P0-04	0xF004	Auxiliary Frequency Source Y Selection	0: Digital Setting (Preset Freq P0-08, UP/DOWN adjustable, non-volatile) 1: Digital Setting (Preset Freq P0-08, UP/DOWN adjustable, volatile) 2: AI1 3: AI2 4: AI3 5: PULSE Pulse Setting (DI5) 6: Multi-step Speed 7: Simple PLC 8: PID 9: Communication Setting 10: Reserved	0	-	Stop Only	*Page74 "P0-04"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P0-05	0xF005	Aux. Freq. Y Range Selection During Superposition	0: Relative to Max Frequency 1: Relative to Frequency Source X	0	-	Stop Only	*Page75 "P0-05"*
P0-06	0xF006	Aux. Freq. Y Range	0%~150%	100	%	Stop Only	*page75 "P0-06"*
P0-07	0xF007	Frequency Source Superposition Selection	Units: Freq Cmd Select 0: Main Freq X 1: Main/Aux Result (Tens Defined) 2: X ↔ Y Toggle 3: X ↔ Main/Aux Result Toggle 4: Y ↔ Main/Aux Result Toggle Tens: Main/Aux Operation 0: Main + Aux 1: Main - Aux 2: Max(X,Y) 3: Min(X,Y) 4: Main × Aux	0	-	Stop Only	*page76 "P0-07"*
P0-08	0xF008	Preset Frequency	0.00Hz~P0-10	50.00	Hz	Stop Only	*page77 "P0-08"*
P0-09	0xF009	Run Direction	0: Same as Default Direction 1: Opposite to Default Direction	0	-	Stop Only	*page77 "P0-09"*
P0-10	0xF00A	Max Frequency	5.00Hz~599.00Hz	50.00	Hz	Stop Only	*page77 "P0-10"*
P0-11	0xF00B	Upper Limit Frequency Source	0: Upper Limit Frequency (P0-12 Setting) 1: AI1 2: AI2 3: AI3 4: PULSE Pulse Setting (DI5) 5: Communication Given 6: Multi-step Speed Command	0	-	Stop Only	*page78 "P0-11"*
P0-12	0xF00C	Upper Limit Frequency	P0-14~P0-10	50.00	Hz	Stop Only	*page78 "P0-12"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P0-13	0xF00D	Upper Limit Freq Bias	0.00Hz~P0-10	0.00	Hz	RT Modify	page79 "P0-13"
P0-14	0xF00E	Lower Limit Frequency	0.00Hz~P0-12	0.00	Hz	RT Modify	page79 "P0-14"
P0-15	0xF00F	Carrier Frequency	0.8kHz~16.0kHz	6.0	kHz	RT Modify	page79 "P0-15"
P0-16	0xF010	Carrier Freq Temp Compensation	0: No 1: Yes	1	-	RT Modify	page79 "P0-16"
P0-17	0xF011	Accel Time 1	0.0s~6500.0s	20.0	s	RT Modify	page80 "P0-17"
P0-18	0xF012	Decel Time 1	0.0s~6500.0s	20.0	s	RT Modify	page80 "P0-18"
P0-19	0xF013	Acc/Dec Time Unit	0: 1s 1: 0.1s 2: 0.01s	1	-	Stop Only	page80 "P0-19"
P0-21	0xF015	Aux Freq Source Bias	0.00Hz~P0-10	0.00	Hz	RT Modify	page81 "P0-21"
P0-22	0xF016	Freq Command Resolution	1: 0.1Hz 2: 0.01Hz	2	-	Stop Only	page81 "P0-22"
P0-23	0xF017	Digital Freq Stop Memory	0: No Memory 1: Memory	0	-	RT Modify	page81 "P0-23"
P0-24	0xF018	Motor Parameter Group Sel	0: Group1 1: Group2 2: Group3 3: Group4	0	-	Stop Only	page82 "P0-24"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P0-25	0xF019	Acc/Dec Time Base Frequency	0: Max Freq (P0-10) 1: Set Freq 2: 100Hz	0	-	Stop Only	*page82 "P0-25"*
P0-26	0xF01A	Run Freq UP/DOWN Base	0: Operating Freq 1: Set Freq	0	-	Stop Only	*page82 "P0-26"*
P0-27	0xF01B	Main Freq Coefficient	0.00%~100.00%	10.00	%	Stop Only	*page82 "P0-27"*
P0-28	0xF01C	Aux Freq Coefficient	0.00%~100.00%	10.00	%	Stop Only	*page83 "P0-28"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P0-29	0xF01D	Command Source Bundled Freq Source	Unit: Keypad Bound Freq Sel 0: No Binding 1: Digital Set Freq Source 2: AI1 3: AI2 4: AI3 5: PULSE Pulse Setting (DI5) 6: Multi-step Command 7: Simple PLC 8: PID 9: Communication Given Ten: Terminal Bound Freq Sel 0: No Binding 1: Digital Set Freq Source 2: AI1 3: AI2 4: AI3 5: PULSE Pulse Setting (DI5) 6: Multi-step Command 7: Simple PLC 8: PID 9: Communication Given Hun: Comm Bound Freq Sel 0: No Binding 1: Digital Set Freq Source 2: AI1 3: AI2 4: AI3 5: PULSE Pulse Setting (DI5) 6: Multi-step Command 7: Simple PLC 8: PID 9: Communication Given	0	-	Stop Only	*page83 “P0-29”*
P1-00	0xF100	Motor Type Selection	0: General Asynchronous Motor 1: Inverter-duty Asynchronous Motor 2: Synchronous Motor	0	-	Stop Only	*page84 “P1-00”*
P1-01	0xF101	Motor Rated Power	0.1kW~1000.0kW	Model-defined	kW	Stop Only	*page85 “P1-01”*
P1-02	0xF102	Motor Rated Voltage	1V~2000V	Model-defined	V	Stop Only	*page85 “P1-02”*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P1-03	0xF103	Motor Rated Current	0.1A~6553.5A	Model-defined	A	Stop Only	page85 "P1-03"
P1-04	0xF104	Motor Rated Frequency	0.01Hz~P0-10	Model-defined	Hz	Stop Only	page86 "P1-04"
P1-05	0xF105	Motor Rated Speed	1rpm~65535rpm	Model-defined	rpm	Stop Only	page86 "P1-05"
P1-06	0xF106	Stator Resistance (Asyn/Syn Motor)	0.001Ω~65.535Ω(Power≤55kW) 0.0001Ω~6.5535Ω(Power >55kW)	Model-defined	Ω	Stop Only	page86 "P1-06"
P1-07	0xF107	Rotor Resistance (Asyn Motor)	0.001Ω~65.535Ω(Power≤55kW) 0.0001Ω~6.5535Ω(Power>55kW)	Model-defined	Ω	Stop Only	page86 "P1-07"
P1-08	0xF108	Leakage Inductance (Asyn Motor)	0.01mH~655.35mH(Power≤55kW) 0.001mH~65.535mH(Power>55kW)	Model-defined	mH	Stop Only	page87 "P1-08"
P1-09	0xF109	Mutual Inductance (Asyn Motor)	0.01mH~655.35mH(Power≤55kW) 0.001mH~65.535mH(Power>55kW)	Model-defined	mH	Stop Only	page87 "P1-09"
P1-10	0xF10A	No-load Current (Asyn Motor)	0.01A~P1-03(Power≤55kW) 0.1A~P1-03(Power>55kW)	Model-defined	A	Stop Only	page87 "P1-10"
P1-11	0xF10B	Core Saturation Coef 2 (Asyn Motor)	50.0%~100.0%	86.0	%	RT Modify	page88 "P1-11"
P1-12	0xF10C	Core Saturation Coef 3 (Asyn Motor)	100.0%~150.0%	130.0	%	RT Modify	page88 "P1-12"
P1-13	0xF10D	Core Saturation Coef 4 (Asyn Motor)	100.0%~170.0%	140.0	%	RT Modify	page88 "P1-13"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P1-14	0xF10E	Core Saturation Coef 4 (Asyn Motor)	100.0%~180.0%	150.0	%	RT Modify	page88 "P1-14"
P1-17	0xF111	Syn Motor D-axis Inductance	0.01mH~655.35mH(Power≤55kW) 0.001mH~65.535mH(Power>55kW)	Model-defined	mH	Stop Only	page89 "P1-17"
P1-18	0xF112	Syn Motor Q-axis Inductance	0.01mH~655.35mH(Power≤55kW) 0.001mH~65.535mH(Power>55kW)	Model-defined	mH	Stop Only	page89 "P1-18"
P1-19	0xF113	Syn Motor Back EMF Coef	0.0V~6553.5V	0.0	V	Stop Only	page89 "P1-19"
P1-20	0xF114	Filter Time Constant (for PMVC)	0.003~65.535	0.100	-	RT Modify	page90 "P1-20"
P1-21	0xF115	Oscillation Suppression Gain (for PMVC)	0~65535	100	-	RT Modify	page90 "P1-21"
P1-23	0xF117	Friction Torque Percentage	0.00%~100.00%	0.00	%	Stop Only	page90 "P1-23"
P1-24	0xF118	Motor Pole Pairs	0~65535	2	-	RT Modify	page90 "P1-24"
P1-26	0xF11A	Param Ident Run Direction (Inertia Ident&Syn Motor)	0: Reverse Run 1: Forward Run	1	-	Stop Only	page90 "P1-26"
P1-27	0xF11B	Encoder Lines	1~20000	1024	-	Stop Only	page91 "P1-27"
P1-28	0xF11C	Encoder Type	0: ABZ Incremental Encoder 1: 23-bit Encoder 2: Resolver	0	-	Stop Only	page91 "P1-28"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P1-30	0xF11E	Encoder Wiring Flag	Units digit: AB Signal/Rotation Direction 0: Forward 1: Reverse Tens digit: Reserved	0	-	Stop Only	*page91 "P1-30"*
P1-31	0xF11F	Encoder Zero Position Angle	0.0°~359.9°	0.0	°	Stop Only	*page92 "P1-31"*
P1-32	0xF120	Gear Ratio Numerator	1~65535	1	-	Stop Only	*page92 "P1-32"*
P1-33	0xF121	Gear Ratio Denominator	1~65535	1	-	Stop Only	*page92 "P1-33"*
P1-34	0xF122	Resolver Pole Pairs	1~32	1	-	Stop Only	*page92 "P1-34"*
P1-36	0xF124	PG Break Detection Enable	Units digit: AB Signal/Rotation Direction 0: Forward 1: Reverse Tens digit: Reserved	1	-	Stop Only	*page93 "P1-36"*
P1-37	0xF125	Parameter Identification Selection	0: No Operation 1: Asyn Motor Static Partial Ident (Rs, Rr, L0) 2: Asyn Motor Dynamic Ident (Load-capable) 3: Asyn Motor Static Full Ident (Rs, Rr, L0, Lm, I0) 4: Asyn Motor Dynamic Ident 2 (Inertia, FVC Only) 5: Asyn Motor Dynamic Ident 3 (Mutual Inductance, No/Light/Inertia Load, V/f/SVC/FVC) 11: Syn Motor Load Ident (No Back EMF Tuning) 12: Syn Motor No-load Dynamic Full Ident 13: Syn Motor Static Ident (No Encoder Angle Tuning) 14: Syn Motor Inertia Ident (FVC Only)	0	-	Stop Only	*page93 "P1-37"*
P2-00	0xF200	Speed Loop Proportional Gain 1	1~200	30	-	RT Modify	*page95 "P2-00"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P2-01	0xF201	Speed Loop Integral Time 1	0.001s~10.000s	0.500	s	RT Modify	page95 “P2-01”
P2-02	0xF202	Switch Frequency 1	0.00Hz~P2-05	5.00	Hz	RT Modify	page95 “P2-02”
P2-03	0xF203	Speed Loop Proportional Gain 2	1~200	20	-	RT Modify	page96 “P2-03”
P2-04	0xF204	Speed Loop Integral Time 2	0.001s~10.000s	1.000	s	RT Modify	page96 “P2-04”
P2-05	0xF205	Switch Frequency 2	P2-02~P0-10	10.00	Hz	RT Modify	page96 “P2-05”
P2-06	0xF206	Vector Control Slip Gain	50%~200%	100	%	RT Modify	page97 “P2-06”
P2-07	0xF207	Speed Feedback Filter Time	0.000s~0.100s	0.004	s	RT Modify	page97 “P2-07”
P2-08	0xF208	VC Deceleration Overexcitation Gain	0~200	64	-	RT Modify	page97 “P2-08”
P2-09	0xF209	Speed Ctrl Torque Limit Source (Motoring)	0: Digital Limit (P2-10) 1: AI1 2: AI2 3: AI3 4: PULSE (DI5) 5: Comm Given 6: MIN(AI1,AI2) 7: MAX(AI1,AI2)	0	-	RT Modify	page98 “P2-09”
P2-10	0xF20A	Speed Ctrl Torque Limit Setting (Motoring)	0.0%~200.0%	150.0	%	RT Modify	page98 “P2-10”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P2-11	0xF20B	Speed Ctrl Torque Limit Source (Regen)	0: Digital Set (P2-10) 1: AI1 2: AI2 3: AI3 4: PULSE (DI5) 5: Comm Given 6: MIN(AI1,AI2) 7: MAX(AI1,AI2) 8: Digital Set (P2-12)	0	-	RT Modify	*page99 "P2-11"*
P2-12	0xF20C	Speed Ctrl Torque Limit Setting (Regen)	0.0%~200.0%	150.0	%	RT Modify	*page100 "P2-12"*
P2-13	0xF20D	Low-speed Current Loop Kp Adjust	0.1~10.0	1.0	-	RT Modify	*page100 "P2-13"*
P2-14	0xF20E	Low-speed Current Loop Ki Adjust	0.1~10.0	1.0	-	RT Modify	*page100 "P2-14"*
P2-15	0xF20F	High-speed Current Loop Kp Adjust	0.1~10.0	1.0	-	RT Modify	*page101 "P2-15"*
P2-16	0xF210	High-speed Current Loop Ki Adjust	0.1~10.0	1.0	-	RT Modify	*page101 "P2-16"*
P2-17	0xF211	Zero-speed Lock Speed Loop Kp	1~100	30	-	RT Modify	*page101 "P2-17"*
P2-18	0xF212	Zero-speed Lock Speed Loop Ti	0.001s~10.000s	0.500	s	RT Modify	*page101 "P2-18"*
P2-19	0xF213	Inertia Compensation Gain	1~200	1	-	RT Modify	*page102 "P2-19"*
P2-20	0xF214	Zero-speed Lock Speed Loop Switch Freq	0.00Hz~P2-02	0.05	Hz	RT Modify	*page102 "P2-20"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P2-21	0xF215	Max Output Voltage Coefficient	100~110	100	-	RT Modify	page102 "P2-21"
P2-22	0xF216	Output Voltage Filter Time	0.000s~0.010s	0.000	s	RT Modify	page102 "P2-22"
P2-23	0xF217	Zero-speed Lock	0: Disable 1: Enable	0	-	Stop Only	page103 "P2-23"
P2-24	0xF218	Vector Overvoltage Suppression Kp	0~1000	40	-	RT Modify	page103 "P2-24"
P2-25	0xF219	Acceleration Compensation Gain	0~200	0	-	RT Modify	page103 "P2-25"
P2-26	0xF21A	Acceleration Compensation Filter Time	0~500	10	-	RT Modify	page103 "P2-26"
P2-27	0xF21B	Vector Overvoltage Suppression Enable	0: Disable 1: Enable	1	-	RT Modify	page104 "P2-27"
P2-28	0xF21C	Torque Command Filter Cutoff Freq	50Hz~1000Hz	500	Hz	Stop Only	page104 "P2-28"
P2-29	0xF21D	Syn Motor Initial Position Angle Detect Current	50~180	80	-	RT Modify	page104 "P2-29"
P2-30	0xF21E	Speed Loop Param Auto-Calc Enable	0: Disable 1: Enable	0	-	Stop Only	page104 "P2-30"
P2-31	0xF21F	Desired Speed Loop Bandwidth (High Speed)	0Hz~3Hz	0	Hz	Stop Only	page105 "P2-31"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P2-32	0xF220	Desired Speed Loop Bandwidth (Low Speed)	1Hz~10000Hz	100	Hz	RT Modify	page105 "P2-32"
P2-33	0xF221	Desired Speed Loop Bandwidth (Zero Speed)	1Hz~10000Hz	100	Hz	RT Modify	page105 "P2-33"
P2-34	0xF222	Desired Speed Loop Damping Ratio (Do Not Modify Normally)	0.100~65.000	1.000	-	RT Modify	page105 "P2-34"
P2-35	0xF223	System Inertia (Equivalent to Start Time)	0.001s~50.000s	0.100	s	Stop Only	page105 "P2-35"
P2-36	0xF224	Motor Inertia ($kg \cdot m^2$)	0.001~50.000	0.001	-	Stop Only	page106 "P2-36"
P2-37	0xF225	Inertia Identification Max Frequency	20%~100%	80	%	Stop Only	page106 "P2-37"
P2-38	0xF226	Inertia Identification Acceleration Time	1.0s~50.0s	10.0	s	Stop Only	page106 "P2-38"
P2-39	0xF227	Speed Loop Dynamic Optimization Test Bandwidth 1	1.0Hz~200.0Hz	5.0	Hz	No Alteration	page106 "P2-39"
P2-40	0xF228	Speed Loop Dynamic Optimization Test Bandwidth 2	1.0Hz~200.0Hz	10.0	Hz	No Alteration	page107 "P2-40"
P2-41	0xF229	Speed Loop Dynamic Optimization Test Bandwidth 3	1.0Hz~100.0Hz	15.0	Hz	No Alteration	page107 "P2-41"
P2-42	0xF22A	Speed Loop Dynamic Optimization Test Bandwidth 4	1.0Hz~200.0Hz	20.0	Hz	No Alteration	page107 "P2-42"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P2-43	0xF22B	G l cprg_ Gbc l rgdga_rgm l $ Bw l _ k ga Qcr Qnccb	0~100	30	-	Stop Only	page107 “P2-43”
P2-44	0xF22C	Pmrmp Rg k c Am l qr_ l r A_jg`p_rgm l C l _`jc	.8 Bgq_`jc /8 C l _`jc	0	-	No Alteration	page108 “P2-44”
P2-45	0xF22D	Rotor Time Constant Calibration Torque Amplitude	10%~100%	30	%	No Alteration	page108 “P2-45”
P2-46	0xF22E	Rotor Time Constant Calibration Times	1~6	3	-	No Alteration	page108 “P2-46”
P2-47	0xF22F	Inertia Identification Enable	.8 Bgq_`jc /8 C l _`jc	0	-	Stop Only	page108 “P2-47”
P2-48	0xF230	Inertia Identifi-cation Speed Loop Bandwidth Set Value	0.1Hz~100.0Hz	10.0	Hz	Stop Only	page109 “P2-48”
P2-49	0xF231	Back EMF Calculation Enable	.8 Bgq_`jc /8 C l _`jc	0	-	No Alteration	page109 “P2-49”
P2-50	0xF232	Inertia Identification Mode	.8 ?aa-Bca Kmbc /8 Rpg_ l ejc U_tc Kmbc	0	-	Stop Only	page109 “P2-50”
P2-51	0xF233	Inertia Identification Acc/ Dec Coefficient	0.1~10.0	1.0	-	Stop Only	page109 “P2-51”
P2-52	0xF234	Decoupling Control Enable	.8 Bgq_`jc /8 C l _`jc	0	-	Stop Only	page110 “P2-52”
P2-53	0xF235	Regenerative Power Limit Enable	.8 Bgq_`jc /8 C l _`jc	0	-	Stop Only	page110 “P2-53”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P2-54	0xF236	Regenerative Power Limit	0.0%~200.0%	Model-defined	%	Stop Only	page110 “P2-54”
P2-55	0xF237	Closed-loop Vector Flux Closed-loop & Torque Linearization Opt Selection	Units: Torque Mode Flux CL Enable 0: Disable 1: Enable Tens: Speed Mode Flux CL Enable 0: Disable 1: Enable Hundreds: Speed Mode Torque Limit Linearization Enable 0: Disable 1: Enable Thousands: Torque Base Selection 0: Motor Rated Current 1: Motor Rated Torque Current	10	-	Stop Only	page110 “P2-55”
P2-56	0xF238	Inverter Output Current Limit	0.0%~170.0%	150.0	%	Stop Only	page111 “P2-56”
P3-00	0xF300	V/f Curve Setting	0: Linear V/f 1: Multi-point V/f 2: Square V/f 3: 1.2x V/f 4: 1.4x V/f 6: 1.6x V/f 8: 1.8x V/f 10: V/f Full Separation 11: V/f Semi-separation	0	-	Stop Only	page111 “P3-00”
P3-01	0xF301	Torque Boost	0.0%~30.0%	Model-defined	%	RT Modify	page112 “P3-01”
P3-02	0xF302	Torque Boost Cutoff Frequency	0.00Hz~P0-10	50.00	Hz	Stop Only	page113 “P3-02”
P3-03	0xF303	Multi-point V/f Frequency Point 1	0.00Hz~P3-05	0.00	Hz	Stop Only	page113 “P3-03”
P3-04	0xF304	Multi-point V/f Voltage Point 1	0.0%~100.0%	0.0	%	Stop Only	page113 “P3-04”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P3-05	0xF305	Multi-point V/f Frequency Point 2	P3-03~P3-07	0.00	Hz	Stop Only	page113 “P3-05”
P3-06	0xF306	Multi-point V/f Voltage Point 2	0.0%~100.0%	0.0	%	Stop Only	page113 “P3-06”
P3-07	0xF307	Multi-point V/f Frequency Point 3	P3-05~P1-04	0.00	Hz	Stop Only	page114 “P3-07”
P3-08	0xF308	Multi-point V/f Voltage Point 3	0.0%~100.0%	0.0	%	Stop Only	page114 “P3-08”
P3-09	0xF309	V/f Slip Compensation Gain	0.0%~200.0%	0.0	%	RT Modify	page114 “P3-09”
P3-10	0xF30A	V/f Overexcitation Gain	0~200	64	-	RT Modify	page114 “P3-10”
P3-11	0xF30B	V/f Oscillation Suppression Gain	0~100	机型确定	-	RT Modify	page115 “P3-11”
P3-12	0xF30C	Oscillation Suppression Gain Mode	0: Invalid 1: Reserved 2: Reserved 3: Valid	3	-	Stop Only	page115 “P3-12”
P3-13	0xF30D	V/f Separation Voltage Source	0: Digital Set (P3-14) 1: AI1 2: AI2 3: AI3 4: PULSE (DI5) 5: Multi-step Command 6: Simple PLC 7: PID 8: Comm Given (1000H)	0	-	RT Modify	page115 “P3-13”
P3-14	0xF30E	V/f Separation Voltage Digital Set	0V~P1-02	0	V	RT Modify	page116 “P3-14”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P3-15	0xF30F	V/f Separation Voltage Acceleration Time	0.0s~1000.0s	0.0	s	RT Modify	page117 "P3-15"
P3-16	0xF310	V/f Separation Voltage Deceleration Time	0.0s~1000.0s	0.0	s	RT Modify	page117 "P3-16"
P3-17	0xF311	V/f Separation Stop Mode Selection	0: Freq/Voltage Decoupled Dec to 0 1: Dec Voltage to 0, Then Dec Freq	0	-	Stop Only	page117 "P3-17"
P3-18	0xF312	V/f Overcurrent Stall Action Current	50%~200%	150	%	Stop Only	page117 "P3-18"
P3-19	0xF313	V/f Overcurrent Stall Enable	0: Disable 1: Enable	1	-	Stop Only	page118 "P3-19"
P3-20	0xF314	V/f Overcurrent Stall Suppression Gain	0~100	20	-	RT Modify	page118 "P3-20"
P3-21	0xF315	V/f Multi-spd OVC Stall Curr Comp Coef	50~200	50	-	Stop Only	page118 "P3-21"
P3-22	0xF316	V/f Overvoltage Stall Action Voltage	200.0V~2000.0V	770.0	V	Stop Only	page119 "P3-22"
P3-23	0xF317	V/f Overvoltage Stall Enable	0: Disable 1: Enable	1	-	Stop Only	page119 "P3-23"
P3-24	0xF318	V/f Overvoltage Stall Suppression Frequency Gain	0~100	30	-	RT Modify	page119 "P3-24"
P3-25	0xF319	V/f Overvoltage Stall Suppression Voltage Gain	0~100	30	-	RT Modify	page120 "P3-25"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P3-26	0xF31A	Overvoltage Stall Max Rise Limit Frequency	0~50	5	-	Stop Only	page120 “P3-26”
P3-27	0xF31B	Slip Compensation Time Constant	0.1Hz~10.0Hz	0.5	Hz	RT Modify	page120 “P3-27”
P3-28	0xF31C	V/f Parameter Tuning Inertia Coefficient	0.00~10.00	0.10	-	Stop Only	page120 “P3-28”
P3-33	0xF321	On-line Torque Compensation Gain	80~150	100	-	Stop Only	page121 “P3-33”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-00	0xF400	DI1 Terminal Function Selection	0: No Function 1: Forward Run 2: Reverse Run 3: 3-wire Run Control 4: Forward Jog 5: Reverse Jog 6: Terminal UP 7: Terminal DOWN 8: Free Stop 9: Fault Reset 10: Run Pause 11: External Fault NO Input 12: Multi-step Command Terminal 1 13: Multi-step Command Terminal 2 14: Multi-step Command Terminal 3 15: Multi-step Command Terminal 4 16: Acc/Dec Select Terminal 1 17: Acc/Dec Select Terminal 2 18: Frequency Source Switch 19: UP/DOWN Setting Clear 20: Run Command Switch 21: Acc/Dec Disable 22: PID Pause 23: PLC Status Reset 24: Swing Frequency Pause 25: Counter Input 26: Counter Reset 27: Length Count Input 28: Length Reset 29: Torque Control Disable 30: Pulse Input 31: Reserved 32: Immediate DC Braking 33: External Fault NC Input 34: Frequency Modify Enable 35: PID Action Direction Reverse 36: External Stop Terminal 1 37: Control Command Switch Terminal 2 38: PID Integral Pause 39: Frequency Source X vs Preset Frequency Switch 40: Fre. Source Y vs Preset Frequency Switch	1	-	Stop Only	*page121 "P4-00"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-00	0xF400	DI1 Terminal Function Selection	41: Motor Selection Terminal 1 42: Zero Servo Enable 43: PID Parameter Switch 44: User Defined Fault 1 45: User Defined Fault 2 46: Speed Control / Torque Control Switch 47: Emergency Stop 48: External Stop Terminal 2 49: Deceleration DC Braking 50: Run Time Reset (This Cycle) 51: 2-wire / 3-wire Control Switch 52: Electromagnetic Star Lock 53: Thickness Superposition 54: Roll Diameter Reset 55: Initial Roll Diameter 1 56: Initial Roll Diameter 2 57: Pre-drive 58: Wind/Unwind Switch 59: Roll Diameter Calculation Stop 60: Exit Tension Mode 61: Terminal Tension Boost 62: Thickness Selection 1 63: Thickness Selection 2 90: Water Cooling System Fault 91: Low Liquid Level Fault 92: Revolution Count Reset 93: Reserved 94: Gate Open Status Feedback 95: Gate Close Status Feedback 96: Cable Reel Wind/Unwind Switch 97: Motor Selection Terminal 2	1	-	Stop Only	*page121 "P4-00"*
P4-01	0xF401	DI2 Terminal Function Selection	Same as P4-00	4	-	Stop Only	*page128 "P4-01"*
P4-02	0xF402	DI3 Terminal Function Selection	Same as P4-00	9	-	Stop Only	*page130 "P4-02"*
P4-03	0xF403	DI4 Terminal Function Selection	Same as P4-00	12	-	Stop Only	*page132 "P4-03"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-04	0xF404	DI5 Terminal Function Selection	Same as P4-00	13	-	Stop Only	page134 "P4-04"
P4-05	0xF405	DI6 Terminal Function Selection	Same as P4-00	0	-	Stop Only	page136 "P4-05"
P4-06	0xF406	DI7 Terminal Function Selection	Same as P4-00	0	-	Stop Only	page138 "P4-06"
P4-07	0xF407	DI8 Terminal Function Selection	Same as P4-00	0	-	Stop Only	page140 "P4-07"
P4-08	0xF408	DI9 Terminal Function Selection	Same as P4-00	0	-	Stop Only	page142 "P4-08"
P4-09	0xF409	DI10 Terminal Function Selection	Same as P4-00	0	-	Stop Only	page144 "P4-09"
P4-10	0xF40A	DI Filter Time	0.000s~1.000s	0.010	s	RT Modify	page146 "P4-10"
P4-11	0xF40B	Terminal Command Mode	0: 2-wire Mode 1 1: 2-wire Mode 2 2: 3-wire Mode 1 3: 3-wire Mode 2	0	-	Stop Only	page147 "P4-11"
P4-12	0xF40C	Terminal UP/ DOWN Rate	0.001Hz/s~65.535Hz/s	1.000	Hz/s	RT Modify	page147 "P4-12"
P4-13	0xF40D	AI Curve 1 Minimum Input	-10.00V~P4-15	-10.00	V	RT Modify	page148 "P4-13"
P4-14	0xF40E	AI Curve 1 Minimum Input Corresponding Setting	-100.0%~100.0%	-100.0	%	RT Modify	page148 "P4-14"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-15	0xF40F	AI Curve 1 Max Input	P4-13~10.00V	10.00	V	RT Modify	page148 “P4-15”
P4-16	0xF410	AI Curve 1 Max Input Corresponding Setting	-100.0%~100.0%	100.0	%	RT Modify	page148 “P4-16”
P4-17	0xF411	AI1 Filter Time	0.00s~10.00s	0.10	s	RT Modify	page149 “P4-17”
P4-18	0xF412	AI Curve 2 Min Input	-10.00V~P4-20	-10.00	V	RT Modify	page149 “P4-18”
P4-19	0xF413	AI Curve 2 Min Input Corresponding Setting	-100.0%~100.0%	-100.0	%	RT Modify	page149 “P4-19”
P4-20	0xF414	AI Curve 2 Max Input	P4-18~10.00V	10.00	V	RT Modify	page149 “P4-20”
P4-21	0xF415	AI Curve 2 Max Input Corresponding Setting	-100.0%~100.0%	100.0	%	RT Modify	page150 “P4-21”
P4-22	0xF416	AI2 Filter Time	0.00s~10.00s	0.10	s	RT Modify	page150 “P4-22”
P4-23	0xF417	AI Curve 3 Min Input	-10.00V~P4-25	-10.00	V	RT Modify	page150 “P4-23”
P4-24	0xF418	AI Curve 3 Min Input Corresponding Setting	-100.0%~100.0%	-100.0	%	RT Modify	page151 “P4-24”
P4-25	0xF419	AI Curve 3 Max Input	P4-23~10.00V	10.00	V	RT Modify	page151 “P4-25”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-26	0xF41A	AI Curve 3 Max Input Corresponding Setting	-100.0%~100.0%	100.0	%	RT Modify	page151 "P4-26"
P4-27	0xF41B	AI3 Filter Time	0.00s~10.00s	0.10	s	RT Modify	page151 "P4-27"
P4-28	0xF41C	Pulse Min Input	0.00kHz~P4-30	0.00	kHz	RT Modify	page152 "P4-28"
P4-29	0xF41D	Pulse Min Input Corresponding Setting	-100.0%~100.0%	0.0	%	RT Modify	page152 "P4-29"
P4-30	0xF41E	Pulse Max Input	P4-28~100.00kHz	50.00	kHz	RT Modify	page152 "P4-30"
P4-31	0xF41F	Pulse Max Input Corresponding Setting	-100.0%~100.0%	100.0	%	RT Modify	page152 "P4-31"
P4-32	0xF420	Pulse Filter Time	0.00s~10.00s	0.10	s	RT Modify	page153 "P4-32"
P4-33	0xF421	AI Curve Selection	Units: AI1 1: Curve1 (2-point, P4-13~P4-16) 2: Curve2 (2-point, P4-18~P4-21) 3: Curve3 (2-point, P4-23~P4-26) 4: Curve4 (4-point, A6-00~A6-07) 5: Curve5 (4-point, A6-08~A6-15) Tens: AI2 1: Curve1 (2-point, P4-13~P4-16) 2: Curve2 (2-point, P4-18~P4-21) 3: Curve3 (2-point, P4-23~P4-26) 4: Curve4 (4-point, A6-00~A6-07) 5: Curve5 (4-point, A6-08~A6-15) Hundreds: AI3 1: Curve1 (2-point, P4-13~P4-16) 2: Curve2 (2-point, P4-18~P4-21) 3: Curve3 (2-point, P4-23~P4-26) 4: Curve4 (4-point, A6-00~A6-07) 5: Curve5 (4-point, A6-08~A6-15)	0x321	-	RT Modify	page153 "P4-33"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-34	0xF422	AI Below Min Input Setting Selection	Units: AI1 0: Follow Min Input Setting 1: 0.0% Tens: AI2 0: Follow Min Input Setting 1: 0.0% Hundreds: AI3 0: Follow Min Input Setting 1: 0.0%	0x0	-	RT Modify	*page154 "P4-34"*
P4-35	0xF423	DI1 Delay Time	0.0s~3600.0s	0.0	s	RT Modify	*page154 "P4-35"*
P4-36	0xF424	DI2 Delay Time	0.0s~3600.0s	0.0	s	RT Modify	*page154 "P4-36"*
P4-37	0xF425	DI3 Delay Time	0.0s~3600.0s	0.0	s	RT Modify	*page155 "P4-37"*
P4-38	0xF426	DI Terminal Active State Setting 1	Units: DI1 Active State 0: High Level Active 1: Low Level Active Tens: DI2 Active State 0: High Level Active 1: Low Level Active Hundreds: DI3 Active State 0: High Level Active 1: Low Level Active Thousands: DI4 Active State 0: High Level Active 1: Low Level Active Ten-thousands: DI5 Active State 0: High Level Active 1: Low Level Active	0	-	Stop Only	*page155 "P4-38"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P4-39	0xF427	DI Terminal Active State Setting 2	Units: DI6 Active State 0: High Level Active 1: Low Level Active Tens: DI7 Active State 0: High Level Active 1: Low Level Active Hundreds: DI8 Active State 0: High Level Active 1: Low Level Active Thousands: DI9 Active State 0: High Level Active 1: Low Level Active Ten-thousands: DI10 Active State 0: High Level Active 1: Low Level Active	0	-	Stop Only	*page156 "P4-39"*
P4-41	0xF429	DO1 Terminal Output Mode Selection	0: Normal DO Output 1: FMP Output	0	-	Stop Only	*page156 "P4-41"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-01	0xF501	Expansion Card Relay Output Function Selection	0: No Output 1: Inverter Running 2: Fault Output (Fault Trip) 3: Frequency Level Detection FDT1 Output 4: Frequency Reached 5: Zero Speed Run (No Output at Stop) 6: Motor Overload Pre-Alarm 7: Inverter Overload Pre-Alarm 8: Set Count Value Reached 9: Specified Count Value Reached 10: Length Reached 11: PLC Cycle Complete 12: Cumulative Runtime Reached 13: Frequency Limited 14: Torque Limited 15: Run Ready 16: AI1 > AI2 17: Upper Limit Frequency Reached 18: Freq Low Limit Reached (Run Only) 19: Undervoltage Status Output 20: Communication Setting 21: Reserved 22: Reserved 23: Zero Speed Running 2 (When Stopped) 24: Cumulative Power-On Time Reached 25: Freq Level Detect FDT2 Output 26: Frequency 1 Reached Output 27: Frequency 2 Reached Output 28: Current 1 Reached Output 29: Current 2 Reached Output 30: Timer Reached Output 31: AI1 Input Over Limit 32: Inverter Output Loss of Load 33: Reverse Running 34: Zero Current Status 35: Module Temperature Reached 36: Output Current Over Limit 37: Lower Limit Frequency Reached (Output Even When Stopped) 38: Abnormal Output (Fault/Warning) 39: Current Over-Temperature Pre-Alarm 40: This Runtime Reached 41: Fault Output 2 42: Fault Output 3	0	-	RT Modify	*page157 “P5-01”*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-02	0xF502	Ctrl Board RELAY1 Func Sel (T/A1-T/B1-T/C1):	0: No Output 1: Inverter Run 2: Fault Trip Output 3: Freq Detect FDT1 4: Freq Reached 5: Zero Speed Run (No Output at Stop) 6: Motor OL Pre-Alarm 7: Inverter OL Pre-Alarm 8: Set Count Reached 9: Spec Count Reached 10: Length Reached 11: PLC Cycle Done 12: Cumul Run Time Reached 13: Freq Limiting 14: Torque Limiting 15: Run Ready 16: AI1 > AI2 17: Upper Freq Reached 18: Lower Freq Reached (Run Only) 19: Undervoltage Status 20: Comm Setting 21/22: Reserved 23: Zero Speed Run 2 (At Stop) 24: Cumul Power-On Time Reached 25: Freq Detect FDT2 26: Freq 1 Reached 27: Freq 2 Reached 28: Current 1 Reached 29: Current 2 Reached 30: Timer Reached 31: AI1 Over Limit 32: Output Loss of Load 33: Reverse Run 34: Zero Current Status 35: Module Temp Reached 36: Output Current Over Limit 37: Lower Freq Reached (Always On) 38: Abnormal Output (Fault/Warning) 39: Over-Temp Pre-Alarm 40: Current Run Time Reached 41: Fault Output 2 42: Fault Output 3	2	-	RT Modify	*page161 "P5-02"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-03	0xF503	Ctrl Board RELAY2 Func Sel (T/A2-T/C2):	0: No Output 1: Inverter Run 2: Fault Trip Output 3: Freq Detect FDT1 4: Freq Reached 5: Zero Speed Run (No Output at Stop) 6: Motor OL Pre-Alarm 7: Inverter OL Pre-Alarm 8: Set Count Reached 9: Spec Count Reached 10: Length Reached 11: PLC Cycle Done 12: Cumul Run Time Reached 13: Freq Limiting 14: Torque Limiting 15: Run Ready 16: AI1 > AI2 17: Upper Freq Reached 18: Lower Freq Reached (Run Only) 19: Undervoltage Status 20: Comm Setting 21/22: Reserved 23: Zero Speed Run 2 (At Stop) 24: Cumul Power-On Time Reached 25: Freq Detect FDT2 26: Freq 1 Reached 27: Freq 2 Reached 28: Current 1 Reached 29: Current 2 Reached 30: Timer Reached 31: AI1 Over Limit 32: Output Loss of Load 33: Reverse Run 34: Zero Current Status 35: Module Temp Reached 36: Output Current Over Limit 37: Lower Freq Reached (Always On) 38: Abnormal Output (Fault/Warning) 39: Over-Temp Pre-Alarm 40: Current Run Time Reached 41: Fault Output 2 42: Fault Output 3	0	-	RT Modify	*page164 "P5-03"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-04	0xF504	DO1 Output Func Sel:	0: No Output 1: Inverter Run 2: Fault Trip Output 3: Freq Detect FDT1 4: Freq Reached 5: Zero Speed Run (No Output at Stop) 6: Motor OL Pre-Alarm 7: Inverter OL Pre-Alarm 8: Set Count Reached 9: Spec Count Reached 10: Length Reached 11: PLC Cycle Done 12: Cumul Run Time Reached 13: Freq Limiting 14: Torque Limiting 15: Run Ready 16: AI1 > AI2 17: Upper Freq Reached 18: Lower Freq Reached (Run Only) 19: Undervoltage Status 20: Comm Setting 21/22: Reserved 23: Zero Speed Run 2 (At Stop) 24: Cumul Power-On Time Reached 25: Freq Detect FDT2 26: Freq 1 Reached 27: Freq 2 Reached 28: Current 1 Reached 29: Current 2 Reached 30: Timer Reached 31: AI1 Over Limit 32: Output Loss of Load 33: Reverse Run 34: Zero Current Status 35: Module Temp Reached 36: Output Current Over Limit 37: Lower Freq Reached (Always On) 38: Abnormal Output (Fault/Warning) 39: Over-Temp Pre-Alarm 40: Current Run Time Reached 41: Fault Output 2 42: Fault Output 3	1	-	RT Modify	*page166 "P5-04"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-05	0xF505	Expansion Card DO2 Output Func Sel:	0: No Output 1: Inverter Run 2: Fault Trip Output 3: Freq Detect FDT1 4: Freq Reached 5: Zero Speed Run (No Output at Stop) 6: Motor OL Pre-Alarm 7: Inverter OL Pre-Alarm 8: Set Count Reached 9: Spec Count Reached 10: Length Reached 11: PLC Cycle Done 12: Cumul Run Time Reached 13: Freq Limiting 14: Torque Limiting 15: Run Ready 16: AI1 > AI2 17: Upper Freq Reached 18: Lower Freq Reached (Run Only) 19: Undervoltage Status 20: Comm Setting 21/22: Reserved 23: Zero Speed Run 2 (At Stop) 24: Cumul Power-On Time Reached 25: Freq Detect FDT2 26: Freq 1 Reached 27: Freq 2 Reached 28: Current 1 Reached 29: Current 2 Reached 30: Timer Reached 31: AI1 Over Limit 32: Output Loss of Load 33: Reverse Run 34: Zero Current Status 35: Module Temp Reached 36: Output Current Over Limit 37: Lower Freq Reached (Always On) 38: Abnormal Output (Fault/Warning) 39: Over-Temp Pre-Alarm 40: Current Run Time Reached 41: Fault Output 2 42: Fault Output 3	4	-	RT Modify	*page168 "P5-05"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-06	0xF506	FMP Output Func Sel	0: Run Freq 1: Set Freq 2: Output Current 3: Output Torque 4: Output Power 5: Output Voltage 6: Pulse Input (100.0% = 100.0kHz) 7: AI1 8: AI2 9: AI3 10: Length 11: Count Value 12: Comm Setting 13: Motor Speed 14: Output Current (100.0% = 1000.0A) 15: Output Voltage (100.0% = 1000.0V) 16: Output Torque (With Dir) 19: Taper Output 20: Roll Diameter Output 21: Tension Output 22: Encoder Feedback Freq	0	-	RT Modify	*page170 "P5-06"*
P5-07	0xF507	AO1 Output Func Sel	0: Run Freq 1: Set Freq 2: Output Current 3: Output Torque 4: Output Power 5: Output Voltage 6: Pulse Input (100.0% = 100.0kHz) 7: AI1 8: AI2 9: AI3 10: Length 11: Count Value 12: Comm Setting 13: Motor Speed 14: Output Current (100.0% = 1000.0A) 15: Output Voltage (100.0% = 1000.0V) 16: Output Torque (With Dir) 19: Taper Output 20: Roll Diameter Output 21: Tension Output 22: Encoder Feedback Freq	0	-	RT Modify	*page171 "P5-07"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-08	0xF508	AO2 Output Func Sel	0: Run Freq 1: Set Freq 2: Output Current 3: Output Torque 4: Output Power 5: Output Voltage 6: Pulse Input (100.0% = 100.0kHz) 7: AI1 8: AI2 9: AI3 10: Length 11: Count Value 12: Comm Setting 13: Motor Speed 14: Output Current (100.0% = 1000.0A) 15: Output Voltage (100.0% = 1000.0V) 16: Output Torque (With Dir) 19: Taper Output 20: Roll Diameter Output 21: Tension Output 22: Encoder Feedback Freq	1	-	RT Modify	*page173 "P5-08"*
P5-09	0xF509	FMP Output Max Freq	0.01kHz~100.00kHz	50.00	kHz	RT Modify	*page175 "P5-09"*
P5-10	0xF50A	AO1 Zero Offset	-100.0%~100.0%	0.0	%	RT Modify	*page175 "P5-10"*
P5-11	0xF50B	AO1 Gain	-10.00~10.00	1.00	-	RT Modify	*page176 "P5-11"*
P5-12	0xF50C	AO2 Zero Offset	-100.0%~100.0%	0.0	%	RT Modify	*page176 "P5-12"*
P5-13	0xF50D	AO2 Gain	-10.00~10.00	1.00	-	RT Modify	*page176 "P5-13"*
P5-17	0xF511	Expansion Card RELAY Output Delay	0.0s~3600.0s	0.0	s	RT Modify	*page177 "P5-17"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P5-18	0xF512	Control Board RELAY1 Output Delay	0.0s~3600.0s	0.0	s	RT Modify	page177 "P5-18"
P5-19	0xF513	Control Board RELAY2 Output Delay	0.0s~3600.0s	0.0	s	RT Modify	page177 "P5-19"
P5-20	0xF514	DO1 Output Delay	0.0s~3600.0s	0.0	s	RT Modify	page178 "P5-20"
P5-21	0xF515	Expansion Card DO2 Output Delay	0.0s~3600.0s	0.0	s	RT Modify	page178 "P5-21"
P5-22	0xF516	DO Output Terminal Active Logic Sel	Units: Expansion Card Relay 0: Positive Logic / 1: Negative Logic Tens: Control Board RELAY1 0: Positive Logic / 1: Negative Logic Hundreds: Control Board RELAY2 0: Positive Logic / 1: Negative Logic Thousands: Control Board DO1 0: Positive Logic / 1: Negative Logic Ten-thousands: Expansion Card DO2 0: Positive Logic / 1: Negative Logic	0	-	RT Modify	page178 "P5-22"
P6-00	0xF600	Start Mode	0: Direct Start1: Speed Tracking Start2: Induction Motor Vector Pre-Excitation Start	0	-	RT Modify	page179 "P6-00"
P6-01	0xF601	Speed Tracking Mode	0: From Stop Freq1: From 50Hz2: From Max Freq3: Reserved	0	-	Stop Only	page180 "P6-01"
P6-02	0xF602	Speed Tracking Speed	1~100	20	-	RT Modify	page180 "P6-02"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P6-03	0xF603	Start Frequency	0.00Hz~10.00Hz	0.00	Hz	RT Modify	page180 “P6-03”
P6-04	0xF604	Start Frequency Hold Time	0.0s~100.0s	0.0	s	Stop Only	page181 “P6-04”
P6-05	0xF605	Start DC Brake/ Pre-excitation Current	0%~150%	0	%	Stop Only	page181 “P6-05”
P6-06	0xF606	Start DC Brake/ Pre-excitation Time	0.0s~100.0s	0.0	s	Stop Only	page181 “P6-06”
P6-07	0xF607	Acc/Dec Mode	0: Linear Acc/Dec 1: S-Curve Acc/Dec	0	-	Stop Only	page182 “P6-07”
P6-08	0xF608	S-Curve Start Time Ratio	0.0%~70.0%	30.0	%	Stop Only	page182 “P6-08”
P6-09	0xF609	S-Curve End Time Ratio	0.0%~70.0%	30.0	%	Stop Only	page182 “P6-09”
P6-10	0xF60A	Stop Mode	0: Deceleration Stop 1: Freewheel Stop	0	-	RT Modify	page182 “P6-10”
P6-11	0xF60B	Stop DC Brake Start Frequency	0.00Hz~P0-10	0.00	Hz	RT Modify	page183 “P6-11”
P6-12	0xF60C	Stop DC Brake Wait Time	0.0s~100.0s	0.0	s	RT Modify	page183 “P6-12”
P6-13	0xF60D	Stop DC Brake Current	0%~150%	0	%	RT Modify	page183 “P6-13”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P6-14	0xF60E	Stop DC Brake Time	0.0s~100.0s	0.0	s	RT Modify	page184 “P6-14”
P6-15	0xF60F	Brake Duty Cycle	0%~100%	100	%	Stop Only	page184 “P6-15”
P6-16	0xF610	Speed Tracking Closed-loop Current KP	0~1000	500	-	RT Modify	page184 “P6-16”
P6-17	0xF611	Torque Tracking Closed-loop Current KI	0~1000	800	-	RT Modify	page184 “P6-17”
P6-18	0xF612	Speed Tracking Current Magnitude	30~200	100	-	RT Modify	page185 “P6-18”
P6-21	0xF615	Demagnetization Time	0.00s~10.00s	1.00	s	RT Modify	page185 “P6-21”
P6-22	0xF616	Startup Pre-torque Setting	0.0%~200.0%	0.0	%	RT Modify	page185 “P6-22”
P6-26	0xF61A	Electromagnetic Star Connection Current	0%~200%	100	%	RT Modify	page185 “P6-26”
P6-27	0xF61B	Startup Electromagnetic Star Connection Time	0.0s~100.0s	0.0	s	Stop Only	page186 “P6-27”
P6-28	0xF61C	Stop Electromagnetic Star Connection Time	0.0s~100.0s	0.0	s	Stop Only	page186 “P6-28”
P6-29	0xF61D	Electromagnetic Star Connection Voltage Margin	20.0V~100.0V	20.0	V	Stop Only	page186 “P6-29”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P6-30	0xF61E	Sync Motor Speed Tracking Test Current	5.0~50.0	10.0	-	No Alteration	page186 "P6-30"
P6-31	0xF61F	Sync Motor Speed Tracking Min Freq	0.0~100.0	0.0	-	No Alteration	page187 "P6-31"
P6-32	0xF620	Sync Motor Speed Tracking Angle Comp	0~360	0	-	No Alteration	page187 "P6-32"
P6-33	0xF621	Sync Motor Speed Tracking Proportional Gain	0.1~10.0	1.0	-	No Alteration	page187 "P6-33"
P6-34	0xF622	Sync Motor Speed Tracking Integral Gain	0.1~10.0	1.0	-	No Alteration	page187 "P6-34"
P6-35	0xF623	DC Brake Max Current Limit	80%~135%	80	%	No Alteration	page187 "P6-35"
P6-36	0xF624	Speed Loop Feedforward	-200.0%~200.0%	0.0	%	RT Modify	page188 "P6-36"
P7-01	0xF701	MF.K Key Function Sel	0: MF.K Key Disabled 1: Switch between Panel Command Channel and Remote Command Channel (Terminal/Comm) 2: Forward/Reverse Toggle 3: Forward Jog 4: Reverse Jog	0	-	No Alteration	page188 "P7-01"
P7-02	0xF702	STOP/RESET Key Function	0: STOP/RESET Key Only Valid in Panel Control Mode 1: STOP/RESET Key Valid in All Control Modes	0	-	RT Modify	page189 "P7-02"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P7-03	0xF703	LED Run Display Param 1	bit0: Run Freq (Hz) bit1: Set Freq (Hz) bit2: DC Bus Voltage (V) bit3: Output Voltage (V) bit4: Output Current (A) bit5: Output Power (kW) bit6: Output Torque (%) bit7: DI Input Status bit8: DO Output Status bit9: AI1 Voltage (V) bit10: AI2 Voltage (V) bit11: AI3 Voltage (V) bit12: Count Value bit13: Length Value bit14: Load Speed Display bit15: PID Setpoint	0x1F	-	RT Modify	*page189 "P7-03"*
P7-04	0xF704	LED Run Display Param 2	bit0: PID Feedback bit1: PLC Stage bit2: PULSE Input Freq (kHz) bit3: Run Freq 2 (Hz) bit4: Remaining Run Time bit5: Pre-calibration AI1 Voltage (V) bit6: Pre-calibration AI2 Voltage (V) bit7: Pre-calibration AI3 Voltage (V) bit8: Line Speed bit9: Total Power-On Time (h) bit10: Total Run Time (min) bit11: PULSE Input Freq (Hz) bit12: Comm Setpoint bit13: Actual Feedback Speed (Hz) bit14: Main Freq X Display (Hz) bit15: Aux Freq Y Display (Hz)	0x0	-	RT Modify	*page190 "P7-04"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P7-05	0xF705	LED Stop Display Param	bit0: Set Freq (Hz) bit1: DC Bus Voltage (V) bit2: DI Input Status bit3: DO Output Status bit4: AI1 Voltage (V) bit5: AI2 Voltage (V) bit6: AI3 Voltage (V) bit7: Count Value bit8: Length Value bit9: PLC Stage bit10: Load Speed Display bit11: PID Setpoint bit12: PULSE Input Freq (kHz) bit13: Reserved bit14: Reserved bit15: Reserved	0x33	-	RT Modify	*page190 "P7-05"*
P7-06	0xF706	Load Speed Display Coefficient	0.0000~6.5000	1.0000	-	RT Modify	*page191 "P7-06"*
P7-07	0xF707	Inverter Module Heatsink Temp	-20°C~120°C	0	°C	No Alteration	*page191 "P7-07"*
P7-08	0xF708	Product Number	0~999	0	-	No Alteration	*page192 "P7-08"*
P7-09	0xF709	Cumulative Run Time	0h~65535h	0	h	No Alteration	*page192 "P7-09"*
P7-10	0xF70A	Performance SW Version	0.00~0.00	0.00	-	No Alteration	*page192 "P7-10"*
P7-11	0xF70B	Function SW Version	0.00~0.00	0.00	-	No Alteration	*page192 "P7-11"*
P7-12	0xF70C	Load Speed Display Decimal Digits	0: 0 Decimal Places 1: 1 Decimal Place 2: 2 Decimal Places 3: 3 Decimal Places	1	-	RT Modify	*page193 "P7-12"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P7-13	0xF70D	Cumulative Power-On Time	0h~65535h	0	h	No Alteration	page193 "P7-13"
P7-14	0xF70E	Cumulative Power Consumption	0kWh~65535kWh	0	kWh	No Alteration	page193 "P7-14"
P7-15	0xF70F	Performance SW Beta Version No.	0.00~0.00	0.00	-	No Alteration	page194 "P7-15"
P7-16	0xF710	Function SW Beta Version No.	0.00~0.00	0.00	-	No Alteration	page194 "P7-16"
P8-00	0xF800	Jog Operation Frequency	0.00Hz~P0-10	2.00	Hz	RT Modify	page194 "P8-00"
P8-01	0xF801	Jog Acceleration Time	0.0s~6500.0s	20.0	s	RT Modify	page194 "P8-01"
P8-02	0xF802	Jog Deceleration Time	0.0s~6500.0s	20.0	s	RT Modify	page195 "P8-02"
P8-03	0xF803	Acceleration Time 2	0.0s~6500.0s	20.0	s	RT Modify	page195 "P8-03"
P8-04	0xF804	Deceleration Time 2	0.0s~6500.0s	20.0	s	RT Modify	page195 "P8-04"
P8-05	0xF805	Acceleration Time 3	0.0s~6500.0s	20.0	s	RT Modify	page195 "P8-05"
P8-06	0xF806	Deceleration Time 3	0.0s~6500.0s	20.0	s	RT Modify	page196 "P8-06"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P8-07	0xF807	Acceleration Time 4	0.0s~6500.0s	20.0	s	RT Modify	page196 "P8-07"
P8-08	0xF808	Deceleration Time 4	0.0s~6500.0s	20.0	s	RT Modify	page196 "P8-08"
P8-09	0xF809	Skip Frequency 1	0.00Hz~P0-10	0.00	Hz	RT Modify	page196 "P8-09"
P8-10	0xF80A	Skip Frequency 2	0.00Hz~P0-10	0.00	Hz	RT Modify	page197 "P8-10"
P8-11	0xF80B	Skip Frequency Bandwidth	0.00Hz~5.00Hz	0.00	Hz	RT Modify	page197 "P8-11"
P8-12	0xF80C	Forward/Reverse Dead Time	0.0s~3000.0s	0.0	s	RT Modify	page197 "P8-12"
P8-13	0xF80D	Reverse Frequency Disable	0: Reverse Allowed 1: Reverse Disabled	0	-	RT Modify	page197 "P8-13"
P8-14	0xF80E	Below Min. Freq. Operation Mode	0: Run at Min. Freq. 1: Stop 2: Zero-Speed Run 3: Free Stop	0	-	RT Modify	page198 "P8-14"
P8-15	0xF80F	Mechanical Brake Freq	0.00Hz~10.00Hz	0.00	Hz	RT Modify	page198 "P8-15"
P8-16	0xF810	Set Cumulative Power-On Time	0h~65000h	0	h	RT Modify	page198 "P8-16"
P8-17	0xF811	Set Cumulative Run Time	0h~65000h	0	h	RT Modify	page199 "P8-17"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P8-18	0xF812	Start & Fault Reset Protection Selection	0: No Protection 1: Protection Enabled	0	-	RT Modify	page199 "P8-18"
P8-19	0xF813	Frequency Detect Level 1	0.00Hz~P0-10	50.00	Hz	RT Modify	page199 "P8-19"
P8-20	0xF814	Frequency Detect Hysteresis 1	0.0%~100.0%	5.0	%	RT Modify	page199 "P8-20"
P8-21	0xF815	Frequency Reach Detect Bandwidth	0.0%~100.0%	0.0	%	RT Modify	page200 "P8-21"
P8-22	0xF816	Skip Frequency Enable During Acc/Dec	0: Disabled 1: Enabled	0	-	RT Modify	page200 "P8-22"
P8-25	0xF819	Acceleration Time 1/2 Switch Freq Point	0.00Hz~P0-10	0.00	Hz	RT Modify	page200 "P8-25"
P8-26	0xF81A	Deceleration Time 1/2 Switch Freq Point	0.00Hz~P0-10	0.00	Hz	RT Modify	page201 "P8-26"
P8-27	0xF81B	Jog Priority	0: Disabled 1: Enabled	0	-	RT Modify	page201 "P8-27"
P8-28	0xF81C	Frequency Detect Level 2	0.00Hz~P0-10	50.00	Hz	RT Modify	page201 "P8-28"
P8-29	0xF81D	Frequency Detect Hysteresis 2	0.0%~100.0%	5.0	%	RT Modify	page202 "P8-29"
P8-30	0xF81E	Arbitrary Frequency Detect Level 1	0.00Hz~P0-10	50.00	Hz	RT Modify	page202 "P8-30"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P8-31	0xF81F	Arbitrary Freq Detect Bandwidth 1	0.0%~100.0%	0.0	%	RT Modify	page202 "P8-31"
P8-32	0xF820	Arbitrary Freq Detect Level 2	0.00Hz~P0-10	50.00	Hz	RT Modify	page202 "P8-32"
P8-33	0xF821	Arbitrary Freq Detect Bandwidth 2	0.0%~100.0%	0.0	%	RT Modify	page203 "P8-33"
P8-34	0xF822	Zero Current Detect Level	0.0%~300.0%	5.0	%	RT Modify	page203 "P8-34"
P8-35	0xF823	Zero Current Detect Delay	0.01s~600.00s	0.10	s	RT Modify	page203 "P8-35"
P8-36	0xF824	Output Current Overlimit Value	0.0%~300.0%	200.0	%	RT Modify	page203 "P8-36"
P8-37	0xF825	Software Overcurrent Detect Delay	0.00s~600.00s	0.00	s	RT Modify	page204 "P8-37"
P8-38	0xF826	Arbitrary Current Level 1	0.0%~300.0%	100.0	%	RT Modify	page204 "P8-38"
P8-39	0xF827	Arbitrary Current Detect Bandwidth 1	0.0%~300.0%	0.0	%	RT Modify	page204 "P8-39"
P8-40	0xF828	Arbitrary Current Level 2	0.0%~300.0%	100.0	%	RT Modify	page204 "P8-40"
P8-41	0xF829	Arbitrary Current Detect Bandwidth 2	0.0%~300.0%	0.0	%	RT Modify	page205 "P8-41"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P8-42	0xF82A	Timer Function Enable	0: Disabled 1: Enabled	0	-	Stop Only	page205 "P8-42"
P8-43	0xF82B	Timer Run Time Selection	0: Set via Timer Run Time (P8-44) 1: AI1 2: AI2 3: AI3	0	-	Stop Only	page205 "P8-43"
P8-44	0xF82C	Timer Run Time	0.0min~6500.0min	0.0	min	Stop Only	page206 "P8-44"
P8-45	0xF82D	AI1 Input Voltage Protection Lower Limit	0.00V~P8-46	3.10	V	RT Modify	page206 "P8-45"
P8-46	0xF82E	AI1 Input Voltage Protection Upper Limit	P8-45~11.00V	6.80	V	RT Modify	page206 "P8-46"
P8-47	0xF82F	Module Temperature Threshold	0°C~100°C	75	°C	RT Modify	page206 "P8-47"
P8-48	0xF830	Cooling Fan Control	0: Run when inverter is operating 1: Fan always runs	0	-	RT Modify	page207 "P8-48"
P8-49	0xF831	Wake-up Frequency	P8-51~P0-10	0.00	Hz	RT Modify	page207 "P8-49"
P8-50	0xF832	Wake-up Delay Time	0.0s~6500.0s	0.0	s	RT Modify	page207 "P8-50"
P8-51	0xF833	Sleep Frequency	0.00Hz~P8-49	0.00	Hz	RT Modify	page208 "P8-51"
P8-52	0xF834	Sleep Delay Time	0.0s~6500.0s	0.0	s	RT Modify	page208 "P8-52"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P8-53	0xF835	Current Run Elapsed Time	0.0min~6500.0min	0.0	min	RT Modify	page208 “P8-53”
P8-55	0xF837	Emergency Stop Deceleration Time	0.0s~6500.0s	机型确定	s	RT Modify	page208 “P8-55”
P8-57	0xF839	Cumulative Power Consumption Reset	0: Cumulative Power Consumption Reset Disabled 1: Cumulative Power Consumption Reset Enabled	0	-	Stop Only	page209 “P8-57”
P8-58	0xF83A	Output Power Correction Coefficient	0.0%~200.0%	100.0	%	Stop Only	page209 “P8-58”
P9-00	0xF900	Inverter Overload Suppression Enable	0: Disabled 1: Enabled	0	-	RT Modify	page209 “P9-00”
P9-01	0xF901	Motor Overload Protection Gain	0.20~10.00	1.00	-	RT Modify	page210 “P9-01”
P9-02	0xF902	Motor Overload Warning Coefficient	50%~100%	80	%	RT Modify	page210 “P9-02”
P9-04	0xF904	Overvoltage Threshold Setting	350.0V~820.0V	820.0	V	RT Modify	page210 “P9-04”
P9-06	0xF906	Pre-start Output Phase Loss Detect Selection	0: Disabled 1: Enabled	0	-	RT Modify	page210 “P9-06”
P9-07	0xF907	Software Ground Fault Detect Selection	0: No Detect 1: Pre-power-on Detect 2: Pre-run Detect 3: Pre-power-on & Pre-run Detect	1	-	Stop Only	page211 “P9-07”
P9-08	0xF908	Brake Unit Operating Start Voltage	200.0V~2000.0V	760.0	V	RT Modify	page211 “P9-08”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-09	0xF909	Fault Auto-reset Times	0~20	0	-	RT Modify	page211 "P9-09"
P9-10	0xF90A	Fault DO Action During Auto-reset	0: No action 1: Actio	0	-	RT Modify	page212 "P9-10"
P9-11	0xF90B	Fault Auto-reset Interval	0.1s~100.0s	1.0	s	RT Modify	page212 "P9-11"
P9-12	0xF90C	Input Phase Loss / Contactor Pickup Protection Sel	Units digit: Input Phase Loss Protection 0: Disable fault 1: Software & hardware detect 2: Hardware-only detect Tens digit: Contactor/Fan Fault Protection 0: Disable fault 1: Enable fault	11	-	RT Modify	page212 "P9-12"
P9-13	0xF90D	Fault Reset Restart Interval	0.0s~600.0s	10.0	s	RT Modify	page213 "P9-13"
P9-14	0xF90E	1st Fault Type	0~99	0	-	No Alteration	page213 "P9-14"
P9-15	0xF90F	2nd Fault Type	0~99	0	-	No Alteration	page213 "P9-15"
P9-16	0xF910	3rd (Latest) Fault Type	0~99	0	-	No Alteration	page214 "P9-16"
P9-17	0xF911	3rd (Latest) Fault Frequency	0Hz~65535Hz	0	Hz	No Alteration	page214 "P9-17"
P9-18	0xF912	3rd (Latest) Fault Current	0.0A~6553.5A	0.0	A	No Alteration	page214 "P9-18"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-19	0xF913	3rd (Latest) Fault DC Bus Voltage	0.0V~6553.5V	0.0	V	No Alteration	page214 "P9-19"
P9-20	0xF914	3rd (Latest) Fault Input Terminal Status	0~65535	0	-	No Alteration	page215 "P9-20"
P9-21	0xF915	3rd (Latest) Fault Output Terminal Status	0~65535	0	-	No Alteration	page215 "P9-21"
P9-22	0xF916	3rd (Latest) Fault Inverter Status	0~65535	0	-	No Alteration	page215 "P9-22"
P9-23	0xF917	3rd (Latest) Fault Power-On Time	0~65535	0	-	No Alteration	page215 "P9-23"
P9-24	0xF918	3rd (Latest) Fault Run Time	0.0~6553.5	0.0	-	No Alteration	page215 "P9-24"
P9-25	0xF919	3rd (Latest) Fault IGBT Temperature	-20°C~120°C	0	°C	No Alteration	page216 "P9-25"
P9-26	0xF91A	3rd (Latest) Fault Sub-code	0~65535	0	-	No Alteration	page216 "P9-26"
P9-27	0xF91B	2nd Fault Frequency	0Hz~65535Hz	0	Hz	No Alteration	page216 "P9-27"
P9-28	0xF91C	2nd Fault Current	0.0A~6553.5A	0.0	A	No Alteration	page216 "P9-28"
P9-29	0xF91D	2nd Fault DC Bus Voltage	0.0V~6553.5V	0.0	V	No Alteration	page217 "P9-29"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-30	0xF91E	2nd Fault Input Terminal Status	0~65535	0	-	No Alteration	page217 "P9-30"
P9-31	0xF91F	2nd Fault Output Terminal Status	0~65535	0	-	No Alteration	page217 "P9-31"
P9-32	0xF920	2nd Fault Inverter Status	0~65535	0	-	No Alteration	page217 "P9-32"
P9-33	0xF921	2nd Fault Power-On Time	0~65535	0	-	No Alteration	page218 "P9-33"
P9-34	0xF922	2nd Fault Run Time	0.0~6553.5	0.0	-	No Alteration	page218 "P9-34"
P9-35	0xF923	2nd Fault IGBT Temperature	-20°C~120°C	0	°C	No Alteration	page218 "P9-35"
P9-36	0xF924	2nd Fault Sub-code	0~65535	0	-	No Alteration	page218 "P9-36"
P9-37	0xF925	1st Fault Frequency	0Hz~65535Hz	0	Hz	No Alteration	page219 "P9-37"
P9-38	0xF926	1st Fault Current	0.0A~6553.5A	0.0	A	No Alteration	page219 "P9-38"
P9-39	0xF927	1st Fault DC Bus Voltage	0.0V~6553.5V	0.0	V	No Alteration	page219 "P9-39"
P9-40	0xF928	1st Fault Input Terminal Status	0~65535	0	-	No Alteration	page219 "P9-40"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-41	0xF929	1st Fault Output Terminal Status	0~65535	0	-	No Alteration	page220 "P9-41"
P9-42	0xF92A	1st Fault Inverter Status	0~65535	0	-	No Alteration	page220 "P9-42"
P9-43	0xF92B	1st Fault Power-On Time	0~65535	0	-	No Alteration	page220 "P9-43"
P9-44	0xF92C	1st Fault Run Time	0.0~6553.5	0.0	-	No Alteration	page220 "P9-44"
P9-45	0xF92D	1st Fault IGBT Temperature	-20°C~120°C	0	°C	No Alteration	page220 "P9-45"
P9-46	0xF92E	1st Fault Sub-code	0~65535	0	-	No Alteration	page221 "P9-46"
P9-47	0xF92F	Fault Protection Action Selection	Units digit: E02, E03, E04 0: Free Stop 1: Fault Restart Tens digit: E05, E06, E07 0: Free Stop 1: Fault Restart Hundreds digit: E08 0: Free Stop 1: Fault Restart Thousands digit: E09 0: Free Stop 1: Fault Restart Ten-thousands digit: E10 0: Free Stop 1: Fault Restart	0	-	Stop Only	page221 "P9-47"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-48	0xF930	Fault Protection Action Selection 1	Units digit: E02, E03, E04 0: Free Stop 2: Fault Restart Tens digit: E05, E06, E07 0: Free Stop 2: Fault Restart Hundreds digit: E08 0: Free Stop Thousands digit: E09 0: Free Stop 2: Fault Restart Ten-thousands digit: E10 0: Free Stop 2: Fault Restart	0	-	Stop Only	*page222 "P9-48"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-49	0xF931	Fault Protection Action Selection 2	Units digit: E16 0: Free Stop 4: Warning 5: Cancel Tens digit: E17 0: Free Stop 4: Warning 5: Cancel Hundreds digit: E18 0: Free Stop 4: Warning 5: Cancel Thousands digit: E19 3: Electromagnetic Block 4: Warning 5: Cancel Ten-thousands digit: E20 0: Free Stop 4: Warning 5: Cancel	0	-	Stop Only	*page223 "P9-49"*
P9-50	0xF932	Fault Protection Action Selection 3	Units digit: Reserved 0: Free Stop 4: Warning 5: Cancel Tens digit: E63 0: Free Stop 4: Warning 5: Cancel Hundreds digit: E23 0: Free Stop 5: Cancel Thousands digit: E24 0: Free Stop 5: Cancel Ten-thousands digit: E25 1: Deceleration Stop 4: Warning 5: Cancel	5040	-	Stop Only	*page224 "P9-50"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-51	0xF933	Fault Protection Action Selection 4	Units digit: E26 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Tens digit: E27 0: Free Stop 1: Deceleration Stop 3: Electromagnetic Lock 4: Warning 5: Cancel Hundreds digit: E28 0: Free Stop 1: Deceleration Stop 3: Electromagnetic Lock 4: Warning 5: Cancel Thousands digit: E29 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Ten-thousands digit: E30 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel	51111	-	Stop Only	*page225 “P9-51”*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-52	0xF934	Fault Protection Action Selection 5	Units digit: E31 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Tens digit: E40 0: Free Stop 2: Fault Restart Hundreds digit: E41 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Thousands digit: E42 0: Free Stop 1: Deceleration Stop 2: Fault Restart 3: Electromagnetic Lock 4: Warning 5: Cancel Ten-thousands digit: E43 0: Free Stop 1: Deceleration Stop 3: Electromagnetic Lock 4: Warning 5: Cancel	101	-	Stop Only	*page227 "P9-52"*
P9-53	0xF935	Fault Protection Action Selection 6	Units digit: E45 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Tens digit: E60 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Hundreds digit: E61 0: Free Stop 1: Deceleration Stop 4: Warning 5: Cancel Thousands digit: E62 0: Free Stop 5: Cancel Ten-thousands digit: Reserved 5: Cancel	0	-	Stop Only	*page228 "P9-53"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-54	0xF936	Frequency selection for continuous operation during fault	0: Run with current operating frequency 1: Run with set operating frequency 2: Run with upper limit frequency 3: Run with reserve frequency under abnormal condition	1	-	RT Modify	page229 “P9-54”
P9-55	0xF937	Abnormal backup frequency setting	0.0%~100.0%	100.0	%	RT Modify	page229 “P9-55”
P9-56	0xF938	Motor temperature sensor type	0：AI3 1：PT100 2：PT1000 3：KTY84-130 4：PTC130	0	-	RT Modify	page229 “P9-56”
P9-57	0xF939	Motor overheat protection threshold	0°C~200°C	110	°C	RT Modify	page230 “P9-57”
P9-58	0xF93A	Motor overheat pre-alarm threshold	0°C~200°C	90	°C	RT Modify	page230 “P9-58”
P9-59	0xF93B	Voltage sag ride-through action selection	0: Disabled 1: DC bus voltage constant control 2: Deceleration stop 3: Voltage sag ride-through control	0	-	Stop Only	page230 “P9-59”
P9-60	0xF93C	Voltage sag ride-through pause judgment voltage	80%~100%	85	%	RT Modify	page231 “P9-60”
P9-61	0xF93D	Voltage sag ride-through voltage recovery judgment time	0.0s~100.0s	0.5	s	RT Modify	page231 “P9-61”
P9-62	0xF93E	Voltage sag ride-through action judgment voltage	60%~100%	80	%	RT Modify	page231 “P9-62”
P9-63	0xF93F	FVC overspeed protection time	0~10000	0	-	Stop Only	page232 “P9-63”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
P9-64	0xF940	Load drop detection level	0.0%~100.0%	10.0	%	RT Modify	page232 "P9-64"
P9-65	0xF941	Load drop detection time	0.0s~60.0s	1.0	s	RT Modify	page232 "P9-65"
P9-66	0xF942	Voltage sag suppression time	0.0s~600.0s	0.0	s	RT Modify	page232 "P9-66"
P9-67	0xF943	Overspeed detection value	0.0%~50.0%	5.0	%	RT Modify	page233 "P9-67"
P9-68	0xF944	Overspeed detection time	0.0s~60.0s	1.0	s	RT Modify	page233 "P9-68"
P9-69	0xF945	Speed deviation excess detection value	0.0%~50.0%	20.0	%	RT Modify	page233 "P9-69"
P9-70	0xF946	Speed deviation excess detection time	0.0s~60.0s	5.0	s	RT Modify	page234 "P9-70"
P9-71	0xF947	Voltage sag ride-through gain Kp	0~100	40	-	RT Modify	page234 "P9-71"
P9-72	0xF948	Voltage sag ride-through integral coefficient Ki	0~100	30	-	RT Modify	page234 "P9-72"
P9-73	0xF949	Voltage sag ride-through action deceleration time	0.0s~300.0s	20.0	s	RT Modify	page235 "P9-73"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PA-00	0xFA00	PID setpoint source	0: PID numerical setting (PA-01) 1: AI1 2: AI2 3: AI3 4: PULSE setting (DI5) 5: Communication setting (1000H) 6: Multi-step command setting	0	-	RT Modify	page235 “PA-00”
PA-01	0xFA01	PID numerical setpoint	0.0%~100.0%	50.0	%	RT Modify	page236 “PA-01”
PA-02	0xFA02	PID feedback source	0：AI1 1：AI2 2：AI3 3: AI1-AI2 4: PULSE setting (DI5) 5: Communication setting 6: AI1+AI2 7: MAX(|AI1|, |AI2|) 8: MIN(|AI1|, |AI2|)	0	-	RT Modify	page236 “PA-02”
PA-03	0xFA03	PID action direction	0: Direct acting 1: Reverse acting	0	-	RT Modify	page236 “PA-03”
PA-04	0xFA04	PID setpoint and feedback range	0~65535	1000	-	RT Modify	page237 “PA-04”
PA-05	0xFA05	Proportional gain Kp1	0.0~1000.0	20.0	-	RT Modify	page237 “PA-05”
PA-06	0xFA06	Integral time Ti1	0.01s~100.00s	2.00	s	RT Modify	page237 “PA-06”
PA-07	0xFA07	Derivative time Td1	0.000s~10.000s	0.000	s	RT Modify	page238 “PA-07”
PA-08	0xFA08	PID reverse cutoff frequency	0.00Hz~P0-10	2.00	Hz	RT Modify	page238 “PA-08”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PA-09	0xFA09	PID deviation limit	0.0%~100.0%	0.0	%	RT Modify	page238 “PA-09”
PA-10	0xFA0A	PID differential limit	0.00%~100.00%	0.10	%	RT Modify	page238 “PA-10”
PA-11	0xFA0B	PID setpoint change time	0.00s~650.00s	0.00	s	RT Modify	page239 “PA-11”
PA-12	0xFA0C	PID feedback filter time	0.00s~60.00s	0.00	s	RT Modify	page239 “PA-12”
PA-13	0xFA0D	PID deviation gain	0.0%~100.0%	100.0	%	RT Modify	page239 “PA-13”
PA-14	0xFA0E	PID optimization parameters	0~100	0	-	RT Modify	page239 “PA-14”
PA-15	0xFA0F	Proportional gain Kp2	0.0~1000.0	20.0	-	RT Modify	page240 “PA-15”
PA-16	0xFA10	Integral time Ti2	0.01s~100.00s	2.00	s	RT Modify	page240 “PA-16”
PA-17	0xFA11	Derivative time Td2	0.000s~10.000s	0.000	s	RT Modify	page240 “PA-17”
PA-18	0xFA12	PID parameter switching condition	0: No switching 1: DI terminal 2: Deviation-based switching 3: Frequency-based switching 6: Roll diameter adjustment 7: Max roll diameter % adjustment	0	-	RT Modify	page240 “PA-18”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PA-19	0xFA13	PID parameter switching deviation 1	0.0%~PA-20	20.0	%	RT Modify	page241 “PA-19”
PA-20	0xFA14	PID parameter switching deviation 2	PA-19~100.0%	80.0	%	RT Modify	page242 “PA-20”
PA-21	0xFA15	PID initial value	0.0%~100.0%	0.0	%	RT Modify	page242 “PA-21”
PA-22	0xFA16	PID initial value hold time	0.00s~650.00s	0.00	s	RT Modify	page242 “PA-22”
PA-23	0xFA17	Positive maximum of output deviation between two cycles	0.00%~100.00%	1.00	%	RT Modify	page242 “PA-23”
PA-24	0xFA18	Negative maximum of output deviation between two cycles	0.00%~100.00%	1.00	%	RT Modify	page243 “PA-24”
PA-25	0xFA19	PID integral attribute	0: Invalid 1: Valid	0	-	RT Modify	page243 “PA-25”
PA-26	0xFA1A	PID feedback loss detection value	0.0%~100.0%	0.0	%	RT Modify	page243 “PA-26”
PA-27	0xFA1B	PID feedback loss detection time	0.0s~20.0s	0.0	s	RT Modify	page243 “PA-27”
PA-28	0xFA1C	PID operation during stop	0: Stop without calculation 1: Stop with calculation	0	-	RT Modify	第244页 “PA-28”
PA-29	0xFA1D	PID anti-windup processing method selection	0: Default mode 1: Integral separation	0	-	RT Modify	page244 “PA-29”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PB-00	0xFB00	Jitter frequency setting mode	0：Relative to center frequency 1：Relative to max frequency	0	-	RT Modify	page244 “PB-00”
PB-01	0xFB01	Jitter frequency amplitude	0.0%~100.0%	0.0	%	RT Modify	page245 “PB-01”
PB-02	0xFB02	Step frequency amplitude	0.0%~50.0%	0.0	%	RT Modify	page245 “PB-02”
PB-03	0xFB03	Jitter frequency period	0.1s~3000.0s	10.0	s	RT Modify	page245 “PB-03”
PB-04	0xFB04	Triangular wave rise time coefficient for jitter frequency	0.1%~100.0%	50.0	%	RT Modify	page245 “PB-04”
PB-05	0xFB05	Set length	0m~65535m	1000	m	RT Modify	page245 “PB-05”
PB-06	0xFB06	Actual length	0m~65535m	0	m	RT Modify	page246 “PB-06”
PB-07	0xFB07	Pulses per meter	0.1~6553.5	100.0	-	RT Modify	page246 “PB-07”
PB-08	0xFB08	Set count value	1~65535	1000	-	RT Modify	page246 “PB-08”
PB-09	0xFB09	Specified count value	1~65535	1000	-	RT Modify	page246 “PB-09”
PB-10	0xFB0A	Rotation count reset mode	0:Rising edge trigger 1:Level trigger	0	-	RT Modify	page247 “PB-10”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PB-11	0xFB0B	Rotation count reset signal	0: Do not reset 1: Reset	0	-	RT Modify	page247 "PB-11"
PB-12	0xFB0C	Operation count power-down save enable	0: No save on power loss 1: Save on power loss	0	-	RT Modify	page247 "PB-12"
PB-13	0xFB0D	Rotation count reset	0~65535	0	-	RT Modify	page248 "PB-13"
PB-14	0xFB0E	Transmission ratio numerator	1~65535	1	-	RT Modify	page248 "PB-14"
PB-15	0xFB0F	Transmission ratio denominator	1~65535	1	-	RT Modify	page248 "PB-15"
PB-16	0xFB10	Actual operation count	0~65535	0	-	No Alteration	page248 "PB-16"
PB-17	0xFB11	Operation count	0~65535	0	-	No Alteration	page249 "PB-17"
PB-18	0xFB12	Operation count precision	0: Count unit: 1 revolution 1: Count unit: 0.1 revolution	0	-	RT Modify	page249 "PB-18"
PB-19	0xFB13	Count direction	0: Forward counting 1: Reverse counting	0	-	RT Modify	page249 "PB-19"
PC-00	0xFC00	Multi-stage command 1	-100.0%~100.0%	0.0	%	RT Modify	page249 "PC-00"
PC-01	0xFC01	Multi-stage command 2	-100.0%~100.0%	0.0	%	RT Modify	page250 "PC-01"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PC-02	0xFC02	Multi-stage command3	-100.0%~100.0%	0.0	%	RT Modify	page250 "PC-02"
PC-03	0xFC03	Multi-stage command4	-100.0%~100.0%	0.0	%	RT Modify	page250 "PC-03"
PC-04	0xFC04	Multi-stage command5	-100.0%~100.0%	0.0	%	RT Modify	page250 "PC-04"
PC-05	0xFC05	Multi-stage command6	-100.0%~100.0%	0.0	%	RT Modify	page251 "PC-05"
PC-06	0xFC06	Multi-stage command7	-100.0%~100.0%	0.0	%	RT Modify	page251 "PC-06"
PC-07	0xFC07	Multi-stage command8	-100.0%~100.0%	0.0	%	RT Modify	page251 "PC-07"
PC-08	0xFC08	Multi-stage command9	-100.0%~100.0%	0.0	%	RT Modify	page251 "PC-08"
PC-09	0xFC09	Multi-stage command10	-100.0%~100.0%	0.0	%	RT Modify	page252 "PC-09"
PC-10	0xFC0A	Multi-stage command11	-100.0%~100.0%	0.0	%	RT Modify	page252 "PC-10"
PC-11	0xFC0B	Multi-stage command12	-100.0%~100.0%	0.0	%	RT Modify	page252 "PC-11"
PC-12	0xFC0C	Multi-stage command13	-100.0%~100.0%	0.0	%	RT Modify	page252 "PC-12"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PC-13	0xFC0D	Multi-stage command14	-100.0%~100.0%	0.0	%	RT Modify	page253 "PC-13"
PC-14	0xFC0E	Multi-stage command15	-100.0%~100.0%	0.0	%	RT Modify	page253 "PC-14"
PC-15	0xFC0F	Multi-stage command16	-100.0%~100.0%	0.0	%	RT Modify	page253 "PC-15"
PC-16	0xFC10	Simple PLC operation mode	0: Stop after single run 1: Hold final value after single run 2: Continuous cycle	0	-	RT Modify	page253 "PC-16"
PC-17	0xFC11	Simple PLC power-down memory selection	Units digit: Power-down memory selection 0: No memory on power-down 1: Memory on power-down Tens digit: Stop memory selection 0: No memory on stop 1: Memory on stop	0	-	RT Modify	page254 "PC-17"
PC-18	0xFC12	PLC segment 0 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page254 "PC-18"
PC-19	0xFC13	PLC segment 0 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page255 "PC-19"
PC-20	0xFC14	PLC segment 1 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page255 "PC-20"
PC-21	0xFC15	PLC segment 1 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page255 "PC-21"
PC-22	0xFC16	PLC segment 2 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page255 "PC-22"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PC-23	0xFC17	PLC segment 2 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page256 "PC-23"
PC-24	0xFC18	PLC segment 3 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page256 "PC-24"
PC-25	0xFC19	PLC segment 3 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page256 "PC-25"
PC-26	0xFC1A	PLC segment 4 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page257 "PC-26"
PC-27	0xFC1B	PLC segment 4 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page257 "PC-27"
PC-28	0xFC1C	PLC segment 5 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page257 "PC-28"
PC-29	0xFC1D	PLC segment 5 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page258 "PC-29"
PC-30	0xFC1E	PLC segment 6 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page258 "PC-30"
PC-31	0xFC1F	PLC segment 6 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page258 "PC-31"
PC-32	0xFC20	PLC segment 7 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page259 "PC-32"
PC-33	0xFC21	PLC segment 7 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page259 "PC-33"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PC-34	0xFC22	PLC segment 8 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page259 "PC-34"
PC-35	0xFC23	PLC segment 8 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page259 "PC-35"
PC-36	0xFC24	PLC segment 9 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page260 "PC-36"
PC-37	0xFC25	PLC segment 9 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page260 "PC-37"
PC-38	0xFC26	PLC segment 10 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page260 "PC-38"
PC-39	0xFC27	PLC segment 10 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page261 "PC-39"
PC-40	0xFC28	PLC segment 11 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page261 "PC-40"
PC-41	0xFC29	PLC segment 11 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page261 "PC-41"
PC-42	0xFC2A	PLC segment 12 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page262 "PC-42"
PC-43	0xFC2B	PLC segment 12 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	page262 "PC-43"
PC-44	0xFC2C	PLC segment 13 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	page262 "PC-44"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PC-45	0xFC2D	PLC segment 13 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	*page262 "PC-45"*
PC-46	0xFC2E	PLC segment 14 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	*page263 "PC-46"*
PC-47	0xFC2F	PLC segment 14 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	*page263 "PC-47"*
PC-48	0xFC30	PLC segment 15 operation time	0.0s(h)~6553.5s(h)	0.0	s(h)	RT Modify	*page263 "PC-48"*
PC-49	0xFC31	PLC segment 15 acceleration/ deceleration time selection	0: 1st acc/dec time (P0-17/18) 1: 2nd acc/dec time (P8-03/04) 2: 3rd acc/dec time (P8-05/06) 3: 4th acc/dec time (P8-07/08)	0	-	RT Modify	*page264 "PC-49"*
PC-50	0xFC32	PLC operation time unit	0：s（秒） 1：h（小时）	0	-	RT Modify	*page264 "PC-50"*
PC-51	0xFC33	Multi-stage command 0 setting mode	0: Multi-step command 0 (PC-00) setting 1: AI1 2: AI2 3: AI3 4: PULSE pulse (DI5) 5: PID 6: Preset frequency P0-08 setting (modifiable via UP/DOWN)	0	-	RT Modify	*page264 "PC-51"*
PD-00	0xFD00	Baud rate	0: 300bps 1: 600bps 2: 1200bps 3: 2400bps 4: 4800bps 5: 9600bps 6: 19200bps 7: 38400bps 8: 57600bps 9: 115200bps	5005	-	RT Modify	*page265 "PD-00"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PD-01	0xFD01	Modbus data format	0: No parity (8-N-2) 1: Even parity (8-E-1) 2: Odd parity (8-O-1) 3: No parity (8-N-1)	0	-	RT Modify	*page265 "PD-01"*
PD-02	0xFD02	Local address	1~247	1	-	RT Modify	*page266 "PD-02"*
PD-03	0xFD03	Response delay	0ms~20ms	2	ms	RT Modify	*page266 "PD-03"*
PD-04	0xFD04	Communication timeout	0.0s~60.0s	0.0	s	RT Modify	*page266 "PD-04"*
PD-06	0xFD06	Communication fault reset enable	0: Disable 1: Enable	1	-	Stop Only	*page267 "PD-06"*
PD-07	0xFD07	Programming/ background connection baud rate	0：300bps 1：600bps 2：1200bps 3：2400bps 4：4800bps 5：9600bps 6：19200bps 7：38400bps 8：57600bps 9：115200bps	0	-	RT Modify	*page267 "PD-07"*
PD-09	0xFD09	CANopen/CANlink communication status	Units digit: CANopen 0: Stop 1: Initialization 2: Pre-operational 8: Operational Tens digit: CANlink 0: Stop 1: Initialization 2: Pre-operational 8: Operational Hundreds digit: Reserved	2	-	No Alteration	*page267 "PD-09"*
PD-10	0xFD0A	CANopen/CANlink switch	1：CANopen 2：CANlink	1	-	Stop Only	*page268 "PD-10"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PD-12	0xFD0C	CAN baud rate	0: 20kbps 1: 50kbps 2: 100kbps 3: 125kbps 4: 250kbps 5: 500kbps 6: 1Mbps	5	-	Stop Only	page268 "PD-12"
PD-13	0xFD0D	CAN station address	1~127	1	-	Stop Only	page269 "PD-13"
PD-14	0xFD0E	Number of CAN frames received per unit time	0~65535	0	-	No Alteration	page269 "PD-14"
PD-15	0xFD0F	Maximum value of node receive error counter	0~65535	0	-	No Alteration	page269 "PD-15"
PD-16	0xFD10	Maximum value of node transmit error counter	0~65535	0	-	No Alteration	page270 "PD-16"
PD-17	0xFD11	Number of bus-off events per unit time	0~65535	0	-	No Alteration	page270 "PD-17"
PD-19	0xFD13	CAN communication drop coefficient	1~15	3	-	Stop Only	page270 "PD-19"
PD-24	0xFD18	Up/down function timeout disconnection time	0.5s~10s	1	s	RT Modify	page270 "PD-24"
PD-37	0xFD25	DHCP enable	0: Disable 1: Enable	0	-	Stop Only	page271 "PD-37"
PD-38	0xFD26	Highest byte of IP address	0~255	0	-	Stop Only	page271 "PD-38"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PD-39	0xFD27	Second highest byte of IP address	0~255	0	-	Stop Only	page271 "PD-39"
PD-40	0xFD28	Third byte of IP address	0~255	0	-	Stop Only	page271 "PD-40"
PD-41	0xFD29	Lowest byte of IP address	0~255	0	-	Stop Only	page272 "PD-41"
PD-42	0xFD2A	Highest byte of subnet mask	0~255	0	-	Stop Only	page272 "PD-42"
PD-43	0xFD2B	Second highest byte of subnet mask	0~255	0	-	Stop Only	page272 "PD-43"
PD-44	0xFD2C	Third byte of subnet mask	0~255	0	-	Stop Only	page272 "PD-44"
PD-45	0xFD2D	Lowest byte of subnet mask	0~255	0	-	Stop Only	page273 "PD-45"
PD-46	0xFD2E	Highest byte of gateway	0~255	0	-	Stop Only	page273 "PD-46"
PD-47	0xFD2F	Second highest byte of gateway	0~255	0	-	Stop Only	page273 "PD-47"
PD-48	0xFD30	Third byte of gateway	0~255	0	-	Stop Only	page273 "PD-48"
PD-49	0xFD31	Lowest byte of gateway	0~255	0	-	Stop Only	page273 "PD-49"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PD-58	0xFD3A	EtherNet/IP expansion card error code	0~255	0	-	No Alteration	page274 "PD-58"
PD-61	0xFD3D	High byte of MAC address	0x0~0xFFFF	0x0	-	Stop Only	page274 "PD-61"
PD-62	0xFD3E	Middle byte of MAC address	0x0~0xFFFF	0x0	-	Stop Only	page274 "PD-62"
PD-63	0xFD3F	Low byte of MAC address	0x0~0xFFFF	0x0	-	Stop Only	page274 "PD-63"
PD-94	0xFD5E	Modbus software version	0~65535	0	-	No Alteration	page275 "PD-94"
PD-95	0xFD5F	CANlink software version	0~65535	0	-	No Alteration	page275 "PD-95"
PD-96	0xFD60	CANopen software version	0~65535	0	-	No Alteration	page275 "PD-96"
PE-00	0xFE00	User function code 0	0~65535	7017	-	RT Modify	page275 "PE-00"
PE-01	0xFE01	User function code 1	0~65535	7016	-	RT Modify	page276 "PE-01"
PE-02	0xFE02	User function code 2	0~65535	0	-	RT Modify	page276 "PE-02"
PE-03	0xFE03	User function code 3	0~65535	0	-	RT Modify	page276 "PE-03"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PE-04	0xFE04	User function code 4	0~65535	0	-	RT Modify	page276 “PE-04”
PE-05	0xFE05	User function code 5	0~65535	0	-	RT Modify	page277 “PE-05”
PE-06	0xFE06	User function code 6	0~65535	0	-	RT Modify	page277 “PE-06”
PE-07	0xFE07	User function code 7	0~65535	0	-	RT Modify	page277 “PE-07”
PE-08	0xFE08	User function code 8	0~65535	0	-	RT Modify	page277 “PE-08”
PE-09	0xFE09	User function code 9	0~65535	0	-	RT Modify	page278 “PE-09”
PE-10	0xFE0A	User function code 10	0~65535	0	-	RT Modify	page278 “PE-10”
PE-11	0xFE0B	User function code 11	0~65535	0	-	RT Modify	page278 “PE-11”
PE-12	0xFE0C	User function code 12	0~65535	0	-	RT Modify	page278 “PE-12”
PE-13	0xFE0D	User function code 13	0~65535	0	-	RT Modify	page279 “PE-13”
FE-14	0xFE0E	User function code 14	0~65535	0	-	RT Modify	page279 “FE-14”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PE-15	0xFE0F	User function code 15	0~65535	0	-	RT Modify	page279 “PE-15”
PE-16	0xFE10	User function code 16	0~65535	0	-	RT Modify	page279 “PE-16”
PE-17	0xFE11	User function code 17	0~65535	0	-	RT Modify	page280 “PE-17”
PE-18	0xFE12	User function code 18	0~65535	0	-	RT Modify	page280 “PE-18”
PE-19	0xFE13	User function code 19	0~65535	0	-	RT Modify	page280 “PE-19”
PE-20	0xFE14	User function code 20	0~65535	6768	-	RT Modify	page280 “PE-20”
PE-21	0xFE15	User function code 21	0~65535	6769	-	RT Modify	page280 “PE-21”
PE-22	0xFE16	User function code 22	0~65535	0	-	RT Modify	page281 “PE-22”
PE-23	0xFE17	User function code 23	0~65535	0	-	RT Modify	page281 “PE-23”
PE-24	0xFE18	User function code 24	0~65535	0	-	RT Modify	page281 “PE-24”
PE-25	0xFE19	User function code 25	0~65535	0	-	RT Modify	page281 “PE-25”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PE-26	0xFE1A	User function code 26	0~65535	0	-	RT Modify	page282 “PE-26”
PE-27	0xFE1B	User function code 27	0~65535	0	-	RT Modify	page282 “PE-27”
PE-28	0xFE1C	User function code 28	0~65535	0	-	RT Modify	page282 “PE-28”
PE-29	0xFE1D	User function code 29	0~65535	0	-	RT Modify	page282 “PE-29”
PE-30	0xFE1E	User function code 30	0~65535	0	-	RT Modify	page283 “PE-30”
PE-31	0xFE1F	User function code 31	0~65535	0	-	RT Modify	page283 “PE-31”
PP-00	0x1F00	User password	0~65535	0	-	RT Modify	page283 “PP-00”
PP-01	0x1F01	Parameter initialization	0: No operation 1: Restore factory defaults mode 1 2: Clear record information 4: Backup current user parameters 501: Restore user backup parameters 503: Restore factory defaults mode 2	1	-	Stop Only	page283 “PP-01”
PP-02	0x1F02	Function parameter display selection	Units digit: U group display selection 0: Hide 1: Show Tens digit: A group display selection 0: Hide 1: Show Hundreds digit: B group display selection 0: Hide 1: Show Thousands digit: C group display selection 0: Hide 1: Show	1111	-	RT Modify	page284 “PP-02”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
PP-03	0x1F03	Personalized parameter display mode selection	Units digit: User-defined parameter group display selection 0: Do not display 1: Display Tens digit: User-modified parameter group selection 0: Do not display 1: Display	11	-	RT Modify	page285 "PP-03"
PP-04	0x1F04	Function code modification attribute	0: Modifiable 1: Read-only	0	-	RT Modify	page285 "PP-04"
A0-00	0xA000	Speed/Torque control mode	0: Speed control 1: Torque control	0	-	Stop Only	page286 "A0-00"
A0-01	0xA001	Torque reference source selection	0: Digital setting of drive torque limit (A0-03) 1: AI1 2: AI2 3: AI3 4: PULSE pulse setting (DI5) 5: Communication setting (1000H) 6: MIN(AI1,AI2) 7: MAX(AI1,AI2)	0	-	Stop Only	page286 "A0-01"
A0-03	0xA003	Digital torque setting	-200.0%~200.0%	100.0	%	RT Modify	page286 "A0-03"
A0-04	0xA004	Torque filter time	0.000s~5.000s	0.000	s	RT Modify	page287 "A0-04"
A0-05	0xA005	Digital speed limit setting	-120.0%~120.0%	0.0	%	RT Modify	page287 "A0-05"
A0-06	0xA006	Window mode frequency modulation coefficient	0.0~50.0	0.0	-	RT Modify	page287 "A0-06"
A0-07	0xA007	Torque acceleration time	0.00s~650.00s	1.00	s	RT Modify	page287 "A0-07"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A0-08	0xA008	Torque deceleration time	0.00s~650.00s	1.00	s	RT Modify	page288 “A0-08”
A0-09	0xA009	Speed limit reference source selection	0: Set via A0-05 1: Set via frequency source	0	-	RT Modify	page288 “A0-09”
A0-10	0xA00A	Speed limit offset / window frequency	0.00Hz~P0-10	5.00	Hz	RT Modify	page288 “A0-10”
A0-11	0xA00B	Speed limit offset enable	0: Bidirectional offset enabled 1: Unidirectional offset enabled 2: Window mode	1	-	Stop Only	page288 “A0-11”
A0-12	0xA00C	Frequency acceleration time	0.0s~6500.0s	1.0	s	RT Modify	page289 “A0-12”
A0-13	0xA00D	Frequency deceleration time	0.0s~6500.0s	1.0	s	RT Modify	page289 “A0-13”
A0-14	0xA00E	Torque mode switch式切换	0: No switching 1: Switch to speed mode when stopped 2: Set target torque to 0 when stopped	1	-	Stop Only	page289 “A0-14”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A1-00	0xA100	Virtual VDI1 terminal function selection	0: No function 1: Forward run (FWD) 2: Reverse run (REV) 3: 3-wire run control 4: Forward jog (FJOG) 5: Reverse jog (RJOG) 6: Terminal UP 7: Terminal DOWN 8: Free stop 9: Fault reset (RESET) 10: Run pause 11: External fault NO input 12: Multi-step command terminal 1 13: Multi-step command terminal 2 14: Multi-step command terminal 3 15: Multi-step command terminal 4 16: Acc/dec selection terminal 1 17: Acc/dec selection terminal 2 18: Frequency source switch 19: UP/DOWN value clear (terminal/ keypad) 20: Run command switch terminal 21: Acc/dec disable 22: PID pause 23: PLC status reset 24: Swing frequency pause 25: Counter input (DI5) 26: Counter reset 27: Length count input (DI5) 28: Length reset 29: Torque control disable 30: Pulse input 31: Reserved 32: Immediate DC braking 33: External fault NC input 34: Frequency modify enable 35: PID direction reverse 36: External stop terminal 1 37: Control command switch terminal 2 38: PID integral pause 39: Freq src X ↔ preset freq 40: Freq src Y ↔ preset freq	0	-	Stop Only	*page290 "A1-00"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A1-00	0xA100	Virtual VDI1 terminal function selection	41: Motor select terminal 1 42: Zero servo enable 43: PID parameter switch 44: User-defined fault 1 45: User-defined fault 2 46: Speed/torque control switch 47: Emergency stop 48: External stop terminal 2 49: Deceleration DC braking 50: Current run time reset 51: 2-wire/3-wire control switch 52: Electromagnetic brake control 53: Thickness overlay 54: Roll diameter reset 55: Initial roll diameter 1 56: Initial roll diameter 2 57: Pre-drive 58: Winder/unwinder switch 59: Roll diameter calculation stop 60: Exit tension mode 61: Terminal tension boost 62: Thickness select 1 63: Thickness select 2 90: Water cooling system fault 91: Low liquid level fault 92: Cycle count reset 93: Reserved 94: Gate open feedback 95: Gate close feedback 96: Cable reel wind/unwind switch 97: Motor select terminal 2	0	-	Stop Only	*page290 "A1-00"*
A1-01	0xA101	Virtual VDI2 terminal function selection	Same as A1-01	0	-	Stop Only	*page297 "A1-01"*
A1-02	0xA102	Virtual VDI3 terminal function selection	Same as A1-01	0	-	Stop Only	*page299 "A1-02"*
A1-03	0xA103	Virtual VDI4 terminal function selection	Same as A1-01	0	-	Stop Only	*page301 "A1-03"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A1-04	0xA104	Virtual VDI5 terminal function selection	Same as A1-01	0	-	Stop Only	page303 “A1-04”
A1-05	0xA105	VDI terminal status setting mode	Units digit: VDI1 0: Function code setting (A1-06) 1: DO status 2: DI status Tens digit: VDI2 0: Function code setting (A1-06) 1: DO status 2: DI status Hundreds digit: VDI3 0: Function code setting (A1-06) 1: DO status 2: DI status Thousands digit: VDI4 0: Function code setting (A1-06) 1: DO status 2: DI status Ten-thousands digit: VDI5 0: Function code setting (A1-06) 1: DO status 2: DI status	0	-	Stop Only	page305 “A1-05”
A1-06	0xA106	Virtual VDI terminal status setting	Units digit: VDI1 0: Invalid 1: Valid Tens digit: VDI2 0: Invalid 1: Valid Hundreds digit: VDI3 0: Invalid 1: Valid Thousands digit: VDI4 0: Invalid 1: Valid Ten-thousands digit: VDI5 0: Invalid 1: Valid	0	-	实时更改	page306 “A1-06”
A1-07	0xA107	AI1 terminal function selection (as DI)	Same as P4-00	0	-	Stop Only	page307 “A1-07”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A1-08	0xA108	AI2 terminal function selection (as DI)	Same as P4-00	0	-	Stop Only	*page309 "A1-08"*
A1-09	0xA109	AI3 terminal function selection (as DI)	Same as P4-00	0	-	Stop Only	*page311 "A1-09"*
A1-10	0xA10A	AI as DI valid state selection	Units digit: AI1 0: High level active 1: Low level active Tens digit: AI2 0: High level active 1: Low level active Hundreds digit: AI3 0: High level active 1: Low level active	0	-	Stop Only	*page313 "A1-10"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A5-01	0xA501	PWM modulation mode	0:Asynchronous modulation 1: Synchronous modulation 2: Synchronous modulation mode 2 3: Synchronous modulation mode 3	0	-	RT Modify	*第401页“A5-01”*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A5-02	0xA502	Dead-time compensation mode selection	0: No compensation 1: Compensation mode 1 2: Compensation mode 2	2	-	Stop Only	page401 "A5-02"
A5-03	0xA503	Random PWM depth	0~10	0	-	RT Modify	page401 "A5-03"
A5-04	0xA504	Fast current limiting enable	0: Disable 1: Enable	0	-	RT Modify	page402 "A5-04"
A5-05	0xA505	Sampling delay time	1~13	5	-	RT Modify	page402 "A5-05"
A5-06	0xA506	Under-voltage threshold setting	150.0V~700.0V	350.0	V	RT Modify	page402 "A5-06"
A5-13	0xA50D	DC bus voltage setting for functional parts	100~20000	5310	-	No Alteration	page403 "A5-13"
A5-14	0xA50E	Temperature correction enable	0: Disable 1: Enable	0	-	No Alteration	page403 "A5-14"
A5-16	0xA510	Monitor parameter address 1	0~100	0	-	No Alteration	page403 "A5-16"
A5-17	0xA511	Monitor parameter address 2	0~100	1	-	No Alteration	page403 "A5-17"
A5-18	0xA512	Monitor parameter address 3	0~100	2	-	No Alteration	page404 "A5-18"
A5-19	0xA513	Monitor parameter address 4	0~100	3	-	No Alteration	page404 "A5-19"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A5-21	0xA515	Low-speed carrier frequency setting	0.0~16.0	0.0	-	RT Modify	page404 "A5-21"
A5-22	0xA516	Dead-time compensation identification enable	0: Disable 1: Enable	0	-	Stop Only	page404 "A5-22"
A6-00	0xA600	Curve 4 minimum input	-10.00V~A6-02	0.00	V	RT Modify	page405 "A6-00"
A6-01	0xA601	Curve 4 minimum input corresponding setting	-100.0%~100.0%	0.0	%	RT Modify	page405 "A6-01"
A6-02	0xA602	Curve 4 inflection point 1 input	A6-00~A6-04	3.00	V	RT Modify	page405 "A6-02"
A6-03	0xA603	Curve 4 inflection point 1 input corresponding setting	-100.0%~100.0%	30.0	%	RT Modify	page405 "A6-03"
A6-04	0xA604	Curve 4 inflection point 2 input	A6-02~A6-06	6.00	V	RT Modify	page406 "A6-04"
A6-05	0xA605	Curve 4 inflection point 2 input corresponding setting	-100.0%~100.0%	60.0	%	RT Modify	page406 "A6-05"
A6-06	0xA606	Curve 4 maximum input	A6-04~10.00V	10.00	V	RT Modify	page406 "A6-06"
A6-07	0xA607	Curve 4 maximum input corresponding setting	-100.0%~100.0%	100.0	%	RT Modify	page406 "A6-07"
A6-08	0xA608	Curve 5 minimum input	-10.00V~A6-10	-10.00	V	RT Modify	page407 "A6-08"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A6-09	0xA609	Curve 5 minimum input corresponding setting	-100.0%~100.0%	-100.0	%	RT Modify	page407 "A6-09"
A6-10	0xA60A	Curve 5 inflection point 1 input	A6-08~A6-12	-3.00	V	RT Modify	page407 "A6-10"
A6-11	0xA60B	Curve 5 inflection point 1 input corresponding setting	-100.0%~100.0%	-30.0	%	RT Modify	page407 "A6-11"
A6-12	0xA60C	Curve 5 inflection point 2 input	A6-10~A6-14	3.00	V	RT Modify	page408 "A6-12"
A6-13	0xA60D	Curve 5 inflection point 2 input corresponding setting	-100.0%~100.0%	30.0	%	RT Modify	page408 "A6-13"
A6-14	0xA60E	Curve 5 maximum input	A6-12~10.00V	10.00	V	RT Modify	page408 "A6-14"
A6-15	0xA60F	Curve 5 maximum input corresponding setting	-100.0%~100.0%	100.0	%	RT Modify	page408 "A6-15"
A6-16	0xA610	AI1 gain	-10.00~10.00	1.00	-	RT Modify	page409 "A6-16"
A6-17	0xA611	AI1 offset	-100.0%~100.0%	0.0	%	RT Modify	page409 "A6-17"
A6-18	0xA612	AI2 gain	-10.00~10.00	1.00	-	RT Modify	page409 "A6-18"
A6-19	0xA613	AI2 offset	-100.0%~100.0%	0.0	%	RT Modify	page409 "A6-19"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A6-20	0xA614	AI3 gain	-10.00~10.00	1.00	-	RT Modify	page409 “A6-20”
A6-21	0xA615	AI3 offset	-100.0%~100.0%	0.0	%	RT Modify	page410 “A6-21”
A6-22	0xA616	AI wire-break detection threshold	0.0%~100.0%	0.0	%	RT Modify	page410 “A6-22”
A6-23	0xA617	AI wire-break detection time	0.0s~6553.5s	0.0	s	RT Modify	page410 “A6-23”
A6-24	0xA618	AI1 set jump point	-100.0%~100.0%	0.0	%	RT Modify	page410 “A6-24”
A6-25	0xA619	AI1 set jump amplitude	0.0%~100.0%	0.1	%	RT Modify	page411 “A6-25”
A6-26	0xA61A	AI2 set jump point	-100.0%~100.0%	0.0	%	RT Modify	page411 “A6-26”
A6-27	0xA61B	AI2 set jump amplitude	0.0%~100.0%	0.1	%	RT Modify	page411 “A6-27”
A6-28	0xA61C	AI3 set jump point	-100.0%~100.0%	0.0	%	RT Modify	page411 “A6-28”
A6-29	0xA61D	AI3 set jump amplitude	0.0%~100.0%	0.1	%	RT Modify	page412 “A6-29”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A6-30	0xA61E	Analog input wire-break detection enable	Units digit: AI1 break detection enable 0: Disable 1: Enable Tens digit: AI2 break detection enable 0: Disable 1: Enable Hundreds digit: AI3 break detection enable 0: Disable 1: Enable	0	-	RT Modify	*page412 "A6-30"*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-00	0xA900	IM on-line rotor time constant identification	0: No identification 1: Identification	0	-	RT Modify	page421 “A9-00”
A9-01	0xA901	IM FVC rotor resistance identification gain	0~100	5	-	RT Modify	page421 “A9-01”
A9-02	0xA902	IM FVC rotor resistance identification start frequency	2Hz~100Hz	7	Hz	RT Modify	page421 “A9-02”
A9-03	0xA903	IM FVC magnetic flux observer coefficient	30~150	40	-	RT Modify	page422 “A9-03”
A9-04	0xA904	IM field weakening max torque limit coefficient	30~150	80	-	RT Modify	page422 “A9-04”
A9-05	0xA905	IM SVC speed filter time	5ms~32ms	15	ms	RT Modify	page422 “A9-05”
A9-06	0xA906	SVC optimization selection	0: No special handling 1: Limit min sync freq based on load change 2: Output fixed current at low speed 3: Output fixed current at low speed 4: Low torque optimization	0	-	RT Modify	page422 “A9-06”
A9-07	0xA907	IM SVC flux regulation bandwidth	0.0~8.0	2.0	-	RT Modify	page423 “A9-07”
A9-08	0xA908	SVC parameter 1	30~170	100	-	RT Modify	page423 “A9-08”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-09	0xA909	SVC parameter 2	0.1Hz~1.0Hz	0.3	Hz	Stop Only	page423 "A9-09"
A9-10	0xA90A	SVC parameter 3	80~100	95	-	Stop Only	page423 "A9-10"
A9-11	0xA90B	SVC parameter 4	10~3000	200	-	Stop Only	page424 "A9-11"
A9-12	0xA90C	SVC speed tracking inhibit reverse	0: Invalid 1: Enable	0	-	Stop Only	page424 "A9-12"
A9-13	0xA90D	IM fast identification stator resistance coefficient 1	0~65535	10	-	Stop Only	page424 "A9-13"
A9-14	0xA90E	IM fast identification stator resistance coefficient 2	0~65535	10	-	Stop Only	page424 "A9-14"
A9-17	0xA911	SM real-time angle	0.0~359.9	0.0	-	No Alteration	page425 "A9-17"
A9-18	0xA912	SM initial position angle detection	0: Detect every run 1: No detection 2: Detect first run after power-up	0	-	RT Modify	page425 "A9-18"
A9-20	0xA914	Field weakening mode selection	0: Auto field weakening 1: Sync motor adjust weakening 2: Sync motor hybrid weakening 3: No field weakening	1	-	Stop Only	page425 "A9-20"
A9-21	0xA915	SM field weakening gain	0~50	5	-	RT Modify	page426 "A9-21"
A9-22	0xA916	SM output voltage upper limit margin	0%~50%	5	%	RT Modify	page426 "A9-22"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-23	0xA917	SM maximum output adjustment gain	20%~300%	100	%	RT Modify	page426 "A9-23"
A9-24	0xA918	SM calculated excitation current adjustment gain	40%~200%	100	%	RT Modify	page426 "A9-24"
A9-25	0xA919	SM SVC speed estimation integral gain	5%~1000%	30	%	RT Modify	page426 "A9-25"
A9-26	0xA91A	SM SVC speed estimation proportional gain	5%~300%	20	%	RT Modify	page427 "A9-26"
A9-27	0xA91B	SM SVC estimated speed filter	10~2000	100	-	RT Modify	page427 "A9-27"
A9-28	0xA91C	SM SVC minimum carrier frequency	0.8~P0-15	2.0	-	RT Modify	page427 "A9-28"
A9-29	0xA91D	SM SVC low-speed excitation current	0%~80%	30	%	RT Modify	page427 "A9-29"
A9-30	0xA91E	Low-speed closed-loop current (for VVC)	0%~65535%	0	%	RT Modify	page428 "A9-30"
A9-31	0xA91F	Oscillation suppression damping coefficient (for VVC)	0%~65535%	0	%	RT Modify	page428 "A9-31"
A9-32	0xA920	SM control reserved parameter 8	0~65535	0	-	RT Modify	page428 "A9-32"
A9-33	0xA921	SM control reserved parameter 9	0~5	0	-	Stop Only	page428 "A9-33"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-34	0xA922	SM control reserved parameter 10	0%~65535%	0	%	RT Modify	page429 "A9-34"
A9-35	0xA923	First performance fault sub-code	0~65535	0	-	No Alteration	page429 "A9-35"
A9-36	0xA924	Second performance fault sub-code	0~65535	0	-	No Alteration	page429 "A9-36"
A9-37	0xA925	Third performance fault sub-code	0~65535	0	-	No Alteration	page429 "A9-37"
A9-40	0xA928	Enable low-speed closed-loop current (for VVC)	0: Disable 1: Enable	0	-	Stop Only	page430 "A9-40"
A9-41	0xA929	Low-speed closed-loop current (for VVC)	30%~200%	50	%	Stop Only	page430 "A9-41"
A9-42	0xA92A	Oscillation suppression damping coefficient (for VVC)	0%~500%	100	%	RT Modify	page430 "A9-42"
A9-43	0xA92B	Initial position compensation angle (for VVC)	0~5	0	-	Stop Only	page430 "A9-43"
A9-44	0xA92C	SM initial position compensation angle	0.0~360.0	0.0	-	RT Modify	page431 "A9-44"
A9-45	0xA92D	SM low-speed processing enable	0: Disable 1: Enable	0	-	Stop Only	page431 "A9-45"
A9-46	0xA92E	SM low-speed processing switch frequency	0.01~P0-10	5.00	-	Stop Only	page431 "A9-46"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-47	0xA92F	SM low-speed processing current	10~200	100	-	Stop Only	page431 "A9-47"
A9-48	0xA930	SM low-speed processing feedback suppression coefficient	0~300	32	-	Stop Only	page432 "A9-48"
A9-49	0xA931	SM energy-saving control enable	0: Disable 1: Enable	0	-	Stop Only	page432 "A9-49"
A9-50	0xA932	Maximum field weakening current limit margin	200~1000	1000	-	Stop Only	page432 "A9-50"
A9-51	0xA933	IM parameter identification advanced settings	Units digit: Rotor R/Ls ident DC offset 0: Standard offset 1: Large offset Tens digit: New rotor R/Ls ident algorithm 0: Disable 1: Enable Hundreds digit: New mutual inductance static ident algorithm 0: Disable 1: Enable Thousands digit: Stator R ident algorithm 0: Current open-loop 1: Current closed-loop	111	-	Stop Only	page432 "A9-51"
A9-52	0xA934	U0-06 feedback torque selection	0: Motoring torque +ve, generating torque -ve 1: Torque +ve in speed +ve direction	1	-	RT Modify	page433 "A9-52"
A9-54	0xA936	Device voltage drop	0~10000	700	-	Stop Only	page433 "A9-54"
A9-55	0xA937	Dead-time 0	0~10000	352	-	Stop Only	page433 "A9-55"
A9-56	0xA938	Dead-time 1	0~10000	1052	-	Stop Only	page434 "A9-56"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-57	0xA939	Dead-time 2	0~10000	1270	-	Stop Only	page434 “A9-57”
A9-58	0xA93A	Dead-time 3	0~10000	1358	-	Stop Only	page434 “A9-58”
A9-59	0xA93B	Dead-time 4	0~10000	1404	-	Stop Only	page434 “A9-59”
A9-60	0xA93C	Dead-time 5	0~10000	1449	-	Stop Only	page435 “A9-60”
A9-61	0xA93D	Dead-time 6	0~10000	1661	-	Stop Only	page435 “A9-61”
A9-62	0xA93E	Dead-time 7	0~10000	1689	-	Stop Only	page435 “A9-62”
A9-63	0xA93F	Dead-time compensation current 0	0~10000	94	-	Stop Only	page435 “A9-63”
A9-64	0xA940	Dead-time compensation current 1	0~10000	376	-	Stop Only	page436 “A9-64”
A9-65	0xA941	Dead-time compensation current 2	0~10000	658	-	Stop Only	第436页 “A9-65”
A9-66	0xA942	Dead-time compensation current 3	0~10000	940	-	Stop Only	page436 “A9-66”
A9-67	0xA943	Dead-time compensation current 4	0~10000	1222	-	Stop Only	page436 “A9-67”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
A9-68	0xA944	Dead-time compensation current 5	0~10000	1504	-	Stop Only	page436 "A9-68"
A9-69	0xA945	Dead-time compensation current 6	0~10000	3478	-	Stop Only	page437 "A9-69"
A9-70	0xA946	Dead-time compensation current 7	0~10000	5452	-	Stop Only	page437 "A9-70"
A9-71	0xA947	Elastic oscillation suppression enable	0: Off 1: Target frequency adaptive 2: Fixed frequency	0	-	Stop Only	page437 "A9-71"
A9-72	0xA948	Elastic oscillation suppression filter time	20ms~1000ms	300	ms	RT Modify	page437 "A9-72"
A9-73	0xA949	Elastic oscillation suppression gain	10~1000	100	-	RT Modify	page438 "A9-73"
AC-00	0xAC00	AI1 measured voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page438 "AC-00"
AC-01	0xAC01	AI1 display voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page438 "AC-01"
AC-02	0xAC02	AI1 measured voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page439 "AC-02"
AC-03	0xAC03	AI1 display voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page439 "AC-03"
AC-04	0xAC04	AI2 measured voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page439 "AC-04"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AC-05	0xAC05	AI2 display voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page440 "AC-05"
AC-06	0xAC06	AI2 measured voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page440 "AC-06"
AC-07	0xAC07	AI2 display voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page440 "AC-07"
AC-08	0xAC08	AI3 measured voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page440 "AC-08"
AC-09	0xAC09	AI3 display voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page441 "AC-09"
AC-10	0xAC0A	AI3 measured voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page441 "AC-10"
AC-11	0xAC0B	AI3 display voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page441 "AC-11"
AC-12	0xAC0C	AO1 measured voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page442 "AC-12"
AC-13	0xAC0D	AO1 target voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page442 "AC-13"
AC-14	0xAC0E	AO1 measured voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page442 "AC-14"
AC-15	0xAC0F	AO1 target voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page442 "AC-15"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AC-16	0xAC10	AO2 measured voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page443 "AC-16"
AC-17	0xAC11	AO2 target voltage 1	-10.000V~10.000V	2.000	V	RT Modify	page443 "AC-17"
AC-18	0xAC12	AO2 measured voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page443 "AC-18"
AC-19	0xAC13	AO2 target voltage 2	-10.000V~10.000V	8.000	V	RT Modify	page443 "AC-19"
AC-20	0xAC14	PT100 measured voltage 1	0.000V~3.300V	0.440	V	RT Modify	page444 "AC-20"
AC-21	0xAC15	PT100 display voltage 1	0.000V~3.300V	0.440	V	RT Modify	page444 "AC-21"
AC-22	0xAC16	PT100 measured voltage 2	0.000V~3.300V	2.160	V	RT Modify	page444 "AC-22"
AC-23	0xAC17	PT100 display voltage 2	0.000V~3.300V	2.160	V	RT Modify	page445 "AC-23"
AC-24	0xAC18	PT1000 measured voltage 1	0.000V~3.300V	1.136	V	RT Modify	page445 "AC-24"
AC-25	0xAC19	PT1000 display voltage 1	0.000V~3.300V	1.136	V	RT Modify	page445 "AC-25"
AC-26	0xAC1A	PT1000 measured voltage 2	0.000V~3.300V	2.122	V	RT Modify	page445 "AC-26"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AC-27	0xAC1B	PT1000 display voltage 2	0.000V~3.300V	2.122	V	RT Modify	page446 "AC-27"
AC-28	0xAC1C	AO1 measured current 1	0.000mA~20.000mA	4.000	mA	RT Modify	page446 "AC-28"
AC-29	0xAC1D	AO1 target current 1	0.000mA~20.000mA	4.000	mA	RT Modify	page446 "AC-29"
AC-30	0xAC1E	AO1 measured current 2	0.000mA~20.000mA	16.000	mA	RT Modify	page446 "AC-30"
AC-31	0xAC1F	AO1 target current 2	0.000mA~20.000mA	16.000	mA	RT Modify	page447 "AC-31"
AF-00	0xAF00	RPDO1-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page447 "AF-00"
AF-01	0xAF01	RPDO1-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page447 "AF-01"
AF-02	0xAF02	RPDO1-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page448 "AF-02"
AF-03	0xAF03	RPDO1-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page448 "AF-03"
AF-04	0xAF04	RPDO1-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page448 "AF-04"
AF-05	0xAF05	RPDO1-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page448 "AF-05"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AF-06	0xAF06	RPDO1-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page448 "AF-06"
AF-07	0xAF07	RPDO1-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page449 "AF-07"
AF-08	0xAF08	RPDO2-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page449 "AF-08"
AF-09	0xAF09	RPDO2-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page449 "AF-09"
AF-10	0xAF0A	RPDO2-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page449 "AF-10"
AF-11	0xAF0B	RPDO2-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page450 "AF-11"
AF-12	0xAF0C	RPDO2-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page450 "AF-12"
AF-13	0xAF0D	RPDO2-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page450 "AF-13"
AF-14	0xAF0E	RPDO2-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page450 "AF-14"
AF-15	0xAF0F	RPDO2-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page451 "AF-15"
AF-16	0xAF10	RPDO3-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page451 "AF-16"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AF-17	0xAF11	RPDO3-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page451 "AF-17"
AF-18	0xAF12	RPDO3-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page451 "AF-18"
AF-19	0xAF13	RPDO3-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page451 "AF-19"
AF-20	0xAF14	RPDO3-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page452 "AF-20"
AF-21	0xAF15	RPDO3-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page452 "AF-21"
AF-22	0xAF16	RPDO3-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page452 "AF-22"
AF-23	0xAF17	RPDO3-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page452 "AF-23"
AF-24	0xAF18	RPDO4-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page453 "AF-24"
AF-25	0xAF19	RPDO4-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page453 "AF-25"
AF-26	0xAF1A	RPDO4-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page453 "AF-26"
AF-27	0xAF1B	RPDO4-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page453 "AF-27"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AF-28	0xAF1C	RPDO4-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page454 "AF-28"
AF-29	0xAF1D	RPDO4-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page454 "AF-29"
AF-30	0xAF1E	RPDO4-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page454 "AF-30"
AF-31	0xAF1F	RPDO4-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page454 "AF-31"
AF-32	0xAF20	TPDO1-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page454 "AF-32"
AF-33	0xAF21	TPDO1-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page455 "AF-33"
AF-34	0xAF22	TPDO1-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page455 "AF-34"
AF-35	0xAF23	TPDO1-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page455 "AF-35"
AF-36	0xAF24	TPDO1-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page455 "AF-36"
AF-37	0xAF25	TPDO1-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page456 "AF-37"
AF-38	0xAF26	TPDO1-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page456 "AF-38"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AF-39	0xAF27	TPDO1-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page456 “AF-39”
AF-40	0xAF28	TPDO2-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page456 “AF-40”
AF-41	0xAF29	TPDO2-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page457 “AF-41”
AF-42	0xAF2A	TPDO2-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page457 “AF-42”
AF-43	0xAF2B	TPDO2-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page457 “AF-43”
AF-44	0xAF2C	TPDO2-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page457 “AF-44”
AF-45	0xAF2D	TPDO2-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page457 “AF-45”
AF-46	0xAF2E	TPDO2-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page458 “AF-46”
AF-47	0xAF2F	TPDO2-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page458 “AF-47”
AF-48	0xAF30	TPDO3-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page458 “AF-48”
AF-49	0xAF31	TPDO3-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page458 “AF-49”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AF-50	0xAF32	TPDO3-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page459 “AF-50”
AF-51	0xAF33	TPDO3-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page459 “AF-51”
AF-52	0xAF34	TPDO3-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page459 “AF-52”
AF-53	0xAF35	TPDO3-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page459 “AF-53”
AF-54	0xAF36	TPDO3-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page460 “AF-54”
AF-55	0xAF37	TPDO3-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page460 “AF-55”
AF-56	0xAF38	TPDO4-SubIndex0-H	0x0~0xFFFF	0x0	-	RT Modify	page460 “AF-56”
AF-57	0xAF39	TPDO4-SubIndex0-L	0x0~0xFFFF	0x0	-	RT Modify	page460 “AF-57”
AF-58	0xAF3A	TPDO4-SubIndex1-H	0x0~0xFFFF	0x0	-	RT Modify	page460 “AF-58”
AF-59	0xAF3B	TPDO4-SubIndex1-L	0x0~0xFFFF	0x0	-	RT Modify	page461 “AF-59”
AF-60	0xAF3C	TPDO4-SubIndex2-H	0x0~0xFFFF	0x0	-	RT Modify	page461 “AF-60”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
AF-61	0xAF3D	TPDO4-SubIndex2-L	0x0~0xFFFF	0x0	-	RT Modify	page461 "AF-61"
AF-62	0xAF3E	TPDO4-SubIndex3-H	0x0~0xFFFF	0x0	-	RT Modify	page461 "AF-62"
AF-63	0xAF3F	TPDO4-SubIndex3-L	0x0~0xFFFF	0x0	-	RT Modify	page462 "AF-63"
AF-66	0xAF42	Valid number of RPDOs	0x0~0xFFFF	0x0	-	RT Modify	page462 "AF-66"
AF-67	0xAF43	Valid number of TPDOs	0x0~0xFFFF	0x0	-	RT Modify	page462 "AF-67"
B0-00	0xB000	Tension control mode	0: Invalid 1: Open-loop torque control 2: Closed-loop speed control 3: Closed-loop torque control 4: Constant linear speed control	0	-	Stop Only	page462 "B0-00"
B0-01	0xB001	Winding mode	0: Winding 1: Unwinding	0	-	RT Modify	page463 "B0-01"
B0-02	0xB002	Unwind reverse take-up selection	0.0m/min~500.0m/min	0.0	m/min	RT Modify	page463 "B0-02"
B0-03	0xB003	Mechanical transmission ratio	0.01~300.00	1.00	-	RT Modify	page464 "B0-03"
B0-04	0xB004	Line speed input source	0: No input 1: AI1 2: AI2 3: AI3 4: Pulse input (DI5) 5: Comm. setting (1000H) 6: Comm. setting (731AH)	0	-	Stop Only	page464 "B0-04"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B0-05	0xB005	Maximum line speed	0.0m/min~6500.0m/min	1000.0	m/min	RT Modify	page464 "B0-05"
B0-06	0xB006	Minimum line speed for diameter calculation	0.0m/min~6500.0m/min	20.0	m/min	RT Modify	page465 "B0-06"
B0-07	0xB007	Diameter calculation method selection	0: Calculated by line speed 1: Calculated by thickness accumulation 2: AI1 input 3: AI2 input 4: AI3 input 5: Pulse input (DI5) 6: Communication setting 7: Set by B0-14	0	-	Stop Only	page465 "B0-07"
B0-08	0xB008	Maximum roll diameter	0.1mm~6000.0mm	500.0	mm	RT Modify	page466 "B0-08"
B0-09	0xB009	Empty roll diameter	0.1mm~6000.0mm	100.0	mm	RT Modify	page466 "B0-09"
B0-10	0xB00A	Initial diameter source	0: Set by B0-11~B0-13 1: AI1 setting 2: AI2 setting 3: AI3 setting 4: Communication setting (1000H)	0	-	Stop Only	page466 "B0-10"
B0-11	0xB00B	Initial diameter 1	0.1mm~6000.0mm	100.0	mm	RT Modify	page467 "B0-11"
B0-12	0xB00C	Initial diameter 2	0.1mm~6000.0mm	100.0	mm	RT Modify	page467 "B0-12"
B0-13	0xB00D	Initial diameter 3	0.1mm~6000.0mm	100.0	mm	RT Modify	page467 "B0-13"
B0-14	0xB00E	Current roll diameter value	0.1mm~6000.0mm	100.0	mm	RT Modify	page467 "B0-14"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B0-15	0xB00F	Diameter filter time	0.00s~10.00s	5.00	s	RT Modify	page468 "B0-15"
B0-16	0xB010	Diameter change rate	0.0~1000.0	0.0	-	RT Modify	page468 "B0-16"
B0-17	0xB011	Diameter change direction limit	0: Function off 1: Disable decreasing for winding, disable increasing for unwinding	0	-	RT Modify	page468 "B0-17"
B0-18	0xB012	Allow diameter reset during operation	0~1	0	-	RT Modify	page469 "B0-18"
B0-19	0xB013	Pre-drive speed gain	-100.0%~200.0%	0.0	%	RT Modify	page469 "B0-19"
B0-20	0xB014	Pre-drive torque limit source	0: Set by P2-09 1: Set by tension control torque	1	-	Stop Only	page469 "B0-20"
B0-21	0xB015	Pre-drive torque correction	-100.0%~100.0%	0.0	%	RT Modify	page470 "B0-21"
B0-23	0xB017	Pre-drive acceleration time	0.0s~6000.0s	20.0	s	RT Modify	page470 "B0-23"
B0-24	0xB018	Pre-drive deceleration time	0.0s~6000.0s	20.0	s	RT Modify	page470 "B0-24"
B0-25	0xB019	Allow diameter calculation in pre-drive	0~1	0	-	RT Modify	page470 "B0-25"
B0-26	0xB01A	Tension frequency limiting	0.0%~100.0%	50.0	%	RT Modify	page471 "B0-26"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B0-27	0xB01B	Tension frequency limit offset	0.00Hz~100.00Hz	5.00	Hz	RT Modify	page471 "B0-27"
B0-28	0xB01C	Tension frequency limit enable	0: Disable 1: Enable	0	-	RT Modify	page471 "B0-28"
B0-29	0xB01D	Pulses per revolution	1~60000	1	-	RT Modify	page472 "B0-29"
B0-30	0xB01E	Number of turns per layer	1~10000	1	-	RT Modify	page472 "B0-30"
B0-31	0xB01F	Material thickness setting source	0: Digital setting 1: AI1 setting 2: AI2 setting 3: AI3 setting	0	-	Stop Only	page472 "B0-31"
B0-32	0xB020	Material thickness 0	0.01mm~100.00mm	0.01	mm	RT Modify	page473 "B0-32"
B0-33	0xB021	Material thickness 1	0.01mm~100.00mm	0.01	mm	RT Modify	page473 "B0-33"
B0-34	0xB022	Material thickness 2	0.01mm~100.00mm	0.01	mm	RT Modify	page473 "B0-34"
B0-35	0xB023	Material thickness 3	0.01mm~100.00mm	0.01	mm	RT Modify	page473 "B0-35"
B0-36	0xB024	Maximum thickness	0.01mm~100.00mm	1.00	mm	RT Modify	page474 "B0-36"
B0-37	0xB025	Disable diameter reset on stop	0: Disable 1: Enable	0	-	RT Modify	page474 "B0-37"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B0-38	0xB026	Closed-loop tension torque mode selection	0: Torque from pure PID operation 1: Torque from main + PID operation	0	-	Stop Only	page474 “B0-38”
B0-40	0xB028	Minimum pre-drive torque limit	0.0%~100.0%	0.0	%	RT Modify	page474 “B0-40”
B0-41	0xB029	Constant line speed source selection	0：AI1 1：AI2 2：AI3 3: Pulse setting (DI5) 4: Comm. setting (1000H) 5: Comm. setting (731AH)	0	-	RT Modify	page475 “B0-41”
B1-00	0xB100	Tension setting source	0: Set by B0-01 1: Set by AI1 2: Set by AI2 3: Set by AI3 4: Pulse setting (DI5) 5: Comm. setting (1000H)	0	-	Stop Only	page475 “B1-00”
B1-01	0xB101	Digital tension setting	0N~65000N	50	N	RT Modify	page476 “B1-01”
B1-02	0xB102	Maximum tension	0N~65000N	500	N	RT Modify	page476 “B1-02”
B1-03	0xB103	Zero speed threshold	0.0%~20.0%	0.0	%	RT Modify	page476 “B1-03”
B1-04	0xB104	Zero speed tension boost	0.0%~100.0%	0.0	%	RT Modify	page477 “B1-04”
B1-05	0xB105	Torque mode frequency acceleration time	0.0s~6500.0s	0.0	s	RT Modify	page477 “B1-05”
B1-06	0xB106	Torque mode frequency deceleration time	0.0s~6500.0s	0.0	s	RT Modify	page477 “B1-06”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B1-07	0xB107	Friction compensation	0.0%~50.0%	0.0	%	RT Modify	page477 "B1-07"
B1-08	0xB108	Mechanical inertia compensation coefficient	0~65535	0	-	RT Modify	page478 "B1-08"
B1-09	0xB109	Acceleration inertia compensation correction	0.0%~200.0%	100.0	%	RT Modify	page478 "B1-09"
B1-10	0xB10A	Deceleration inertia compensation correction	0.0%~200.0%	100.0	%	RT Modify	page478 "B1-10"
B1-11	0xB10B	Material density	0~65535	0	-	RT Modify	page479 "B1-11"
B1-12	0xB10C	Material width	0mm~65535mm	0	mm	RT Modify	page479 "B1-12"
B1-13	0xB10D	Inertia compensation exit delay	0ms~1000ms	0	ms	RT Modify	page479 "B1-13"
B1-14	0xB10E	Zero-speed compensation transition frequency	0.00Hz~20.00Hz	2.00	Hz	RT Modify	page479 "B1-14"
B1-15	0xB10F	Allow open-loop torque reversal	0: Torque reversal prohibited 1: Torque reversal allowed	0	-	RT Modify	page480 "B1-15"
B1-16	0xB110	Tension closed-loop torque limit	0.0%~200.0%	100.0	%	RT Modify	page480 "B1-16"
B1-17	0xB111	Friction compensation correction coefficient	-50.0~50.0	0.0	-	RT Modify	page480 "B1-17"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B1-18	0xB112	Friction compensation curve	0: Frequency 1: Line speed 2: Multi-stage friction compensation curve 1 3: Multi-stage friction compensation curve 2	0	-	Stop Only	page480 "B1-18"
B1-19	0xB113	Multi-segment friction compensation torque 1	0.0~50.0	0.0	-	RT Modify	page481 "B1-19"
B1-20	0xB114	Multi-segment friction compensation torque 2	0.0~50.0	0.0	-	RT Modify	page481 "B1-20"
B1-21	0xB115	Multi-segment friction compensation torque 3	0.0~50.0	0.0	-	RT Modify	page481 "B1-21"
B1-22	0xB116	Multi-segment friction compensation torque 4	0.0~50.0	0.0	-	RT Modify	page482 "B1-22"
B1-23	0xB117	Multi-segment friction compensation torque 5	0.0~50.0	0.0	-	RT Modify	page482 "B1-23"
B1-24	0xB118	Multi-segment friction compensation torque 6	0.0~50.0	0.0	-	RT Modify	page482 "B1-24"
B1-25	0xB119	Multi-segment friction compensation knee point 1	0.00Hz~P0-10	0.00	Hz	RT Modify	page482 "B1-25"
B1-26	0xB11A	Multi-segment friction compensation knee point 2	0.00Hz~P0-10	0.00	Hz	RT Modify	page483 "B1-26"
B1-27	0xB11B	Multi-segment friction compensation knee point 3	0.00Hz~P0-10	0.00	Hz	RT Modify	page483 "B1-27"
B1-28	0xB11C	Multi-segment friction compensation knee point 4	0.00Hz~P0-10	0.00	Hz	RT Modify	page483 "B1-28"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B1-29	0xB11D	Multi-segment friction compensation knee point 5	0.00Hz~P0-10	0.00	Hz	RT Modify	page484 "B1-29"
B1-30	0xB11E	Multi-segment friction compensation knee point 6	0.00Hz~P0-10	0.00	Hz	RT Modify	page484 "B1-30"
B1-31	0xB11F	Tension build-up enable	0: Off 1: On	0	-	Stop Only	page484 "B1-31"
B1-32	0xB120	Tension build-up dead band	0.0%~100.0%	2.0	%	RT Modify	page484 "B1-32"
B1-33	0xB121	Tension build-up frequency	0.00Hz~P0-10	0.10	Hz	RT Modify	page485 "B1-33"
B1-34	0xB122	Terminal torque boost ratio	0.0%~500.0%	50.0	%	RT Modify	page485 "B1-34"
B1-35	0xB123	Terminal torque boost cancellation time	0.0s~50.0s	0.0	s	RT Modify	page485 "B1-35"
B1-37	0xB125	Initial diameter self-learning enable	0: Off 1: On	0	-	Stop Only	page485 "B1-37"
B1-38	0xB126	Dancer arm length	1mm~65535mm	300	mm	Stop Only	page486 "B1-38"
B1-39	0xB127	Dancer arm angle	0.1°~360.0°	40.0	°	Stop Only	page486 "B1-39"
B2-00	0xB200	Taper curve	0: Curve taper 1: Multi-segment linear taper	0	-	Stop Only	page486 "B2-00"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B2-01	0xB201	Tension taper source selection	0: Set by B2-02 1: AI1 setting 2: AI2 setting 3: AI3 setting 4: Comm. setting (1000H)	0	-	Stop Only	page487 "B2-01"
B2-02	0xB202	Digital taper setting	0.0%~100.0%	0.0	%	RT Modify	page487 "B2-02"
B2-03	0xB203	Taper compensation correction	0mm~10000mm	0	mm	RT Modify	page487 "B2-03"
B2-05	0xB205	External taper AO output setting source	0: Set by B2-06 1: AI1 setting 2: AI2 setting 3: AI3 setting 4: Comm. setting (1000H)	0	-	Stop Only	page488 "B2-05"
B2-06	0xB206	External taper setting	0.0%~100.0%	100.0	%	RT Modify	page488 "B2-06"
B2-08	0xB208	Minimum diameter taper value	0.0%~100.0%	100.0	%	RT Modify	page488 "B2-08"
B2-09	0xB209	Linear taper switch point 1	B0-09~B0-08	150.0	mm	RT Modify	page488 "B2-09"
B2-10	0xB20A	Taper value at switch point 1	0.0%~100.0%	100.0	%	RT Modify	page489 "B2-10"
B2-11	0xB20B	Linear taper switch point 2	B2-09~B0-08	200.0	mm	RT Modify	page489 "B2-11"
B2-12	0xB20C	Taper value at switch point 2	0.0%~100.0%	90.0	%	RT Modify	page489 "B2-12"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B2-13	0xB20D	Linear taper switch point 3	B2-11~B0-08	250.0	mm	RT Modify	page489 "B2-13"
B2-14	0xB20E	Taper value at switch point 3	0.0%~100.0%	80.0	%	RT Modify	page490 "B2-14"
B2-15	0xB20F	Linear taper switch point 4	B2-13~B0-08	300.0	mm	RT Modify	page490 "B2-15"
B2-16	0xB210	Taper value at switch point 4	0.0%~100.0%	70.0	%	RT Modify	page490 "B2-16"
B2-17	0xB211	Linear taper switch point 5	B2-15~B0-08	400.0	mm	RT Modify	page490 "B2-17"
B2-18	0xB212	Taper value at switch point 5	0.0%~100.0%	50.0	%	RT Modify	page491 "B2-18"
B2-19	0xB213	Maximum diameter taper value	0.0~100.0	30.0	-	RT Modify	page491 "B2-19"
B6-00	0xB600	Source address 1	0x0~0xFFFF	0xE012	-	RT Modify	page491 "B6-00"
B6-01	0xB601	Mapping address 1	0x0~0xFFFF	0x500E	-	RT Modify	page491 "B6-01"
B6-02	0xB602	Write gain 1	0.00~100.00	10.00	-	RT Modify	page492 "B6-02"
B6-03	0xB603	Read gain 1	0.00~100.00	0.10	-	RT Modify	page492 "B6-03"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-04	0xB604	Source address 2	0x0~0xFFFF	0x0	-	RT Modify	page492 “B6-04”
B6-05	0xB605	Mapping address 2	0x0~0xFFFF	0x0	-	RT Modify	page492 “B6-05”
B6-06	0xB606	Write gain 2	0.00~100.00	0.00	-	RT Modify	page493 “B6-06”
B6-07	0xB607	Read gain 2	0.00~100.00	0.00	-	RT Modify	page493 “B6-07”
B6-08	0xB608	Source address 3	0x0~0xFFFF	0x0	-	RT Modify	page493 “B6-08”
B6-09	0xB609	Mapping address 3	0x0~0xFFFF	0x0	-	RT Modify	page494 “B6-09”
B6-10	0xB60A	Write gain 3	0.00~100.00	0.00	-	RT Modify	page494 “B6-10”
B6-11	0xB60B	Read gain 3	0.00~100.00	0.00	-	RT Modify	page494 “B6-11”
B6-12	0xB60C	Source address 4	0x0~0xFFFF	0x0	-	RT Modify	page494 “B6-12”
B6-13	0xB60D	Mapping address 4	0x0~0xFFFF	0x0	-	RT Modify	page495 “B6-13”
B6-14	0xB60E	Write gain 4	0.00~100.00	0.00	-	RT Modify	page495 “B6-14”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-15	0xB60F	Read gain 4	0.00~100.00	0.00	-	RT Modify	page495 “B6-15”
B6-16	0xB610	Source address 5	0x0~0xFFFF	0x0	-	RT Modify	page495 “B6-16”
B6-17	0xB611	Mapping address 5	0x0~0xFFFF	0x0	-	RT Modify	page496 “B6-17”
B6-18	0xB612	Write gain 5	0.00~100.00	0.00	-	RT Modify	page496 “B6-18”
B6-19	0xB613	Read gain 5	0.00~100.00	0.00	-	RT Modify	page496 “B6-19”
B6-20	0xB614	Source address 6	0x0~0xFFFF	0x0	-	RT Modify	page496 “B6-20”
B6-21	0xB615	Mapping address 6	0x0~0xFFFF	0x0	-	RT Modify	page497 “B6-21”
B6-22	0xB616	Write gain 6	0.00~100.00	0.00	-	RT Modify	page497 “B6-22”
B6-23	0xB617	Read gain 6	0.00~100.00	0.00	-	RT Modify	page497 “B6-23”
B6-24	0xB618	Source address 7	0x0~0xFFFF	0x0	-	RT Modify	page497 “B6-24”
B6-25	0xB619	Mapping address 7	0x0~0xFFFF	0x0	-	RT Modify	page498 “B6-25”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-26	0xB61A	Write gain 7	0.00~100.00	0.00	-	RT Modify	page498 "B6-26"
B6-27	0xB61B	Read gain 7	0.00~100.00	0.00	-	RT Modify	page498 "B6-27"
B6-28	0xB61C	Source address 8	0x0~0xFFFF	0x0	-	RT Modify	page498 "B6-28"
B6-29	0xB61D	Mapping address 8	0x0~0xFFFF	0x0	-	RT Modify	page499 "B6-29"
B6-30	0xB61E	Write gain 8	0.00~100.00	0.00	-	RT Modify	page499 "B6-30"
B6-31	0xB61F	Read gain 8	0.00~100.00	0.00	-	RT Modify	page499 "B6-31"
B6-32	0xB620	Source address 9	0x0~0xFFFF	0x0	-	RT Modify	page499 "B6-32"
B6-33	0xB621	Mapping address 9	0x0~0xFFFF	0x0	-	RT Modify	page500 "B6-33"
B6-34	0xB622	Write gain 9	0.00~100.00	0.00	-	RT Modify	page500 "B6-34"
B6-35	0xB623	Read gain 9	0.00~100.00	0.00	-	RT Modify	page500 "B6-35"
B6-36	0xB624	Source address 10	0x0~0xFFFF	0x0	-	RT Modify	page500 "B6-36"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-37	0xB625	Mapping address 10	0x0~0xFFFF	0x0	-	RT Modify	page501 “B6-37”
B6-38	0xB626	Write gain 10	0.00~100.00	0.00	-	RT Modify	page501 “B6-38”
B6-39	0xB627	Read gain 10	0.00~100.00	0.00	-	RT Modify	page501 “B6-39”
B6-40	0xB628	Source address 11	0x0~0xFFFF	0x0	-	RT Modify	page501 “B6-40”
B6-41	0xB629	Mapping address 11	0x0~0xFFFF	0x0	-	RT Modify	page502 “B6-41”
B6-42	0xB62A	Write gain 11	0.00~100.00	0.00	-	RT Modify	page502 “B6-42”
B6-43	0xB62B	Read gain 11	0.00~100.00	0.00	-	RT Modify	page502 “B6-43”
B6-44	0xB62C	Source address 12	0x0~0xFFFF	0x0	-	RT Modify	page502 “B6-44”
B6-45	0xB62D	Mapping address 12	0x0~0xFFFF	0x0	-	RT Modify	page503 “B6-45”
B6-46	0xB62E	Write gain 12	0.00~100.00	0.00	-	RT Modify	page503 “B6-46”
B6-47	0xB62F	Read gain 12	0.00~100.00	0.00	-	RT Modify	page503 “B6-47”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-48	0xB630	Source address 13	0x0~0xFFFF	0x0	-	RT Modify	page503 "B6-48"
B6-49	0xB631	Mapping address 13	0x0~0xFFFF	0x0	-	RT Modify	page504 "B6-49"
B6-50	0xB632	Write gain 13	0.00~100.00	0.00	-	RT Modify	page504 "B6-50"
B6-51	0xB633	Read gain 13	0.00~100.00	0.00	-	RT Modify	page504 "B6-51"
B6-52	0xB634	Source address 14	0x0~0xFFFF	0x0	-	RT Modify	page504 "B6-52"
B6-53	0xB635	Mapping address 14	0x0~0xFFFF	0x0	-	RT Modify	page505 "B6-53"
B6-54	0xB636	Write gain 14	0.00~100.00	0.00	-	RT Modify	page505 "B6-54"
B6-55	0xB637	Read gain 14	0.00~100.00	0.00	-	RT Modify	page505 "B6-55"
B6-56	0xB638	Source address 15	0x0~0xFFFF	0x0	-	RT Modify	page505 "B6-56"
B6-57	0xB639	Mapping address 15	0x0~0xFFFF	0x0	-	RT Modify	page506 "B6-57"
B6-58	0xB63A	Write gain 15	0.00~100.00	0.00	-	RT Modify	page506 "B6-58"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-59	0xB63B	Read gain 15	0.00~100.00	0.00	-	RT Modify	page506 "B6-59"
B6-60	0xB63C	Source address 16	0x0~0xFFFF	0x0	-	RT Modify	page506 "B6-60"
B6-61	0xB63D	Mapping address 16	0x0~0xFFFF	0x0	-	RT Modify	page507 "B6-61"
B6-62	0xB63E	Write gain 16	0.00~100.00	0.00	-	RT Modify	page507 "B6-62"
B6-63	0xB63F	Read gain 16	0.00~100.00	0.00	-	RT Modify	page507 "B6-63"
B6-64	0xB640	Source address 17	0x0~0xFFFF	0x0	-	RT Modify	page507 "B6-64"
B6-65	0xB641	Mapping address 17	0x0~0xFFFF	0x0	-	RT Modify	page508 "B6-65"
B6-66	0xB642	Write gain 17	0.00~100.00	0.00	-	RT Modify	page508 "B6-66"
B6-67	0xB643	Read gain 17	0.00~100.00	0.00	-	RT Modify	page508 "B6-67"
B6-68	0xB644	Source address 18	0x0~0xFFFF	0x0	-	RT Modify	page508 "B6-68"
B6-69	0xB645	Mapping address 18	0x0~0xFFFF	0x0	-	RT Modify	page509 "B6-69"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-70	0xB646	Write gain 18	0.00~100.00	0.00	-	RT Modify	page509 "B6-70"
B6-71	0xB647	Read gain 18	0.00~100.00	0.00	-	RT Modify	page509 "B6-71"
B6-72	0xB648	Source address 19	0x0~0xFFFF	0x0	-	RT Modify	page509 "B6-72"
B6-73	0xB649	Mapping address 19	0x0~0xFFFF	0x0	-	RT Modify	page510 "B6-73"
B6-74	0xB64A	Write gain 19	0.00~100.00	0.00	-	RT Modify	page510 "B6-74"
B6-75	0xB64B	Read gain 19	0.00~100.00	0.00	-	RT Modify	page510 "B6-75"
B6-76	0xB64C	Source address 20	0x0~0xFFFF	0x0	-	RT Modify	page510 "B6-76"
B6-77	0xB64D	Mapping address 20	0x0~0xFFFF	0x0	-	RT Modify	page511 "B6-77"
B6-78	0xB64E	Write gain 20	0.00~100.00	0.00	-	RT Modify	page511 "B6-78"
B6-79	0xB64F	Read gain 20	0.00~100.00	0.00	-	RT Modify	page511 "B6-79"
B6-80	0xB650	Source address 21	0x0~0xFFFF	0x0	-	RT Modify	page511 "B6-80"

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-81	0xB651	Mapping address 21	0x0~0xFFFF	0x0	-	RT Modify	page512 “B6-81”
B6-82	0xB652	Write gain 21	0.00~100.00	0.00	-	RT Modify	page512 “B6-82”
B6-83	0xB653	Read gain 21	0.00~100.00	0.00	-	RT Modify	page512 “B6-83”
B6-84	0xB654	Source address 22	0x0~0xFFFF	0x0	-	RT Modify	page512 “B6-84”
B6-85	0xB655	Mapping address 22	0x0~0xFFFF	0x0	-	RT Modify	page513 “B6-85”
B6-86	0xB656	Write gain 22	0.00~100.00	0.00	-	RT Modify	page513 “B6-86”
B6-87	0xB657	Read gain 22	0.00~100.00	0.00	-	RT Modify	第513页 “B6-87”
B6-88	0xB658	Source address 23	0x0~0xFFFF	0x0	-	RT Modify	page513 “B6-88”
B6-89	0xB659	Mapping address 23	0x0~0xFFFF	0x0	-	RT Modify	page514 “B6-89”
B6-90	0xB65A	Write gain 23	0.00~100.00	0.00	-	RT Modify	page514 “B6-90”
B6-91	0xB65B	Read gain 23	0.00~100.00	0.00	-	RT Modify	page514 “B6-91”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
B6-92	0xB65C	Source address 24	0x0~0xFFFF	0x0	-	RT Modify	page514 “B6-92”
B6-93	0xB65D	Mapping address 24	0x0~0xFFFF	0x0	-	RT Modify	page515 “B6-93”
B6-94	0xB65E	Write gain 24	0.00~100.00	0.00	-	RT Modify	page515 “B6-94”
B6-95	0xB65F	Read gain 24	0.00~100.00	0.00	-	RT Modify	page515 “B6-95”
B6-96	0xB660	Source address 25	0x0~0xFFFF	0x0	-	RT Modify	page515 “B6-96”
B6-97	0xB661	Mapping address 25	0x0~0xFFFF	0x0	-	RT Modify	page516 “B6-97”
B6-98	0xB662	Write gain 25	0.00~100.00	0.00	-	RT Modify	page516 “B6-98”
B6-99	0xB663	Read gain 25	0.00~100.00	0.00	-	RT Modify	page516 “B6-99”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-00	0x7000	Operation frequency	0.00Hz~0.00Hz	0.00	Hz	No Alteration	*page535 “ U0-00”*
U0-01	0x7001	Set frequency	0.00Hz~0.00Hz	0.00	Hz	No Alteration	*page535 “ U0-01”*
U0-02	0x7002	DC bus voltage	0.0V~0.0V	0.0	V	No Alteration	*page535 “ U0-02”*
U0-03	0x7003	Output voltage	0V~0V	0	V	No Alteration	*page535 “ U0-03”*
U0-04	0x7004	Output current	0.0A~0.0A	0.0	A	No Alteration	*page536 “ U0-04”*

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-05	0x7005	Output power	0.0kW~0.0kW	0.0	kW	No Alteration	page536 “U0-05”
U0-06	0x7006	Output torque	0.0%~0.0%	0.0	%	No Alteration	page536 “U0-06”
U0-07	0x7007	DI input status	0~0	0	-	No Alteration	page536 “U0-07”
U0-08	0x7008	DO output status	0~0	0	-	No Alteration	page537 “U0-08”
U0-09	0x7009	AI1 voltage	0.00V~0.00V	0.00	V	No Alteration	page538 “U0-09”
U0-10	0x700A	AI2 voltage	0.00V~0.00V	0.00	V	No Alteration	page538 “U0-10”
U0-11	0x700B	AI3 voltage	0.00V~0.00V	0.00	V	No Alteration	page538 “U0-11”
U0-12	0x700C	Count value	0~0	0	-	No Alteration	page538 “U0-12”
U0-13	0x700D	Length value	0~0	0	-	No Alteration	page538 “U0-13”
U0-14	0x700E	Load speed display	0rpm~65535rpm	0	rpm	No Alteration	page539 “U0-14”
U0-15	0x700F	PID setpoint	0.0%~0.0%	0.0	%	No Alteration	page539 “U0-15”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-16	0x7010	PID feedback	0.0%~0.0%	0.0	%	No Alteration	page539 “U0-16”
U0-17	0x7011	PLC stage	0~0	0	-	No Alteration	page540 “U0-17”
U0-18	0x7012	PULSE input pulse frequency	0.00kHz~0.00kHz	0.00	kHz	No Alteration	page540 “U0-18”
U0-19	0x7013	Feedback speed	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page540 “U0-19”
U0-20	0x7014	Remaining running time	0.0min~0.0min	0.0	min	No Alteration	page540 “U0-20”
U0-21	0x7015	AI1 voltage before calibration	0.000V~0.000V	0.000	V	No Alteration	page541 “U0-21”
U0-22	0x7016	AI2 voltage before calibration	0.000V~0.000V	0.000	V	No Alteration	page541 “U0-22”
U0-23	0x7017	AI3 voltage before calibration	0.000V~0.000V	0.000	V	No Alteration	page541 “U0-23”
U0-24	0x7018	Line speed	0m/min~0m/min	0	m/min	No Alteration	page541 “U0-24”
U0-25	0x7019	Current power-on time	0min~0min	0	min	No Alteration	page542 “U0-25”
U0-26	0x701A	Current running time	0.0min~0.0min	0.0	min	No Alteration	page542 “U0-26”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-27	0x701B	PULSE input pulse frequency	0Hz~0Hz	0	Hz	No Alteration	page542 “U0-27”
U0-28	0x701C	Communication setpoint	0.00%~0.00%	0.00	%	No Alteration	page542 “U0-28”
U0-29	0x701D	Encoder feedback speed	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page543 “U0-29”
U0-30	0x701E	Main frequency X display	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page543 “U0-30”
U0-31	0x701F	Auxiliary frequency Y display	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page543 “U0-31”
U0-32	0x7020	View arbitrary memory address value	0~0	0	-	No Alteration	page543 “U0-32”
U0-33	0x7021	Synchronous motor rotor position	0.0°~0.0°	0.0	°	No Alteration	page544 “U0-33”
U0-34	0x7022	Motor temperature	0°C~0°C	0	°C	No Alteration	page544 “U0-34”
U0-35	0x7023	Target torque	0.0%~0.0%	0.0	%	No Alteration	page544 “U0-35”
U0-36	0x7024	Resolver position	0~0	0	-	No Alteration	page544 “U0-36”
U0-37	0x7025	Power factor angle	0.0°~0.0°	0.0	°	No Alteration	page545 “U0-37”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-38	0x7026	ABZ position	0~0	0	-	No Alteration	page545 “U0-38”
U0-39	0x7027	V/f separation target voltage	0V~0V	0	V	No Alteration	page545 “U0-39”
U0-40	0x7028	V/f separation output voltage	0V~0V	0	V	No Alteration	page545 “U0-40”
U0-41	0x7029	DI input status visual display	0~0	0	-	No Alteration	page546 “U0-41”
U0-42	0x702A	DO output status visual display	0~0	0	-	No Alteration	page546 “U0-42”
U0-43	0x702B	DI function status visual display	0~0	0	-	No Alteration	page546 “U0-43”
U0-44	0x702C	DO function status visual display	0~0	0	-	No Alteration	page546 “U0-44”
U0-45	0x702D	Fault subcode	0~0	0	-	No Alteration	page547 “U0-45”
U0-46	0x702E	Inverter module temperature	0°C~0°C	0	°C	No Alteration	page547 “U0-46”
U0-47	0x702F	PTC channel voltage before calibration	0.000V~0.000V	0.000	V	No Alteration	page547 “U0-47”
U0-48	0x7030	PTC channel voltage after calibration	0.000V~0.000V	0.000	V	No Alteration	page547 “U0-48”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-49	0x7031	Zero servo deviation pulse count	0~0	0	-	No Alteration	page548 “ U0-49”
U0-50	0x7032	Roll diameter	0mm~0mm	0	mm	No Alteration	page548 “ U0-50”
U0-51	0x7033	Tension (after taper)	0N~0N	0	N	No Alteration	第page U0-51”
U0-52	0x7034	Cumulative power consumption (kWh)	0kWh~0kWh	0	kWh	No Alteration	page556 “ U0-52”
U0-53	0x7035	Cumulative power consumption (MWh)	0MWh~0MWh	0	MWh	No Alteration	page557 “ U0-53”
U0-54	0x7036	Cumulative power consumption (GWh)	0GWh~0GWh	0	GWh	No Alteration	page557 “ U0-54”
U0-58	0x703A	Z-signal counter	0~0	0	-	No Alteration	page548 “ U0-58”
U0-59	0x703B	Set frequency (%)	0~0	0	-	No Alteration	page549 “ U0-59”
U0-60	0x703C	Running frequency (%)	0~0	0	-	No Alteration	page549 “ U0-60”
U0-61	0x703D	Inverter status	0~0	0	-	No Alteration	page549 “ U0-61”
U0-62	0x703E	Current fault code	0~0	0	-	No Alteration	page549 “ U0-62”

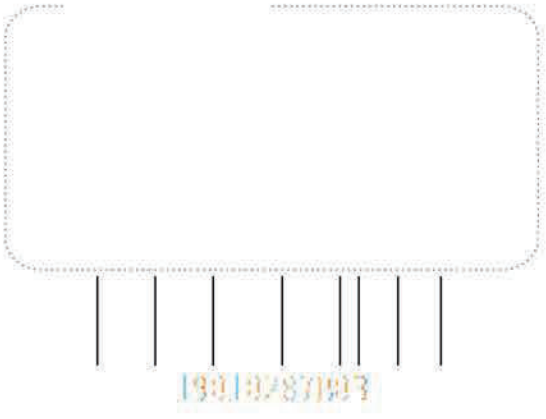
Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-63	0x703F	Running frequency (after droop)	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page550 “U0-63”
U0-64	0x7040	Back EMF	0.0V~0.0V	0.0	V	No Alteration	page550 “U0-64”
U0-65	0x7041	Stator resistance identified at startup	0~0	0	-	No Alteration	page550 “U0-65”
U0-66	0x7042	Communication expansion card model	0~0	0	-	No Alteration	page550 “U0-66”
U0-67	0x7043	Communication expansion card version	0~0	0	-	No Alteration	page551 “U0-67”
U0-68	0x7044	DP card inverter status	0~0	0	-	No Alteration	page551 “U0-68”
U0-69	0x7045	Speed transmitted to DP card / 0.01Hz	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page551 “U0-69”
U0-70	0x7046	Speed transmitted to DP card / rpm	0rpm~0rpm	0	rpm	No Alteration	page552 “U0-70”
U0-71	0x7047	Communication card dedicated current display	0.0A~0.0A	0.0	A	No Alteration	page552 “U0-71”
U0-72	0x7048	Communication card error status	0~0	0	-	No Alteration	page552 “U0-72”
U0-73	0x7049	Target torque before filtering	0.0%~0.0%	0.0	%	No Alteration	page552 “U0-73”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-74	0x704A	Target torque after filtering	0.0%~0.0%	0.0	%	No Alteration	page553 “U0-74”
U0-75	0x704B	Set torque after acceleration/ deceleration	0.0%~0.0%	0.0	%	No Alteration	page553 “U0-75”
U0-76	0x704C	Motoring torque limit	0.0%~0.0%	0.0	%	No Alteration	page553 “U0-76”
U0-77	0x704D	Regenerative torque limit	0.0%~0.0%	0.0	%	No Alteration	page553 “U0-77”
U0-80	0x7050	EtherCAT slave station official name	0~0	0	-	No Alteration	page554 “U0-80”
U0-81	0x7051	EtherCAT slave station alias	0~0	0	-	No Alteration	page554 “U0-81”
U0-82	0x7052	EtherCAT ESM transmission error code	0~0	0	-	No Alteration	page554 “U0-82”
U0-83	0x7053	EtherCAT XML file version	0.00~0.00	0.00	-	No Alteration	page554 “U0-83”
U0-84	0x7054	EtherCAT sync loss count	0~0	0	-	No Alteration	page555 “U0-84”
U0-85	0x7055	Max invalid frames/errors on EtherCAT port 0 per unit time	0~0	0	-	No Alteration	page555 “U0-85”
U0-86	0x7056	Max invalid frames/errors on EtherCAT port 1 per unit time	0~0	0	-	No Alteration	SEKI 555 “U0-86”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U0-87	0x7057	Max EtherCAT forwarding errors per unit time	0~0	0	-	No Alteration	page555 “U0-87”
U0-88	0x7058	Max EtherCAT data frame processing unit error count per unit time	0~0	0	-	No Alteration	page556 “U0-88”
U0-89	0x7059	Max EtherCAT port connection losses per unit time	0~0	0	-	No Alteration	page556 “U0-89”
U0-96	0x7060	Induction motor vector on-line observed no-load current	0.0A~0.0A	0.0	A	No Alteration	page556 “U0-96”
U0-97	0x7061	Induction motor vector on-line observed mutual inductance	0.0mH~0.0mH	0.0	mH	No Alteration	page556 “U0-97”
U1-00	0x7100	Line speed	0.0m/min~0.0m/min	0.0	m/min	No Alteration	page557 “U1-00”
U1-01	0x7101	Current roll diameter	0.0mm~0.0mm	0.0	mm	No Alteration	page558 “U1-01”
U1-02	0x7102	Line speed synchronous frequency	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page558 “U1-02”
U1-03	0x7103	Frequency PID output	0.00Hz~0.00Hz	0.00	Hz	No Alteration	page558 “U1-03”
U1-04	0x7104	Current set tension	0N~0N	0	N	No Alteration	page558 “U1-04”
U1-05	0x7105	Set tension after taper	0N~0N	0	N	No Alteration	page558 “U1-05”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U1-06	0x7106	Set torque for tension control	0.0%~0.0%	0.0	%	No Alteration	page559 “U1-06”
U1-07	0x7107	Torque PID output	0.0%~0.0%	0.0	%	No Alteration	page559 “U1-07”
U1-08	0x7108	Tension control mode	0~0	0	-	No Alteration	page559 “U1-08”
U1-09	0x7109	Tension PID setpoint	0.0%~0.0%	0.0	%	No Alteration	page559 “U1-09”
U1-10	0x710A	Tension PID feedback	0.0%~0.0%	0.0	%	No Alteration	page560 “U1-10”
U1-11	0x710B	Tension PID proportional gain	0~0	0	-	No Alteration	page560 “U1-11”
U1-12	0x710C	Tension PID integral time Ti	0s~0s	0	s	No Alteration	page560 “U1-12”
U1-13	0x710D	Tension PID derivative time Td	0s~0s	0	s	No Alteration	page560 “U1-13”
U1-14	0x710E	Tension time	0s~0s	0	s	No Alteration	page561 “U1-14”
U1-15	0x710F	Winding mode	0~0	0	-	No Alteration	page561 “U1-15”
U1-18	0x7112	Torque limit for vertical cable reel application	0.0%~0.0%	0.0	%	No Alteration	page561 “U1-18”

Parameter	Comm Address	Parameter Name	Setting Range	Default Value	Unit	Change Mode	Page Number
U1-19	0x7113	Calculated torque lower limit for vertical cable reel application	0.0%~0.0%	0.0	%	No Alteration	*page561 “U1-19”*
U1-20	0x7114	Actual torque upper limit for vertical cable reel application	0.0%~0.0%	0.0	%	No Alteration	*page562 “U1-20”*
U1-21	0x7115	Actual torque lower limit for vertical cable reel application	0.0%~0.0%	0.0	%	No Alteration	*page562 “U1-21”*



Yolico

YD680系列

电流矢量变频器用户手册



380V 3-phase 0.75 ~ 630kW

Ver 1.3

前 言

首先感谢您购买使用无锡优利康电气开发生产的 YD680 系列变频器！

该产品是一款通用高性能矢量控制变频器，主要用于控制和调节三相交流异步电机和三相交流永磁电机的速度和转矩，可用于纺织、造纸、拉丝、机床、包装、食品、 风机、水泵及各种自动化生产设备的驱动。

本手册介绍产品的基本信息、机械安装、电气安装、安装准备、通信、调试、功能应用、故障码、功能码、以及产品符合认证及标准等详细内容。

初次使用

对于初次使用本产品的用户，应先认真阅读本手册。若对一些功能及性能方面有所疑惑，请咨询我公司的技术支持人员，以获得帮助，对正确使用本产品有利。

符合标准

相关认证指令与标准如下表所示，是否获得相关认证资质以产品铭牌标识为准。

认证名称	指令名称		标准
CE 认证	EMC 指令	2014/30/EU	EN 61800-3
	LVD 指令	2014/35/EU	EN 61800-5-1
	RoHS 指令	2011/65/EU	EN 50581

- 在正确安装和正确使用的条件下，满足 IEC/EN 61800-3 标准要求，或GB/T 12668.1 2002 详细请参照外围设备连接及常见 EMC 问题整改部分。



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安全注意事项

安全声明

- 在安装、操作、维护产品时，请先阅读并遵守本安全注意事项。
- 为保障人身和设备安全，在安装、操作和维护产品时，请遵循产品上标识及手册中说明的所有安全注意事项。
- 手册中的“注意”、“警告”和“危险”事项，并不代表所应遵守的所有安全事项，只作为所有安全注意事项的补充。
- 本产品应在符合设计规格要求的环境下使用，否则可能造成故障，因未遵守相关规定引发的功能异常或部件损坏等不在产品质量保证范围之内、
- 因违规操作产品引发的人身安全事故、财产损失等，我司将不承担任何法律责任。

安全等级定义

危 险	“危险”表示如果不按规定操作，则导致死亡或严重身体伤害。
警 告	“警告”表示如果不按规定操作，则可能导致死亡或严重身体伤害。
注 意	“注意”如果不按规定操作，则可能导致轻微身体伤害或设备损坏。

安全注意事项

开箱验收

注 意

- 开箱前请检查产品的外包装是否完好，有无破损、浸湿、受潮、变形等情况。
- 按照层次顺序打开包装，严禁猛烈敲打！
- 开箱时请检查产品和产品附件表面有无残损、锈蚀、碰伤等情况。
- 开箱后请仔细对照装箱单，查验产品及产品附件数量、资料是否齐全

警 告

- 开箱时发现产品及产品附件有损伤、锈蚀、使用过的迹象等问题，请勿安装！
- 开箱时发现产品内部进水、部件缺少或有部件损坏时，请勿安装！
- 请仔细对照装箱单，发现装箱单与产品名称不符时，请勿安装！

储存与运输时

注 意

- 按照产品的储存与运输条件进行储存与运输，储存温度、湿度满足要求。
- 避免在水溅雨淋、阳光直射、强电场、强磁场、强烈振动等场所储存与运输。
- 避免产品储存时间超过 3 个月，储存时间过长时，请进行更严密的防护和必要的检验。
- 将产品进行严格包装后再进行车辆运输，长途运输时必须使用封闭的箱体。
- 严禁将本产品与可能对本产品构成影响或损害的设备或物品一起混装运输。

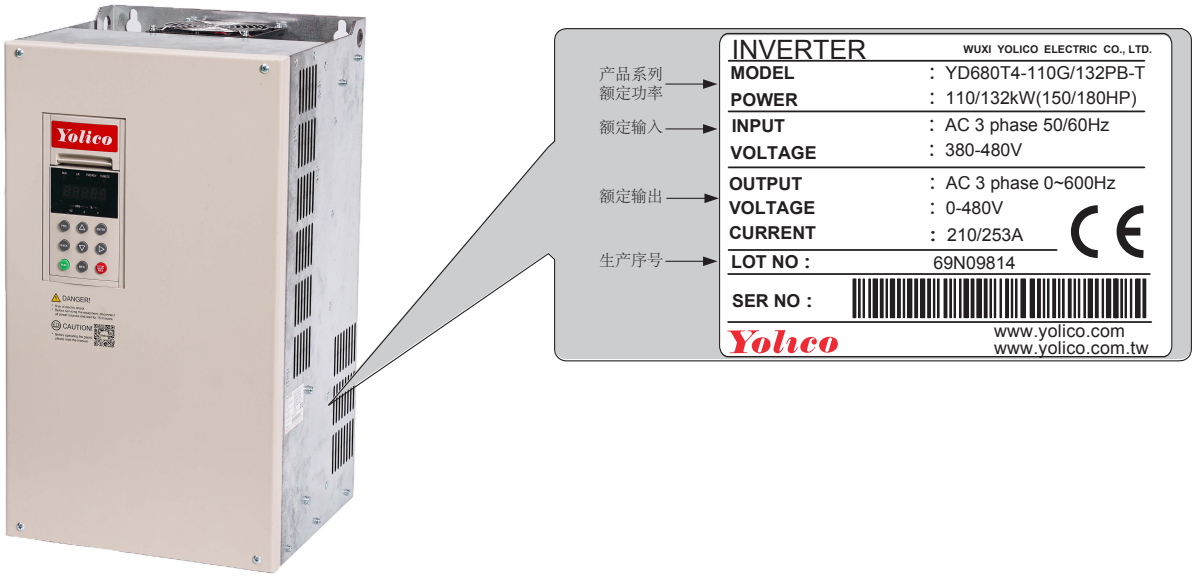
第一章　产品信息

安全注意事项

注意

- 请勿抓住前盖板或端子外罩搬运变频器。如果仅抓住前盖板，则会使主体掉落，有砸伤的危险；
- 操作变频器时，请遵守静电防止措施（ESD）规定的步骤。否则会因静电而损坏变频器内部的回路。

1.1 铭牌及型号



YD680 T4- 55 G / 75 P B-T

标识	产品名称
YD680	变频器系列

标识	电压等级
T2-	三相220-240V
T4-	三相380-480V
T2S-	单相200-240V
T6-	三相660-690V
T11-	三相1140V

标识	G型功率等级
0P7	0.75kW
1P5	1.5kW
...	...
630	630kW

标识	负载类型
G	150%*60秒 通用

标识	尾缀说明
空	无
-L	含输出交流电抗器
-T	含直流电抗器
-A	含辅助配电柜

标识	制动单元
空	无
B	含制动单元

标识	负载类型
P	120%*60秒 风机泵

标识	P型功率等级
1P5	1.5kW
2P2	2.2kW
...	...
500	500kW

图 1-1 产品命名与铭牌标识

第二章　系统连接

安全注意事项

危险

- 严禁在电源接通的状态下进行接线，否则会有触电的危险！
- 请务必将断路器保持在 OFF 状态。

警告

- 将变频器安装在封闭的柜内或机壳箱内时，请用冷却风扇或冷却空调等充分冷却，以使变频器进气温度保持在 50℃ 以下，否则可能导致过热或火灾！

注意

- 进行安装作业时，请用布或纸等遮住变频器的上部，以防止钻孔时的金属屑、油、水等进入变频器内部。如果异物进入变频器内部，可能导致变频器故障；作业结束后，请拿掉这些布或纸，如果继续盖在上面，则会使通风效果变差，导致变频器异常发热！
- 在使用变频器时，请遵守静电防止措施（ESD）规定的步骤，否则会因静电而损坏变频器！
- 用变频器驱动时和用商用电源驱动时的转矩特性不同，请确认要连接的机械的负载转矩特性。
- 请勿在拆下外壳的状态下吊起变频器，否则可能导致变频器的电路板或端子排损坏！

2.1 YD680 系统连接图

使用YD680系列变频器控制电机构成控制系统时，需要在变频器的输入输出侧安装各类电气元件保证系统的安全稳定。产品系统构成如下图所示：

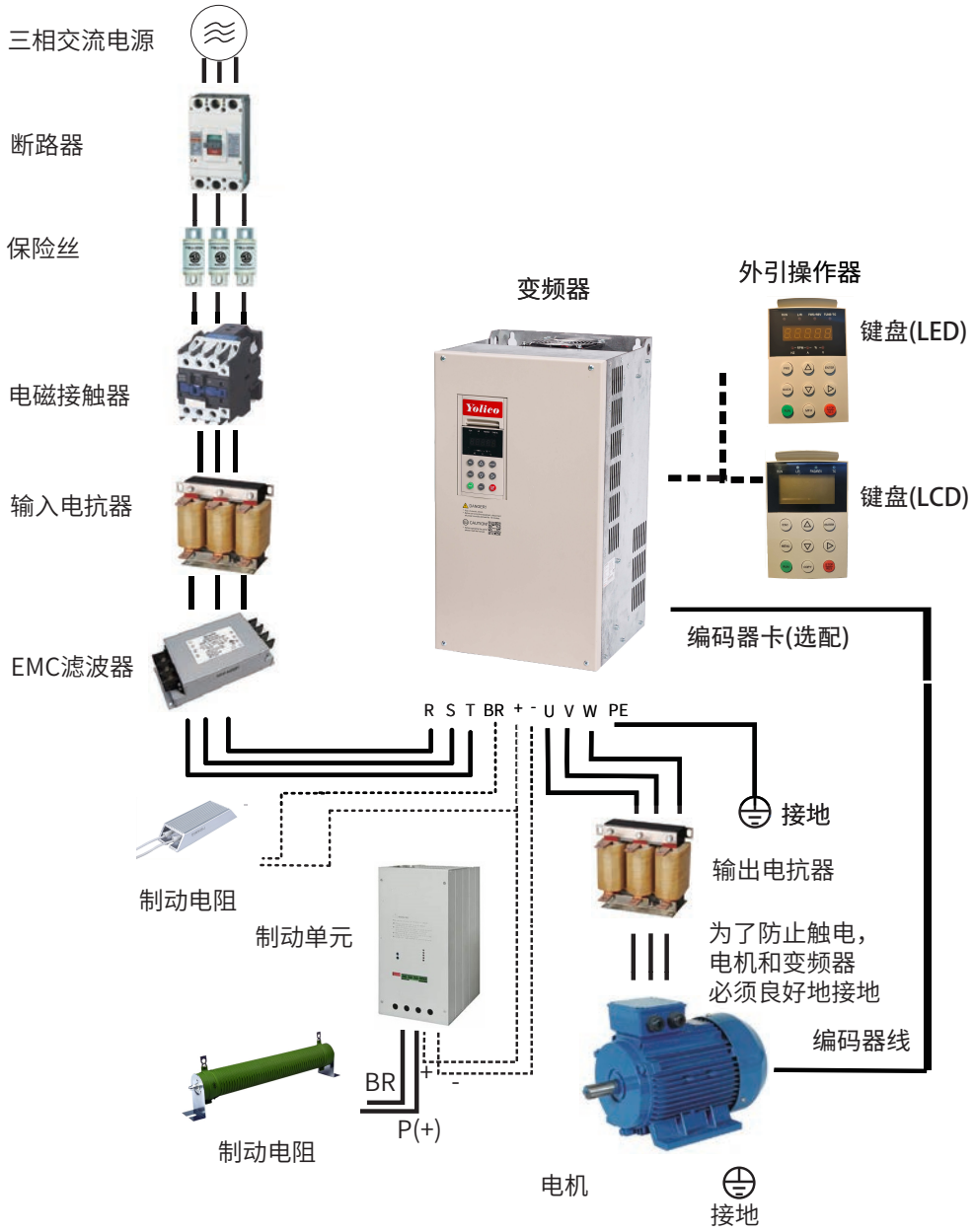


图 2-1 YD680 系列系统构成

NOTE

- 上图仅作为 YD680变频系统连接示意图，外围设备选型参见第 9 章《规格与选型》。

第三章　安装与接线

3.1 安装

3.1.1 安装环境

1） 环境温度：周围环境温度对变频器寿命有很大影响，不允许变频器的运行环境温度超过允许温度范围 （-10℃～ 50℃）。

2） 将变频器装于阻燃物体的表面，周围要有足够空间散热。变频器工作时易产生大量热量。并用螺丝垂直安装在安装支座上。

3） 请安装在不易振动的地方。振动应不大于 0.6G。特别注意远离冲床等设备。

4） 避免装于阳光直射、潮湿、有水珠的地方。

5） 避免装于空气中有腐蚀性、易燃性、易爆性气体的场所。

6） 避免装在有油污、粉尘的场所。

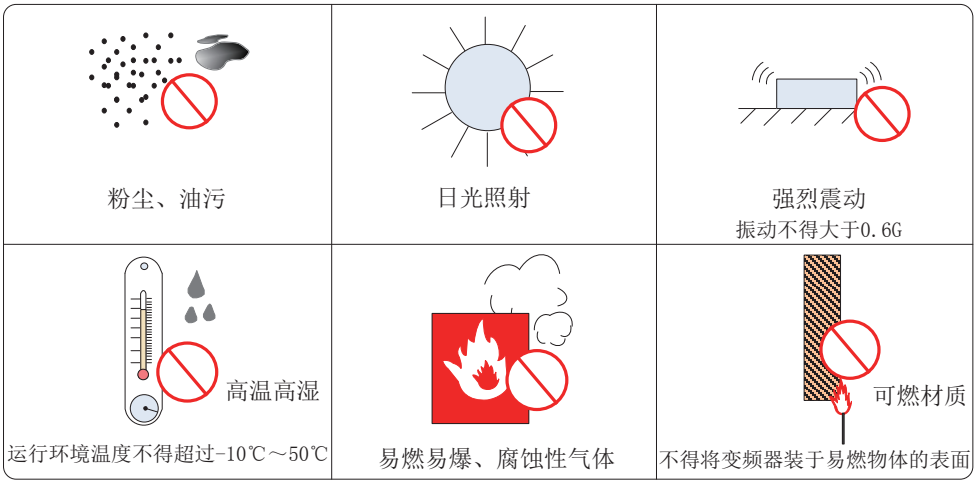


图 3-1 安装环境要求

7） YD680 系列产品为机柜内安装产品，需要安装在最终系统中使用，最终系统应提供相应的防火外壳、电气防护外壳和机械防护外壳等，并符合当地法律法规和相关 IEC 标准要求。

三相380V 0.75kW ~ 450kW 机型
三相220V　0.4kW ~ 200kW 机型

3.2 接线

3.2.1 标准接线图

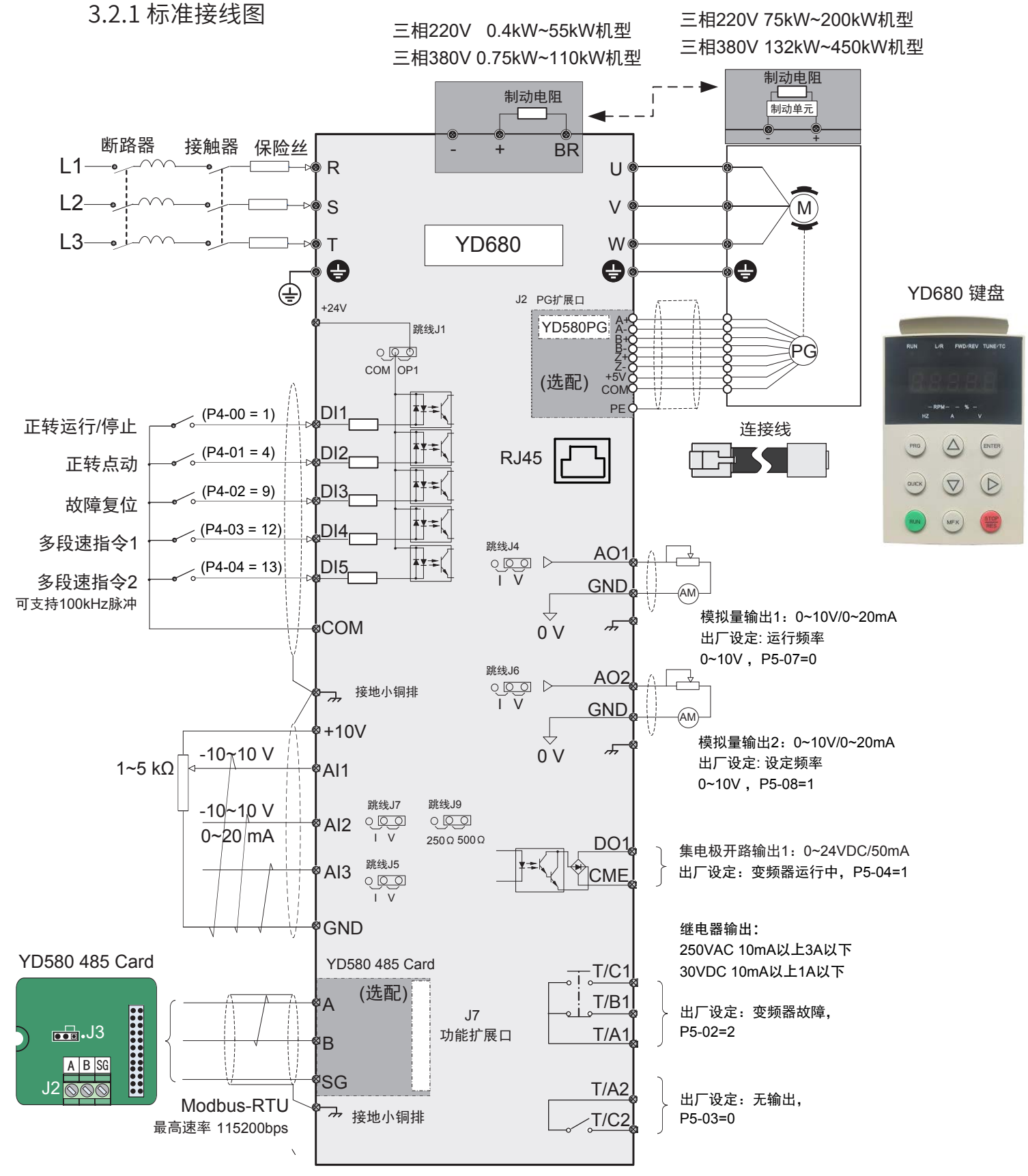


图 3-26 YD680 典型接线图

注：　屏蔽层；　双绞线

3.2.2 主回路端子功能说明及注意事项

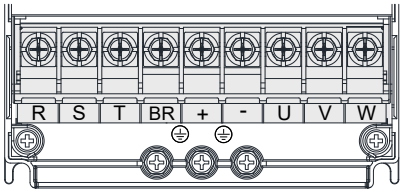


图 3-27 0.4kW~ 22kW 主回路端子分布图

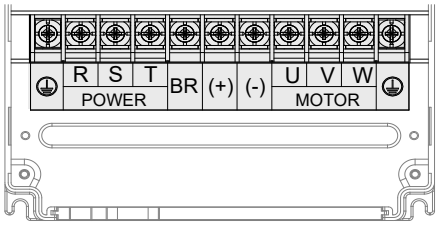


图 3-28 30kW~160kW 主回路端子分布图

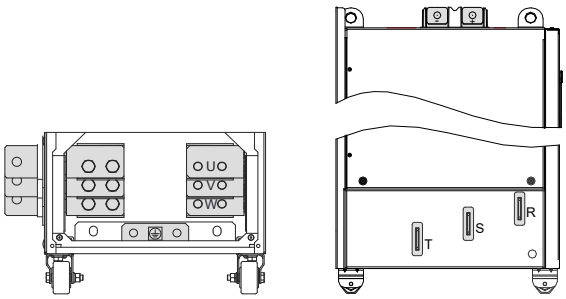


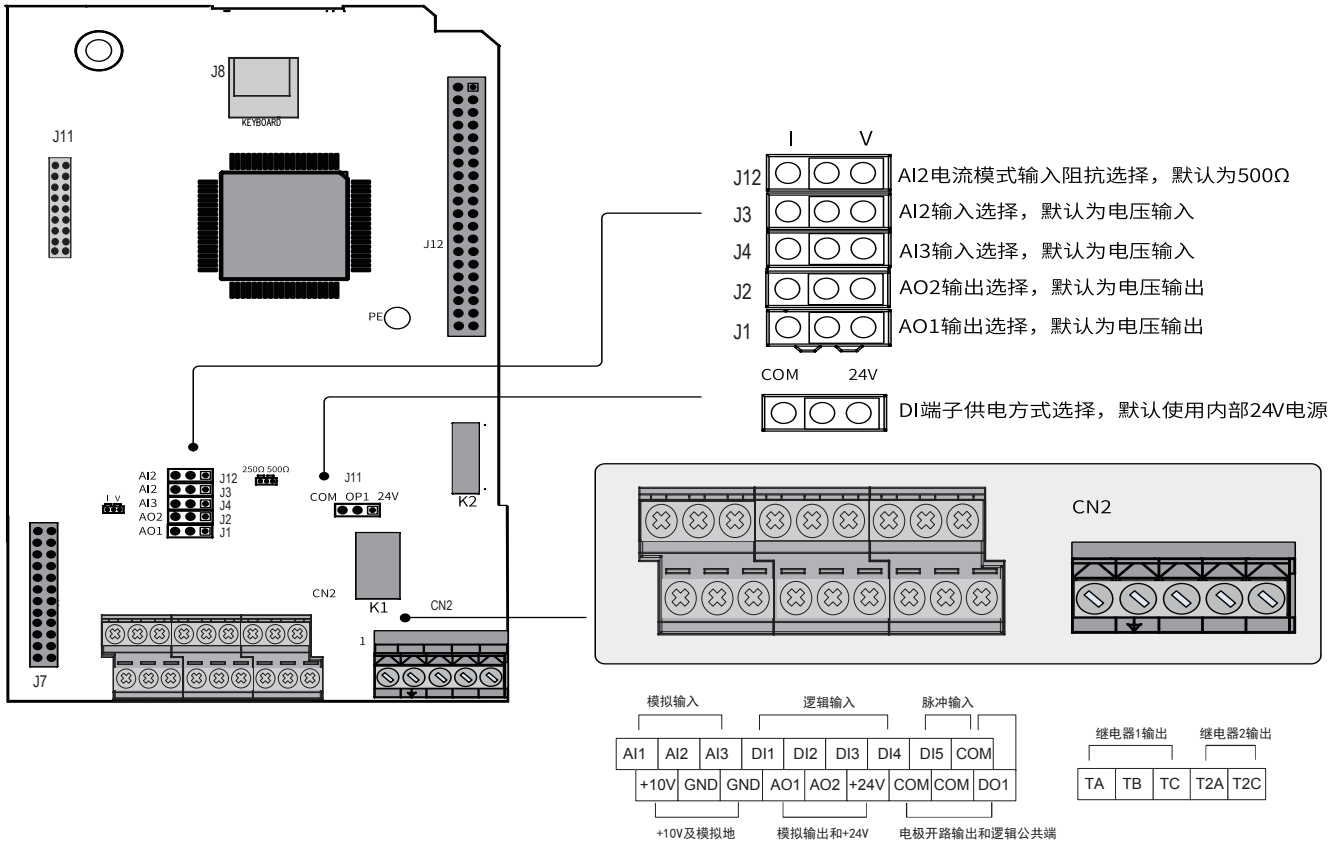
图 3-29 200kW~630kW 主回路端子分布图表 3-4

主回路端子分布图 图表 3-3 YD680 系列变频器主回路端子说明

端子标记	端子名称	功能说明
R、S、T	三相电源输入端子	交流输入电源连接点
（+）、（-）	直流母线正、负端子	共直流母线输入点，或制动单元的连接点
（+）、BR	制动电阻连接端子	制动电阻连接点
U、V、W	变频器输出端子	连接三相电动机
⏚	接地端子（PE）	保护接地

3.2.3 控制回路端子分布

◆ 控制回路端子布置



类别	端子符号	端子名称	功能说明
跳线	J11	DI 端子供电方式选择	DI 端子供电方式选择，默认使用内部 24V 电源。
	J1	AO1 输出选择	电压、电流输出可选，默认为电压输出。
	J2	AO2 输出选择	电压、电流输出可选，默认为电压输出。
	J4	AI3 输入选择	电压、电流输入可选，默认为电压输入。
	J3	AI2 输入选择	电压、电流输入可选，默认为电压输入。
	J12	AI2 电流模式的输入阻抗选择	选择 AI2 电流模式下，输入阻抗为500Ω或者250Ω。

图 3-57 控制回路端子布置图

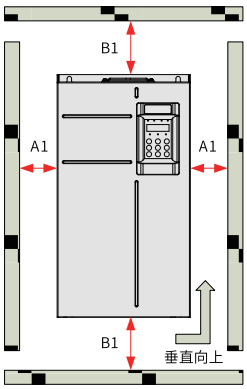
表 3-17 YD680 变频器控制端子功能说明

类别	端子符号	端子名称	功能说明
电源	+10V-GND	外接+10V电源	向外提供+10V电源，最大输出电流：10mA。 一般用作外接电位器工作电源，电位器阻值范围：1kΩ~5kΩ。
	+24V-COM	外接+24V电源	向外提供+24V电源，一般用作数字输入输出端子工作电源和外接传感器电源。 最大输出电流：200mA 。
模拟输入	AI1-GND	模拟量输入端子1	输入电压范围： -10V DC~+10V DC。输入 阻抗：22kΩ。
	AI2-GND	模拟量输入端子2	输入范围：-10V DC~+10V DC/0mA~20mA，由控制板上的J3跳线选择决定。 输入阻抗：电压输入时22kΩ，电流输入时可以支持500Ω和250Ω切换，通过跳线帽J12。
	AI3-GND	模拟量输入端子3	输入范围：-10V DC~+10V DC/0mA~20mA，由控制板上的J4跳线选择决定。 输入阻抗：电压输入时22kΩ，电流输入时500Ω。 AI3可以支持PT100/PT1000/KTY-84-130/PTC130四种温度传感器，通过P9-56切换。
数字输入	DI1- COM	数字输入1	光耦隔离，输入频率小于100Hz，由控制板上的J11 跳线选择外部或内部电源驱动。 输入阻抗：1.39kΩ。 工作电压范围： 9V~30V。 DI5可作为高速脉冲输入通道， 最高输入频率：100kHz；输入阻抗：1.03kΩ。
	DI2- COM	数字输入2	
	DI3- COM	数字输入3	
	DI4- COM	数字输入4	
	DI5- COM	数字输入5	
模拟输出	AO1-GND	模拟输出1	控制板上的 J1跳线选择电压或电流输出，最大负载电阻值 500Ω。 输出电压范围：0V~10V。 输出电流范围：0mA~20mA。
	AO2-GND	模拟输出2	控制板上的 J2跳线选择电压或电流输出，最大负载电阻值 500Ω。 输出电压范围：0V~10V。 输出电流范围：0mA~20mA。
数字输出	DO1-COM	数字输出1	光耦隔离，双极性开路集电极输出。 输出电压范围：0V~24V。 输出电流范围：0mA~50mA。 通过参数P4-41更改，DO可作为高速脉冲输出，最高频率100kHz。
继电器输出	TA-TB	常闭端子	触点驱动能力： 250V AC，3A，COSØ=0.4。 30V DC，1A。
	TA-TC	常开端子	
	T2A-T2C	常开端子	
辅助接口	J7	功能扩展卡接口	28 芯端子，标配RS485卡与可选卡（各种总线卡等选配卡的接口）
	J9	PG卡接口	支持旋变编码器、差分编码器。
	J8	外引键盘接口	外引操作键盘。

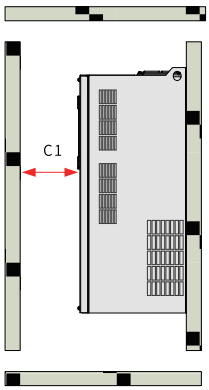
3.3 安装空间

- 单台机器安装

（正视图）



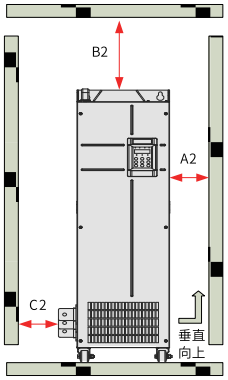
（侧视图）



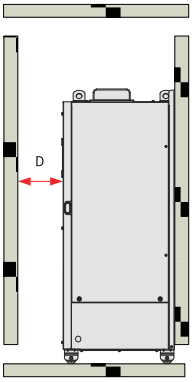
安装空间要求

功率等级（kW）	尺寸要求（mm）		
0.4~15	A1≥10	B1≥100	C1≥40
1.5~22	A1≥10	B1≥200	C1≥40
30~37	A1≥50	B1≥200	C1≥40
45~160	A1≥50	B1≥300	C1≥40

（正视图）



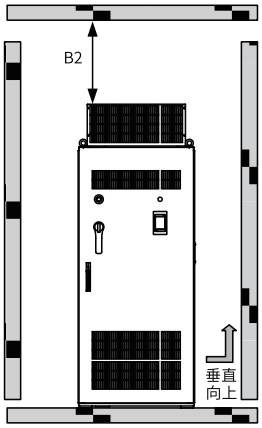
（侧视图）



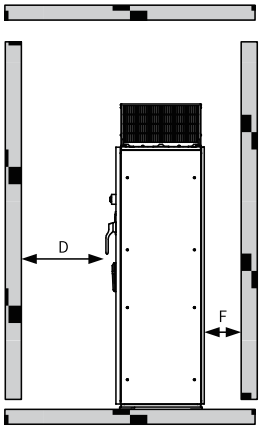
安装空间要求

功率等级（kW）	尺寸要求（mm）			
200~450	A2≥10	B2≥250	C2≥20	D≥20

（正视图）



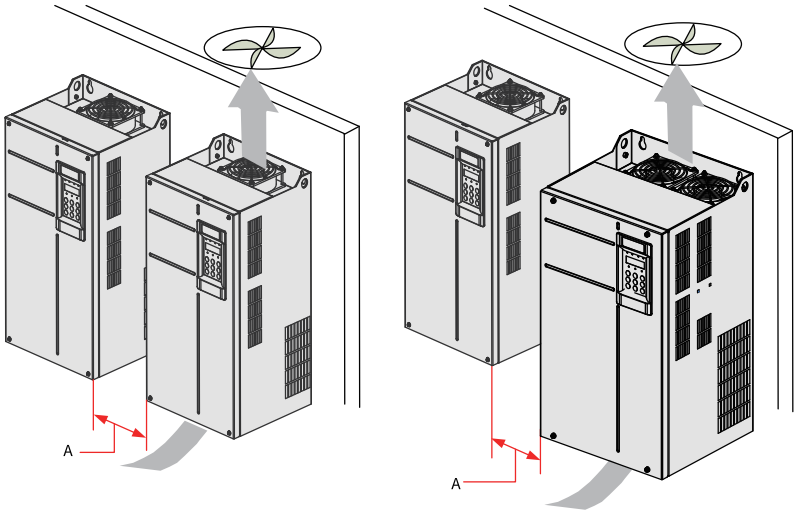
（侧视图）



安装空间要求

功率等级（kW）	尺寸要求（mm）		
500~630	B2≥250	D≥800	F≥100

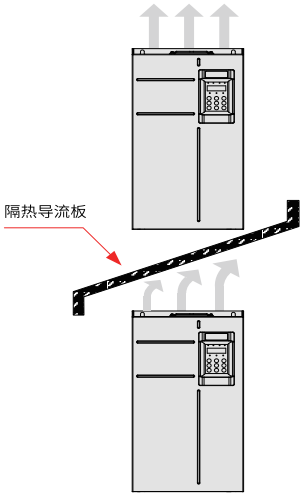
- 多台机器并排安装



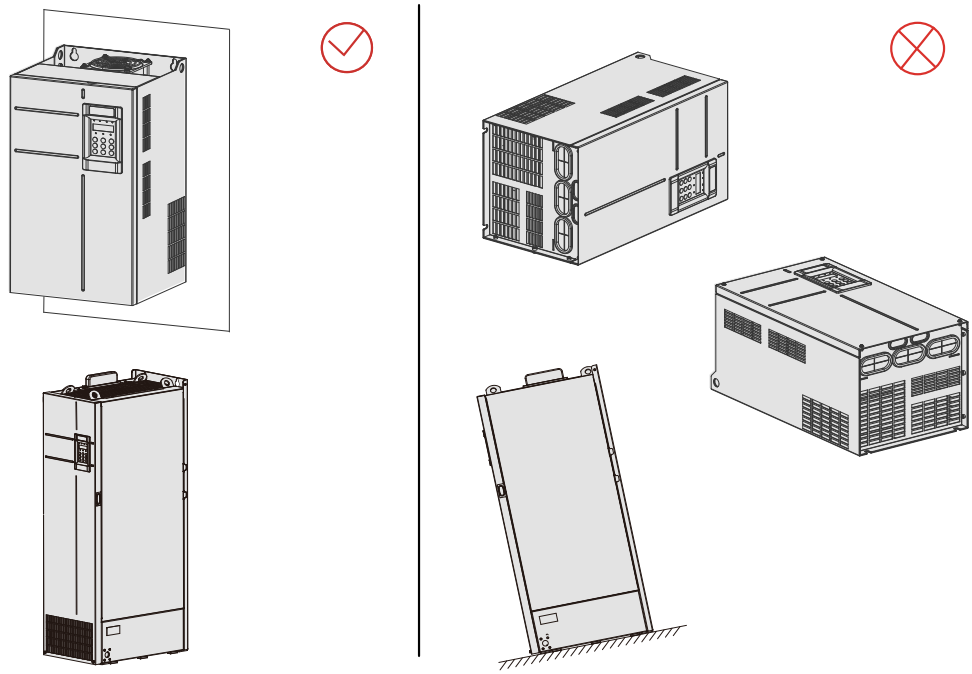
安装空间要求

功率等级（kW）	空间要求（mm）
0.4~15	A≥10
18.5~22	A≥10
30~37	A≥50
45~160	A≥50

- 多台机器上下排安装



- 安装方向



第四章　面板操作

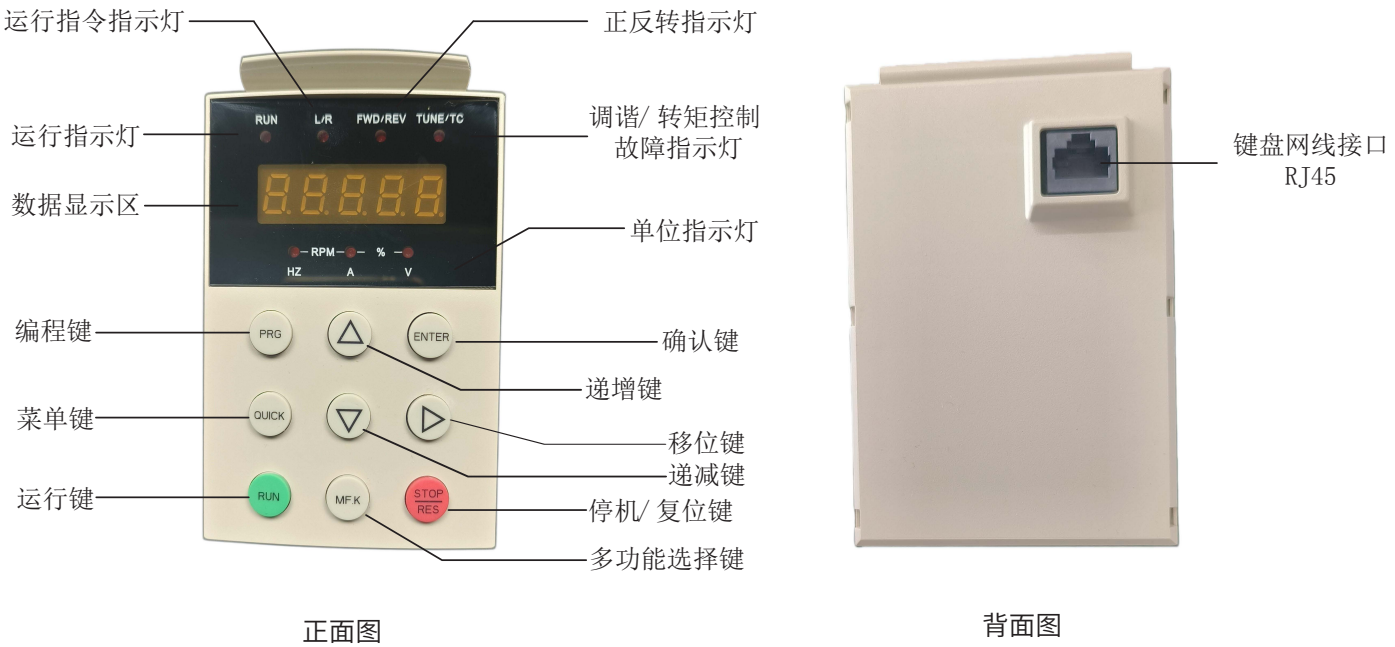
4.1 面板操作说明

YD680 系列变频器可通过 LED 操作面板或 LCD 操作面板进行参数操作、状态监控与控制。除变频器自带的 LCD 操作面板外，用户还可选配 LED 操作面板,并实现面板外引。

参见“4.2 LED 操作面板介绍”；通过选配 LCD 操作面板，可实现参数拷贝、上下载等功能。键盘详细使用介绍请参见“4.3 LCD 操作面板介绍”。

4.2 LED 操作面板介绍

用操作面板，可对变频器进行参数设定 / 修改、工作状态监控、运行控制（起动、停止）等操作。操作面板的外观和操作键名称如下图所示：



正面图　　背面图

图 4-1 操作面板示意图

4.2.1 功能指示灯

下表中 表示灯亮； 表示灯灭。 表示闪烁

表 4-1 操作面板指示灯说明

指示灯状态		状态说明
RUN 运行指示灯	RUN	灯灭：停机
	RUN	灯亮：运行
L/R 运行指令指示灯	LOCAL/ REMOT	灯灭：面板控制
	LOCAL/ REMOT	灯亮：端子控制
	LOCAL/ REMOT	闪烁：通讯控制
FWD/REV 正反转指示灯	FED/REV	灯灭：正转运行
	FED/REV	灯亮：反转运行
TUNE/TC 调谐 / 转矩控制 / 故障指示灯	TUNE/TC	灯灭：正常运行
	TUNE/TC	灯亮：转矩控制模式
	TUNE/TC	慢闪：调谐状态 （1 次 / 秒）
	TUNE/TC	快闪：故障状态（4 次 / 秒）
Hz RPM A % V		频率单位 Hz
Hz RPM A % V		电流单位 A
Hz RPM A % V		电压单位 V
Hz RPM A % V		转速单位 RMP
Hz RPM A % V		百分数 %

4.2.2 LED 显示区

操作面板上共有 5 位 LED 显示，可以显示设定频率、输出频率，各种监视数据以及报警代码等。

表 4-2 实际对应与 LED 显示对应表

LED 显示	实际对应	LED 显示	实际对应	LED 显示	实际对应	LED 显示	实际对应
0	0	6	6	C	C	n	N
1	1	7	7	c	c	P	P
2	2	8	8	d	D	r	R
3	3	9	9	E	E	t	T
4	4	A	A	F	F	U	U
5	5、S	b	B	L	L	u	u

4.2.3 键盘按钮功能

表 4-3 键盘按键功能表

按键	按键名称	按键功能
PRG	编程键	一级菜单进入或退出。
ENTER	确认键	逐级进入菜单画面、设定参数确认。
△	递增键	数据或参数的递增。
▽	递减键	数据或参数的递减。
▷	移位键	在停机显示界面和运行显示界面下，可循环选择显示参数； 在修改参数时，可以选择参数的修改位。
RUN	运行键	在“操作面板”启停控制方式下，用于运行操作。
STOP RES	停止 / 复位	运行状态时，按此键可以停止运行操作，此特性受参数 P7-02 制约； 故障报警状态时，可用来复位操作。
MF.K	多功能选择键	根据 P7-01 的设定值，在选择的功能之间切换。详细操作方法见 4.3 中“多功能按键操作”
QUICK	菜单模式选择键	根据 PP-03 中值切换不同的菜单模式（默认为一种菜单模式）。

4.2.4 参数设置、查看、修改方法

操作面板采用3级菜单结构进行参数设置等操作。进入每一级菜单之后，当显示位闪烁时，可以按△键、▽键、▷键进行设置。三级菜单如下：

- 一级菜单：参数组
- 二级菜单：参数
- 三级菜单：参数设定值

参数设置、修改

举例：将参数P3-02从10.00Hz更改设定为15.00Hz。

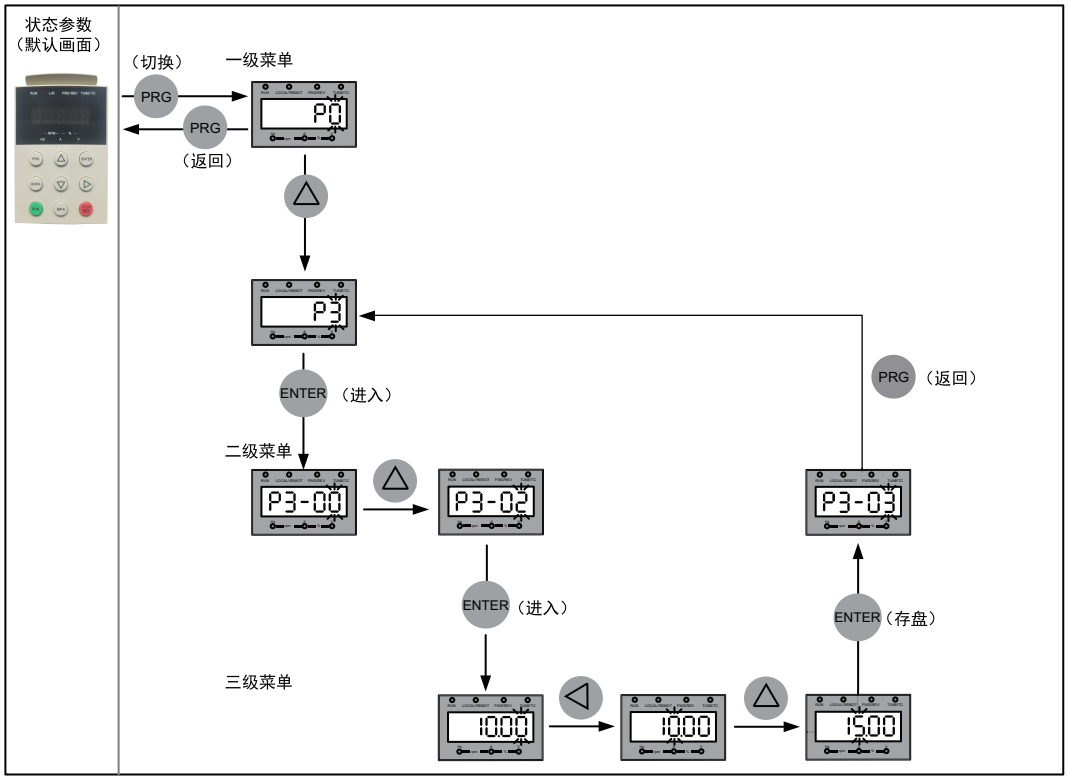


图4-3 参数修改操作示意图

在三级菜单操作时，可按 PRG 键或 ENTER 键返回二级菜单。两者的区别是：

1. 按 ENTER 键将设定参数保存后返回二级菜单，并自动转移到下一个参数。
2. 按 PRG 键是放弃当前的参数修改，直接返回当前参数对应的上一级菜单。

在第三级菜单状态下，若参数设定值没有闪烁位，表示该参数值不能设置，可能原因有：

1. 该参数为不可更改参数，如产品类型、实际检测参数、运行记录参数等。
2. 该参数在运行状态下不可更改，需停机后才能进行更改。

参数查看 设置PP-02=11，PP-03=11，即可通过键盘查看全部参数，操作流程如下图所示。

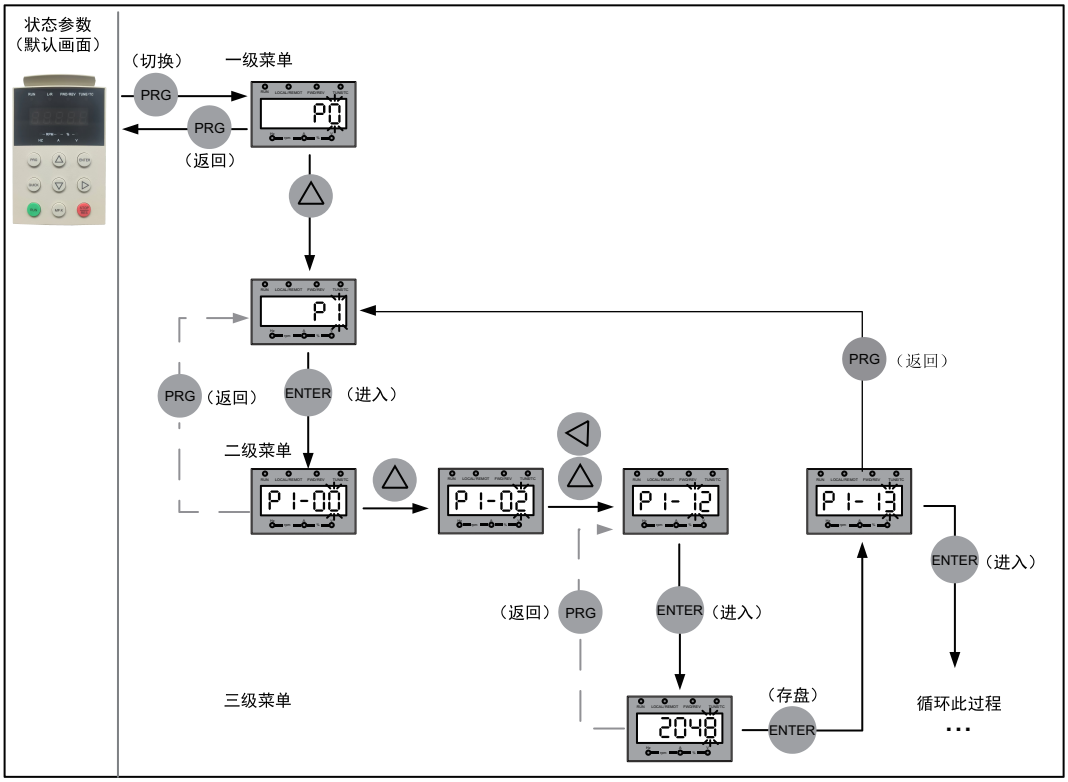


图4-4 参数查看操作示意图

4.2.5 状态参数显示

在运行状态下，按下 ▷，可以查看状态参数。默认显示状态参数有：运行频率、设定频率、母线电压、输出电压、输出电流。如果想查看更多状态参数，请参考“相关参数”中P7-03、P7-04相关说明。

在停机状态下，按下 ▷，可以查看状态参数。默认显示状态参数有：设频率、母线电压、AI1电压、AI2电压。如果想查看更多状态参数请参考“相关参数”中P7-05相关说明。

4.2.6 故障和报警显示

产品出现故障时，故障指示灯闪烁，操作面板显示故障代码如下图所示。

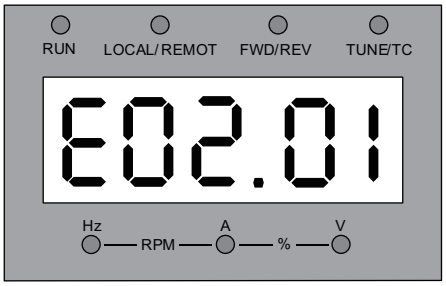


图4-5 故障代码显示

当故障指示灯闪烁时，设备会立即停止输出，故障继电器接点闭合。请参考*第七章“故障诊断与对策”*的常见解决方法排除故障或寻求技术支持。根据操作面板显示的故障类型上查找故障原因并解除故障，解除故障后再复位。

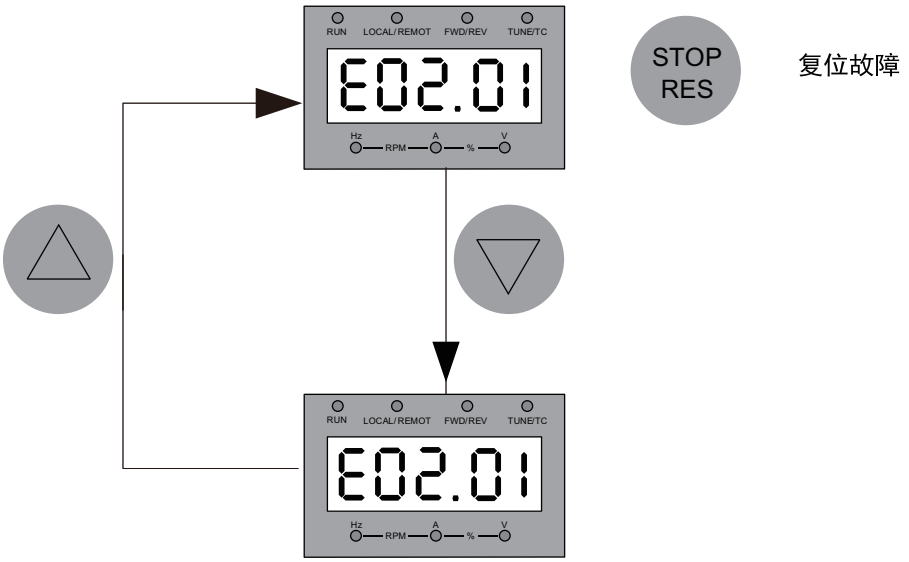


图 4-6 多个故障的查看和复位

4.2.7 面板演示驱动电机

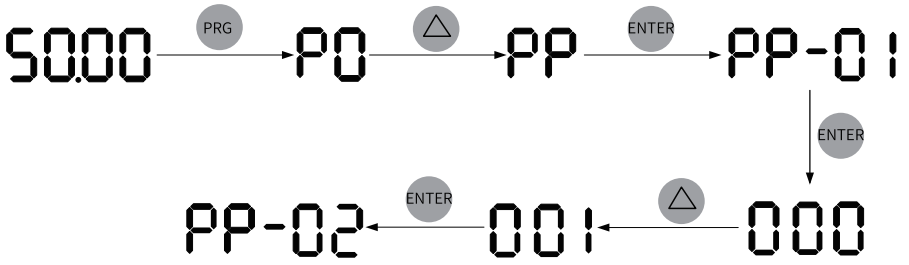
按操作面板上 MF.K 键，对电机进行正转点动、反转点动的运行控制，按 RUN 、 STOP/RES 键对电机进行启动、停止的运行控制。

操作步骤

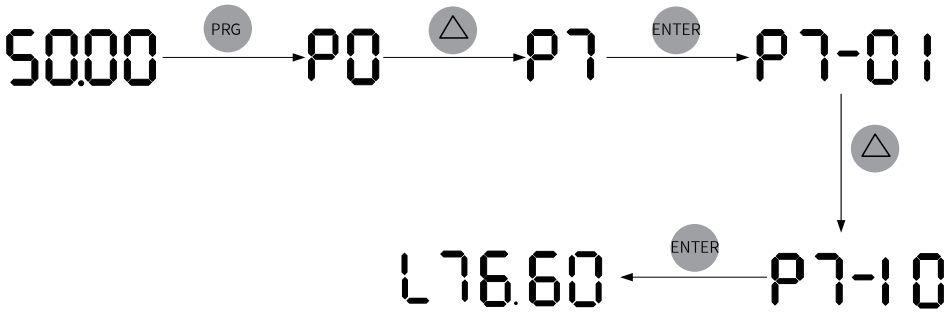
1. 上电前检查。

   按照安装手册进行安装和接线检查。详细检查请参考《*安装指导*》的上电前检查介绍。

2. 按下电源开关，接通变频器电源。
3. 查看操作面板显示50.00，表示上电成功。
4. 设置PP-01=001，恢复所有参数为出厂默认值，操作示例如下图所示。



5. 查看 P7-10的数值，数值显示代表软件版本号。

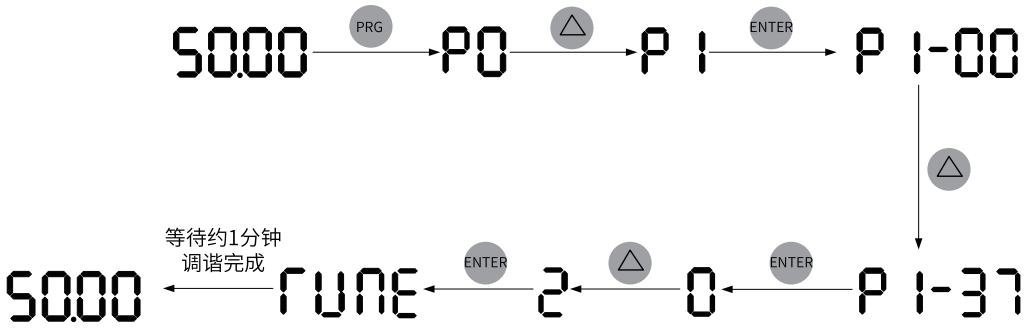


6. 根据电机铭牌数据，设置P1组电机参数。

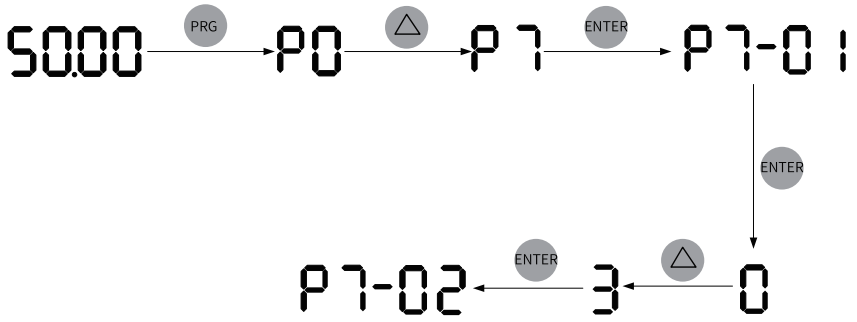
表 4-7 电机参数说明

参数	参数名称	默认值	设定范围	参数说明	设定值
P1-00	电机类型选择	0	0：普通异步电机 1：变频异步电机 2：永磁同步电机	变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动；负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。 普通异步电动机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。	0
P1-01	电机额定功率	机型确定	0.1kW~1000.0kW	电机额定功率是指电机工作在额定工况时的轴端输出功率。选择电机功率时，应在电机能够满足机械负载要求的前提下，经济合理的选择电机功率。要考虑电机的发热、允许过载能力和起动能力等因素。	22.0
P1-02	电机额定电压	机型确定	1V~2000V	电机额定电压是指电机正常工作时的电压，一般指线电压。	0380
P1-03	电机额定电流	机型确定	0.1A~6553.5A	电机额定电流是指电机正常工作时的电流，一般指线电流。	45.0
P1-04	电机额定频率	机型确定	0.01Hz~600.00Hz	电机额定频率指的是电动机在额定运行状态下，定子绕组所接电源的频率。	50.00
P1-05	电机额定转速	机型确定	1rpm~65535rpm	电机额定转速指的是电动机在额定运行状态下，转子的转速，单位为“转/分钟”（rpm）。	1460

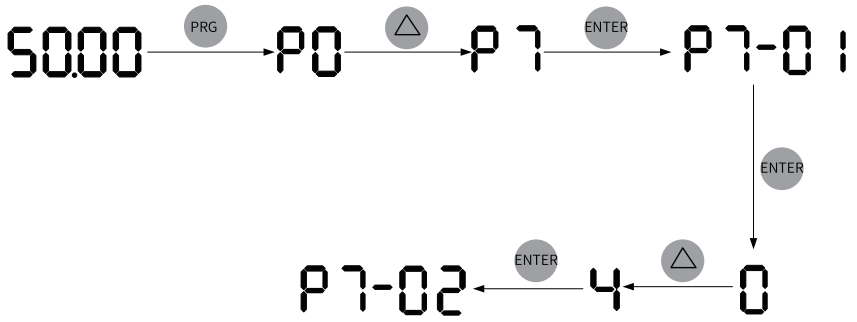
7. 设置P1-37=2，按ENTER键确认，键盘显示 TUNE 。按操作面板上RUN键3秒以上，开始进行电机调谐。此过程中，RUN指示灯长亮，TUNE/TC指示灯闪烁，变频器使电机通电。约1分钟后，面板显示50.00，表示调谐完成。



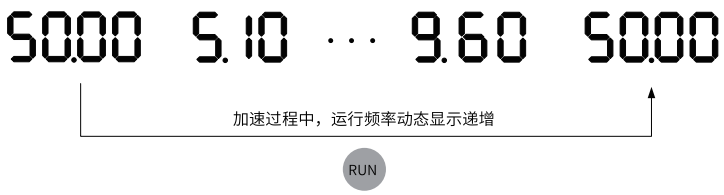
8. 设置P7-01=3，设置完成后，按下 MF.K 键，电机正转点动。



9. 设置P7-01=4，设置完成后，按下 MF.K 键，电机反转点动。



10. 按下 RUN 键，启动电机，电机轴开始加速旋转，同时面板显示当前运行频率，如下图所示，加速完成后，频率值显示为50.00。按下，可切换显示的运行状态参数。



11. 按下 STOP/RES 停止按钮，电机减速停机。

4.2.8 相关参数

参数	参数名称	默认值	设定范围	参数说明
P7-01	MF.K键功能选择	0	0：MF.K键无效 1：操作面板命令通道与远程命令通道（端子命令通道或通信命令通道）切换 2：正反转切换 3：正转点动 4：反转点动	操作面板上的MF.K键为多功能键，通过该参数设置MF.K键的功能。 0：MF.K 无效 此键无功能。 1：操作面板命令通道与远程命令通道(端子命令通道或通信命令通道)切换P0-02 设置为0（操作面板），按下MF.K 键后无效果。P0-02设置为1（端子），通过MF.K键可实现端子与操作面板之间的切换。P0-02设置为2（通信），通过MF.K 键可实现通信与操作面板之间的切换。 2：正反转切换 通过MF.K键切换频率指令的方向。该功能只在命令源运行指令为操作面板时有效。 3：正转点动 通过MF.K键实现正转点动（FJOG）。该功能只在命令源运行指令为操作面板时有效。 4：反转点动 通过MF.K键实现反转点动（RJOG）。该功能只在命令源运行指令为操作面板时有效。
P7-02	STOP/RESET键功能	0	0：只在键盘操作方式下，STOP/RESET键停机功能有效 1：在任何操作方式下，STOP/RESET键停机功能有效	操作面板上的STOP/RESET键为停机复位键，通过该参数设置STOP/RESET键的功能。 0：只在键盘操作方式下，STOP/RESET键停机功能有效 1：在任何操作方式下，STOP/RESET键停机功能有效

参数	参数名称	默认值	设定范围	参数说明
P7-03	LED运行显示参数1	0x1F	bit0：运行频率（Hz） bit1：设定频率（Hz） bit2：母线电压（V） bit3：输出电压（V） bit4：输出电流（A） bit5：输出功率（kW） bit6：输出转矩（%） bit7：DI输入状态 bit8：DO输出状态 bit9：AI1电压（V） bit10：AI2电压（V） bit11：AI3电压（V） bit12：计数值 bit13：长度值 bit14：负载速度显示 bit15：PID设定	1、此参数为变频器运行状态下，LED面板上支持显示的参数。 2、通过按下左移位键和右移位键，能够显示各个bit位对应的参数。 3、bit位值为1，表示显示；bit位为0，表示不显示。bit0~bit5位默认出厂时为1。 4、本参数通过十六进制显示。本参数用于设置变频器在运行状态下，操作面板支持显示的参数。若需要显示某参数，则将其相对应bit位的值设为1，再将此二进制数转为十六进制后设于本参数中。 例如，需要显示第bit0、bit7、bit8、bit15位代表的参数，则对应二进制数值为1000 0001 1000 0001，转换为16进制数值为8181H。
P7-04	LED运行显示参数2	0	bit0：PID反馈 bit1：PLC阶段 bit2：PULSE输入脉冲频率（kHz） bit3：运行频率2（Hz） bit4：剩余运行时间 bit5：AI1校正前电压（V） bit6：AI2校正前电压（V） bit7：保留 bit8：线速度 bit9：当前上电时间（h） bit10：当前运行时间（min） bit11：PULSE输入脉冲频率（Hz） bit12：通信设定值 bit13：实际反馈速度（Hz） bit14：主频率X显示（Hz） bit15：辅频率Y显示（Hz）	1、此参数为变频器运行状态下，LED面板上支持显示的参数。 2、通过按下左移位键和右移位键，能够显示各个bit位对应的参数。 3、bit位值为1，表示显示；bit位为0，表示不显示。bit0~bit5位默认出厂时为1。 4、本参数通过十六进制显示。本参数用于设置变频器在运行状态下，操作面板支持显示的参数。若需要显示某参数，则将其相对应bit位的值设为1，再将此二进制数转为十六进制后设于本参数中。 例如，需要显示第bit0、bit7、bit8、bit15位代表的参数，则对应二进制数值为1000 0001 1000 0001，转换为16进制数值为8181H。

参数	参数名称	默认值	设定范围	参数说明
P7-05	LED停机显示参数	0x33	bit0：设定频率（Hz） bit1：母线电压（V） bit2：DI输入状态 bit3：DO输出状态 bit4：AI1电压（V） bit5：AI2电压（V） bit6：保留 bit7：计数值 bit8：长度值 bit9：PLC阶段 bit10：负载速度显示 bit11：PID设定 bit12：PULSE输入脉冲频率（kHz） bit13：保留 bit14：保留 bit15：保留	此参数为变频器停机状态下，LED面板上支持显示的参数。通过按下左移位键和右移位键，可以显示各个bit位对应的参数。bit位值为1，表示显示，bit位值为0，表示不显示。该参数通过十六进制显示。
PP-01	参数初始化	0	0：无操作 1：恢复出厂参数模式1 2：清除记录信息 4：备份用户当前参数 501：恢复用户备份参数 503：恢复出厂参数模式2	设置变频器进行参数初始化时的对应动作。 0：无操作； 变频器不进行任何操作。 1：恢复出厂参数模式1 变频器功能参数大部分恢复为厂家出厂参数，但是电机参数、频率指令小数点（P0-22）、故障记录信息、累计运行时间（P7-09）、累计上电时间（P7-13）、累计耗电量（P7-14）、逆变器模块散热器温度（P7-07）不恢复。 2：清除记录信息 清除变频器故障记录信息、累计运行时间（P7-09）、累计上电时间（P7-13）、累计耗电量（P7-14）。 4：备份用户当前参数 备份当前用户所设置的参数设定值。 501：恢复用户备份参数 恢复通过设置PP-01为4时所备份的参数设定值。 503：恢复出厂参数模式2 除了厂家参数PP组、PP-00、PP-01不恢复，其他变频器功能参数都恢复为厂家出厂参数。

参数	参数名称	默认值	设定范围	参数说明
PP-02	功能参数组显示选择	11	个位：U组显示选择 0：隐藏 1：显示 十位：A组显示选择 0：隐藏 1：显示 百位：B组显示选择 0：隐藏 1：显示 千位：C组显示选择 0：隐藏 1：显示	设置U组、A组、B组、C组参数是否在操作面板上显示。
PP-03	个性参数组显示选择	0	个位：用户定制参数组显示选择 0：不显示 1：显示 十位：用户变更参数组选择 0：不显示 1：显示	通过个位或十位分别设置用户定制参数组和用户变更参数组是否在操作面板上显示。

4.2.9 MF.K多功能键操作

操作面板上面的 MF.K 键为多功能键，可以通过参数P7-01设置多功能键的功能。在停机或运行状态下，按下此键，进行命令通道的切换、正反转和点动。

表14–6 多功能键参数说明

参数	参数名称	默认值	设定范围	参数说明
P7-01	MF.K键功能选择	0	0：MF.K键无效 1：操作面板命令通道与远程命令通道（端子命令通道或通信命令通道）切换 2：正反转切换 3：正转点动 4：反转点动	操作面板上的MF.K键为多功能键，通过该参数设置MF.K键的功能。 0：MF.K 无效 此键无功能。 1：操作面板命令通道与远程命令通道(端子命令通道或通信命令通道)切换P0-02 设置为0（操作面板），按下MF.K 键后无效果。P0-02设置为1（端子），通过MF.K键可实现端子与操作面板之间的切换。P0-02设置为2（通信），通过MF.K 键可实现通信与操作面板之间的切换。 2：正反转切换 通过MF.K键切换频率指令的方向。该功能只在命令源运行指令为操作面板时有效。 3：正转点动 通过MF.K键实现正转点动（FJOG）。该功能只在命令源运行指令为操作面板时有效。 4：反转点动 通过MF.K键实现反转点动（RJOG）该功能只在命令源运行指令为操作面板时有效。

4.3 LCD 操作面板介绍

YKEY060 是适配于 YD680 的外引操作面板（选配件），采用
LCD 液晶显示，支持参数拷贝与下
载功能，用户通过该面板可方便的更改参数， 提供中文显示，使用起来更加简易和方便。

1） 外观及界面：



图 4-6 YKEY060 外观示意图

2） 键盘安装尺寸

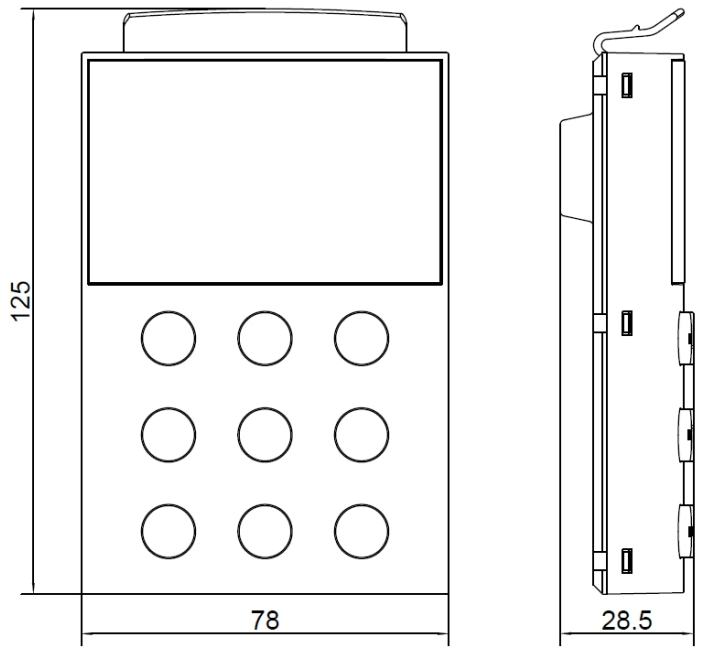


图 4-7 YKEY060 外引操作面板尺寸

第五章　基本操作与试运行

本章介绍变频器的基本调试步骤，主要包括变频器的频率指令设置、启动和停机的控制， 根据本章内容可以实现变频器控制电机的试运行。

5.1 调试指南

5.1.1　基本调试流程

不同模式请具体参考各章节。

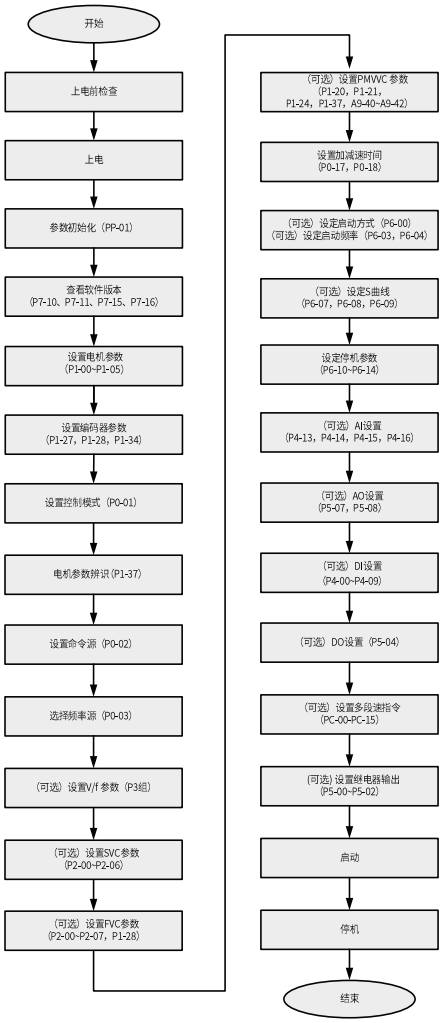


图15-1 基本调试流程图

表15–1 基本调试流程表

序号	步骤	相关参数
1	上电前检查	无
2	上电	无
3	参数初始化	PP-01
4	查看软件版本	P7-10，P7-11，P7–15，P7–16
5	设置电机参数	P1-00~P1-05。注意设置相应的电机类型

序号	步骤	相关参数
6	设置编码器参数	P1–27，P1–28，P1–34
7	设置控制模式	P0-01
8	电机参数辨识	P1-37
10	设置命令源	P0-02
11	选择频率源	P0-03
12	（可选）设定V/f参数	P3组
13	（可选）设定SVC参数	P2-00~P2-06
14	（可选）设定FVC参数	P2-00~P2-07，P1-28
15	（可选）设置PMVVC参数	P0-01，P1-00，P1-20，P1-21，P1-24，P1-37，A9-40~A9-42
16	设置加减速时间	P0-17，P0-18
17	（可选）设定启动方式	P6-00
18	（可选）设定启动频率	P6-03，P6-04
19	（可选）设定S曲线	P6-07，P6-08，P6-09
20	设定停机参数	P6-10~P6-14
21	（可选）AI设置	P4-13，P4-14，P4-15， P4-16
22	（可选）AO设置	P5-07，P5-08
23	（可选）DI设置	P4-00~P4-09
24	（可选）DO设置	P5-04
25	（可选）设置多段速指令	PC-00~PC-15
26	（可选）设置继电器输出	P5-00，P5-01，P5-02
27	启动	无
28	停机	无

5.1.2 V/F 控制模式调试流程

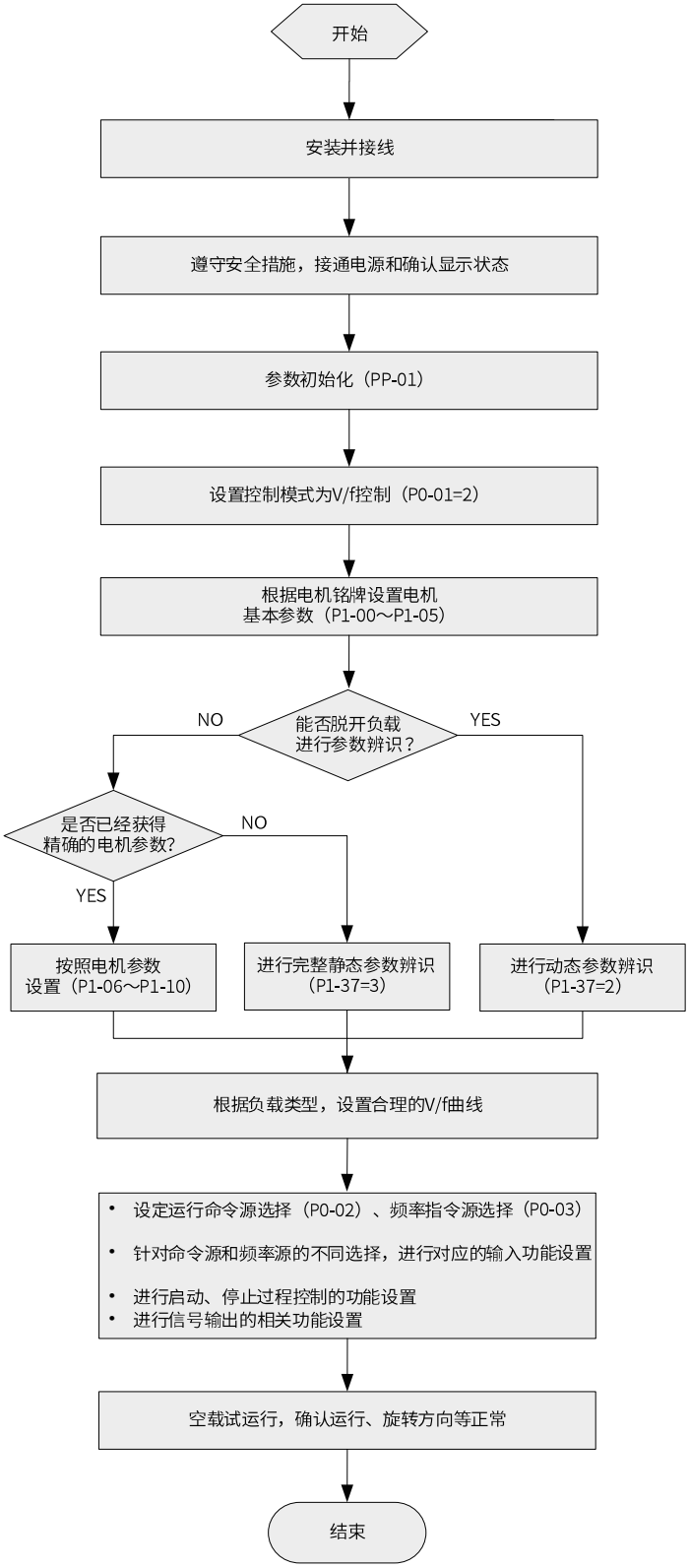


图 5-2 变频器调试流程图（V/f控制）

15.1.3 SVC控制模式调试流程

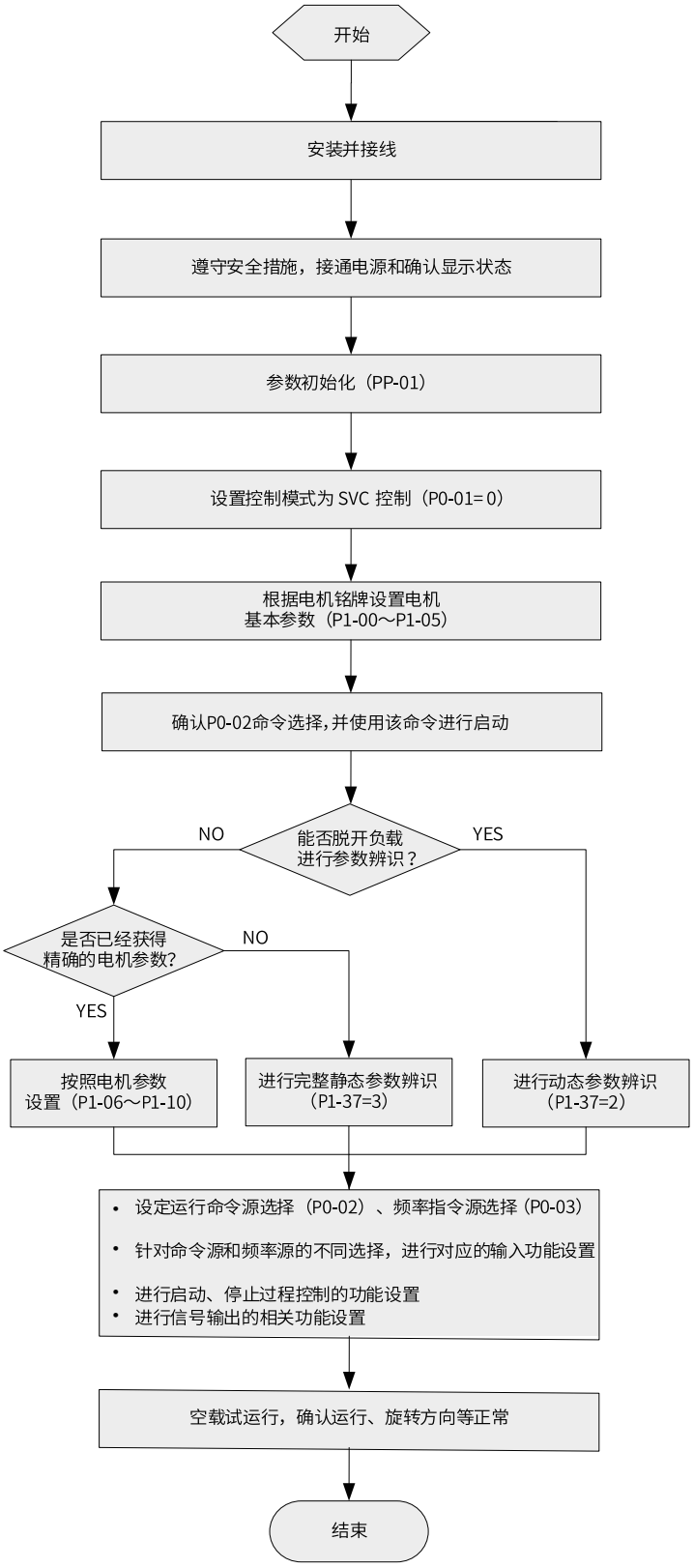


图 5-3 变频器调试流程图（SVC）

5.1.4 FVC控制模式调试流程

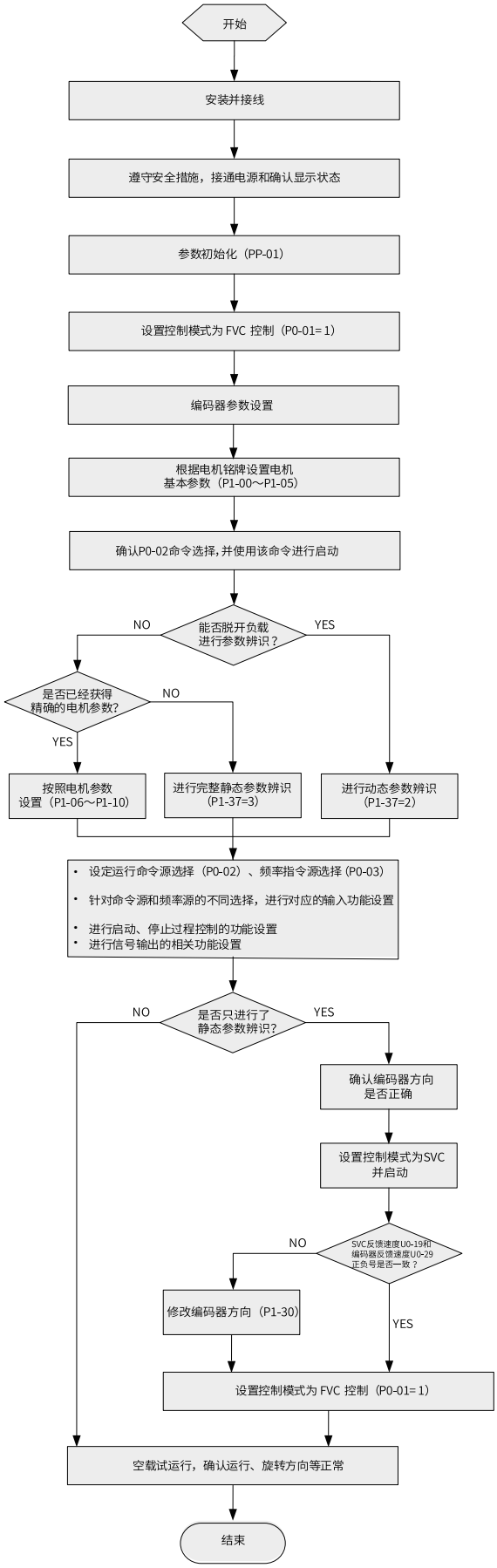


图 5-4 变频器调试流程图（FVC）

5.1.5 PMVVC控制模式调试流程

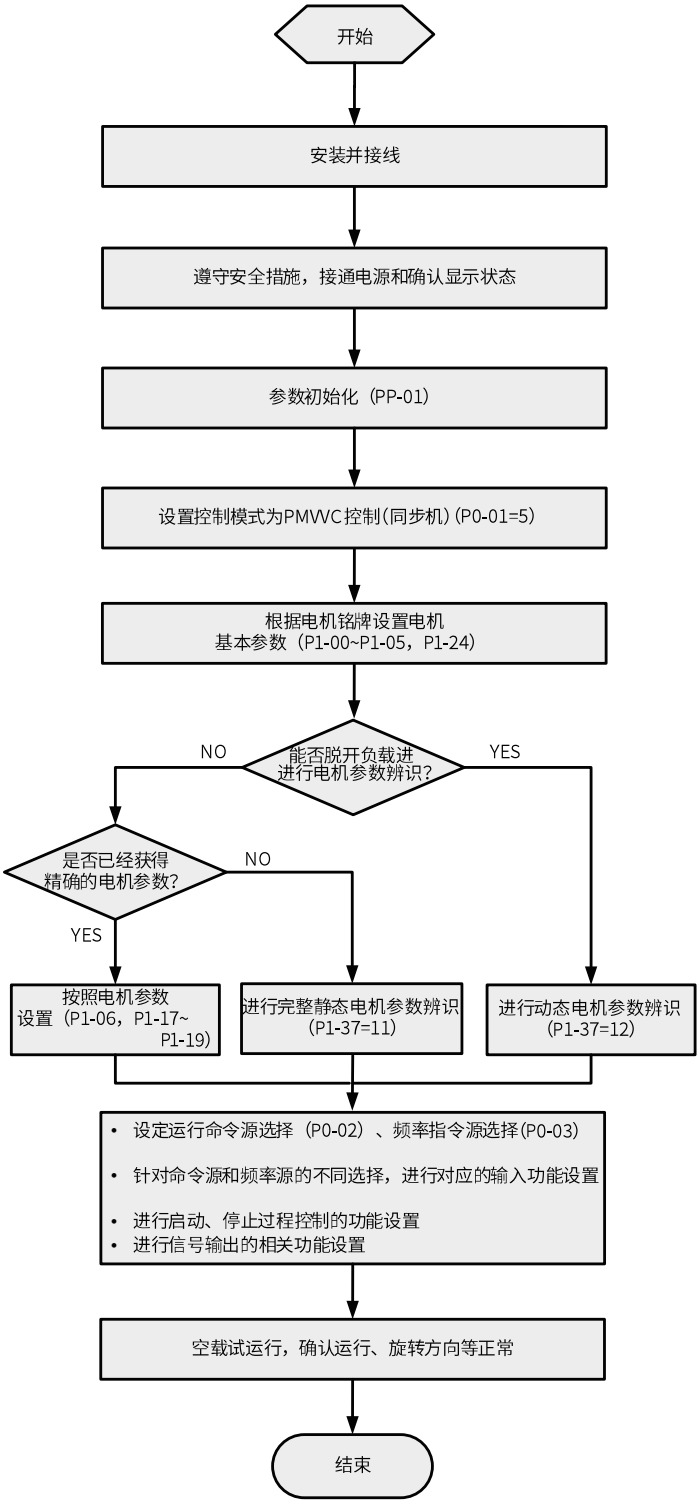


图 5-5 变频器调试流程图（PMVVC控制）

5.2 调试步骤

5.2.1 上电前检查

请务必确认以下项目后，再接通电源。

表 5–2 接通电源前确认事项

项目	内容
主回路连接确认	确认电源电压正确。 • 三相380V：3PH 380V AC-480V AC 50/60Hz • 三相220V：3PH 200V AC-240V AC 50/60Hz • 单相220V：1PH 200V AC-240V AC 50/60Hz
	确认电源输入端与变频器输入端子（R/S/T）可靠接线。
	确认电机接入端与变频器输出端子（U/V/W）可靠接线。
	确认变频器和电机正确接地。
	确认主回路的线缆线径符合要求。
	确认对主回路线耳铜管与线缆芯线部分加套管热缩，且套管完全包覆线缆导体部。
	确认电机输出线，如超过50米，需要降低载频（F0-15）。
控制回路连接确认	确认控制回路端子和其他控制装置的连接牢靠。
	确认控制回路信号线已选用屏蔽双绞线。
	确认选配卡的接线正确。
	确认控制回路线缆与主回路动力线缆分开走线。
	确认变频器控制回路端子都处于OFF状态（变频器不运行状态）。
负载确认	确认电机为空载状态，未与机械系统连接。
制动电阻确认	使用制动电阻和制动单元时，确认接线正确且电阻值合适。

5.2.2 上电

闭合电源开关，查看变频器面板显示。变频器面板显示50.00，表示上电成功。

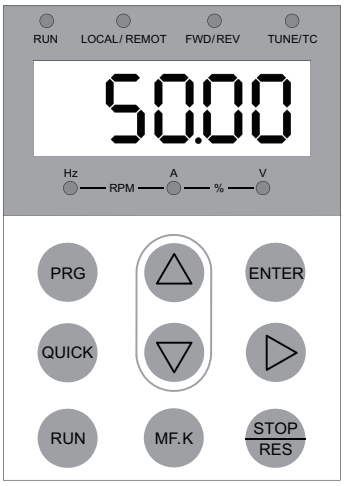


图 5-6 操作面板上电显示

5.2.3 参数初始化

参数	参数名称	默认值	设定范围	参数说明
PP-01	参数初始化	0	0：无操作 1：恢复出厂参数模式1 2：清除记录信息 4：备份用户当前参数 501：恢复用户备份参数 503：恢复出厂参数模式2	设置变频器进行参数初始化时的对应动作。 0：无操作 变频器不进行任何操作。 1：恢复出厂参数模式1 变频器功能参数大部分恢复为厂家出厂参数，但是电机参数、频率指令小数点（P0-22）、故障记录信息、累计运行时间（P7-09）、累计上电时间（P7-13）、累计耗电量（P7-14）、逆变器模块散热器温度（P7-07）不恢复。 2：清除记录信息 清除变频器故障记录信息、累计运行时间（P7-09）、累计上电时间（P7-13）、累计耗电量（P7-14）。 4：备份用户当前参数 备份当前用户所设置的参数设定值。 501：恢复用户备份参数 恢复通过设置PP-01为4时所备份的参数设定值。 503：恢复出厂参数模式2 除了厂家参数PP组、PP-00、PP-01不恢复，其他变频器功能参数都恢复为厂家出厂参数。

5.2.4 查看软件版本

参数	参数名称	设定范围	参数说明
P7-10	性能软件版本号	0.00~655.35	变频器性能软件版本号。
P7-11	功能软件版本号	0.00~655.35	变频器功能软件版本号。
P7-15	性能临时软件版本号	0.00~655.35	变频器性能临时软件版本号。
P7-16	功能临时软件版本号	0.00~655.35	变频器功能临时软件版本号。

5.2.5 电机参数设置

参数	参数名称	设定范围	参数说明
P1-00	电机类型选择	0：普通异步电机 1：变频异步电机 2：永磁同步电机	用于设置应用现场的电机类型。 0：普通异步电机 普通异步电机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。 1：变频异步电机 变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动；负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。 2：永磁同步电机 永磁同步电机是以永磁体提供励磁，具有结构简单，体积小、效率高、功率因数高等优点。
P1-01	电机额定功率	0.1~1000.0kW	电机额定功率是指电机工作在额定工况时的轴端输出功率。选择电机功率时，应在电机能够满足机械负载要求的前提下，经济合理的选择电机功率。要考虑电机的发热、允许过载能力和启动能力等因素。
P1-02	电机额定电压	1V~2000V	电机额定电压是指电机正常工作时的电压，一般指线电压。
P1-03	电机额定电流	0.01~655.35A(功 率≤55kW) 0.1~6553.5A(功率>55kW)	电机额定电流是指电机正常工作时的电流，一般指线电流。
P1-04	电机额定频率	0.01Hz~P0-10	电机额定频率指的是电机在额定运行状态下，定子绕组所接电源的频率。
P1-05	电机额定转速	1rpm~65535rpm	电机额定转速指的是电机在额定运行状态下，转子的转速，单位为“转/分钟”(rpm)。
P1-06	异步电机/同步电机定子电阻	0.001~65.535Ω(功率≤55kW) 0.0001~6.5535Ω(功率>55kW)	异步电机定子电阻是指异步电机定子绕组的直流电阻，该参数可通过电机参数辨识获得。精度0.001(功率≤55kW)，精度0.0001(功率>55kW)。
P1-07	异步电机转子电阻	0.001~65.535Ω(功率≤55kW) 0.0001~6.5535Ω(功率>55kW)	异步电机转子电阻是指异步电机转子绕组的直流电阻，该参数可通过电机静止参数辨识或动态参数辨识获得。精度0.001(功率≤55kW)，精度0.0001(功率>55kW)。
P1-08	异步电机漏感抗	0.01~655.35mH(功率≤55kW) 0.001~65.535mH(功率>55kW)	异步电机漏感抗是电机绕组漏磁通引起的。在电机的绕组中，通入电流，将产生磁通，根据磁通的路径，可以分为：主磁通和漏磁通两部分。描述漏磁通可以用一个感抗表示，就是漏感抗。该参数可通过电机静止参数辨识或动态参数辨识获得。精度0.01(功率≤55kW)，精度0.0001(功率>55kW)。
P1-09	异步电机互感抗	0.01~655.35mH(功率≤55kW) 0.001~65.535mH(功率>55kW)	当电机的一线圈中的电流发生变化时，在临近的另一线圈中产生感应电动势，这个互感电动势可以通过互感抗参数来表示。 电机的互感抗可以大致分为两种，一种是定子或者转子的相间感抗，即定子的某一相和另一相之间的电抗，还有另一种是定子和转子之间的感抗。第一种的感抗是不随转子旋转变化的，而第二种会随着转子的转动，感抗也发生相应的变化。 这两种都是电机的互感抗，该参数可通过电机动态参数辨识获得。精度0.01(功率≤55kW)，精度0.001(功率>55kW)。
P1-10	异步电机空载电流	0.01A~P1-03(功率≤55kW) 0.1A~P1-03(功率>55kW)	异步电机空载电流是指电机空载运行时定子三相绕组中通过的电流，该参数可通过异步机动态参数辨识（P1-37=2），或异步机静止完整参数辨识（P1-37=3）获得。

参数	参数名称	设定范围	参数说明
P1-17	同步电机D轴电感	0.01~655.35mH(功率≤55kW) 0.001~65.535mH(功率>55kW)	同步电机D轴电感是指同步电机主磁极轴(纵轴)的电感值。 精度0.01(功率≤55kW)， 精度 0.001(功率>55kW)。
P1-18	同步电机Q轴电感	0.01~655.35mH(功率≤55kW) 0.001~65.535mH(功率>55kW)	同步电机Q轴电感是指同步电机转子相临磁极轴线间的中心线(交轴)的电感值。 精度0.01(功率≤55kW)， 精度0.001(功率>55kW)。
P1-19	同步电机反电动势系数	0.0V~6553.5V	为对应的P1-04设定额定频率下的电机反电动势线有效值。
P1-20	滤波时间常数 (PMVVC使用)	0.003~65.535	滤波时间常数。仅P0-01选择PMVVC（P0-01=5）时适用。
P1-21	振荡抑制增益 (PMVVC使用)	0~65535	振荡抑制增益系数。仅P0-01选择PMVVC（P0-01=5）时适用。
P1-24	电机极对数	0~65535	-
P1-26	参数辨识运行方向 (惯量辨识和同步机)	0：反转运行 1：正转运行	P1-37选择12同步机空载动态完整参数辨识时有效，设置辨识时电机的旋转方向 0：反转运行 变频器以UWV反相序输出频率。若电机的UVW端子一一对应接到变频器的UVW输出端子上，则辨识时电机反向旋转。 1：正转运行 变频器以UVW正相序输出频率。若电机的UVW端子一一对应接到变频器的UVW输出端子上，则辨识时电机正向旋转。
P1-27	编码器线数	1~20000	设定ABZ编码器线数（每圈A脉冲或B脉冲的个数，应与编码铭牌标识一致），或正余弦编码器每圈弦波数。在有速度传感器矢量控制方式下（FVC），必须正确设置编码器脉冲数，否则电机运行不正常。 注：23位编码器不用设置编码器线数。
P1-28	编码器类型	0：ABZ增量编码器 1：23位编码器 2：旋转变压器	安装好 PG 卡后，要根据实际情况正确设置P1-28编码器类型，否则变频器可能运行不正常，具体编码器类型以现场实际使用为准。 0：ABZ增量编码器 1：23位编码器 2：旋转变压器
P1-30	编码器接线标志	个位：AB信号或旋转方向 0：正向 1：反向 十位：保留	个位：AB信号的方向或旋转方向。在部分应用场合，会出现编码器测速值的方向与实际设定值相反，即可通过该功能码的个位更改编码器测速相序。若对电机进行动态辨识（异步机 P1-37选2，同步机 P1-37选 12），则会自动设置该参数位。 0：正向 1：反向
P1-31	编码器零点位置角	0.0°~359.9°	同步电机参数，可手动设置，或调谐后自动获取

参数	参数名称	设定范围	参数说明
P1-32	电机齿轮比分子	1~65535	编码器和电机非同轴安装时，控制电机需要设置传动比，该值和电机齿轮比分母P1-33共同组成传动比。如电机与负载减速比为2.5(电机转2.5圈负载转1圈)、且编码器安装在负载上时，分子应设置为5、分母设置为2。 注意，传动比分子与电机极对数的乘积不能超过65535。
P1-33	电机齿轮比分母	1~65535	编码器和电机非同轴安装时，控制电机需要设置传动比，该值和电机齿轮比分子P1-32共同组成传动比。如电机与负载减速比为2.5(电机转2.5圈负载转1圈)、且编码器安装在负载上时，分子应设置为5、分母设置为2。

5.2.6 电机参数辨识

准确输入电机的铭牌参数（P1-00~P1-05），参数P1-37 设置为1（异步机静止参数辨识），按ENTER 键确认，键盘显示TUNE，按下RUN键，电机参数辨识开始，当TUNE消失，表示参数辨识完成。经过参数辨识，变频器会自动计算出P1-06-P1-10的数值并写入。

参数	参数名称	默认值	设定范围	参数说明
P1-37	参数辨识选择	0	0：无操作	0：无操作 不进行参数辨识
			1：异步机静止部分参数辨识（参数辨识参数Rs、Rr、L0）	异步机静止部分参数辨识，应用于电机与负载很难脱离，且不允许动态参数辨识运行的场合。 辨识部分电机参数：P1-06（异步电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗），其他参数使用默认值。
			2：异步机动态参数辨识（支持带负载动态参数辨识）	应用于异步机动态参数辨识电机与应用系统适用于较高转速转动的场合，支持空载、轻载（50%负载以下）、纯惯量负载状态下参数辨识。 辨识所有电机参数：P1-06（异步电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-30（编码器相序）。
			3：异步机静态完整参数辨识（参数辨识参数，包含 Rs、Rr、L0、Lm、IO）	应用于电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。 辨识所有电机参数：P1-06（异步电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）。
			4：保留	4：保留
			5：异步机动态参数辨识3（增加互感曲线辨识要求空载或者轻载或者纯惯量负载支持V/ f、SVC、FVC）	应用于电机与应用系统可以较高转速转动的场合，支持空载、轻载（10%负载以下）、纯惯量负载状态下参数辨识。 辨识所有电机参数：P1-06（异步电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-11（异步机铁芯饱和系数1）、P1-12（异步机铁芯饱和系数2）、P1-13（异步机铁芯饱和系数3）、P1-14（异步机铁芯饱和系数4）、P1-30（编码器相序）。
			11：同步机静态部分参数辨识（不调反电动势）	应用于同步机带载参数辨识，电机与负载很难脱离的场合。 FVC模式下辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）、P1-30（编码器相序）、P1-31（编码器零点位置角）。 其他模式辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益） 编码器选用旋变及23位编码器，辨识过程中电机不旋转；编码器选用ABZ编码器，辨识过程中电机会短暂旋转。
			12：同步机空载动态完整参数辨识	应用于同步机空载动态完整参数辨识，电机与负载可以脱离运行的场合。 FVC模式下辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-19（同步机反电动势）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）、P1-30（编码器相序）、P1-31（编码器零点位置角）。 其他模式辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-19（同步机反电动势）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。
			13：同步机静态完整参数辨识（不参数辨识编码器安装角）	应用于同步机静态参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。 辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。

5.2.7 设置命令源

设定参数P0-02，选择命令源。命令源是指运行指令的来源或输入方式，用于控制变频器的启动、停止、正转、反转、点动运行等。

参数	参数名称	默认值	设定范围	参数说明
P0-02	运行指令选择	0	0：操作面板命令 通道（LED灭） 1：端子命令通道（LED亮） 2：通信命令通道（LED闪烁）	选择变频器控制命令的输入通道。变频器控制命令包括：启动、停机、正转、反转、点动等。 0：操作面板命令通道 选择此命令通道，可通过操作面板上的RUN/STOP实现启停操作，适用于初次调试。 1：端子命令通道 选择此命令通道，可通过变频器的DI端子输入控制命令，DI端子控制命令根据不同场合进行设定，如启停、正反转、点动、二三线式、多段速等功能，适用于大多数场合。 2：通信命令通道 选择此命令通道，可通过远程通信输入控制命令，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。

5.2.8 设置频率源

参数	参数名称	默认值	设定范围	参数说明
P0-03	主频率源X选择	0	0：数字设定（预置频率P0-08，UP/DOWN可修改，掉电不记忆） 1：数字设定（预置频率P0-08，UP/DOWN可修改，掉电记忆） 2：AI1 3：AI2 4：AI3 5：PULSE脉冲设定（DI5） 6：多段指令 7：简易PLC 8：PID 9：通信给定 10：保留	0：数字设定（掉电不记忆） 设定频率初始值为P0-08 “预置频率”的值。可通过键盘的▲键与▼ 键（或多功能输入端子的UP、DOWN）来改变变频器的设定频率值。变频器掉电后并再次上电时，设定频率值恢复为P0-08 “数字设定预置频率”值。 1：数字设定（掉电记忆） 设定频率初始值为P0-08 “预置频率”的值。可通过键盘的▲键与▼ 键（或多功能输入端子的UP、DOWN）来改变变频器的设定频率值。变频器掉电后并再次上电时，设定频率为上次掉电时刻的设定频率，通过键盘▲、▼ 键或者端子UP、DOWN的修正量被记忆。 2：AI1 设定频率通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。 3：AI2 设定频率通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。 4：AI3 设定频率通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。 5：PULSE脉冲设定（DI5） 设定频率通过DI输入端子DI5高速脉冲频率来给定，根据脉冲频率与设定频率的对应关系曲线计算出对应的频率值。 6：多段指令 选择多段指令做设定频率时，需要通过数字量输入DI端子的不同状态组合，对应不同的设定频率值。4个多段指令端子，可以组合为16种状态，这16个状态对应16个设定频率值。 7：简易PLC 简易PLC是可以进行运行时间和加减速时间控制的多段速运行指令。 参数PC-00-PC-15设定每段频率值，PC-18-PC-49设置每段频率的运行时间和加减速时间,最多可以设置16段速。 8：PID 选择了PID作为主频率。PID控制是过程控制的一种常用方法，通过对被控量的反馈信号与目标信号的差量进行比例、积分、微分运算，通过调整变频器的输出频率，构成闭环系统，使被控量稳定在目标值。选择PID 控制的输出作为设定频率，一般用于现场的工艺闭环控制，例如恒压力闭环控制、恒张力闭环控制等场合。 9：通信给定 主频率值由通信给定。可通过远程通信输入设定频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。 10：保留

5.2.9 设置控制模式

参数	参数名称	默认值	设定范围	参数说明
P0-01	第1电机控制方式	0	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f（同步机不可用） 3：保留 4：保留 5：PMVVC（仅支持同步机）	0：SVC控制（无速度传感器矢量控制） 无速度传感器矢量控制，是一种开环矢量控制，适用于通常的高性能控制场合，一台变频器只能驱动一台电机。如机床、离心机、拉丝机、注塑机等负载。 1：FVC控制（有速度传感器矢量控制） 有速度传感器矢量控制，是一种闭环矢量控制，电机端必须加装编码器，变频器必须选配与编码器同类型的PG卡。适用于高精度的速度控制或转矩控制的场合。一台变频器只能驱动一台电机。如高速造纸机械、起重机械、电梯等负载。 2：V/f 控制（速度开环控制） 适用于对负载控制性能要求不高的场合，如风机、泵类负载。当用于一台变频器拖动多台电机的场合时，只能使用V/f控制方式。同步机不可用 3、4：保留 5：PMVVC（同步机速度开环控制） 适用于风机、水泵等精度要求不高的负载。

5.2.10 设置Vf参数（可选）

参数	参数名称	默认值	设定范围	参数说明
P3-00	V/f曲线设定	0	0：直线V/f曲线 1：多点V/f曲线 2：平方V/f曲线 3：1.2次V/f曲线 4：1.4次V/f曲线 6：1.6次V/f曲线 8：1.8次V/f曲线 10：V/f完全分离模式 11：V/f半分离模式	0：直线V/f曲线 在额定频率以下，变频器的输出电压与输出频率成线性变化，适用于大惯量风机加速、冲床、离心机、水泵等一般机械传动应用场合。 1：多点V/f曲线 频率点设置范围为0.00Hz~电机额定频率，电压点设置范围为0.0%~100.0%，对应0V~电机额定电压，多点V/f曲线的设定值通常根据电机的负载特性来设定。务必如下设定：P3-03≤P3-05≤P3-07。 2：平方V/f曲线 在额定频率以下，变频器的输出电压与输出频率的关系按2次方曲线变化，适用于轻载且负载不经常变化的风机、水泵负载。 3：1.2次V/f曲线 在额定频率以下，变频器的输出电压与输出频率的关系按1.2次方曲线变化。 4：1.4次V/f曲线 在额定频率以下，变频器的输出电压与输出频率的关系按1.4次方曲线变化。 6：1.6次V/f曲线 在额定频率以下，变频器的输出电压与输出频率的关系按1.6次方曲线变化。 8：1.8次V/f曲线 在额定频率以下，变频器的输出电压与输出频率的关系按1.8次方曲线变化。 10：V/f完全分离模式 变频器的输出频率与输出电压相互独立，输出频率由频率源确定，而输出电压由V/f分离电压源确定。一般应用在力矩电机控制等场合。 11：V/f半分离模式 这种情况下V与f是成比例的，但是比例关系可以通过电压源设置，且V与f的关系也与第一组的电机额定电压与额定频率有关。假设电压源输入为X（X为0~100%的值），则变频器输出电压V与频率f的关系为：V/f=2 ×（电压源输入）×（电机额定电压）÷（电机额定频率）

5.2.11 设置SVC参数（可选）

参数	参数名称	默认值	设定范围	参数说明
P2-00	速度环比例增益1	异步机：30 同步机：20	1~200	此参数用于设置低速速度环增益Kp。 速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大。Kp数值越小，调节灵敏度就越小，调节力度越小。低速速度环Kp是低速时使用。
P2-01	速度环积分时间1	0.500s	0.001s~10.000s	此参数用于设置低速速度环积分时间Ti。 速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。低速速度环Ti是低速时使用。

参数	参数名称	默认值	设定范围	参数说明
P2-02	切换频率1	5.00Hz	0.00Hz~P2-05	零速锁定不使能时（出厂值），速度环PI参数分低速和高速两组。 运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。 运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P3-04。 运行频率介于切换频率1和切换频率2之间时，速度环PI参数为两组PI参数线性切换。 该参数的设定值应小于P2-05（切换频 率2）。
P2-03	速度环比例增益2	20	1~200	本参数是指高速速度环增益Kp。 Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。
P2-04	速度环积分时间2	1.000s	0.001s~10.000s	高速速度环积分时间Ti。 速度环积分时间的大小影响电机稳态速度误差的大小及速度环系统的稳定性。速度环积分时间增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。
P2-05	切换频率2	10.00Hz	P2-02~P0-10	零速锁定不使能时（出厂值），速度环PI参数分低速和高速两组。运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01；运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P3-04。运行频率介于切换频率1和切换频率2之间时的速度环PI参数为两组PI参数线性切换。该参数的设定值应大于P2-02（切换频率1）。

5.2.12 设置FVC参数（可选）

参数	参数名称	默认值	设定范围	参数说明
P2-00	速度环比例增益1	异步机：30 同步机：20	1~200	此参数用于设置低速速度环增益kp。 速度环Kp的大小影响电机速度的响应快慢。 Kp数值越大，调节灵敏度越高，调节力度越大； Kp数值越小，调节灵敏度就越小，调节力度越小。 低速速度环Kp是低速时使用的。
P2-01	速度环积分时间1	0.500s	0.001s~10.000s	此参数用于设置低速速度环积分时间Ti。 速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性。 速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。低速速度环Ti是低速时使用。
P2-02	切换频率1	5.00Hz	0.00Hz~P2-05	零速锁定不使能时（出厂值），速度环PI参数分低速和高速两组。 运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。 运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。 切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。
P2-03	速度环比例增益2	20	1~300	本参数是指高速速度环增益Kp。 Kp数值越大，调节灵敏度越高，调节力度越大； Kp数值越小，调节灵敏度越低，调节力度越小。
P2-04	速度环积分时间2	1.000s	0.001s~10.000s	高速速度环积分时间Ti。速度环积分时间的大小影响电机稳态速度误差的大小及速度环系统的稳定性。 速度环积分时间增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。

参数	参数名称	默认值	设定范围	参数说明
P2-05	切换频率2	10.00Hz	P2-02~P0-10	零速锁定不使能时（出厂值），速度环PI参数分低速和高速两组。 运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01； 运行频率大于F2-05（切换频率2）时，速度环PI调节参数为P2-03和P3-04。 运行频率介于切换频率1和切换频率2之间时的速度环PI参数为两组PI参数线性切换。该参数的设定值应大于P2-02（切 换频率1）。
P2-07	编码器测速滤波时间常数	0.004s	0.000s~0.100s	通过调整编码器测速滤波时间常数，可以改变对编码器信号的滤波效果。 滤波时间越大，编码器反馈速度越是平滑，但反馈速度延迟越大； 滤波时间越小，编码器反馈速度波动越大，但反馈速度延迟越小； FVC控制方式下，可根据应用工况和编码器测速质量调整该滤波时间常数，旋变编码器以及其他编码器信号质量差的情况下，不能设置太小的滤波时间。
P1-27	编码器线数	1024	1~20000	设定ABZ编码器线数（每圈A脉冲或B脉冲的个数，应与编码铭牌标识一致），或正余弦编码器每圈弦波数。 在有速度传感器矢量控制方式下（FVC），必须正确设置编码器脉冲数，否则电机运行不正常。 注：23位编码器不用设置编码器线数。
P1-28	编码器类型	0	0：ABZ增量编码器 1：23位编码器 2：旋变编码器	安装好 PG 卡后，要根据实际情况正确设置 P1-28 编码器类型， 否则变频器可能运行不正常，具体编码器类型以现场实际使用为准。 0：ABZ 增量编码器 1：23 位编码器 2：旋变编码器
P1-34	旋变极对数	1	1~32	旋变极对数是指旋转变压器的磁极对数，极对数越高，精度越高。其中，旋转变压器是一种电磁式传感器，又称同步分解器。它是一种测量角度用的小型交流电机，用来测量旋转物体的转轴角位移和角速度，由定子和转子组成。 在使用旋转变压器时，必须正确设置极对数参数。旋转变压器极对数需小于等于电机极对数，且电机极对数/旋转变压器极对数=整数。

5.2.13 设置PMVVC参数（可选）

参数	参数名称	默认值	设定范围	参数说明
P0-01	第1电机控制方式	0	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f（同步机不可用） 3：保留 4：保留 5：同步机速度开环控制（PMVVC）	0：SVC控制（无速度传感器矢量控制） 无速度传感器矢量控制，是一种开环矢量控制，适用于通常的高性能控制场合，一台变频器只能驱动一台电机。如机床、离心机、拉丝机、注塑机等负载。 1：FVC控制（有速度传感器矢量控制） 有速度传感器矢量控制，是一种闭环矢量控制，电机端必须加装编码器，变频器必须选配与编码器同类型的PG卡。适用于高精度的速度控制或转矩控制的场合。一台变频器只能驱动一台电机。如高速造纸机械、起重机械、电梯等负载。 2：V/f 控制（速度开环控制） 适用于对负载控制性能要求不高的场合，如风机、泵类负载。当用于一台变频器拖动多台电机的场合时，只能使用V/f控制方式。同步机不可用 3、4：保留 5：PMVVC（同步机速度开环控制） 适用于风机、水泵等精度要求不高的负载。
P1-00	电机类型选择	0	0：普通异步电机 1：变频异步电机 2：同步机	用于设置应用现场的电机类型。 0：普通异步电机 普通异步电机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。 1：变频异步电机 变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动；负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。 2：永磁同步电机 永磁同步电机是以永磁体提供励磁，具有结构简单，体积小、效率高、功率因数高等优点。
P1-20	滤波时间常数（PMVVC使 用）	0.100	0.003~65.535	滤波时间常数。仅P0-01选择PMVVC（P0-01=5）时适用。
P1-21	振荡抑制增益（PMVVC使 用）	100	0~65535	振荡抑制增益系数。仅P0-01选择PMVVC（P0-01=5）时适 用。
P1-24	电机极对数	2	0~65535	-

参数	参数名称	默认值	设定范围	参数说明
P1-37	参数辨识选择	0	0：无操作 1：异步机静态部分参数辨识（参数辨识参数Rs、Rr、L0） 2：异步机动态参数辨识（支持带负载动态参数辨识） 3：异步机静态完整参数辨识（参数辨识参数 Rs、Rr、L0、Lm、IO） 4：保留 5：异步机动态参数辨识3（增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持(V/ f、SVC、FVC） 续下	0：无操作 不参数辨识 1：异步机静态部分参数辨识 异步机静止部分参数参数辨识，电机与负载很难脱离，且不允许动态参数辨识运行的场合。辨识部分电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗），其他参数使用默认值。 2：异步机动态参数辨识 电机与应用系统可以较高转速转动的场合，支持空载、轻载（50%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：P1-06（异步电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-30（编码器相序）。 3：异步机静态完整参数辨识 异步机静态完整参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识所有电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）。 4：保留 电机与应用系统可以较高转速转动的场合，支持空载、轻载（80%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-30（编码器相序）、P2-35（系统惯量）。 5：异步机动态参数辨识3（增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC） 电机与应用系统可以较高转速转动的场合，支持空载、轻载（10%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-11（异步机铁芯饱和系数1）、P1-12（异步机铁芯饱和系数2）、P1-13（异步机铁芯饱和系数3）、P1-14（异步机铁芯饱和系数4）、P1-30（编码器相序）。 续下

参数	参数名称	默认值	设定范围	参数说明
P1-37	参数辨识选择	0	续上 11：同步机带载参数辨识 (不调反电动势) 12：同步机空载动态 (完整参数辨识) 13：同步机静态参数辨识 (不参数辨识编码器安装角)	续上 11：同步机带载参数辨识（不调反电动势） 同步机带载参数辨识，电机与负载很难脱离的场合。FVC模式下辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）、P1-30（编码器相序）、P1-31（编码器零点位置角）。其他模式辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。 12：同步机空载动态(完整参数辨识) 同步机空载动态完整参数辨识，电机与负载可以脱离运行的场合。FVC模式下辨识的电机参数：P1-06（电机定子电阻)、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感)、P1-19（同步机反电动势）、P1-20（滤波时间常数)、P1-21（振荡抑制增益）、P1-30（编码器相序）、P1-31（编码器零点位置角）。 其他模式辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-19（同步机反电动势）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。 13：同步机静态参数辨识（不参数辨识编码器安装角） 同步机静态参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。
A9-40	低速是否开启闭电流（VVC使用）	0	0：不使能 1：使能	-
A9-41	低速闭环电流（VVC使用 ）	50%	30%~200%	-
A9-42	振荡抑制阻尼系数（VVC 使用）	100%	0%~500%	-
A9-43	初始位置补偿角（VVC使 用）	0	0~5	-

5.2.14 设定加减速时间

参数	参数名称	默认值	设定范围	参数说明
P0-17	加速时间1	20.0s	0.0s~6500.0s	加速时间是指输出频率从0上升到P0-25（加减速基准频率）所需时间，通常用频率设定信号上升来确定加速时间。在电机加速时须限制频率设定的上升率以防止过电流。 加速时间设定要求：将加速电流限制在变频器过电流容量以下，不使过流失速而引起变频器跳闸。
P0-18	减速时间1	20.0s	0.0s~6500.0s	减速时间是指输出频率从P0-25（加减速基准频率）下降到0所需时间，通常用频率设定信号下降来确定减速时间。在电机减速时须限制频率设定的下降率以防止过电压。 减速时间设定要求：防止平滑电路电压过大，不使再生过压失速而使变频器跳闸。
P0-25	加减速时间基准频率	0	0：最大频率(P0-10) 1：目标频率 2：100Hz	加减速时间基准频率，用于加速时的目标频率，减速时的起始频率。

5.2.15 设置启动方式（可选）

参数	参数名称	默认值	设定范围	参数说明
P6-00	启动方式	0	0：直接启动 1：转速跟踪启动 2：异步机矢量预励磁启动（异步电机）	0：直接启动 变频器直接启动，适用于大多数负载，启动前加"启动频率”适用于电梯、起重等提升类负载场合。 1：转速跟踪再启动 是指在某些场合，变频器启动前电机已经处于旋转状态，变频器能自动跟踪电机的转速和方向，对旋转中的电机实施平滑无冲击启动。例如变频器在运行中，由于电网瞬时掉电，导致变频器掉电再启动，由于惯性，电机处于旋转状态。在这种状态下，要想重新控制异步电机，变频器必须首先检测出电机当前的实际转速，否则在启动过程中会造成变频器过流、过压等故障情况，严重的可能烧毁变频器功率管。 2：预励磁启动（异步机） 变频器为预励磁启动，该方式只适用于异步电机的SVC与FVC 控制模式，启动前对电机进行预励磁，可以提高电机的快速响应和减小启动电流，启动时序与直流制动再启动一致。

5.2.16 设定启动频率（可选）

参数	参数名称	默认值	设定范围	参数说明
P6-03	启动频率	0.00Hz	0.00Hz~10.00Hz	变频器直接启动的启动频率值。当启动频率值高于给定频率时，变频器处于待机状态，不会启动。
P6-04	启动频率保持时间	0.0s	0.0s~100.0s	输出频率为启动频率并保持一段时间，时间（该设定值）到达后，输出频率才加/减速至给定频率。
P0-22	频率指令分辨率	2	1：0.1Hz 2：0.01Hz	选项说明： 1-0.1Hz: 变频器的频率单位为0.1Hz； 2- 0.01Hz：变频器频率单位为0.01Hz； 特殊说明： ① 频率单位由0.1Hz切换为0.01Hz时，需要同时修改下频率相关功能码(扩大 10倍)。 ② 频率单位由0.01Hz切换为0.1Hz时，需要同时修改下频率相关功能码(缩小 10倍)。

5.2.17 设定S曲线（可选）

参数	参数名称	默认值	设定范围	参数说明
P6-07	加减速方式	0	0：直线加减速 1：S曲线加减速	选择变频器的加减速方式。 0：直线加减速 输出频率按照直线递增或递减。 1：S曲线加减速 在目标频率实时动态变化的情况下，输出频率按照S曲线实时递增或递减。适用在舒适感要求较高及实时响应快速的场合。
P6-08	S曲线开始段时间比例	30.0%	0.0%~(100.0%-P6-09)	P6-08（S曲线开始段时间比例）与P6-09（S曲线结束段时间比例）之和要小于等于100%。
P6-09	S曲线结束段时间比例	30.0%	0.0%~(100.0%-P6-08)	P6-08（S曲线开始段时间比例）与P6-09（S曲线结束段时间比例）之和要小于等于100%。

5.2.18 设定停机参数

参数	参数名称	默认值	设定范围	参数说明
P6-10	停机方式	0	0:减速停机 1:自由停机	0：减速停机 停机命令有效后，变频器按照减速时间降低输出频率，频率降为0后停机。 1：自由停机 停机命令有效后，变频器立即终止输出，此时电机按照机械惯性自由停机。
P6-11	停机直流制动起始频率	0.00Hz	0.00Hz~最大频率（P0-10）	减速停机过程中，当运行频率降低到到该频率时，开始直流制动过程。
P6-12	停机直流制动等待时间	0.0s	0.0s~100.0s	在运行频率降低到停机直流制动起始频率后，变频器先停止输出一段时间，然后再开始直流制动过程。用于防止在较高速度时开始直流制动可能引起的过流等故障。

参数	参数名称	默认值	设定范围	参数说明
P6-13	停机直流制动电流	0%	0%~150%	启动直流制动开启，启动指令发出后，不会直接启动，而是先进行直流制动。直流制动电流越大，制动力越大，100%对应电机额定电流（电流上限为变频器额定电流的80%）。 可通过P6-35设置电流上限，最大将电流上限设置为变频器额定电流的135%。
P6-14	停机直流制动时间	0.0s	0.0s~100.0s	直流制动量保持的时间。此值为0则直流制动过程取消。

5.2.19 AI设置（可选）

参数	参数名称	默认值	设定范围	参数说明
P4-13	AI曲线1最小输入	-10.00V	-10.00~P4-15	当通过模拟量输入设定主频率时，AI端子作为频率源的给定，每个AI端子可以选择5种不同的AI曲线。 AI 曲线是设置模拟量输入电压（或模拟量输入电流）与相对最大频率（P0-10）的百分比之间的关系。AI曲线的x轴表示模拟量输入电压（或模拟量输入电流），y轴表示模拟输入对应的设定量，即相对最大频率（P0-10）的百分比。 AI曲线共有5 种，其中曲线1、曲线2、曲线3 均为2 点式曲线，相关参数为P4-13~P4-27；曲线4 与曲线5 均为4 点式曲线，相关参数为A6-00 ~ A6-15。 AI曲线1~3上有2个点，分别为最小输入点与最大输入点。P4-13对应AI曲线1的最小输入点的x轴，即最小模拟量输入电压（或最小模拟量输入电流）。
P4-14	AI曲线1最小输入对应设定	-100.0%	-100.0%~100.0%	P4-14对应AI曲线1的最小输入点的y轴，即最小模拟输入对应的设定量。
P4-15	AI曲线1最大输入	10.00V	P4-13~10.00V	P4-15对应AI曲线1的最大输入点的x轴，即最大模拟量输入电压（或最大模拟量输入电流）。
P4-16	AI曲线1最大输入对应设定	100.0%	-100.0%~100.0%	P4-16对应AI曲线1的最大输入点的y轴，即最大模拟输入对应的设定量。

5.2.20 AO设置（可选）

参数	参数名称	默认值	设定范围	参数说明
P5-07	AO1输出功能选择	0	0：运行频率 1：设定频率 2：输出电流 3：输出转矩 4：输出功率 5：输出电压 6：脉冲输入(100.0%对应100.00kHz) 7：AI1 8：AI2 9：AI3 10：长度 11：计数值 12：通信设定 13：电机转速 14：输出电流(100.0%对应1000.0A) 15：输出电压(100.0%对应1000.0V) 16：输出转矩(带方向) 19：锥度输出 20：卷径输出 21：张力输出 22：编码器反馈频率	0：运行频率(100.0%对应最大频率P0-10) 1：设定频率 2：输出电流(100.0%对应2倍电机额定电流) 3：电机输出转矩(100.0%对应2倍电机额定转矩)(绝对值，相对电机的百分比) 4：输出功率(100.0%对应2倍电机额定功率) 5：输出电压(100.0%对应1.2倍电机额定电压) 6：脉冲输入(100.0% 对应100.0kHz) 7：AI1(100.0% 对应10V) 8：AI2(100.0% 对应10V) 9：AI3(100.0% 对应10V) 10：长度(100.0% 对应PB-05) 11：计数值(100.0% 对应PB-08) 12：通信设定(100.0%对应AO通信设定) 13：电机转速(100.0% 对应最大频率P0-10) 14：输出电流(100.0% 对应1000.0A) 15：输出电压(100.0% 对应1000.0V) 16：电机输出转矩(100.0%对2倍电机额定转矩，50%对应0，0 对应-2倍电机额定转矩)(实际值，相对电机的百分比) 19：锥度输出 20：卷径输出(100.0%对应最大卷径B0-08) 21：张力输出(100.0%对应最大张力B1-02) 22：编码器反馈频率(100.0%对应最大频率P0-10)
P5-08	AO2输出功能选择	1		

5.2.21 DI设置（可选）

参数	参数名称	默认值	设定范围		参数说明
P4-00	DI1端子功能选择	1	0：无功能	36：外部停机端子1	如下
P4-01	DI2端子功能选择	4	1：正转运行（FWD）	37：控制命令切换端子2	
P4-02	DI3端子功能选择	9	2：反转运行（REV）	38：PID积分暂停	
P4-03	DI4端子功能选择	12	3：三线式运行控制	39：频率源X与预置频率切换	
P4-04	DI5端子功能选择	13	4：正转点动（FJOG）	40：频率源Y与预置频率切换	
P4-05	DI6端子功能选择	0	5：反转点动（RJOG）	41：电机选择端子1	
P4-06	DI7端子功能选择	0	6：端子UP	42：零伺服使能	
P4-07	DI8端子功能选择	0	7：端子DOWN	43：PID参数切换	
P4-08	DI9端子功能选择	0	8：自由停机	44：用户自定义故障1	
P4-09	DI10端子功能选择	0	9：故障复位（RESET）	45：用户自定义故障2	
			10：运行暂停	46：速度控制/转矩控制切换	
			11：外部故障常开输入	47：紧急停机	
			12：多段指令端子1	48：外部停机端子2	
			13：多段指令端子2	49：减速直流制动	
			14：多段指令端子3	50：本次运行时间清零	
			15：多段指令端子4	51：两线式/三线式切换	
			16：加减速选择端子1	52：电磁封星	
			17：加减速选择端子2	53：厚度叠加	
			18：频率源切换	54：卷径复位	
			19：UP/DOWN设定清零（端子、键盘）	55：初始卷径1	
				56：初始卷径2	
			20：运行命令切换端子	57：预驱动	
			21：加减速禁止	58：收放卷切换	
			22：PID暂停	59：卷径计算停止	
			23：PLC状态复位	60：退出张力模式	
			24：摆频暂停	61：端子张力提升	
			25：计数器输入（DI5）	62：厚度选择1	
			26：计数器复位	63：厚度选择2	
			27：长度计数输入（DI5）	90：水冷系统故障	
			28：长度复位	91：低液位故障	
			29：转矩控制禁止	92：计算圈数复位	
			30：脉冲输入	93：保留	
			31：保留	94：开闸状态反馈	
			32：立即直流制动	95：关闸状态反馈	
			33：外部故障常闭输入	96：电缆卷筒收放卷切换	
			34：频率修改使能	97：电机选择端子2	
			35：PID作用方向取反		

0：无功能

DI端子无任何功能。

1：正转运行

变频器的运行方式为正转运行。FWD（即FORWORD）。两线式1（P4-11=0）时为正向运行；两线式2（P4-11=1）时为运行命令。

2：反转运行

变频器的运行方式为反转运行。REV（即REVERSE）。三线式1（P4-11=2）时为反向运行；三线式2（P4-11=3）时为正反运行方向。

3：三线式运行控制

确定变频器运行方式是三线控制模式。如果要通过端子设定运行指令，参数P4-11（端子命令方式）设置为2（三线式1）或者3（三线式2），端子功能要设置为此功能。三线控制模式包括三线式1和三线式2两种模式。

4：正转点动（FJOG）

变频器的运行方式为正转点动运行。点动模式下，变频器短暂低速运行，一般用于对现场设备进行维护和调试的场景。

5：反转点动（RJOG）

变频器的运行方式为反转点动运行。

6：端子UP

通过端子给定频率时修改频率的递增指令。端子有效相当于一直按着递增键，端子无效相当于松开递增键。

7：端子DOWN

通过端子给定频率时修改频率的递减指令。端子有效相当于一直按着递减键，端子无效相当于松开递减键。

8：自由停机

变频器接到停机命令后，立即终止输出，负载按照机械惯性自由停止。变频器通过停止输出来停机，这时，电机的电源被切断,拖动系统处于自由制动状态。由于停机时间的长短由拖动系统的惯性决定,也称为惯性停机。

9：故障复位（RESET）

对变频器的故障进行复位，与键盘上的STOP/RES 键功能相同。用此功能可实现远距离故障复位。

10：运行暂停

端子选择此功能，变频器进行减速停机，所有运行参数均被记忆（如PLC 参数、摆频参数、PID参数）。端子无效后，变频器恢复之前所记忆的运行状态。

11：外部故障常开输入

当外部信号送给变频器后，变频器报故障E15。

12~15：多段指令端子1~4

变频器选择多段指令作为主频率。可通过这四个端子的16种状态，实现16段速度或者16个指令的设定。应用场景：不需要连续调整变频器运行频率，只需使用若干个频率值的应用场合。

16、17：加减速选择端子1~2

提供4 组加减速时间，通过这两个端子的4种状态，可实现4组加减速时间的切换。加速时间指变频器从零频，加速到加减速基准频率(P0-25 确定)所需时间；减速时间指变频器从加减速基准频率(P0-25 确定)，减速到零频所需时间。

18：频率源切换

用来选择不同的频率指令输入方法。通过P0-07（频率指令叠加选择）设置频率指令。

19：UP/DOWN设定清零

当通过面板设定主频率时，端子有效时可清除已设置的频率值（该频率值是指通过键盘上递增键、递减键或者端子UP/端子DOWN所设置的频率值），使给定频率恢复到P0-08设定的值。

20：运行命令切换端子1

当通过端子设置运行指令时（P0-02=1），端子有效时可进行端子控制与键盘控制的切换。

当通过通信设置运行指令时（P0-02=2），端子有效时可进行通信控制与键盘控制的切换。

21：加减速禁止

变频器维持当前运行频率（停机命令除外），不受外部输入频率变化的影响。

22：PID暂停

PID 暂时失效，变频器维持当前的输出频率，不再进行频率源的PID调节。

23：PLC状态复位

使变频器恢复到简易PLC 的初始状态。

24：摆频暂停

在摆频工艺功能中，端子有效时使摆频功能暂停（变频器以中心频率输出）。

25：计数器输入

在计数工艺功能中，端子有效时输入计数脉冲。

26；计数器复位

在计数工艺功能中，端子有效时对计数器状态进行清零处理。

27：长度计数输入

在定长工艺功能中，端子有效时输入长度计数。

28：长度复位

在定长工艺功能中，端子有效时使长度清零。

29：转矩控制禁止

端子有效时，变频器进行转矩控制模式到速度控制模式的切换；端子无效时，恢复到转矩控制模式。

30：脉冲输入

当DI5作为脉冲输入的端子时，DI5端子必须选择此功能。

32：立即直流制动

变频器直接切换到直流制动状态。直流制动是指变频器向异步电机定子绕组中通入直流，形成静止磁场，此时电机处于能耗制动状态，转子切割该静止磁场而产生制动转矩，使电机迅速停止。

33：外部故障常闭输入

当外部信号送给变频器后，变频器报出故障E15。

34：频率修改使能

如果端子有效，允许修改频率；如果端子无效，禁止修改频率。

35：PID作用方向取反

PID 作用方向与PA-03（PID作用方向）设定的方向相反。

36：外部停机端子1 当通过操作面板设置运行指令时（P0-02=0），使变频器停机，相当于键盘上STOP/RES键的功能。

37：控制命令切换端子2

在端子和通信设定运行指令之间进行切换。

如果用端子控制运行命令，端子有效时系统切换为通信控制；

如果用通信控制运行命令，端子有效时系统切换为端子控制。

38：PID 积分暂停

PID 的积分调节功能暂停，但PID的比例调节和微分调节功能仍然有效。

39：频率源X与预置频率切换

主频率源X切换为P0-08(预置频率)。

40：频率源Y与预置频率切换

辅频率源Y切换为P0-08(预置频率)。

41、97：选择电机参数1~4。例如设置DI1和DI2的功能分别为41和97，通过DI1与DI2配合切换电机组参数。

【0，0】表示第一组电机；

【0，1】表示第二组电机；

【1，0】表示第三组电机；

【1，1】表示第四组电机。

42：零伺服使能

该端子生效，变频器减速到0Hz，然后进入0伺服状态。

43：PID参数切换

当PID参数切换条件设置为“通过DI端子切换”时（PA-18=1），若端子无效，PID参数使用PA-05~FA-07（比例增益Kp1、积分时间Ti1、微分时间Td1）的设定值；若端子有效，PID参数使用PA-15~PA-17（比例增益Kp2、积分时间Ti2、微分时Td2）的设定值。

44：用户自定义故障1

变频器报故障E27，变频器会根据P9-49（故障保护动作选择）的设定值进行处理。

45：用户自定义故障2

变频器报故障E28，变频器会根据P9-49（故障保护动作选择）的设定值进行处理。

46：速度控制/ 转矩控制切换

变频器在转矩控制与速度控制模式之间切换。

A0-00(速度/转矩控制方式)设置为0，端子有效时，控制方式为转矩模式；端子无效时，控制方式为速度模式。

A0-00(速度/转矩控制方式)设置为1，端子有效时，控制方式为速度模式；端子无效时，控制方式为转矩模式。

47：紧急停机

系统处于紧急状态时，变频器按照P8-55（端子急停减速时间）减速，V/f 模式急停减速时间为0s时按照最小单位时间进行减速。该输入端子无需持续处于闭合状态，即使处于闭合状态的时间仅仅为一瞬间，也会紧急停止。与一般的减速时间不同，在经过紧急停止减速时间后断开紧急停机输入端子，如果此时变频器端子运行信号仍处于闭合状态，变频器也不会启动，需先断开运行端子后再次输入端子运行指令，变频器才会重新启动。

48：外部停机端子2

在任何运行指令方式下（面板控制、端子控制、通信控制），变频器减速停机。此时减速时间固定为减速时间4（P8-08）。

49：减速直流制动

变频器先减速到P6-11（停机直流制动起始频率），然后进入直流制动状态。

50：本次运行时间清零

变频器本次运行计时时间被清零。如果本次运行时间小于P8-53（本次运行到达时间）的设定值（大于0），在此过程中端子有效，本次运行计时清零。如果本次运行时间大于P8-53的设定值（大于0），此时端子有效，本次运行计时不清零。

51：两线制/ 三线制切换

用于在两线式和三线式控制之间进行切换。

P4-11 = 0（两线式1），端子有效时，切换为三线式1。端子无效时，为两线式1。

P4-11 = 1（两线式2），端子有效时，切换为三线式2。

P4-11 = 2（三线式1），端子有效时，切换为两线式1。

P4-11 = 3（三线式2），端子有效时，切换为两线式2。

52：电磁封星

该端子生效，变频器进入电磁封星状态

53：计圈信号

使用厚度累积计算卷径时，该端子用来进行记圈。

54：卷径复位

该端子生效，复位初始卷径。使用张力模式的情况下，在换卷的时候，需要复位初始卷径。

55：初始卷径1

56：初始卷径2

使用张力模式情况下，通过端子组合选择初始卷径B0-11/12/13，两者都不生效选择最小卷径B0-09作为初始卷径，仅初始卷径1端子生效时选择B0-11作为初始卷径，仅初始卷径2端子生效时选择B0-12作为初始卷径，两者都生效时选择B0-13作为初始卷径。

57：预驱动

该端子生效，变频器切换到预驱动速度模式。使用张力模式的情况下，在需要自动换卷，待换卷的轴需要进行线速度同步，需要使能该功能。换卷完成后，失效该端子，张力功能可正常实现。

58：收放卷切换

使用张力模式情况下，用来切换收/放卷切换。

59：卷径计算停止

该端子生效后，卷径计算停止。使用张力模式情况下，如需要自动换卷，预驱动，为了不影响卷径计算，可以禁止卷径计算。

60：退出张力模式

使用张力模式情况下，用来退出张力控制模式。

61：端子张力提升

该端子生效后，在张力转矩的基础上，提升一定的比例，而在DI端子撤销后，按照时间逐渐将提升部分撤销掉。

62：厚度选择1

63：厚度选择2

使用张力模式情况下，通过端子组合选择材料厚度B0-32/33/34/35，两者都不生效选材料厚度选择B0-32，仅厚度选择1端子生效时材料厚度选择B0-33，仅厚度选择2端子生效时材料厚度选择B0-34，两者都生效时材料厚度选择B0-35。

64~89：保留

90：水冷系统故障

T13机型当水冷系统发生故障时，该端子接收信号，变频器报出故障E64。

91：低液位故障

T13机型当水箱液位过低时，该端子接收信号，变频器报出警告A63。

92：计算圈数复位

该端子生效，计数圈数清零。

93：保留

94：抱闸工艺固化参数1

95：抱闸工艺固化参数2

96：切换收/放卷切换

97：电机组参数选择端子2

用于切换不同电机组，配合41号端子功能可以做到第三组和第四组电机切换。

5.2.22 DO设置（可选）

参数	参数名称	默认值	设定范围		参数说明
P5-04	DO1输出功能选择	1	0：无输出 1：变频器运行中 2：故障输出(故障停机) 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定记数值到达 9：指定记数值到达 10：长度到达 11：PLC 循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达(运行有关) 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时也输出） 24：累计上电时间到达 25：频率水平检测FDT2输出	26：频率1到达输出 27：频率2到达输出 28：电流1到达输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达(停机也输出) 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3 43：零伺服成功 44：停机抱闸输出 45：工艺指令1 46：工艺指令2 47：工艺指令3 48：工艺指令4 49：工艺指令5 50：工艺指令6 51：工艺指令7 52：工艺指令8 53：抱闸指令输出	如下
P5-05	扩展卡DO2输出选择	4			

设置扩展卡继电器端子功能。

0：无输出

输出端子无任何功能。

1：变频器运行中

变频器处于运行状态，有输出频率（可以为零），此时输出“有效”信号。

2：故障输出(为自由停机的故障)

当变频器故障停机时，输出“有效”信号。

3：频率水平检测1

当运行频率高于频率检测值时，DO输出“有效”信号；当运行频率低于检测值减去FDT 滞后值（P8-19设定值与P8-20的乘积）时，DO输出“有效”信号取消。

4：频率到达

当变频器的运行频率处于目标频率一定范围内（目标频率±P8-21的设定值与最大频率的乘积），DO输出“有效”信号。

5：零速运行中（停机时不输出）

变频器运行且输出频率为0时，输出“有效”信号。在变频器处于停机状态时，该信号“无效”。

6：电机过载预报警

电机过载保护动作之前，根据过载预警系数（P9-02）进行判断，在超过预报警阈值后输出“有效”信号。

7：变频器过载预报警

在变频器过载保护发生前10s，输出“有效”信号。

8：设定计数值到达

在计数功能中，当计数值达到PB-08所设定的值时，输出“有效”信号。

9：指定计数值到达

在计数功能中，当计数值达到PB-09所设定的值时，输出“有效”信号。

10：长度到达

在定长功能中，当检测的实际长度超过PB-05所设定的长时，输出“有效”信号。

11：简易PLC 循环完成

当简易PLC 运行完成一个循环后，输出一个宽度为250ms的脉冲信号。

12：累计运行时间到达

变频器累计运行时间超过P8-17（设定累计运行到达时间）所设定时间时，输出“有效”信号。

13：频率限定中

当设定频率超出上限频率或者下限频率，且变频器输出频率达到上限频率或者下限频率时，输出“有效”信号。

14：转矩限定中

变频器在速度控制模式下，当输出转矩达到转矩限定值时，输出“有效”信号。

15：运行准备就绪

变频器上电后，处于无异常状态时，输出“有效”信号。

16：AI1>AI2

当模拟量输入AI1的值大于AI2的输入值时，输出“有效”信号。

17：上限频率到达

当运行频率到达上限频率（P0-12）时，输出“有效”信号。

18：下限频率到达(停机时不输出)

当P8-14（给定频率低于下限频率运行模式）设置为1（停机）时，无论运行频率是否到达下限频率，都输出“无效”信号；

当P8-14（给定频率低于下限频率运行模式）设置为0（以下限频率运行）或者2（零速运行）时，且运行频率到达下限频率时，输出“有效”信号。

19：欠压状态

变频器处于欠压状态时，输出“有效”信号。

20：通信设定

端子“有效”或者“无效”状态由通信地址0x2001的设定值控制。

21：保留

22：保留

23：零速运行中2（停机时也输出）

变频器运行且输出频率为0时，输出“有效”信号。在变频器处于停机状态时，该信号也为“有效”。

24：累计上电时间到达

变频器累计上电时间（P7-13）超过P8-16（设定累计上电到达时间）所设定时间时，输出“有效”信号。

25：频率水平检测2

当运行频率高于频率检测值时，DO输出“有效”信号，当运行频率低于检测值减去频率检测滞后值（P8-28设定值与P8-29的乘积），DO输出“有效”信号取消。

26：频率1到达

变频器的运行频率处于P8-30（任意到达频率检测值1）频率检出范围内，DO输出“有效”信号。

频率检出范围：P8-30-P8-31×P0-10（最大频率）~ P8-30+P8-31×P0-10。

27：频率2到达

变频器的运行频率处于P8-32（任意到达频率检测值2）频率检出范围内，DO输出“有效”信号。

频率检出范围：P8-32-P8-33×P0-10（最大频率）~ P8-32+P8-33×P0-10。

28：电流1到达

变频器的输出电流处于P8-38（任意到达电流1）电流的范围内，DO输出“有效”信号。

电流检出范围= P8-38-P8-39×P1-03（电机额定电流）~ P8-38+P8-39×P1-03。

29：电流2到达

变频器的输出电流处于P8-40（任意到达电流2）电流的范围内，DO输出“有效”信号。

电流检出范围= P8-40-P8-41×P1-03（电机额定电流）~ P8-40+P8-41×P1-03。

30：定时到达

当定时功能选择（P8-42）有效时，变频器本次运行时间达到所设置的定时时间后，输出“有效”信号。定时时间由P8-43和P8-44设置。

31：AI1输入超限

当模拟量输入AI1的值大于P8-46(AI1输入保护上限)或小于P8-45(AI1输入保护下限)时，输出“有效”信号。

32：掉载中

变频器处于掉载状态时，输出“有效”信号。

33：反向运行中

变频器处于反向运行时，输出“有效”信号。

34：零电流状态

变频器的输出电流处于零电流的范围内，且持续时间超过F8-35（零电流检测延迟时间）后，DO输出“有效”信号。零电流检出范围=0 ~ P8-34×P1-03。

35：模块温度到达

逆变模块散热器温度（P7-07）达到所设置的模块温度到达值（P8-47）时，输出“有效”信号。

36：输出电流超限

变频器的输出电流大于P8-36（输出电流超限值），且持续时间超过P8-37（输出电流超限检测延迟时间）后，DO输出“有效”信号。

37：下限频率到达(停机也输出)

当运行频率到达下限频率（P0-14）时，输出”有效”信号。在停机状态时，也输出“有效”信号。

38：告警(所有故障) 当变频器发生故障，且该故障保护动作选择为继续运行时，DO端子输出“有效”信号。

故障保护动作选择可以参照P9-47~P9-50。

39：电机过温

当电机温度达到P9-58（电机过热预报警阈值）时，输出“有效”信号。（电机温度可通过U0-34查看）

40：本次运行时间到达

变频器本次开始运行时间超过P8-53（本次运行到达时间设定）所设定的时间时，输出“有效”信号。

41：故障输出2

当变频器发生故障时（除了欠压故障之外），DO端子输出“有效”信号。

42：故障输出3

当变频器发生故障时，输出“有效”信号。

43：零伺服成功

当系统在零伺服运行状态，零伺服偏差脉冲数小于零伺服结束幅度设定值（P6-25）时，输出“有效”信号。

44：停机抱闸输出（拉丝机）

当变频器处于减速停机状态，运行频率小于设定频率（P8-15），输出“有效”信号，持续5秒后，
输出“无 效”信号。

45：工艺指令1

保留

46：工艺指令2（松闸）

运行使能和减速状态，输出“有效”信号。

47：工艺指令3

保留

48：工艺指令4

保留

49：工艺指令5

保留

50：工艺指令6

保留

51：工艺指令7

保留

52：工艺指令8

保留

53：抱闸指令输出

当变频器开闸时，输出“有效”信号。

5.2.23 设置多段速指令（可选）

PC组参数应用场景：当需要使用简易PLC作为主频率时，请设置PC组参数。在一些工业场合，使用交流电机只需实现启停、定时分段调速及简单的自动正反转等功能，使用简易PLC 便可完成以往还需添加PLC后才能完成的控制功能。简易PLC一般应用于混合料搅拌、工业洗衣机等行业设备。

PC组参数与其他参数的关联关系：设定参数P0-03=7，选择了简易PLC 作为主频率时，需要设置FC组参数。

参数	参数名称	默认值	设定范围	参数说明
PC-00	多段指令1	0.0%	-100.0%~100.0%	多段速指令频率设定，单位为%，该频率设定值是以相对最大频率 的百分比计算，100%对应P0-10（最大频率）。 变频器可通过PC-55~PC-58组合成16个状态，这16个状态对应这16 个频率设定值。或者直接使用DI端子功能（12~15）调用多段指令 1~16。 多段值1可以通过PC-51选择来源，其他多段值通过功能码数字设 定。 多段值输出到浮点连接器，除了作为频率给定，还可以用作转矩、 电压等给定输入，%对应额定值。
PC-01	多段指令2			
PC-02	多段指令3			
PC-03	多段指令4			
PC-04	多段指令5			
PC-05	多段指令6			
PC-06	多段指令7			
PC-07	多段指令8			
PC-08	多段指令9			
PC-09	多段指令10			
PC-10	多段指令11			
PC-11	多段指令12			
PC-12	多段指令13			
PC-13	多段指令14			
PC-14	多段指令15			
PC-15	多段指令16			

5.2.24 设置继电器输出（可选）

参数	参数名称	默认值	设定范围		参数说明
P5-01	扩展卡RELAY继电器功能选择	0	0：无输出 1：变频器运行中 2：故障输出（故障停机） 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定计数值到达 9：指定计数值到达 10：长度到达 11：PLC 循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达（运行有关） 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时也输出） 24：累计上电时间到达 25：频率水平检测FDT2输出	26：频率1到达输出 27：频率2到达输出 28：电流1到达输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达（停机也输出） 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3 43：零伺服成功 44：停机抱闸输出 45：工艺指令1 46：工艺指令2 47：工艺指令3 48：工艺指令4 49：工艺指令5 50：工艺指令6 51：工艺指令7 52：工艺指令8 53：抱闸指令输出	如下
P5-02	控制板RELAY1继电器功能选择（T/A1- T/B1-T/C1）	2			
P5-03	控制板RELAY2继电器功能选择（T/A2-T/C2）	0			

设置扩展卡继电器端子功能。

0：无输出

输出端子无任何功能。

1：变频器运行中

变频器处于运行状态，有输出频率（可以为零），此时输出“有效”信号。

2：故障输出（为自由停机的故障）

当变频器故障停机时，输出“有效”信号。

3：频率水平检测1

当运行频率高于频率检测值时，DO输出“有效”信号；当运行频率低于检测值减去FDT 滞后值（P8-19设定值与P8-20的乘积）时，DO输出“有效”信号取消。

4：频率到达

当变频器的运行频率处于目标频率一定范围内（目标频率±P8-21的设定值与最大频率的乘积），DO输出“有效”信号。

5：零速运行中（停机时不输出）

变频器运行且输出频率为0时，输出“有效”信号。在变频器处于停机状态时，该信号“无效”。

6：电机过载预报警

电机过载保护动作之前，根据过载预警系数（P9-02）进行判断，在超过预报警阈值后输出“有效”信号。

7：变频器过载预报警

在变频器过载保护发生前10s，输出“有效”信号。

8：设定计数值到达

在计数功能中，当计数值达到PB-08所设定的值时，输出“有效”信号。

9：指定计数值到达

在计数功能中，当计数值达到PB-09所设定的值时，输出“有效”信号。

10：长度到达

在定长功能中，当检测的实际长度超过PB-05所设定的长度时，输出“有效”信号。

11：简易PLC 循环完成

当简易PLC 运行完成一个循环后，输出一个宽度为250ms的脉冲信号。

12：累计运行时间到达

变频器累计运行时间超过P8-17（设定累计运行到达时间）所设定时间时，输出“有效”信号。

13：频率限定中

当设定频率超出上限频率或者下限频率，且变频器输出频率达到上限频率或者下限频率时，输出“有效”信号。

14：转矩限定中

变频器在速度控制模式下，当输出转矩达到转矩限定值时，输出“有效”信号。

15：运行准备就绪

变频器上电后，处于无异常状态时，输出“有效”信号。

16：AI1>AI2

当模拟量输入AI1的值大于AI2的输入值时，输出“有效”信号。

17：上限频率到达

当运行频率到达上限频率（P0-12）时，输出“有效”信号。

18：下限频率到达（ 停机时不输出）

当P8-14（给定频率低于下限频率运行模式）设置为1（停机）时，无论运行频率是否到达下限频率，都输出“无效”信号；

当P8-14（给定频率低于下限频率运行模式）设置为0（以下限频率运行）或者2（零速运行）时，且运行频率到达下限频率时，输出“有效”信号。

19：欠压状态

变频器处于欠压状态时，输出“有效”信号。

20：通信设定

端子“有效”或者“无效”状态由通信地址0x2001的设定值控制。

21：保留

22：保留

23：零速运行中2（停机时也输出）

变频器运行且输出频率为0时，输出“有效”信号。在变频器处于停机状态时，该信号也为“有效”。

24：累计上电时间到达

变频器累计上电时间（P7-13）超过P8-16（设定累计上电到达时间）所设定时间时，输出“有效”信号。

25：频率水平检测2

当运行频率高于频率检测值时，DO输出“有效”信号，当运行频率低于检测值减去频率检测滞后值（P8-28设定值与P8-29的乘积），DO输出“有效”信号取消。

26：频率1 到达

变频器的运行频率处于P8-30（任意到达频率检测值1）频率检出范围内，DO输出“有效”信号。

频率检出范围：P8-30-P8-31×P0-10（最大频率）~ P8-30+P8-31×P0-10。

27：频率2 到达

变频器的运行频率处于P8-32（任意到达频率检测值2）频率检出范围内，DO输出“有效”信号。

频率检出范围：P8-32-P8-33×P0-10（最大频率）~ P8-32+P8-33×P0-10。

28：电流1 到达

变频器的输出电流处于P8-38（任意到达电流1）电流的范围内，DO输出“有效”信号。

电流检出范围= P8-38-P8-39×P1-03（电机额定电流）~ P8-38+P8-39×P1-03。

29：电流2 到达

变频器的输出电流处于P8-40（任意到达电流2）电流的范围内，DO输出“有效”信号。

电流检出范围= P8-40-P8-41×P1-03（电机额定电流）~ P8-40+P8-41×P1-03。

30：定时到达

当定时功能选择（P8-42）有效时，变频器本次运行时间达到所设置的定时时间后，输出“有效”信号。定时时间由P8-43和P8-44设置。

31：AI1 输入超限

当模拟量输入AI1的值大于P8-46（AI1输入保护上限）或小于P8-45（AI1输入保护下限）时，输出“有效”信号。

32：掉载中

变频器处于掉载状态时，输出“有效”信号。

33：反向运行中

变频器处于反向运行时，输出“有效”信号。

34：零电流状态

变频器的输出电流处于零电流的范围内，且持续时间超过P8-35（零电流检测延迟时间）后，DO输出“有效”信号。零电流检出范围=0 ~ P8-34×P1-03。

35：模块温度到达

逆变模块散热器温度（P7-07）达到所设置的模块温度到达值（P8-47）时，输出“有效”信号。

36：输出电流超限

变频器的输出电流大于P8-36（输出电流超限值），且持续时间超过P8-37（输出电流超限检测延迟时间）后，DO输出“有效”信号。

37：下限频率到达（ 停机也输出）

当运行频率到达下限频率（P0-14）时，输出“有效”信号。在停机状态时，也输出“有效”信号。

38：告警（所有故障）

当变频器发生故障，且该故障保护动作选择为继续运行时，DO端子输出“有效”信号。

故障保护动作选择可以参照P9-47~P9-50。

39：电机过温

当电机温度达到P9-58（电机过热预报警阈值）时，输出“有效”信号（电机温度可通过U0-34查看）。

40：本次运行时间到达

变频器本次开始运行时间超过P8-53（本次运行到达时间设定）所设定的时间时，输出“有效”信号。

41：故障输出2

当变频器发生故障时（除了欠压故障之外），DO端子输出“有效”信号。

42：故障输出3

当变频器发生故障时，输出“有效”信号。

43：零伺服成功

当系统在零伺服运行状态，零伺服偏差脉冲数小于零伺服结束幅度设定值（P6-25）时，输出“有效”信号。

44：停机抱闸输出（拉丝机）

当变频器处于减速停机状态，运行频率小于设定频率（P8-15），输出“有效”信号，持续5秒后，输出“无效”信号。

45：工艺指令1

保留

46：工艺指令2（松闸）

运行使能和减速状态，输出“有效”信号。

47：工艺指令3

保留

48：工艺指令4

保留

49：工艺指令5

保留

50：工艺指令6

保留

51：工艺指令7

保留

52：工艺指令8

保留

53：抱闸指令输出

当变频器开闸时，输出“有效”信号。

5.3 功能调试

5.3.1 PMVVC功能调试（仅适应于同步机）

调试流程

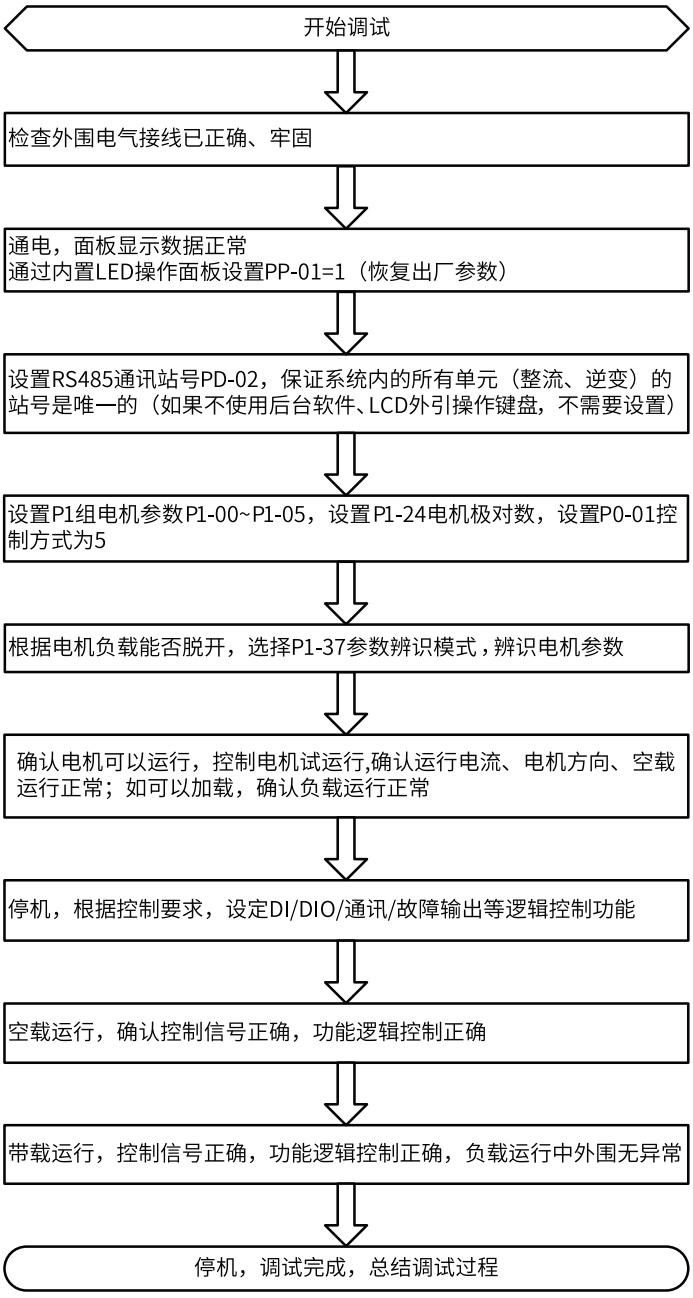


图 5-7 调试流程图

调试步骤

1. 设置控制方式为同步机VVC+控制方式（P0-01=5），设置电机类型为永磁同步电机（P1-00=2）；
2. 设置P1-01~P1-05相关电机参数，同时设置P1-24电机极对数；
3. 设置P1-37参数辨识（空载动态参数辨识选择12，静态参数辨识选择11）；
4. 参数辨识完毕后，设置空载试运行；
5. 对低速启动负载有需求的可以手动设置P3-01转矩提升。

相关参数

参数	名称	默认值	设定范围	设定值
P0-01	第1电机控制方式	0	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f（同步机不可用） 3：保留 4：保留 5：PMVVC（仅支持同步机）	5
P1-00	电机类型选择	0	0：普通异步电机 1：变频异步电机 2：同步机	2
P1-01	电机额定功率	机型确定	0.1kW~1000.0kW	机型确定
P1-02	电机额定电压	机型确定	1V~2000V	机型确定
P1-03	电机额定电流	机型确定	0.01A~655.35A(功率≤55kW) 0.1A~6553.5A(功率>55kW)	机型确定
P1-04	电机额定频率	机型确定	0.01Hz~P0-10	机型确定
P1-05	电机额定转速	机型确定	1rpm~65535rpm	机型确定
P1-20	滤波时间常数(PMVVC使用)	0.100	0.003~65.535	0.040
P1-21	振荡抑制增益(PMVVC使用)	100	0~65535	0.100
P1-37	参数辨识选择	0	0：无操作 1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0) 2：异步机动态参数辨识(支持带负载动态参数辨识) 3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO) 4：保留 5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/ f、SVC、FVC) 11：同步机带载参数辨识(不调反电动势) 12：同步机空载动态完整参数辨识 13：同步机静态参数辨识(不参数辨识编码器安装角)	11~13

第六章 参数说明

6.1 P0 基本功能组

P0-00 **GP类型显示**

通讯地址:	0xF000	生效方式:	-
最小值:	1	单位:	-
最大值:	2	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

1：G型（恒转矩负载机型）

2：P型（风机、水泵类负载机型）

设定说明

1：G型（恒转矩负载机型）

G型：通常为恒转矩负载，过载量较大。通常过载能力150%。负载如：传送带，起重机。

2：P型（风机、水泵类负载机型）

P型：通常为变转矩负载，如风机、水泵。

P0-01 **第1电机控制方式**

通讯地址:	0xF001	生效方式:	-
最小值:	0	单位:	-
最大值:	5	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：无速度传感器矢量控制（SVC）

1：有速度传感器矢量控制（FVC）

2：V/f（同步机不可用）

3：保留

4：保留

5：PMVVC（仅支持同步机）

设定说明

0：SVC控制（无速度传感器矢量控制）

无速度传感器矢量控制，是一种开环矢量控制，适用于通常的高性能控制场合，一台变频器只能驱动一台电机。如机床、离心机、拉丝机、注塑机等负载。

1：FVC控制（有速度传感器矢量控制）

有速度传感器矢量控制，是一种闭环矢量控制，电机端必须加装编码器，变频器必须选配与编码器同类型的PG卡。适用于高精度的速度控制或转矩控制的场合。一台变频器只能驱动一台电机。如高速造纸机械、起重机械、电梯等负载。

2：V/f 控制（速度开环控制）
适用于对负载控制性能要求不高的场合，如风机、泵类负载。当用于一台变频器拖动多台电机的场合时，只能使用V/f控制方式。同步机不可用
3、4：保留
5：PMVVC（同步机速度开环控制）
适用于风机、水泵等精度要求不高的负载。

P0-02 **运行指令选择**

通讯地址:	0xF002	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：操作面板命令通道（LED灭）
1：端子命令通道 （LED亮）
2：通信命令通道 （LED闪烁）
设定说明
选择变频器控制命令的输入通道。变频器控制命令包括：启动、停机、正转、反转、点动等
0：操作面板命令通道
选择此命令通道，可通过操作面板上的RUN/STOP实现启停操作，适用于初次调试。
1：端子命令通道
选择此命令通道，可通过变频器的DI端子输入控制命令，DI端子控制命令根据不同场合进行设定，如启停、正反转、点动、二三线式、多段速等功能，适用于大多数场合。
2：通信命令通道
选择此命令通道，可通过远程通信输入控制命令，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。

P0-03 **主频率源X选择**

通讯地址:	0xF003	生效方式:	-
最小值:	0	单位：	-
最大值:	10	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：数字设定（预置频率P0-08，UP/DOWN可修改，掉电不记忆）
1：数字设定（预置频率P0-08，UP/DOWN可修改，掉电记忆）
2：AI1
3：AI2
4：AI3
5：PULSE脉冲设定（DI5）
6：多段指令
7：简易PLC
8：PID
9：通信给定
10：保留

设定说明

0：数字设定（掉电不记忆）
设定频率初始值为P0-08“预置频率”的值。可通过键盘的▲键与▼键（或多功能输入端子的UP、DOWN）来改变变频器的设定频率值。变频器掉电后并再次上电时，设定频率值恢复为P0-08“数字设定预置频率”值。

1：数字设定（掉电记忆）
设定频率初始值为P0-08“预置频率”的值。可通过键盘的▲键与▼键（或多功能输入端子的UP、DOWN）来改变变频器的设定频率值。变频器掉电后并再次上电时，设定频率为上次掉电时刻的设定频率，通过键盘▲、▼ 键或者端子UP、DOWN 的修 正量被记忆。

2：AI1
设定频率通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

3：AI2
设定频率通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

4：AI3
设定频率通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

5：PULSE脉冲设定（DI5）
设定频率通过DI输入端子DI5高速脉冲频率来给定，根据脉冲频率与设定频率的对应关系曲线计算出对应的频率值。

6：多段指令
选择多段指令做设定频率时，需要通过数字量输入DI端子的不同状态组合，对应不同的设定频率值。4个多段指令端子，可以组合为16 种状态，这16个状态对应16个设定 频率值。

7：简易PLC
简易PLC是可以进行运行时间和加减速时间控制的多段速运行指令。参数PC-00~PC-15设定每段频率值，PC-18~PC-49设置每段频率的运行时间和加减速时间,最多可以设 置16段速。

8：PID

选择了PID作为主频率。PID控制是过程控制的一种常用方法，通过对被控量的反馈信号与目标信号的差量进行比例、积分、微分运算，通过调整变频器的输出频率，构成闭环系统，使被控量稳定在目标值。选择PID 控制的输出作为设定频率，一般用于现场的工艺闭环控制，例如恒压力闭环控制、恒张力闭环控制等场合。

9：通信给定

主频率值由通信给定。可通过远程通信输入设定频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。

10：保留

P0-04　　辅助频率源Y选择

通讯地址:	0xF004	生效方式:	-
最小值:	0	单位：	-
最大值:	10	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：数字设定（预置频率P0-08，UP/DOWN可修改，掉电不记忆）

1：数字设定（预置频率P0-08，UP/DOWN可修改，掉电记忆）

2：AI1

3：AI2

4：AI3

5：PULSE脉冲设定（DI5）

6：多段指令

7：简易PLC

8：PID

9：通信给定

10：保留

设定说明

0：数字设定（掉电不记忆）

设定频率初始值为P0-08 “预置频率”的值。可通过键盘的▲键与▼ 键（或多功能输入端子的UP、DOWN）来改变变频器的设定频率值。变频器掉电后并再次上电时，设定频率值恢复为P0-08 “数字设定预置频率”值。

1：数字设定（掉电记忆）

设定频率初始值为P0-08 “预置频率”的值。可通过键盘的▲键与▼ 键（或多功能输入端子的UP、DOWN）来改变变频器的设定频率值。变频器掉电后并再次上电时，设定频率为上次掉电时刻的设定频率，通过键盘▲、▼ 键或者端子UP、DOWN 的修正量被记忆。

2：AI1

设定频率通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

3：AI2

设定频率通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

4：AI3

设定频率通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

5：PULSE脉冲设定（DI5）

设定频率通过DI输入端子DI5高速脉冲频率来给定，根据脉冲频率与设定频率的对应关系曲线计算出对应的频率值。

6：多段指令

选择多段指令做设定频率时，需要通过数字量输入DI端子的不同状态组合，对应不同的设定频率值。4个多段指令端子，可以组合为16 种状态，这16个状态对应16个设定频率值。

7：简易PLC

简易PLC是可以进行运行时间和加减速时间控制的多段速运行指令。参数PC-00~PC-15设定每段频率值，PC-18~PC-49设置每段频率的运行时间和加减速时间,最多可以设 置16段速。

8：PID

选择了PID作为主频率。PID控制是过程控制的一种常用方法，通过对被控量的反馈信号与目标信号的差量进行比例、积分、微分运算，通过调整变频器的输出频率，构成闭环系统，使被控量稳定在目标值。选择PID 控制的输出作为设定频率，一般用于现场的工艺闭环控制，例如恒压力闭环控制、恒张力闭环控制等场合。

9：通信给定

主频率值由通信给定。可通过远程通信输入设定频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。

10：保留

P0-05　叠加时辅助频率源Y范围选择

通讯地址:	0xF005	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：相对于最大频率

1：相对于频率源X

设定说明

0：相对于最大频率叠加时辅助频率值=叠加时辅助频率源范围（P0-06）x 最大频率（P0-10）

1：相对于频率源X叠加时辅助频率值=叠加时辅助频率源范围（P0-06）x 主频率源X的值

P0-06　叠加时辅助频率源Y范围

通讯地址:	0xF006	生效方式:	-
最小值:	0	单位：	%
最大值:	150	数据类型：	无符号16位

默认值:	100	更改方式：	实时更改

设定值：

0%~150%

设定说明

-

P0-07　频率源叠加选择

通讯地址:	0xF007	生效方式:	-
最小值:	0	单位：	-
最大值:	44	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

个位：频率指令选择

0：主频率源X

1：主辅运算结果（运算关系由十位确定）

2：主频率源X与辅助频率源Y切换

3：主频率源X与主辅运算结果切换

4：辅助频率源Y与主辅运算结果切换

十位：频率指令主辅运算关系

0：主+辅

1：主-辅

2：二者最大值

3：二者最小值

4：主 × 辅

设定说明

个位：频率指令选择

0：主频率源X

变频器运行频率由主频率源X指令直接给定 1：主辅运算结果（运算关系由十位确定）

变频器运行频率由主辅频率的运算结果给定，运算方法由P0-07的设定值十位数确定。

2：主频率源X与辅助频率源Y切换

变频器运行频率通过DI端子在主频率源X与辅助频率源Y两个值中进行选择或切换。此时对应DI端子的功能选择要设置为频率源切换功能。如设定DI2端子来切换，则P4-01=18。

3：主频率源X与主辅运算结果切换

变频器运行频率通过DI端子在主频率源X与主辅运算结果两个值中进行选择或切换。

4：辅助频率源Y与主辅运算结果切换

变频器运行频率通过DI端子在辅频率源Y与主辅运算结果两个值中进行选择或切换。

十位：频率指令主辅运算关系

0：主+辅

主辅运算结果为主频率X+辅频率Y

1：主-辅
主辅运算结果为主频率X+辅频率Y
2：二者最大值
主辅运算结果为主频率X和辅频率Y的最大值
3：二者最小值
主辅运算结果为主频率X和辅频率Y的最小值
4：主辅
主辅运算结果为主频率X × 辅频率Y

P0-08 **预置频率**

通讯地址:	0xF008	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：
0.00Hz~P0-10
设定说明
设定的目标频率。

P0-09 **运行方向**

通讯地址:	0xF009	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0：与默认方向一致
1：与默认方向相反
设定说明
通过更改该参数，可以不改变电机接线而实现改变电机转向的目的，其作用相当于调整电机（U、V、W）任意两条线实现电机旋转方向的转换。

P0-10 **最大频率**

通讯地址:	0xF00A	生效方式:	-
最小值:	5.00	单位：	Hz
最大值:	599.00	数据类型：	无符号16位
默认值:	50.00	更改方式：	停机更改

设定值：
5.00Hz~599.00Hz
设定说明
变频器限制最高输出频率。

P0-11 **上限频率源**

通讯地址:	0xF00B	生效方式:	-
最小值:	0	单位：	-
最大值:	6	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：上限频率(P0-12)设定

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定

6：多段速指令

设定说明

0：上限频率(P0-12)设定

上限频率值为P0-12的设定值。

1：AI1

上限频率通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲 线来计算出对应的频率值。

2：AI2

上限频率通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲 线来计算出对应的频率值。

3：AI3

上限频率通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲 线来计算出对应的频率值。

4：PULSE脉冲设定（DI5）

上限频率通过DI5高速脉冲频率来给定，根据脉冲频率与最大频率的对应关系曲线计算出对应的频率值。

5：通信给定

上限频率通过通信方式来给定。

6：多段速指令

P0-12 **上限频率**

通讯地址:	0xF00C	生效方式:	-
最小值:	P0-14	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：

P0-14~P0-10

设定说明

上限频率：不允许电机在某个频率以上运行时，限制最高运行频率。

P0-13 **上限频率偏置**

通讯地址:	0xF00D	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明 上限频率偏置：设定上限频率的偏移量，其用途是当频率由外部模拟信号(电压或电 流) 进行设定时，可用此功能调整频率设定信号最低时的输出频率值。

P0-14 **下限频率**

通讯地址:	0xF00E	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-12	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-12

设定说明

下限频率：不允许电机在某个频率以下运行时，限制最低运行频率。

P0-15 **载波频率**

通讯地址:	0xF00F	生效方式:	-
最小值:	0.8	单位：	kHz
最大值:	16.0	数据类型：	无符号16位
默认值:	6.0	更改方式：	实时更改

设定值：

0.8kHz~16.0kHz

设定说明

变频器的载波频率就是决定逆变器的功率开关器件（如：IGBT）的开通与关断的次数，因此，也称开关频率。它主要影响以下几方面：

功率模块IGBT的功率损耗与载波频率有关，载波频率提高，功率损耗增大，功率模块发热增加，对变频器不利。

载波频率对变频器输出二次电流的波形影响：当载波频率高时，电流波形正弦性好，而且平滑。这样谐波就小，但是干扰相对要大，反之就差。当载波频率过低时，电机有效转矩减小，损耗加大，温度增高的缺点，反之载波频率过高时，变频器自身损耗加大，IGBT温度上升，同时输出电压的变化率dV/dt增大，对电机绝缘影响较大。

在额定电压380V的情况下，设定范围为4kHz~6kHz(功率≤55kW)，3kHz(功率>55kW)

P0-16 **载波频率随温度调整**

通讯地址:	0xF010	生效方式:	-

最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

0：否

1：是

设定说明

载波频率随温度调整。

P0-17 **加速时间1**

通讯地址:	0xF011	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

加速时间是指输出频率从0上升到P0-25（加减速基准频率）所需时间，通常用频率设定信号上升来确定加速时间。在电机加速时须限制频率设定的上升率以防止过电流。加速时间设定要求：将加速电流限制在变频器过电流容量以下，不使过流失速而引起变频器跳闸。

P0-18 **减速时间1**

通讯地址:	0xF012	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

减速时间是指输出频率从P0-25（加减速基准频率）下降到0所需时间，通常用频率设定信号下降来确定减速时间。在电机减速时须限制频率设定的下降率以防止过电压。减速时间设定要求：防止平滑电路电压过大，不使再生过压失速而使变频器跳闸。

P0-19 **加减速时间单位**

通讯地址:	0xF013	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：1s

1：0.1s

2：0.01s

设定说明

加减速时间单位。

P0-21 **叠加时辅助频率源偏置频率**

通讯地址:	0xF015	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

设定叠加时辅助频率的偏移量，其用途是当频率由外部模拟信号(电压或电流)进行设定时，可用此功能调整频率设定信号最低时的辅助频率值。

P0-22 **频率指令分辨率**

通讯地址:	0xF016	生效方式:	-
最小值:	1	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	2	更改方式：	停机更改

设定值：

1：0.1Hz

2：0.01Hz

设定说明

频率指令小数位数。

P0-23 **数字设定频率停机记忆选择**

通讯地址:	0xF017	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：不记忆

1：记忆

设定说明

0：不记忆

用面板设置 P0-08（预置频率），再通过键盘的▲键与▼键或者端子UP、DOWN进行频率的修正，变频器停机后，频率的修正值被清零。

1：记忆

用面板设置 P0-08（预置频率），再通过键盘的▲键与▼键或者端子UP、DOWN进行频率的修正，变频器停机后，频率的修正值被保留。

P0-24 **电机参数组选择**

通讯地址:	0xF018	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：电机参数组1

1：电机参数组2

2：电机参数组3

3：电机参数组4

设定说明

-

P0-25 **加减速时间基准频率**

通讯地址:	0xF019	生效方式:	-
最小值:	0	单位:	-
最大值:	2	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：最大频率(P0-10)

1：设定频率

2：100Hz

设定说明

加减速时间基准频率，用于加速时的目标频率，减速时的起始频率。

P0-26 **运行时频率指令UP/DOWN基准**

通讯地址:	0xF01A	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：运行频率

1：设定频率

设定说明

运行过程中，用键盘的UP/DOWN键调整目标频率时的基准值。

设置为0时，运行频率为25Hz,此时按UP键，目标频率会在25Hz上按照一定速率更改。

设置为1时，按UP键，目标频率会在原目标频率上更改。

P0-27 **主频率系数**

通讯地址:	0xF01B	生效方式:	-
最小值:	0.00	单位:	%

最大值:	100.00	数据类型：	无符号16位
默认值:	10.00	更改方式：	实时更改

设定值：

0.00%~100.00%

设定说明

当频率叠加方式选择主 × 辅时主频率给定系数。设为100.00%对应给定目标主频率。

P0-28 **辅助频率系数**

通讯地址:	0xF01C	生效方式:	-
最小值:	0.00	单位：	%
最大值:	100.00	数据类型：	无符号16位
默认值:	10.00	更改方式：	实时更改

设定值：

0.00%~100.00%

设定说明

当频率叠加方式选择主 × 辅时辅频率给定系数。设为100.00%对应给定目标辅频率。

P0-29 **命令源捆绑频率源**

通讯地址:	0xF01D	生效方式:	-
最小值:	0	单位：	-
最大值:	999	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

个位：操作面板绑定频率源选择
0：无捆绑
1：数字设定频率源
2：AI1
3：AI2
4：AI3
5：PULSE脉冲设定（DI5）
6：多段指令
7：简易PLC
8：PID
9：通信给定
十位：端子绑定频率源选择
0：无捆绑
1：数字设定频率源
2：AI1
3：AI2
4：AI3
5：PULSE脉冲设定（DI5）
6：多段指令
7：简易PLC
8：PID
9：通信给定
百位：通信绑定频率源选择
0：无捆绑
1：数字设定频率源
2：AI1
3：AI2
4：AI3
5：PULSE脉冲设定（DI5）
6：多段指令
7：简易PLC
8：PID
9：通信给定
设定说明

6.2 P1 第一电机参数

P1-00 **电机类型选择**

通讯地址:	0xF100	生效方式:	-
最小值:	0	单位：	-

最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：普通异步电机

1：变频异步电机

2：同步机

设定说明

变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动。负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。

普通异步电机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。

P0-01 电机额定功率

通讯地址:	0xF101	生效方式:	-
最小值:	0.1	单位：	kW
最大值:	1000.0	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.1kW~1000.0kW

设定说明

电机额定功率是指电机正常工作时的功率。它的值为电机额定电压 电机额定电流。选择电机功率时，应在电机能够满足机械负载要求的前提下，经济合理的选择电机功率。要考虑电机的发热、允许过载能力和启动能力等因素。

P1-02 电机额定电压

通讯地址:	0xF102	生效方式:	-
最小值:	1	单位：	V
最大值:	2000	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

1V~2000V

设定说明

电机额定电压是指电机正常工作时的电压，一般指线电压。

P1-03 电机额定电流

通讯地址:	0xF103	生效方式:	-
最小值:	0.01	单位：	A
最大值:	6553.5	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01A~655.35A(功率≤55kW)

0.1A~6553.5A(功率>55kW)

设定说明

电机额定电流是指电机正常工作时的电流，一般指线电流。

P1-04 **电机额定频率**

通讯地址:	0xF104	生效方式:	-
最小值:	0.01	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01Hz~P0-10

设定说明

电机额定频率指的是电机在额定运行状态下，定子绕组所接电源的频率。

P1-05 **电机额定转速**

通讯地址:	0xF105	生效方式:	-
最小值:	1	单位：	rpm
最大值:	65535	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

1rpm~65535rpm

设定说明 电机额定转速指的是电机在额定运行状态下，转子的转速，单位为“转/分钟”（rpm）。

P1-06 **异步/同步电机定子电阻**

通讯地址:	0xF106	生效方式:	-
最小值:	0.0001	单位：	Ω
最大值:	65.535	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.001Ω~65.535Ω(功率≤55kW)

0.0001Ω~6.5535Ω(功率>55kW)

设定说明

异步电机定子电阻是指异步电机定子绕组的直流电阻，该参数可通过电机参数辨识获得。精度0.001(功率<=55kW)，精度0.0001(功率>55kW)

P1-07 **异步电机转子电阻**

通讯地址:	0xF107	生效方式:	-
最小值:	0.0001	单位：	Ω
最大值:	65.535	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.001Ω~65.535Ω(功率≤55kW)
0.0001Ω~6.5535Ω(功率>55kW)

设定说明

异步电机转子电阻是指异步电机转子绕组的直流电阻，该参数可通过电机静止参数辨识或动态参数辨识获得。精度0.001(功率<=55kW)，精度0.0001(功率>55kW)

P1-08 异步电机漏感抗

通讯地址:	0xF108	生效方式:	-
最小值:	0.001	单位：	mH
最大值:	655.35	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01mH~655.35mH(功率≤55kW)
0.001mH~65.535mH(功率>55kW)

设定说明

异步电机漏感抗是电机绕组漏磁通引起的。在电机的绕组中，通入电流，将产生磁通，根据磁通的路径，可以分为：主磁通和漏磁通两部分。描述漏磁通可以用一个感抗表示，就是漏感抗。该参数可通过电机静止参数辨识或动态参数辨识获得。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

P1-09 异步电机互感抗

通讯地址:	0xF109	生效方式:	-
最小值:	0.001	单位：	mH
最大值:	655.35	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01mH~655.35mH(功率≤55kW)
0.001mH~65.535mH(功率>55kW)

设定说明

当电机的一线圈中的电流发生变化时，在临近的另一线圈中产生感应电动势，这个互感电动势可以通过互感抗参数来表示。
电机的互感抗可以大致分为两种，一种是定子或者转子的相间感抗，即定子的某一相和另一相之间的电抗，还有另一种是定子和转子之间的感抗。第一种的感抗是不随转子旋转变化的，而第二种会随着转子的转动，感抗也发生相应的变化。
这两种都是电机的互感抗，该参数可通过电机动态参数辨识获得。
精度0.01(功率≤55kW)，精度0.001(功率>55kW)

P1-10 异步电机空载电流

通讯地址:	0xF10A	生效方式:	-
最小值:	0.01	单位：	A
最大值:	P1-03	数据类型：	无符号16位

默认值: 机型确定 更改方式: 停机更改

设定值:

0.01A~P1-03(功率≤55kW)

0.1A~P1-03(功率>55kW)

设定说明

异步电机空载电流是指电机空载运行时定子三相绕组中通过的电流，该参数可通过电机动态参数辨识获得。

P1-11 异步机铁芯饱和系数1

通讯地址: 0xF10B 生效方式: -

最小值: 50.0 单位: %

最大值: 100.0 数据类型: 无符号16位

默认值: 86.0 更改方式: 实时更改

设定值:

50.0%~100.0%

设定说明

异步机铁芯饱和系数1

P1-12 异步机铁芯饱和系数2

通讯地址: 0xF10C 生效方式: -

最小值: 100.0 单位: %

最大值: 150.0 数据类型: 无符号16位

默认值: 130.0 更改方式: 实时更改

设定值:

100.0%~150.0%

设定说明

异步机铁芯饱和系数2

P1-13 异步机铁芯饱和系数3

通讯地址: 0xF10D 生效方式: -

最小值: 100.0 单位: %

最大值: 170.0 数据类型: 无符号16位

默认值: 140.0 更改方式: 实时更改

设定值:

100.0%~170.0%

设定说明

异步机铁芯饱和系数3

P1-14 异步机铁芯饱和系数4

通讯地址: 0xF10E 生效方式: -

最小值: 100.0 单位: %

最大值: 180.0 数据类型: 无符号16位

默认值: 150.0 更改方式： 实时更改

设定值：

100.0%~180.0%

设定说明

异步机铁芯饱和系数4

P1-17 同步电机D轴电感

通讯地址: 0xF111 生效方式: -

最小值: 0.001 单位： mH

最大值: 655.35 数据类型： 无符号16位

默认值: 机型确定 更改方式： 停机更改

设定值：

0.01mH~655.35mH(功率≤55kW)

0.001mH~65.535mH(功率>55kW)

设定说明

同步电机D轴电感是指同步电机主磁极轴(纵轴)的电感值。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

P1-18 同步电机Q轴电感

通讯地址: 0xF112 生效方式: -

最小值: 0.001 单位： mH

最大值: 655.35 数据类型： 无符号16位

默认值: 机型确定 更改方式： 停机更改

设定值：

0.01mH~655.35mH(功率≤55kW)

0.001mH~65.535mH(功率>55kW)

设定说明

同步电机Q轴电感是指同步电机转子相临磁极轴线间的中心线(交轴)的电感值。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

P1-19 同步电机反电动势系数

通讯地址: 0xF113 生效方式: -

最小值: 0.0 单位： V

最大值: 6553.5 数据类型： 无符号16位

默认值: 0.0 更改方式： 停机更改

设定值：

0.0V~6553.5V

设定说明

为对应的P1-04设定额定频率下的电机反电动势线有效值。

P1-20 **滤波时间常数(PMVVC使用)**

通讯地址: 0xF114 生效方式: -
最小值: 0.003 单位: -
最大值: 65.535 数据类型: 无符号16位
默认值: 0.100 更改方式: 实时更改

设定值:
0.003~65.535

设定说明
PMVVC使用滤波时间常数。

P1-21 **振荡抑制增益(PMVVC使用)**

通讯地址: 0xF115 生效方式: -
最小值: 0 单位: -
最大值: 65535 数据类型: 无符号16位
默认值: 100 更改方式: 实时更改

设定值:
0~65535

设定说明
PMVVC使用振荡抑制增益系数。

P1-23 **摩擦力矩百分比**

通讯地址: 0xF117 生效方式: -
最小值: 0.00 单位: %
最大值: 100.00 数据类型: 无符号16位
默认值: 0.00 更改方式: 停机更改

设定值:
0.00%~100.00%

设定说明
-

P1-24 **电机极对数**

通讯地址: 0xF118 生效方式: -
最小值: 0 单位: -
最大值: 65535 数据类型: 无符号16位
默认值: 2 更改方式: 实时更改

设定值:
0~65535

设定说明
-

P1-26 **参数辨识运行方向(惯量辨识和同步机)**

通讯地址: 0xF11A 生效方式: -

最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：反转运行

1：正转运行

设定说明

-

P1-27 编码器线数

通讯地址:	0xF11B	生效方式:	-
最小值:	1	单位：	-
最大值:	20000	数据类型：	无符号16位
默认值:	1024	更改方式：	停机更改

设定值：

1~20000

设定说明

编码器线数是指编码器码盘每转一圈发出的脉冲数。在有速度传感器矢量控制模式下（FVC），必须设置编码器线数与编码器名牌正确匹配，否则电机运行异常。

P1-28 编码器类型

通讯地址:	0xF11C	生效方式:	-
最小值:	0	单位：	-
最大值:	5	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：ABZ增量编码器

1：23位编码器

2：旋转变压器

设定说明

安装好 PG 卡后，要根据实际情况正确设置P1-28编码器类型，否则变频器可能运行不正常，具体编码器类型以现场实际使用为准。

0：ABZ增量编码器

1：23位编码器

2：旋转变压器

P1-30 编码器接线标志

通讯地址:	0xF11E	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

个位：AB信号的方向或旋转方向
0：正向
1：反向
十位：保留
设定说明
-

P1-31 **编码器零点位置角**

通讯地址:	0xF11F	生效方式:	-
最小值:	0.0	单位：	°
最大值:	359.9	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：
0.0°~359.9°
设定说明
-

P1-32 **电机齿轮比分子**

通讯地址:	0xF120	生效方式:	-
最小值:	1	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：
1~65535
设定说明
-

P1-33 **电机齿轮比分母**

通讯地址:	0xF121	生效方式:	-
最小值:	1	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：
1~65535
设定说明
-

P1-34 **旋变极对数**

通讯地址:	0xF122	生效方式:	-
最小值:	1	单位：	-
最大值:	32	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

1~32

设定说明

旋转变压器是一种电磁式传感器，又称同步分解器。它是一种测量角度用的小型交流电动机，用来测量旋转物体的转轴角位移和角速度，由定子和转子组成。旋变极对数是 指旋转变压器的磁极对数，极对数越高，精度越高。

P1-36 **PG断线检测使能**

通讯地址:	0xF124	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

个位：AB信号的方向或旋转方向

0：正向

1：反向

十位：保留

设定说明

PG断线检测是否使能。

P1-37 **参数辨识选择**

通讯地址:	0xF125	生效方式:	-
最小值:	0	单位：	-
最大值:	14	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无操作

1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0)

2：异步机动态参数辨识(支持带负载动态参数辨识)

3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO)

4：异步机动态参数辨识2(增加惯量辨识仅支持FVC)

5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载支持 V/f、SVC、FVC)

11：同步机带载参数辨识(不调反电动势)

12：同步机空载动态完整参数辨识

13：同步机静态参数辨识(不参数辨识编码器安装角)

14：同步机惯量辨识(仅支持FVC)

设定说明

0：无操作

不参数辨识

1：异步机静态部分参数辨识
异步机静止部分参数参数辨识，电机与负载很难脱离，且不允许应用于动态参数辨识运行的场合。辨识部分电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗），其他参数使用默认值。

2：异步机动态参数辨识
电机与应用系统可以较高转速转动的场合，支持空载、轻载（50%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：P1-06（异步电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-30（编码器相序）。

3：异步机静态完整参数辨识
异步机静态完整参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识所有电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）。

4：异步机动态参数辨识2(增加惯量辨识 仅支持FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（80%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-30（编码器相序）、P2-35（系统惯量）。

5：异步机动态参数辨识3(增加互感曲线辨识要求空载或轻载或纯惯量负载，支持V/f、SVC、FVC)
电机与应用系统可以应用于较高转速转动的场合，支持空载、轻载（10%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：P1-06（电机定子电阻）、P1-07（异步电机转子电阻）、P1-08（异步电机漏感抗）、P1-09（异步电机互感抗）、P1-10（异步电机空载电流）、P1-11（异步机铁芯饱和系数1）、P1-12（异步机铁芯饱和系数2）、P1-13（异步机铁芯饱和系数3）、P1-14（异步机铁芯饱和系数4）、P1-30（编码器相序）。

11：同步机带载参数辨识(不调反电动势)
同步机带载参数辨识，应用于电机与负载很难脱离的场合。FVC模式下辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）、P1-30（编码器相序）、P1-31（编码器零点位置角）。其他模式辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。编码器选用旋变及23位编码器，辨识过程中电机不旋转；编码器选用ABZ编码器，辨识过程中电机会短暂旋转。

12：同步机空载动态完整参数辨识
同步机空载动态完整参数辨识，应用于电机与负载可以脱离运行的场合。FVC模式下辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-19（同步机反电动势）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）、P1-30（编码器相序）、P1-31（编码器零点位置角）。其他模式辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-19（同步机反电动势）、P1-20（滤波时间常数）、P1-21（振荡抑制 增益）。

13：同步机静态参数辨识(不参数辨识编码器安装角)
同步机静态参数辨识，应用于电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识的电机参数：P1-06（电机定子电阻）、P1-17（同步机D轴电感）、P1-18（同步机Q轴电感）、P1-20（滤波时间常数）、P1-21（振荡抑制增益）。

14：同步机惯量辨识(仅支持FVC)
同步机惯量辨识，应用于需要高动态响应的场合，参数辨识时需要连接负载。
辨识的电机参数：P2-35（系统惯量）、P2-36（电机和负载惯量）。

6.3 P2 第一电机矢量控制参数

P2-00 **速度环比例增益1**

通讯地址:	0xF200	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：
1~200
设定说明
此参数用于设置低速速度环增益Kp。
速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。低速速度环Kp是低速时使用的。

P2-01 **速度环积分时间1**

通讯地址:	0xF201	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.500	更改方式：	实时更改

设定值：
0.001s~10.000s
设定说明
此参数用于设置低速速度环积分时间Ti。
速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性。速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。低速速度环Ti是低速时使用。

P2-02 **切换频率1**

通讯地址:	0xF202	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P2-05	数据类型：	无符号16位

默认值: 5.00　　更改方式: 实时更改
设定值：0.00Hz~P2-05

设定说明 速度环PI参数分低速和高速两组。
运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。
运行频率大于PP-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04
。 切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切
换。该参数的设定值应小于P2-05（切换频率2）。

P2-03 **速度环比例增益2**

通讯地址:	0xF203	生效方式:	-
最小值:	1	单位:	-
最大值:	200	数据类型:	无符号16位
默认值:	20	更改方式:	实时更改

设定值：
1~200
设定说明
本参数是指高速速度环增益Kp。
Kp数值越大，调节灵敏度就越高，调节力度越大；
Kp数值越小，调节灵敏度就越低，调节力度越小。

P2-04 **速度环积分时间2**

通讯地址:	0xF204	生效方式:	-
最小值:	0.001	单位:	s
最大值:	10.000	数据类型:	无符号16位
默认值:	1.000	更改方式:	实时更改

设定值：
0.001s~10.000s
设定说明
高速速度环积分时间Ti。
速度环积分时间的大小影响电机稳态速度误差的大小及速度环系统的稳定性。
速度环积分时间增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应 时间。

P2-05 **切换频率2**

通讯地址:	0xF205	生效方式:	-
最小值:	P2-02	单位:	Hz
最大值:	P0-10	数据类型:	无符号16位
默认值:	10.00	更改方式:	实时更改

设定值：
P2-02~P0-10

设定说明

速度环PI参数分低速和高速两组，
运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。
运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。
切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。
该参数的设定值应大于P2-02（切换频率1）。

P2-06 **矢量控制转差增益**

通讯地址:	0xF206	生效方式:	-
最小值:	50	单位：	%
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：
50%~200%

设定说明
SVC控制模式下，此参数可调节电机的稳速精度，例如电机运行频率低于变频器输出频率时，可增大该参数。
FVC控制模式下，此参数可以调节同样负载下变频器的输出电流大小，如在大功率变频器中，若带载能力较弱时，可逐渐调小此参数。一般情况下，无需调整此参数值。

P2-07 **速度反馈滤波时间**

通讯地址:	0xF207	生效方式:	-
最小值:	0.000	单位：	s
最大值:	0.100	数据类型：	无符号16位
默认值:	0.004	更改方式：	实时更改

设定值：
0.000s~0.100s
设定说明
在FVC控制模式下（P0-01=1），速度环反馈滤波时间有效，通过调节该参数改善电机稳定性，速度环反馈滤波时间增大，可以改善电机稳定性，动态响应变弱。速度环反馈滤波时间减小，动态响应加强。该参数值过小时会引起电机振荡。一般情况下，电机的稳定性可满足要求，无需调节该参数。

P2-08 **VC减速过励磁增益**

通讯地址:	0xF208	生效方式:	-
最小值:	0	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	64	更改方式：	实时更改

设定值：
0~200
设定说明
在矢量控制模式下，减速过励磁功能生效时，过励磁功能生效的强度。过励磁触发条件，当减速发电能量过大时，开启过励磁能够消耗部分发电能量。过励磁增益越大，抑制效果越强。

P2-09 **速度控制下转矩上限源（电动）**

通讯地址:	0xF209	生效方式:	-
最小值:	0	单位：	-
最大值:	7	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定

6：MIN(AI1,AI2)

7：MAX(AI1,AI2)

设定说明

0：上限数字设定(P2-10)

速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。

1：AI1

速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

2：AI2

速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

3：AI3

速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

4：PULSE脉冲设定（DI5）

速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的转矩值。

5：通信给定

主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。

6：MIN(AI1,AI2)

速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。

7：MAX(AI1,AI2)

速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。

P2-10 **速度控制下转矩上限设定（电动）**

通讯地址:	0xF20A	生效方式:	-
最小值:	0.0	单位：	%

最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：

0.0%~200.0%

设定说明

电动状态下的转矩上限，以变频器额定电流为基值。

P2-11 **速度控制下转矩上限源（发电）**

通讯地址:	0xF20B	生效方式:	-
最小值:	0	单位：	-
最大值:	8	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定

6：MIN(AI1,AI2)

7：MAX(AI1,AI2)

8：上限数字设定（P2-12）

设定说明

0：上限数字设定(P2-10)

速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。

1：AI1

速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

2：AI2

速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

3：AI3

速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

4：PULSE脉冲设定（DI5）

速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的频率值。

5：通信给定

主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合

6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。
8：上限数字设定（P2-12）
速度控制转矩上限通过上限数字设定，设定值为P2-12（制动转矩上限数字设定）的值。

P2-12　速度控制下转矩上限设定（发电）

通讯地址:	0xF20C	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：
0.0%~200.0%
设定说明
发电状态下的转矩上限，以变频器额定电流为基值。

P2-13　低速电流环Kp调整

通讯地址:	0xF20D	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值： 0.1~10.0

设定说明
低速电流环比例系数调整。本参数值越大，电流响应越快，建议使用默认值。
当低速电流振荡或者转矩波动较大时，可以适当减小本参数设定值。

P2-14　低速电流环Ki调整

通讯地址:	0xF20E	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值： 0.1~10.0

设定说明
低速电流环积分系数调整。本参数值越大，电流响应越快，建议使用默认值。
当低速电流振荡或者转矩波动较大时，可以适当减小本参数设定值。

P2-15 **高速电流环Kp调整**

通讯地址:	0xF20F	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：

0.1~10.0

设定说明

高速电流环比例系数调整。本参数值越大，电流响应越快，建议使用默认值。当高速电流振荡或者转矩波动较大时，可以适当减小本参数设定值。

P2-16 **高速电流环Ki调整**

通讯地址:	0xF210	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：

0.1~10.0

设定说明

高速电流环积分系数调整。本参数值越大，电流响应越快，建议使用默认值。当高速电流振荡或者转矩波动较大时，可以适当减小本参数设定值。

P2-17 **零速锁定速度环Kp**

通讯地址:	0xF211	生效方式:	-
最小值:	1	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：

1~100

设定说明

零速速度环比例系数调整。本参数值越大，零速刚性越强，建议使用默认值。当零速电流振荡或者转矩波动较大时，可以适当减小本参数设定值。

P2-18 **零速锁定速度环Ti**

通讯地址:	0xF212	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.500	更改方式：	实时更改

设定值：

0.001s~10.000s

设定说明

零速速度环积分系数调整。本参数值越小，零速刚性越强，建议使用默认值。当零速电流振荡或者转矩波动较大时，可以适当减小本参数设定值。

P2-19 **惯量补偿增益**

通讯地址:	0xF213	生效方式:	-
最小值:	1	单位:	-
最大值:	200	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:

1~200

设定说明

-

P2-10 **零速锁定速度环切换频率**

通讯地址:	0xF214	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P2-02	数据类型:	无符号16位
默认值:	0.05	更改方式:	实时更改

设定值:

0.00Hz~P2-02

设定说明

-

P2-21 **最大输出电压系数**

通讯地址:	0xF215	生效方式:	-
最小值:	100	单位:	-
最大值:	110	数据类型:	无符号16位
默认值:	100	更改方式:	实时更改

设定值:

100~110

设定说明

最大输出电压系数表示变频器最大输出电压的提升能力。
加大可提高电机弱磁区的最大带载能力，但电机电流纹波增加，会加重电机发热量。
反之电机弱磁区的最大带载能力会下降，但电机电流纹波减少，会减轻电机发热量。
一般无需调节。

P2-22 **输出电压滤波时间**

通讯地址:	0xF216	生效方式:	-
最小值:	0.000	单位:	s
最大值:	0.010	数据类型:	无符号16位
默认值:	0.000	更改方式:	实时更改

设定值:

0.000s~0.010s

设定说明

-

P2-23 **零速锁定**

通讯地址:	0xF217	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

P2-23设置为1使能,是开启零速段速度环,即频率小于P2-20时时,速度环使用的是P2-17/18增益值。

P2-24 **矢量过压抑制KP**

通讯地址:	0xF218	生效方式:	-
最小值:	0	单位:	-
最大值:	1000	数据类型:	无符号16位
默认值:	40	更改方式:	实时更改

设定值:

0~1000

设定说明

-

P2-25 **加速补偿增益**

通讯地址:	0xF219	生效方式:	-
最小值:	0	单位:	-
最大值:	200	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~200

设定说明

-

P2-26 **加速度补偿滤波时间**

通讯地址:	0xF21A	生效方式:	-
最小值:	0	单位:	-
最大值:	500	数据类型:	无符号16位
默认值:	10	更改方式:	实时更改

设定值:

0~500

设定说明

-

P2-27 **矢量过压抑制使能**

通讯地址: 0xF21B
最小值: 0
最大值: 1
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0：不使能

1：使能

设定说明

-

P2-28 **设定转矩滤波截止频率**

通讯地址: 0xF21C
最小值: 50
最大值: 1000
默认值: 500
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 停机更改

设定值:

50Hz~1000Hz

设定说明

-

P2-29 **同步机初始位置角检测电流**

通讯地址: 0xF21D
最小值: 50
最大值: 180
默认值: 80
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

50~180

设定说明

-

P2-30 **速度环参数自动计算使能**

通讯地址: 0xF21E
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

P2-31 **期望速度环带宽(高速)**

通讯地址: 0xF21F
最小值: 0
最大值: 3
默认值: 0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0Hz~3Hz

设定说明

-

P2-32 **期望速度环带宽(低速)**

通讯地址: 0xF220
最小值: 1
最大值: 10000
默认值: 100
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 实时更改

设定值:

1Hz~10000Hz

设定说明

-

P2-33 **期望速度环带宽(零速)**

通讯地址: 0xF221
最小值: 1
最大值: 10000
默认值: 100
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 实时更改

设定值:

1Hz~10000Hz

设定说明

-

P2-34 **期望速度环阻尼比: (一般不更改)**

通讯地址: 0xF222
最小值: 0.100
最大值: 65.000
默认值: 1.000
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.100~65.000

设定说明

-

P2-35 **系统惯量(等效为启动时间)**

通讯地址: 0xF223
生效方式: -

最小值: 0.001
最大值: 50.000
默认值: 0.100
单位: s
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0.001s~50.000s

设定说明

-

P2-36 电机单机惯量（kg·m²）

通讯地址: 0xF224
最小值: 0.001
最大值: 50.000
默认值: 0.001
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0.001~50.000

设定说明

-

P2-37 惯量辨识最大频率

通讯地址: 0xF225
最小值: 20
最大值: 100
默认值: 80
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 停机更改

设定值:

20%~100%

设定说明

-

P2-38 惯量辨识加速时间

通讯地址: 0xF226
最小值: 1.0
最大值: 50.0
默认值: 10.0
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 停机更改

设定值:

1.0s~50.0s

设定说明

-

P2-39 速度环动态优化测试带宽1

通讯地址: 0xF227
最小值: 1.0
最大值: 200.0
生效方式: -
单位: Hz
数据类型: 无符号16位

默认值: 5.0 更改方式： 不可更改

设定值：

1.0Hz~200.0Hz

设定说明

-

P2-40

速度环动态优化测试带宽2

通讯地址: 0xF228 生效方式: -

最小值: 1.0 单位： Hz

最大值: 200.0 数据类型： 无符号16位

默认值: 10.0 更改方式： 不可更改

设定值：

1.0Hz~200.0Hz

设定说明

-

P2-41

速度环动态优化测试带宽3

通讯地址: 0xF229 生效方式: -

最小值: 1.0 单位： Hz

最大值: 100.0 数据类型： 无符号16位

默认值: 15.0 更改方式： 不可更改

设定值：

1.0Hz~100.0Hz

设定说明

-

P2-42

速度环动态优化测试带宽4

通讯地址: 0xF22A 生效方式: -

最小值: 1.0 单位： Hz

最大值: 200.0 数据类型： 无符号16位

默认值: 20.0 更改方式： 不可更改

设定值：

1.0Hz~200.0Hz

设定说明

-

P2-43

惯量辨识及动态设定速度

通讯地址: 0xF22B 生效方式: -

最小值: 0 单位： -

最大值: 100 数据类型： 无符号16位

默认值: 30 更改方式： 停机更改

设定值：

0~100

设定说明

-

P2-44 **转子时间常数校验使能**

通讯地址:	0xF22C	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0：不使能

1：使能

设定说明

-

P2-45 **转子时间常数校验转矩幅值**

通讯地址:	0xF22D	生效方式:	-
最小值:	10	单位:	%
最大值:	100	数据类型:	无符号16位
默认值:	30	更改方式:	不可更改

设定值:

10%~100%

设定说明

-

P2-46 **转子时间常数校验次数**

通讯地址:	0xF22E	生效方式:	-
最小值:	1	单位:	-
最大值:	6	数据类型:	无符号16位
默认值:	3	更改方式:	不可更改

设定值:

1~6

设定说明

-

P2-47 **惯量辨识使能**

通讯地址:	0xF22F	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

-

P2-48 **惯量辨识速度环带宽设置值**

通讯地址:	0xF230	生效方式:	-
最小值:	0.1	单位：	Hz
最大值:	100.0	数据类型：	无符号16位
默认值:	10.0	更改方式：	停机更改

设定值：

0.1Hz~100.0Hz

设定说明

-

P2-49 **反电势计算使能**

通讯地址:	0xF231	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0：不使能

1：使能

设定说明

-

P2-50 **惯量辨识模式**

通讯地址:	0xF232	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：加减速模式

1：三角波模式

设定说明

-

P2-51 **惯量辨识加减速系数**

通讯地址:	0xF233	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	停机更改

设定值：

0.1~10.0

设定说明

-

P2-52　解耦控制使能

通讯地址: 0xF234　　生效方式: -

最小值: 0　　单位: -

最大值: 1　　数据类型: 无符号16位

默认值: 0　　更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

P2-53　发电功率限制使能

通讯地址: 0xF235　　生效方式: -

最小值: 0　　单位: -

最大值: 1　　数据类型: 无符号16位

默认值: 0　　更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

P2-54　发电功率限制

通讯地址: 0xF236　　生效方式: -

最小值: 0.0　　单位: %

最大值: 200.0　　数据类型: 无符号16位

默认值: 机型确定　　更改方式: 停机更改

设定值:

0.0%~200.0%

设定说明

-

P2-55　闭环矢量磁通闭环与转矩线性度优化选择

通讯地址: 0xF237　　生效方式: -

最小值: 0　　单位: -

最大值: 1111　　数据类型: 无符号16位

默认值: 10　　更改方式: 停机更改

设定值:

个位：转矩模式磁通闭环使能
0：不使能
1：使能

十位：速度模式磁通闭环使能
0：不使能
1：使能

百位：速度模式转矩上限转矩线性化使能
0：不使能
1：使能

千位：转矩基值选择
0：选择电机额定电流
1：选择电机额定转矩电流

设定说明
-

P2-56 **变频器输出电流上限**

通讯地址:	0xF238	生效方式:	-
最小值:	0.0	单位：	%
最大值:	170.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	停机更改

设定值：
0.0%~170.0%
设定说明
-

6.4 P3 V/f控制参数

P3-00 **V/f曲线设定**

通讯地址:	0xF300	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：直线V/f曲线
1：多点V/f曲线
2：平方V/f曲线
3：1.2次V/f曲线
4：1.4次V/f曲线
6：1.6次V/f曲线
8：1.8次V/f曲线
10：V/f完全分离模式
11：V/f半分离模式

设定说明

0：直线V/f曲线

在额定频率以下，变频器的输出电压与输出频率成线性变化，适用于大惯量风机加速、冲床、离心机、水泵等一般机械传动应用场合。

1：多点V/f曲线

频率点设置范围为0.00Hz~电机额定频率，电压点设置范围为0.0%~100.0%，对应0V~电机额定电压，多点V/f曲线的设定值通常根据电机的负载特性来设定。务必如下设定：P3-03≤P3-05≤P3-07。

2：平方V/f曲线

在额定频率以下，变频器的输出电压与输出频率的关系按2次方曲线变化，适用于轻载且负载不经常变化的风机、水泵负载。

3：1.2次V/f曲线

在额定频率以下，变频器的输出电压与输出频率的关系按1.2次方曲线变化。

4：1.4次V/f曲线

在额定频率以下，变频器的输出电压与输出频率的关系按1.4次方曲线变化。

6：1.6次V/f曲线

在额定频率以下，变频器的输出电压与输出频率的关系按1.6次方曲线变化。

8：1.8次V/f曲线

在额定频率以下，变频器的输出电压与输出频率的关系按1.8次方曲线变化。

10：V/f完全分离模式

变频器的输出频率与输出电压相互独立，输出频率由频率源确定，而输出电压由V/f分离电压源确定。一般应用在力矩电机控制等场合。

11：V/f半分离模式

这种情况下V与f是成比例的，但是比例关系可以通过电压源设置，且V与f的关系也与第一组的电机额定电压与额定频率有关。假设电压源输入为X(X为0~100%的值)，则变频器输出电压V与频率f的关系为：

V/f = 2 ×（电压源输入）×（电机额定电 压）÷（电机额定频率）

P3-01　转矩提升

通讯地址:	0xF301	生效方式:	-
最小值:	0.0	单位：	%
最大值:	30.0	数据类型：	无符号16位
默认值:	机型确定	更改方式：	实时更改

设定值：

0.0%~30.0%

设定说明

转矩提升功能一般应用于变频器低频情况下。V/f控制方式下变频器的输出力矩和频率成正比，在低频的情况下，电机低速运行时转矩很低，通过设置该参数提高变频器输出电压，使电流增大提高输出力矩。

使用该功能时不可将转矩提升功能调的太大，否则会出现报过载保护。

P3-02 **转矩提升截止频率**

通讯地址:	0xF302	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P0-10	数据类型:	无符号16位
默认值:	50.00	更改方式:	停机更改

设定值:

0.00Hz~P0-10

设定说明

当运行频率到达转矩提升截止频率时，转矩提升功能关闭。

P3-03 **多点V/f频率点1**

通讯地址:	0xF303	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P3-05	数据类型:	无符号16位
默认值:	0.00	更改方式:	停机更改

设定值:

0.00Hz~P3-05

设定说明

多点V/f曲线设定的频率点1。

P3-04 **多点V/f电压点1**

通讯地址:	0xF304	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	停机更改

设定值:

0.0%~100.0%

设定说明

多点V/f曲线设定的电压点1。

P3-05 **多点V/f频率点2**

通讯地址:	0xF305	生效方式:	-
最小值:	P3-03	单位:	Hz
最大值:	P3-07	数据类型:	无符号16位
默认值:	0.00	更改方式:	停机更改

设定值:

P3-03~P3-07

设定说明

多点V/f曲线设定的频率点2。

P3-06 **多点V/f电压点2**

通讯地址:	0xF306	生效方式:	-

最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：

0.0%~100.0%

设定说明

多点V/f曲线设定的电压点2。

P3-07 **多点V/f频率点3**

通讯地址:	0xF307	生效方式:	-
最小值:	P3-05	单位：	Hz
最大值:	P1-04	数据类型：	无符号16位
默认值:	0.00	更改方式：	停机更改

设定值：

P3-05~P1-04

设定说明

多点V/f曲线设定的频率点3。

P3-08 **多点V/f电压点3**

通讯地址:	0xF308	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：

0.0%~100.0%

设定说明

多点V/f曲线设定的电压点3。

P3-09 **V/f转差补偿增益**

通讯地址:	0xF309	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~200.0%

设定说明

V/f模式下，提高输出频率，使电机降低的转速得到补偿。增益越大，补偿频率越大，但增益过大，会出现过补偿。

P3-10 **V/f过励磁增益**

通讯地址:	0xF30A	生效方式:	-
最小值:	0	单位：	-

最大值:	200	数据类型：	无符号16位
默认值:	64	更改方式：	实时更改

设定值：

0~200

设定说明

过励磁增益越大，抑制效果越强。使用制动电阻、加装制动单元或者使用能量回馈单元时，请注意设定过励磁增益值为0，否则可能引起运行中电流过大问题。

P3-11　V/f振荡抑制增益

通讯地址:	0xF30B	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	机型确定	更改方式：	实时更改

设定值：

0~100

设定说明

振荡增益越大，抑制效果越强。

P3-12　振荡抑制增益模式

通讯地址:	0xF30C	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	3	更改方式：	停机更改

设定值：

0：无效

1：保留

2：保留

3：有效

设定说明

V/f模式下，对于大多数的电机，低频时会出现速度振荡与电流振荡的现象，振荡可能会导致变频器过流。使能振荡抑制，可以消除振荡。

P3-13　V/f分离的电压源

通讯地址:	0xF30D	生效方式:	-
最小值:	0	单位：	-
最大值:	8	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：数字设定（P3-14）
1：AI1
2：AI2
3：AI3
4：PULSE脉冲设定（DI5）
5：多段指令
6：简易PLC
7：PID
8：通信给定（1000H）

设定说明

电压和频率分离情况下的目标电压的给定通道。
0：数字设定(P3-14)
V/f分离电压通过数字设定，设定值为P3-14（V/f分离的电压数字设定）的值。

1：AI1
V/f分离电压通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

2：AI2
V/f分离电压通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

3：AI3
V/f分离电压通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

4：PULSE脉冲设定（DI5）
V/f分离电压通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的频率值。

5：多段指令
选择多段指令做V/f分离电压时，需要通过数字量输入DI端子的不同状态组合，对应不同的设定值。4个多段指令端子，可以组合为16种状态，这16个状态对应FC组16个参数的设定频率（百分数值 x 最大频率值）。

6：简易PLC
V/f分离电压通过简易PLC设定，详见简易PLC功能描述。

7：PID
V/f分离电压通过PID设定，详见PID功能描述。

8：通信给定
主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。

P3-14 V/f分离的电压数字设定

通讯地址:	0xF30E	生效方式:	-
最小值:	0	单位：	V
最大值:	P1-02	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0V~P1-02
设定说明
设定值为0V到额定电压值之间。

P3-15　V/f分离的电压加速时间

通讯地址:	0xF30F	生效方式:	-
最小值:	0.0	单位：	s
最大值:	1000.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
0.0s~1000.0s
设定说明
V/f分离的电压加速时间指输出电压从0加速到电机额定电压所需的时间。

P3-16　V/f分离的电压减速时间

通讯地址:	0xF310	生效方式:	-
最小值:	0.0	单位：	s
最大值:	1000.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
0.0s~1000.0s
设定说明
V/f分离的电压减速时间指输出电压从电机额定电压减速到0所需的时间。

P3-17　V/f分离停机方式选择

通讯地址:	0xF311	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：频率/电压独立减至0
1：电压减为0后频率再减
设定说明
0：频率/电压独立减至0。
1：电压减为0后频率再减。

P3-18　V/f过流失速动作电流

通讯地址:	0xF312	生效方式:	-
最小值:	50	单位：	%
最大值:	200	数据类型：	无符号16位
默认值:	150	更改方式：	停机更改

设定值：

50%~200%

设定说明

当电机电流达到该值时，变频器启动过流失速功能。出厂值150%，表示变频器额定电流的1.5倍。

P3-19　V/f过流失速使能

通讯地址:	0xF313	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：不使能

1：使能

设定说明

V/f过流失速使能设置。

0:不使能

不使能V/f过流失速功能

1:使能

使能V/f过流失速功能

P3-20　V/f过流失速抑制增益

通讯地址:	0xF314	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	20	更改方式：	实时更改

设定值：

0~100

设定说明

如果电流超过过流失速动作电流，过流失速将起作用，输出频率开始降低，直到电流回到过流失速点以下后，频率才开始向上加速到目标频率，实际加速时间自动拉长，设定值越大，抑制效果越强。

P3-21　V/f倍速过流失速动作电流补偿系数

通讯地址:	0xF315	生效方式:	-
最小值:	50	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	50	更改方式：	停机更改

设定值：

50~200

设定说明

降低高速过流失速动作电流，补偿系数为50%时无效，弱磁区动作电流对应P3-18推荐设定值100%。

P3-22 V/f过压失速动作电压

通讯地址:	0xF316	生效方式:	-
最小值:	200.0	单位：	V
最大值:	2000.0	数据类型：	无符号16位
默认值:	770.0	更改方式：	停机更改

设定值：

200.0V~2000.0V

设定说明

当母线电压达到该值时，变频器启动过压失速保护功能。

P3-23 V/f过压失速使能

通讯地址:	0xF317	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：不使能

1：使能

设定说明

0：无效

1：有效（默认过压失速增益有效）

P3-23的功能作用等同于P9-04（过压失速保护电压）。

使用制动电阻、加装制动单元或者使用能量回馈单元时，请注意设定过压失速使能值为0，否则可能引起减速时间延长的问题。

P3-24 V/f过压失速抑制频率增益

通讯地址:	0xF318	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：

0~100

设定说明

增大P3-24会改善母线电压的控制效果，但是输出频率会产生波动。如果输出频率波动较大，可以适当减少P3-24。

P3-25 **V/f过压失速抑制电压增益**

通讯地址:	0xF319	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：

0~100

设定说明

抑制母线电压，增大该设定值，可以减少母线电压的超调量。

P3-26 **过压失速最大上升限制频率**

通讯地址:	0xF31A	生效方式:	-
最小值:	0	单位：	-
最大值:	50	数据类型：	无符号16位
默认值:	5	更改方式：	停机更改

设定值：

0~50

设定说明

过压失速抑制时可能会使运行频率增大，该参数是运行频率的增量上限。

P3-27 **转差补偿时间常数**

通讯地址:	0xF31B	生效方式:	-
最小值:	0.1	单位：	Hz
最大值:	10.0	数据类型：	无符号16位
默认值:	0.5	更改方式：	实时更改

设定值：

0.1Hz~10.0Hz

设定说明

转差补偿的频率的时间常数。时间常数越大，转差补偿的频率越平稳，受负载扰动及噪声干扰的影响越小，但负载变化的响应会越慢。

P3-28 **V/f参数整定惯量系数**

通讯地址:	0xF31C	生效方式:	-
最小值:	0.00	单位：	-
最大值:	10.00	数据类型：	无符号16位
默认值:	0.10	更改方式：	停机更改

设定值：

0.00~10.00

设定说明

-

P3-33 **在线转矩补偿增益**

通讯地址:	0xF321	生效方式:	-
最小值:	80	单位：	-
最大值:	150	数据类型：	无符号16位
默认值:	100	更改方式：	停机更改

设定值： 80~150

设定说明

V/f模式下，P3-01是按固定的曲线提高变频器的输出电压。

当P3-33≥100或P3-01=0时，可在P3-01提升后的输出电压上再额外附加一个跟负载大小相关的提升量，即自动转矩提升补偿。P3-33增益越大，转矩提升补偿越大。

当P3-33＜100且P3-01≠0时，自动转矩提升补偿关闭。

6.5 P4 输入端子

P4-00 **DI1端子功能选择**

通讯地址:	0xF400	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

0：无功能
DI端子无任何功能。

1：正转运行 变频器的运行方式为正转运行。FWD（即FORWORD）。
两线式1（P4-11=0）时为正 向运行；
两线式2（P4-11=1）时为运行命令。

2：反转运行 变频器的运行方式为反转运行。REV（即REVERSE）。
三线式1（P4-11=2）时为反向 运行；
三线式2（P4-11=3）时为正反运行方向。

3：三线式运行控制
确定变频器运行方式是三线控制模式。如果要通过端子设定运行指令，参数P4-11（端子命令方式）设置为2（三线式1）或者3（三线式2），端子功能要设置为此功能。三线控制模式包括三线式1和三线式2两种模式。

4：正转点动（FJOG）
变频器的运行方式为正转点动运行。点动模式下，变频器短暂低速运行，一般用于对现场设备进行维护和调试的场景。

5：反转点动（RJOG）
变频器的运行方式为反转点动运行。

6：端子UP
通过端子给定频率时修改频率的递增指令。端子有效相当于一直按着递增键，端子无效相当于松开递增键。

7：端子DOWN
通过端子给定频率时修改频率的递减指令。端子有效相当于一直按着递减键，端子无效相当于松开递减键。

8：自由停机
变频器接到停机命令后，立即终止输出，负载按照机械惯性自由停止。变频器通过停止输出来停机,这时,电机的电源被切断,拖动系统处于自由制动状态。由于停机时间的长短由拖动系统的惯性决定,也称为惯性停机。

9：故障复位（RESET）：对变频器的故障进行复位，与键盘上的STOP/RES 键功能相同。用此功能可实现远距离故障复位。
10：运行暂停
端子选择此功能，变频器进行减速停机，所有运行参数均被记忆（如PLC 参数、摆频参数、PID参数）。端子无效后，变频器恢复之前所记忆的运行状态。

11：外部故障常开输入
当外部信号送给变频器后，变频器报故障E15。

12~15：多段指令端子1~4
变频器选择多段指令作为主频率。可通过这四个端子的16种状态，实现16段速度或者16个指令的设定。应用场景：不需要连续调整变频器运行频率，只需使用若干个频率值的应用场合。

16、17：加减速选择端子1~2
提供4 组加减速时间，通过这两个端子的4种状态，可实现4组加减速时间的切换。加速时间指变频器从零频，加速到加减速基准频率(P0-25 确定)所需时间；减速时间指变频器从加减速基准频率(P0-25 确定)，减速到零频所需时间。

18：频率源切换
用来选择不同的频率指令输入方法。通过P0-07（频率指令叠加选择）设置频率指令。

19：UP/DOWN设定清零
当通过面板设定主频率时，端子有效时可清除已设置的频率值（该频率值是指通过键盘上递增键、递减键或者端子UP/端子DOWN所设置的频率值），使给定频率恢复到P0-08设定的值。

20：运行命令切换端子1
当通过端子设置运行指令时（P0-02=1），端子可进行端子控制与键盘控制的切换。
当通过通信设置运行指令时（P0-02=2），端子可进行通信控制与键盘控制的切换。

21：加减速禁止
变频器维持当前运行频率（停机命令除外），不受外部输入频率变化的影响。

22：PID暂停
PID 暂时失效，变频器维持当前的输出频率，不再进行频率源的PID调节。

23：PLC状态复位
使变频器恢复到简易PLC 的初始状态。

24：摆频暂停
在摆频工艺功能中，端子有效时使摆频功能暂停（变频器以中心频率输出）。

25：计数器输入
在计数工艺功能中，端子有效时输入计数脉冲。

26；计数器复位
在计数工艺功能中，端子有效时对计数器状态进行清零处理。

27：长度计数输入
在定长工艺功能中，端子有效时输入长度计数。

28：长度复位
在定长工艺功能中，端子有效时使长度清零。

29：转矩控制禁止
端子有效时，变频器进行转矩控制模式到速度控制模式的切换；
端子无效时，恢复到转矩控制模式。

30：脉冲输入
当DI5作为脉冲输入的端子时，DI5端子必须选择此功能。

32：立即直流制动
变频器直接切换到直流制动状态。直流制动是指变频器向异步电机定子绕组中通入直流，形成静止磁场，此时电机处于能耗制动状态，转子切割该静止磁场而产生制动转矩，使电机迅速停止。

33：外部故障常闭输入
当外部信号送给变频器后，变频器报出故障E15。

34：频率修改使能 如果端子有效，允许修改频率；如果端子无效，禁止修改频率。

35：PID作用方向取反
PID 作用方向与PA-03（PID作用方向）设定的方向相反。

36：外部停机端子1
当通过操作面板设置运行指令时（P0-02=0），使变频器停机，相当于键盘上STOP/RES 键的功能。

37：控制命令切换端子2
在端子和通信设定运行指令之间进行切换。
如果用端子控制运行命令，端子有效时系统切换为通信控制；
如果用通信控制运行命令，端子有效时系统切换为端子控制。

38：PID 积分暂停
PID 的积分调节功能暂停，但PID的比例调节和微分调节功能仍然有效。

39：频率源X与预置频率切换
主频率源X切换为P0-08(预置频率)。

40：频率源Y与预置频率切换
辅频率源Y切换为P0-08(预置频率)。

41、97：选择电机参数1~4。例如设置DI1和DI2的功能分别为41和97，通过DI1与DI2配合切换电机组参数。
【0，0】表示第一组电机；
【0，1】表示第二组电机；
【1，0】表示第三组电机；
【1，1】表示第四组电机。

42：零伺服使能

该端子生效，变频器减速到0Hz，然后进入0伺服状态。

43：PID参数切换
当PID参数切换条件设置为“通过DI端子切换”时（PA-18=1），
若端子无效，PID使用PA-05~PA-07（比例增益Kp1、积分时间Ti1、微分时间Td1）
若端子有效，PID使用PA-15~PA-17（比例增益Kp2、积分时间Ti2、微分时间Td2）

44：用户自定义故障1
变频器报故障E27，变频器会根据P9-49（故障保护动作选择）的设定值进行处理。

45：用户自定义故障2
变频器报故障E28，变频器会根据P9-49（故障保护动作选择）的设定值进行处理。

46：速度控制/ 转矩控制切换
变频器在转矩控制与速度控制模式之间切换。
A0-00(速度/转矩控制方式)设置为0，
端子有效时，控制方式为转矩模式；端子无效时，控制方式为速度模式。
A0-00(速度/转矩控制方式)设置为1，
端子有效时，控制方式为速度模式；端子无效时，控制方式为转矩模式。

47：紧急停机
系统处于紧急状态时，变频器按照P8-55（端子急停减速时间）减速，V/f 模式急停减速时间为0s时按照最小单位时间进行减速。该输入端子无需持续处于闭合状态，即使处于闭合状态的时间仅仅为一瞬间，也会紧急停止。与一般的减速时间不同，在经过紧急停止减速时间后断开紧急停机输入端子，如果此时变频器端子运行信号仍处于闭合状态，变频器也不会启动，需先断开运行端子后再次输入端子运行指令，变频器才会重新启动。

48：外部停机端子2
在任何运行指令方式下（面板控制、端子控制、通信控制），变频器减速停机。此时减速时间固定为减速时间4（P8-08）。

49：减速直流制动
变频器先减速到P6-11（停机直流制动起始频率），然后进入直流制动状态。

50：本次运行时间清零
变频器本次运行计时时间被清零。如果本次运行时间小于P8-53（本次运行到达时间）的设定值（大于0），在此过程中端子有效，本次运行计时清零。如果本次运行时间大于P8-53的设定值（大于0），此时端子有效，本次运行计时不清零。

51：两线制/ 三线制切换
用于在两线式和三线式控制之间进行切换。
P4-11=0（两线式1），端子有效时，切换为三线式1。端子无效时，为两线式1。
P4-11=1（两线式2），端子有效时，切换为三线式2。
P4-11=2（三线式1），端子有效时，切换为两线式1。
P4-11=3（三线式2），端子有效时，切换为两线式2。

52：电磁封星
该端子生效，变频器进入电磁封星状态。

53：计圈信号
使用厚度累积计算卷径时，该端子用来进行记圈。

54：卷径复位
该端子生效，复位初始卷径。使用张力模式情况下，在换卷时候，需复位初始卷径。

55：初始卷径1

56：初始卷径2
在张力模式下，通过端子组合选择初始卷径B0-11/12/13，两者都不生效。选择最小卷径B0-09为初始卷径，
仅初始卷径1端子生效时选择B0-11作为初始卷径，
仅初始卷径2端子生效时选择B0-12作为初始卷径，
两者都生效时选择B0-13作为初始卷径。

57：预驱动
该端子生效，变频器切换到预驱动速度模式。使用张力模式的情况下，在需要自动换卷，待换卷的轴需要进行线速度同步，需要使能该功能。换卷完成后，
失效该端子，张力功能可正常实现。

58：收放卷切换
使用张力模式情况下，用来切换收/放卷切换。

59：卷径计算停止
该端子生效后，卷径计算停止。使用张力模式情况下，如需要自动换卷，预驱动，为了不影响卷径计算，可以禁止卷径计算。

60：退出张力模式
使用张力模式情况下，用来退出张力控制模式。

61：端子张力提升
该端子生效后，在张力转矩的基础上，提升一定的比例，而在DI端子撤销后，按照时间逐渐将提升部分撤销掉。

62：厚度选择1

63：厚度选择2
使用张力模式情况下，通过端子组合选择材料厚度B0-32/33/34/35，两者都不生效选材料厚度选择B0-32，仅厚度选择1端子生效时材料厚度选择B0-33，仅厚度选择2端子生效时材料厚度选择B0-34，两者都生效时材料厚度选择B0-35。

64~89：保留

90：水冷系统故障
T13机型当水冷系统发生故障时，该端子接收信号，变频器报出故障E64。

91：低液位故障
T13机型当水箱液位过低时，该端子接收信号，变频器报出警告A63。

92：计算圈数复位
该端子生效，计数圈数清零。

93：保留

94：抱闸工艺固化参数1

95：抱闸工艺固化参数2

96：切换收/放卷切换

97：电机组参数选择端子2，用于切换不同电机组，配合41号端子功能可以做到第三组和第四组电机切换。

P4-01　DI2端子功能选择

通讯地址:	0xF401	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	4	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换

40：频率源Y与预置频率切换
41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI2输入端子功能。
端子功能选择同P4-00

P4-02　　DI3端子功能选择

通讯地址:	0xF402	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	9	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI3输入端子功能。
端子功能选择同P4-00

P4-03 **DI4端子功能选择**

通讯地址:	0xF403	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	12	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI4输入端子功能。
端子功能选择同P4-00

P4-04 **DI5端子功能选择**

通讯地址:	0xF404	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	13	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI5输入端子功能。
端子功能选择同P4-00

P4-05 **DI6端子功能选择**

通讯地址:	0xF405	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI6输入端子功能。
端子功能选择同P4-00

P4-06 **DI7端子功能选择**

通讯地址:	0xF406	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI7输入端子功能。
端子功能选择同P4-00

P4-07 **DI8端子功能选择**

通讯地址:	0xF407	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI8输入端子功能。
端子功能选择同P4-00

P4-08 **DI9端子功能选择**

通讯地址:	0xF408	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI9输入端子功能。
端子功能选择同P4-00

P4-09 **DI10端子功能选择**

通讯地址:	0xF409	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置DI10输入端子功能。
端子功能选择同P4-00

P4-10 **DI滤波时间**

通讯地址:	0xF40A	生效方式:	-
最小值:	0.000	单位：	s
最大值:	1.000	数据类型：	无符号16位
默认值:	0.010	更改方式：	实时更改

设定值：

0.000s~1.000s

设定说明

设置DI端子状态的软件滤波时间。若使用场合输入端子易受干扰而引起误动作，可将此参数增大，以增强抗干扰能力。但是该滤波时间增大会引起DI端子的响应变慢。

P4-11　端子命令方式

通讯地址:	0xF40B	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：两线式1

1：两线式2

2：三线式1

3：三线式2

设定说明

通过外部端子控制变频器运行的四种不同方式。

0：两线式1

两线式模式1，接入2个DI端子，一个用于控制变频器的正转启停，另一个用于控制反转启停。

1：两线式2

两线式模式2，接入2个DI端子，一个用于控制变频器的启停，另一个用于控制运行方向。

2：三线式1

三线式模式1，接入3个DI端子，一个用于控制变频器的启停，另外2个用于控制运行方向。

3：三线式2

三线式模式2，接入3个DI端子，一个用于控制变频器的启动，一个用于控制停止，另外1个用于控制运行方向。

P4-12　端子UP/DOWN变化率

通讯地址:	0xF40C	生效方式:	-
最小值:	0.001	单位：	Hz/s
最大值:	65.535	数据类型：	无符号16位
默认值:	1.000	更改方式：	实时更改

设定值：

0.001Hz/s~65.535Hz/s

设定说明

通过端子UP或DOWN调整频率时的变化率。

当DI端子功能选择设置为端子UP或端子DOWN时，需要设置此参数（P4-00~P4-09的值为6或7）。

P4-13 **AI曲线1最小输入**

通讯地址:	0xF40D	生效方式:	-
最小值:	-10.00	单位:	V
最大值:	P4-15	数据类型:	有符号16位
默认值:	-10.00	更改方式:	实时更改

设定值:

-10.00V~P4-15

设定说明

当通过模拟量输入设定主频率时，AI端子作为频率源的给定，每个AI端子可以选择5种不同的AI曲线。AI 曲线是设置模拟量输入电压（或模拟量输入电流）与相对最大频率（P0-10）的百分比之间的关系。AI曲线的x轴表示模拟量输入电压（或模拟量输入电流），y轴表示模拟输入对应的设定量，即相对最大频率（P0-10）的百分比。AI曲线共有5种，其中曲线1、曲线2、曲线3均为2点式曲线，相关参数为P4-13~P4-27；曲线4与曲线5均为4点式曲线，相关参数为A6-00~ A6-15。AI曲线1~3上有2个点，分别为最小输入点与最大输入点。P4-13对应AI曲线1的最小输入点的x轴，即最小模拟量输入电压（或最小模拟量输入电流）。

P4-14 **AI曲线1最小输入对应设定**

通讯地址:	0xF40E	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	-100.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

P4-14对应AI曲线1的最小输入点的y轴，即最小模拟输入对应的设定量。

P4-15 **AI曲线1最大输入**

通讯地址:	0xF40F	生效方式:	-
最小值:	P4-13	单位:	V
最大值:	10.00	数据类型:	有符号16位
默认值:	10.00	更改方式:	实时更改

设定值:

P4-13~10.00V

设定说明

P4-15对应AI曲线1的最大输入点的x轴，即最大模拟量输入电压（或最大模拟量输入电流）。

P4-16 **AI曲线1最大输入对应设定**

通讯地址:	0xF410	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位

默认值: 100.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

P4-16对应AI曲线1的最大输入点的y轴，即最大模拟输入对应的设定量。

P4-17 AI1滤波时间

通讯地址: 0xF411 生效方式: -

最小值: 0.00 单位： s

最大值: 10.00 数据类型： 无符号16位

默认值: 0.10 更改方式： 实时更改

设定值：

0.00s~10.00s

设定说明

模拟量输入端子AI1的软件滤波时间。

AI滤波时间越大，抗干扰能力越强，对模拟量检测的响应速度变慢；AI滤波时间越小，抗干扰能力变弱，对模拟量检测的响应速度变快。

当现场模拟量信号容易被干扰时，通过加大AI滤波时间，增强模拟量信号的稳定性。

P4-18 AI曲线2最小输入

通讯地址: 0xF412 生效方式: -

最小值: -10.00 单位： V

最大值: P4-20 数据类型： 有符号16位

默认值: -10.00 更改方式： 实时更改

设定值：

-10.00V~P4-20

设定说明

P4-18对应AI曲线2的最小输入点的x轴，即最小模拟量输入电压（或最小模拟量输入电流）。

P4-19 AI曲线2最小输入对应设定

通讯地址: 0xF413 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: -100.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

P4-19对应AI曲线2的最小输入点的y轴，即最小模拟输入对应的设定量。

P4-20 AI曲线2最大输入

通讯地址: 0xF414 生效方式: -

最小值:	P4-18	单位：	V
最大值:	10.00	数据类型：	有符号16位
默认值:	10.00	更改方式：	实时更改

设定值：

P4-18~10.00V

设定说明

P4-20对应AI曲线2的最大输入点的x轴，即最大模拟量输入电压（或最大模拟量输入电流）。

P4-21 AI曲线2最大输入对应设定

通讯地址:	0xF415	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	100.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

P4-21对应AI曲线2的最大输入点的y轴，即最大模拟输入对应的设定量。

P4-22 AI2滤波时间

通讯地址:	0xF416	生效方式:	-
最小值:	0.00	单位：	s
最大值:	10.00	数据类型：	无符号16位
默认值:	0.10	更改方式：	实时更改

设定值：

0.00s~10.00s

设定说明

模拟量输入端子AI2的软件滤波时间。

AI滤波时间越大，抗干扰能力越强，对模拟量检测的响应速度变慢；

AI滤波时间越小，抗干扰能力变弱，对模拟量检测的响应速度变快。

当现场模拟量信号容易被干扰时，通过加大AI滤波时间，增强模拟量信号的稳定性。

P4-23 AI曲线3最小输入

通讯地址:	0xF417	生效方式:	-
最小值:	-10.00	单位：	V
最大值:	P4-25	数据类型：	有符号16位
默认值:	-10.00	更改方式：	实时更改

设定值：

-10.00V~P4-25

设定说明

P4-23对应AI曲线3的最小输入点的x轴，即最小模拟量输入电压（或最小模拟量输入电流）。

P4-24　AI曲线3最小输入对应设定

通讯地址:	0xF418	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	-100.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

P4-24对应AI曲线3的最小输入点的y轴，即最小模拟输入对应的设定量。

P4-25　AI曲线3最大输入

通讯地址:	0xF419	生效方式:	-
最小值:	P4-23	单位：	V
最大值:	10.00	数据类型：	有符号16位
默认值:	10.00	更改方式：	实时更改

设定值：

P4-23~10.00V

设定说明

P4-25对应AI曲线3的最大输入点的x轴，即最大模拟量输入电压（或最大模拟量输入电流）。

P4-26　AI曲线3最大输入对应设定

通讯地址:	0xF41A	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	100.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

P4-26对应AI曲线3的最大输入点的y轴，即最大模拟输入对应的设定量。

P4-27　AI3滤波时间

通讯地址:	0xF41B	生效方式:	-
最小值:	0.00	单位：	s
最大值:	10.00	数据类型：	无符号16位
默认值:	0.10	更改方式：	实时更改

设定值：

0.00s~10.00s

设定说明

模拟量输入端子AI3软件滤波时间。

AI滤波时间越大，抗干扰能力越强，对模拟量检测的响应速度变慢；
AI滤波时间越小，抗干扰能力变弱，对模拟量检测的响应速度变快。
当现场模拟量信号容易被干扰时，通过加大AI滤波时间，增强模拟量信号的稳定性。

P4-28　PULSE最小输入

通讯地址:	0xF41C	生效方式:	-
最小值:	0.00	单位：	kHz
最大值:	P4-30	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：
0.00kHz~P4-30
设定说明
当通过端子DI5高速脉冲作为主频率给定时，需要定义脉冲频率与设定频率的对应关系曲线，其中，设定频率是相对最大频率（P0-10）的百分比。该曲线的x轴表示DI5脉冲频率，y轴表示相对最大频率（P0-10）的百分比。该曲线为2点直线式，曲线上有2个点，分别为：脉冲最小输入和脉冲最大输入。
P4-28对应脉冲最小输入点的x轴，即脉冲最小输入频率。

P4-29　PULSE最小输入对应设定

通讯地址:	0xF41D	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
-100.0%~100.0%
设定说明
P4-29对应脉冲最小输入点的y轴，即脉冲最小输入设定量。

P4-30　PULSE最大输入

通讯地址:	0xF41E	生效方式:	-
最小值:	P4-28	单位：	kHz
最大值:	100.00	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：
P4-28~100.00kHz
设定说明
P4-30对应脉冲最大输入点的x轴，即脉冲最大输入频率。

P4-31　PULSE最大输入设定

通讯地址:	0xF41F	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位

默认值: 100.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

P4-31对应脉冲最大输入点的y轴，即脉冲最大输入设定量。

P4-32 PULSE滤波时间

通讯地址: 0xF420 生效方式: -

最小值: 0.00 单位： s

最大值: 10.00 数据类型： 无符号16位

默认值: 0.10 更改方式： 实时更改

设定值：

0.00s~10.00s

设定说明

设定频率的滤波时间。

P4-33 AI曲线选择

通讯地址: 0xF421 生效方式: -

最小值: 0x111 单位： -

最大值: 0x555 数据类型： 无符号16位

默认值: 0x321 更改方式： 实时更改

设定值：

个位：AI1

1：曲线1（2点，见P4-13~P4-16）

2：曲线2（2点，见P4-18~P4-21）

3：曲线3（2点，见P4-23~P4-26）

4：曲线4（4点，见A6-00~A6-07）

5：曲线5（4点，见A6-08~A6-15）

十位：AI2

1：曲线1（2点，见P4-13~P4-16）

2：曲线2（2点，见P4-18~P4-21）

3：曲线3（2点，见P4-23~P4-26）

4：曲线4（4点，见A6-00~A6-07）

5：曲线5（4点，见A6-08~A6-15）

百位：AI3

1：曲线1（2点，见P4-13~P4-16）

2：曲线2（2点，见P4-18~P4-21）

3：曲线3（2点，见P4-23~P4-26）

4：曲线4（4点，见A6-00~A6-07）

5：曲线5（4点，见A6-08~A6-15）

设定说明

通过该参数的个位、十位、百位分别设置模拟量输入端子AI1、AI2、AI3对应的设定曲线，3个模拟量输入端子可以分别选择5种曲线中的任意一个。当通过模拟量输入设定主频率时，AI端子作为频率源的给定，每个AI端子可以选择5种不同的AI曲线。

P4-34 AI低于最小输入设定选择

通讯地址:	0xF422	生效方式:	-
最小值:	0x0	单位：	-
最大值:	0x111	数据类型：	无符号16位
默认值:	0x0	更改方式：	实时更改

设定值：

个位：AI1

0：对应最小输入设定

1：0.0%

十位：AI2

0：对应最小输入设定

1：0.0%

百位：AI3

0：对应最小输入设定

1：0.0%

设定说明

通过该参数的个位、十位、百位分别设置模拟量输入端子AI1、AI2、AI3低于最小输入的设定方式。当模拟输入电压小于所设定的“最小输入”（P4-13）时，对应的设定量则根据该参数定义的最小输入或0.0%计算。

P4-35 DI1延迟时间

通讯地址:	0xF423	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

数字量输入端子DI的状态发生变化时， 变频器对该变化进行的延时时间。目前仅DI1、DI2、DI3有设置延迟时间的功能。

P4-36 DI2延迟时间

通讯地址:	0xF424	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

数字量输入端子DI的状态发生变化时， 变频器对该变化进行的延时时间。目前仅DI1、DI2、DI3有设置延迟时间的功能。

P4-37 **DI3延迟时间**

通讯地址:	0xF425	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

数字量输入端子DI的状态发生变化时， 变频器对该变化进行的延时时间。目前仅DI1、DI2、DI3有设置延迟时间的功能。

P4-38 **DI输入端子有效状态设定1**

通讯地址:	0xF426	生效方式:	-
最小值:	0	单位：	-
最大值:	11111	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

个位：DI1端子有效状态设定

0：高电平有效

1：低电平有效

十位：DI2端子有效状态设定

0：高电平有效

1：低电平有效

百位：DI3端子有效状态设定

0：高电平有效

1：低电平有效

千位：DI4端子有效状态设定

0：高电平有效

1：低电平有效

万位：DI5端子有效状态设定

0：高电平有效

1：低电平有效

设定说明

通过该参数的个位、十位、百位、千位、万位分别设置DI1~DI5端子的有效模式。

0：高电平有效

DI端子(DI1~DI5)与COM连通时有效，与COM断开时无效。

1：低电平有效

DI端子(DI1~DI5)与COM连通时无效，与COM断开时有效。

P4-39　DI输入端子有效状态设定2

通讯地址:	0xF427	生效方式:	-
最小值:	0	单位:	-
最大值:	11111	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

个位：DI6端子有效状态设定

0：高电平有效

1：低电平有效

十位：DI7端子有效状态设定

0：高电平有效

1：低电平有效

百位：DI8端子有效状态设定

0：高电平有效

1：低电平有效

千位：DI9端子有效状态设定

0：高电平有效

1：低电平有效

万位：DI10端子有效状态设定

0：高电平有效

1：低电平有效

设定说明

通过该参数的个位、十位、百位、千位、万位分别设置DI6~DI10端子的有效模式。

0：高电平有效

DI端子(DI6~DI10)与COM 连通时有效，与COM断开时无效。

1：低电平有效

DI端子(DI6~DI10)与COM 连通时无效，与COM断开时有效。

P4-41　DO1端子输出模式选择

通讯地址:	0xF429	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：普通DO输出

1：FMP输出

设定说明

0：普通DO输出

通过P5-04选择DO1输出功能。

1：FMP输出

通过P5-06选择FMP输出功能，输出最大频率由P5-09决定。且此时P5-04设置的普通 DO1端子功能无效。

6.6 P5 输出端子

P5-01 **扩展卡RELAY输出功能选择**

通讯地址:	0xF501	生效方式:	-
最小值:	0	单位:	-
最大值:	51	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：无输出
1：变频器运行中
2：故障输出(故障停机)
3：频率水平检测FDT1输出
4：频率到达
5：零速运行中（停机时不输出）
6：电机过载预报警
7：变频器过载预报警
8：设定计数值到达
9：指定计数值到达
10：长度到达
11：PLC循环完成
12：累计运行时间到达
13：频率限定中
14：转矩限定中
15：运行准备就绪
16：AI1>AI2
17：上限频率到达
18：下限频率到达(运行有关)
19：欠压状态输出
20：通信设定
21：保留
22：保留
23：零速运行中2（停机时）
24：累计上电时间到达
25：频率水平检测FDT2输出
26：频率1到达输出
27：频率2到达输出
28：电流1达到输出
29：电流2到达输出
30：定时达到输出
31：AI1输入超限
32：变频器输出掉载
33：反向运行中
34：零电流状态
35：模块温度到达
36：输出电流超限
37：下限频率到达（停机也输出）
38：异常输出（产生故障或警告时直接输出）
39：电流过温预报警
40：本次运行时间到达
41：故障输出2
42：故障输出3

设定说明

设置扩展卡继电器端子功能。
0：无输出
输出端子无任何功能。
1：变频器运行中
变频器处于运行状态，有输出频率（可以为零），此时输出“有效”信号。
2：故障输出(为自由停机的故障)
当变频器故障停机时，输出“有效”信号。
3：频率水平检测1
当运行频率高于频率检测值时，DO输出“有效”信号；当运行频率低于检测值减去FDT 滞后值（P8-19设定值与P8-20的乘积）时，DO输出“有效”信号取消。
4：频率到达
当变频器的运行频率处于目标频率一定范围内（目标频率±P8-21的设定值与最大频率的乘积），DO输出“有效”信号。
5：零速运行中（停机时不输出）
变频器运行且输出频率为0时，输出“有效”信号。在变频器处于停机状态时，该信号“无效”。
6：电机过载预报警
电机过载保护动作之前，根据过载预警系数（P9-02）进行判断，在超过预报警阈值后输出“有效”信号。
7：变频器过载预报警
在变频器过载保护发生前10s，输出“有效”信号。
8：设定计数值到达
在计数功能中，当计数值达到PB-08所设定的值时，输出“有效”信号。
9：指定计数值到达
在计数功能中，当计数值达到PB-09所设定的值时，输出“有效”信号。
10：长度到达
在定长功能中，当检测的实际长度超过PB-05所设定的长度时，输出“有效”信号。
11：简易PLC 循环完成
当简易PLC 运行完成一个循环后，输出一个宽度为250ms的脉冲信号。
12：累计运行时间到达
变频器累计运行时间超过P8-17（设定累计运行到达时间）所设定时间时，输出“有效”信号。
13：频率限定中
当设定频率超出上限频率或者下限频率，且变频器输出频率达到上限频率或者下限频率时，输出“有效”信号。
14：转矩限定中
变频器在速度控制模式下，当输出转矩达到转矩限定值时，输出“有效”信号。
15：运行准备就绪
变频器上电后，处于无异常状态时，输出“有效”信号。
16：AI1>AI2
当模拟量输入AI1的值大于AI2的输入值时，输出“有效”信号。

17：上限频率到达
当运行频率到达上限频率（P0-12）时，输出“有效”信号。
18：下限频率到达(停机时不输出)
当P8-14（给定频率低于下限频率运行模式）设置为1（停机）时，无论运行频率是否到达下限频率，都输出“无效”信号；
当P8-14（给定频率低于下限频率运行模式）设置为0（以下限频率运行）或者2（零速运行）时，且运行频率到达下限频率时，输出“有效”信号。
19：欠压状态
变频器处于欠压状态时，输出“有效”信号。
20：通信设定
端子“有效”或者“无效”状态由通信地址0x2001的设定值控制。
21：保留
22：保留
23：零速运行中2（停机时也输出）
变频器运行且输出频率为0时，输出“有效”信号。在变频器处于停机状态时，该信号也为“有效”。
24：累计上电时间到达
变频器累计上电时间（P7-13）超过P8-16（设定累计上电到达时间）所设定时间时，输出“有效”信号。
25：频率水平检测2
当运行频率高于频率检测值时，DO输出“有效”信号，当运行频率低于检测值减去频率检测滞后值（P8-28设定值与P8-29的乘积），DO输出“有效”信号取消。
26：频率1 到达
变频器的运行频率处于P8-30（任意到达频率检测值1）频率检出范围内，DO输出“有效”信号。
频率检出范围：P8-30-P8-31×P0-10（最大频率）~P8-30+P8-31×P0-10。
27：频率2 到达
变频器的运行频率处于P8-32（任意到达频率检测值2）频率检出范围内，DO输出“有效”信号。
频率检出范围：P8-32-P8-33×P0-10（最大频率）~P8-32+P8-33×P0-10。
28：电流1 到达
变频器的输出电流处于P8-38（任意到达电流1）电流的范围内，DO输出“有效”信号。
电流检出范围= P8-38-P8-39×P1-03（电机额定电流）~P8-38+P8-39×P1-03。
29：电流2 到达
变频器的输出电流处于P8-40（任意到达电流2）电流的范围内，DO输出“有效”信号。
电流检出范围= P8-40-P8-41×P1-03（电机额定电流）~P8-40+P8-41×P1-03。
30：定时到达
当定时功能选择（P8-42）有效时，变频器本次运行时间达到所设置的定时时间后，输出“有效”信号。定时时间由P8-43和P8-44设置。

31：AI1 输入超限
当模拟量输入AI1的值大于P8-46(AI1输入保护上限)或小于P8-45(AI1输入保护下限)时，输出“有效”信号。
32：掉载中
变频器处于掉载状态时，输出“有效”信号。
33：反向运行中
变频器处于反向运行时，输出“有效”信号。
34：零电流状态
变频器的输出电流处于零电流的范围内，且持续时间超过P8-35（零电流检测延迟时间）后，DO输出“有效”信号。零电流检出范围=0~ P8-34×P1-03。
35：模块温度到达
逆变模块散热器温度（P7-07）达到所设置的模块温度到达值（P8-47）时，输出“有效”信号。
36：输出电流超限
变频器的输出电流大于P8-36（输出电流超限值），且持续时间超过P8-37（输出电流超限检测延迟时间）后，DO输出“有效”信号。
37：下限频率到达(停机也输出)
当运行频率到达下限频率（P0-14）时，输出“有效”信号。在停机状态时，也输出“有效”信号。
38：告警(所有故障)
当变频器发生故障，且该故障保护动作选择为继续运行时，DO端子输出“有效”信号。
故障保护动作选择可以参照P9-47~P9-50。
39：电机过温
当电机温度达到P9-58（电机过热预报警阈值）时，输出“有效”信号（电机温度可通过U0-34查看）。
40：本次运行时间到达
变频器本次开始运行时间超过P8-53（本次运行到达时间设定）所设定的时间时，输出“有效”信号。
41：故障输出2
当变频器发生故障时（除了欠压故障之外），DO端子输出“有效”信号。
42：故障输出3
当变频器发生故障时，输出“有效”信号。
43~51：保留
其他：当选择为“其他”时，其输出功能为B连接器所连接到的位连接器的信号或功能状态。

P5-02 控制板RELAY1功能选择（T/A1-T/B1-T/C1）

通讯地址:	0xF502	生效方式:	-
最小值:	0	单位：	-
最大值:	51	数据类型：	无符号16位
默认值:	2	更改方式：	实时更改

设定值：

0：无输出
1：变频器运行中
2：故障输出(故障停机)
3：频率水平检测FDT1输出
4：频率到达
5：零速运行中（停机时不输出）
6：电机过载预报警
7：变频器过载预报警
8：设定计数值到达
9：指定计数值到达
10：长度到达
11：PLC循环完成
12：累计运行时间到达
13：频率限定中
14：转矩限定中
15：运行准备就绪
16：AI1>AI2
17：上限频率到达
18：下限频率到达(运行有关)
19：欠压状态输出
20：通信设定
21：保留
22：保留
23：零速运行中2（停机时）
24：累计上电时间到达
25：频率水平检测FDT2输出
26：频率1到达输出
27：频率2到达输出
28：电流1达到输出
29：电流2到达输出
30：定时达到输出
31：AI1输入超限
32：变频器输出掉载
33：反向运行中
34：零电流状态
35：模块温度到达
36：输出电流超限
37：下限频率到达（停机也输出）
38：异常输出（产生故障或警告时直接输出）
39：电流过温预报警
40：本次运行时间到达
41：故障输出2
42：故障输出3

设定说明

设置控制板继电器（T/A1-T/B1-T/C1）端子功能。

端子功能选择同P5-01。

P5-03 **控制板RELAY2功能选择（T/A2-T/C2）**

通讯地址:	0xF503	生效方式:	-
最小值:	0	单位:	-
最大值:	51	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：无输出
1：变频器运行中
2：故障输出(故障停机)
3：频率水平检测FDT1输出
4：频率到达
5：零速运行中（停机时不输出）
6：电机过载预报警
7：变频器过载预报警
8：设定计数值到达
9：指定计数值到达
10：长度到达
11：PLC循环完成
12：累计运行时间到达
13：频率限定中
14：转矩限定中
15：运行准备就绪
16：AI1>AI2
17：上限频率到达
18：下限频率到达(运行有关)
19：欠压状态输出
20：通信设定
21：保留
22：保留
23：零速运行中2（停机时）
24：累计上电时间到达
25：频率水平检测FDT2输出
26：频率1到达输出
27：频率2到达输出
28：电流1达到输出
29：电流2到达输出
30：定时达到输出
31：AI1输入超限
32：变频器输出掉载
33：反向运行中
34：零电流状态
35：模块温度到达
36：输出电流超限
37：下限频率到达（停机也输出）
38：异常输出（产生故障或警告时直接输出）
39：电流过温预报警
40：本次运行时间到达
41：故障输出2
42：故障输出3

设定说明

设置控制板继电器（T/A2-T/C2）端子功能。

端子功能选择同P5-01。

P5-04　DO1输出功能选择

通讯地址:	0xF504	生效方式:	-
最小值:	0	单位:	-
最大值:	51	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:

0：无输出
1：变频器运行中
2：故障输出(故障停机)
3：频率水平检测FDT1输出
4：频率到达
5：零速运行中（停机时不输出）
6：电机过载预报警
7：变频器过载预报警
8：设定计数值到达
9：指定计数值到达
10：长度到达
11：PLC循环完成
12：累计运行时间到达
13：频率限定中
14：转矩限定中
15：运行准备就绪
16：AI1>AI2
17：上限频率到达
18：下限频率到达(运行有关)
19：欠压状态输出
20：通信设定
21：保留
22：保留
23：零速运行中2（停机时）
24：累计上电时间到达
25：频率水平检测FDT2输出
26：频率1到达输出
27：频率2到达输出
28：电流1达到输出
29：电流2到达输出
30：定时达到输出
31：AI1输入超限
32：变频器输出掉载
33：反向运行中
34：零电流状态
35：模块温度到达
36：输出电流超限
37：下限频率到达（停机也输出）
38：异常输出（产生故障或警告时直接输出）
39：电流过温预报警
40：本次运行时间到达
41：故障输出2
42：故障输出3

设定说明

设置DO1输出端子功能。

端子功能选择同P5-01。

P5-05 **扩展卡DO2输出选择**

通讯地址:	0xF505	生效方式:	-
最小值:	0	单位:	-
最大值:	51	数据类型:	无符号16位
默认值:	4	更改方式:	实时更改

设定值:

0：无输出
1：变频器运行中
2：故障输出(故障停机)
3：频率水平检测FDT1输出
4：频率到达
5：零速运行中（停机时不输出）
6：电机过载预报警
7：变频器过载预报警
8：设定计数值到达
9：指定计数值到达
10：长度到达
11：PLC循环完成
12：累计运行时间到达
13：频率限定中
14：转矩限定中
15：运行准备就绪
16：AI1>AI2
17：上限频率到达
18：下限频率到达(运行有关)
19：欠压状态输出
20：通信设定
21：保留
22：保留
23：零速运行中2（停机时）
24：累计上电时间到达
25：频率水平检测FDT2输出
26：频率1到达输出
27：频率2到达输出
28：电流1达到输出
29：电流2到达输出
30：定时达到输出
31：AI1输入超限
32：变频器输出掉载
33：反向运行中
34：零电流状态
35：模块温度到达
36：输出电流超限
37：下限频率到达（停机也输出）
38：异常输出（产生故障或警告时直接输出）
39：电流过温预报警
40：本次运行时间到达
41：故障输出2
42：故障输出3

设定说明

设置扩展卡DO2输出端子功能。

端子功能选择同P5-01。

P5-06　FMP输出功能选择

通讯地址:	0xF506	生效方式:	-
最小值:	0	单位:	-
最大值:	22	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：运行频率
1：设定频率
2：输出电流
3：输出转矩
4：输出功率
5：输出电压
6：脉冲输入(100.0%对应100.0kHz)
7：AI1
8：AI2
9：AI3
10：长度
11：计数值
12：通信设定
13：电机转速
14：输出电流(100.0%对应1000.0A)
15：输出电压(100.0%对应1000.0V)
16：输出转矩（带方向）
19：锥度输出
20：卷径输出
21：张力输出
22：编码器反馈频率

设定说明

仅在P4-41设为1时有效。

0：运行频率（100.0%对应最大频率P0-10）
1：设定频率
2：输出电流(100.0%对应2倍电机额定电流)
3：电机输出转矩（100.0%对应2倍电机额定转矩）（绝对值，相对电机的百分比）
4：输出功率（100.0%对应2倍电机额定功率）
5：输出电压（100.0%对应1.2倍电机额定电压）
6：脉冲输入(100.0%对应100.0kHz)
7：AI1(100.0% 对应10V)
8：AI2(100.0% 对应10V)
9：AI3(100.0% 对应10V)
10：长度(100.0% 对应PB-05)
11：计数值(100.0% 对应PB-08)
12：通信设定（100.0%对应AO通信设定）
13：电机转速(100.0% 对应最大频率P0-10）
14：输出电流(100.0% 对应1000.0A)
15：输出电压(100.0% 对应1000.0V)
16：电机输出转矩（100.0%对2倍电机额定转矩,50%对应0,0对应-2倍电机额定转矩）
（实际值，相对电机的百分比）
19：锥度输出
20：卷径输出（100.0%对应最大卷径B0-08）
21：张力输出（100.0%对应最大张力B1-02）
22：编码器反馈频率（100.0%对应最大频率P0-10）

P5-07 **AO1输出功能选择**

通讯地址:	0xF507	生效方式:	-
最小值:	0	单位：	-
最大值:	22	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：运行频率
1：设定频率
2：输出电流
3：输出转矩
4：输出功率
5：输出电压
6：脉冲输入(100.0%对应100.0kHz)
7：AI1
8：AI2
9：AI3
10：长度
11：计数值
12：通信设定
13：电机转速
14：输出电流(100.0%对应1000.0A)
15：输出电压(100.0%对应1000.0V)
16：输出转矩（带方向）
19：锥度输出
20：卷径输出
21：张力输出
22：编码器反馈频率

设定说明

0：运行频率（0~最大输出频率，100.0%对应最大频率P0-1）
1：设定频率（0~最大输出频率）
2：输出电流(0~2倍电机额定电流，100.0%对应2倍电机额定 电流)
3：电机输出转矩（0~2倍电机额定转矩，100.0%对应2倍电机额定 转矩）（绝对值，相对电机的百分比）
4：输出功率（0~2倍额定功率，100.0%对应2倍电机额定功率）
5：输出电压（0~1.2倍变频器额定电压，100.0%对应1.2倍电机 额定电压）
6：脉冲输入(0.01kHz~100.00kHz，100.0% 对应100.0H)
7：AI1(-10V~10V，100.0% 对应10V)
8：AI2(-10V~10V（或者0~20mA），100.0% 对应10V)
9：AI3(0V~10V（或者0~20mA），100.0% 对应10)
10：长度(0~最大设定长度，100.0% 对应PB-05)
11：计数值(0~最大计数值，100.0% 对应PB-08)
12：通信设定（0.0%~100.0%，100.0%对应AO通讯设定）
13：电机转速(0~最大输出频率对应的转速，100.0% 对应最大 频率P0-10）
14：输出电流(0.0A~1000.0A，100.0% 对应1000.0)
15：输出电压(0.0V~1000.0V，100.0% 对应1000.0)
16：电机输出转矩（-2倍电机额定转矩~2倍电机额定转矩，100.0% 对2倍电机额定转矩，50%对应0，0对应-2倍电 机额定转矩）（实际值，相对电机的百分比）
19：锥度输出
20：卷径输出（100.0%对应最大卷径B0-08）
21：张力输出（100.0%对应最大张力B1-02）
22：编码器反馈频率（100.0%对应最大频率P0-10）

P5-08 **AO2输出选择**

通讯地址:	0xF508	生效方式:	-
最小值:	0	单位：	-
最大值:	22	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

0：运行频率
1：设定频率
2：输出电流
3：输出转矩
4：输出功率
5：输出电压
6：脉冲输入(100.0%对应100.0kHz)
7：AI1
8：AI2
9：AI3
10：长度
11：计数值
12：通信设定
13：电机转速
14：输出电流(100.0%对应1000.0A)
15：输出电压(100.0%对应1000.0V)
16：输出转矩（带方向）
19：锥度输出
20：卷径输出
21：张力输出
22：编码器反馈频率

设定说明

0：运行频率（0~最大输出频率，100.0%对应最大频率P0-1）
1：设定频率（0~最大输出频率）
2：输出电流(0~2倍电机额定电流，100.0%对应2倍电机额定 电流)
3：电机输出转矩（0~2倍电机额定转矩，100.0%对应2倍电机额定 转矩）（绝对值，相对电机的百分比）
4：输出功率（0~2倍额定功率，100.0%对应2倍电机额定功率）
5：输出电压（0~1.2倍变频器额定电压，100.0%对应1.2倍电机 额定电压）
6：脉冲输入(0.01kHz~100.00kHz，100.0% 对应100.0H)
7：AI1(-10V~10V，100.0% 对应10V)
8：AI2(-10V~10V（或者0~20mA），100.0% 对应10V)
9：AI3(0V~10V（或者0~20mA），100.0% 对应10)
10：长度(0~最大设定长度，100.0% 对应PB-05)
11：计数值(0~最大计数值，100.0% 对应PB-08)
12：通信设定（0.0%~100.0%，100.0%对应AO通讯设定）
13：电机转速(0~最大输出频率对应的转速，100.0% 对应最大 频率P0-10）
14：输出电流(0.0A~1000.0A，100.0% 对应1000.0)
15：输出电压(0.0V~1000.0V，100.0% 对应1000.0)
16：电机输出转矩（-2倍电机额定转矩~2倍电机额定转矩，100.0% 对2倍电机额定转矩，50%对应0，0对应-2倍电 机额定转矩）（实际值，相对电机的百分比）
19：锥度输出
20：卷径输出（100.0%对应最大卷径B0-08）
21：张力输出（100.0%对应最大张力B1-02）
22：编码器反馈频率（100.0%对应最大频率P0-10）

P5-09 **FMP输出最大频率**

通讯地址:	0xF509	生效方式:	-
最小值:	0.01	单位：	kHz
最大值:	100.00	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：
0.01kHz~100.00kHz
设定说明
FMP端子输出脉冲最大频率，可在0.01kHz~100kHz之间设置

P5-10 **AO1零偏系数**

通讯地址:	0xF50A	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
-100.0%~100.0%
设定说明

在AO输出曲线中，若零偏用“b”表示，增益用k表示，实际输出用Y表示，标准输出用X表示，则实际输出为：Y=kX＋b。其中，AO1、AO2 的零偏系数100%对应10V（或20mA），标准输出是指在无零偏及增益修正下，输出0V~10V（或0mA~20mA）对应模拟输出表示的量。

零偏= 零偏系数×10V(或20mA)

变频器共支持2路AO输出，AO1、AO2 可用于模拟量方式指示内部运行参数，所指示的参数属性通过参数P5-07、P5-08来选择。

P5-11 **AO1增益**

通讯地址:	0xF50B	生效方式:	-
最小值:	-10.00	单位：	-
最大值:	10.00	数据类型：	有符号16位
默认值:	1.00	更改方式：	实时更改

设定值：

-10.00~10.00

设定说明

在AO输出曲线中，若零偏用“b”表示，增益用k表示，实际输出用Y表示，标准输出用X表示，则实际输出为：Y=kX＋b。其中，AO1、AO2 的零偏系数100%对应10V（或20mA），标准输出是指在无零偏及增益修正下，输出0～10V（或0 ～20mA）对应模拟输出表示的量。

零偏= 零偏系数×10V(或20mA)

变频器共支持2路AO输出，AO1、AO2 可用于模拟量方式指示内部运行参数，所指示的参数属性通过参数P5-07、P5-08来选择。

P5-12 **AO2零偏系数**

通讯地址:	0xF50C	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

在AO输出曲线中，若零偏用“b”表示，增益用k表示，实际输出用Y表示，标准输出用X表示，则实际输出为：Y=kX＋b。其中，AO1、AO2 的零偏系数100%对应10V（或20mA），标准输出是指在无零偏及增益修正下，输出0～10V（或0～20mA）对应模拟输出表示的量。

零偏= 零偏系数×10V(或者20mA)

变频器共支持2路AO输出，AO1、AO2 可用于模拟量方式指示内部运行参数，所指示的参数属性通过参数P5-07、P5-09来选择。

P5-13 **AO2增益**

通讯地址:	0xF50D	生效方式:	-

最小值:	-10.00	单位：	-
最大值:	10.00	数据类型：	有符号16位
默认值:	1.00	更改方式：	实时更改

设定值：

-10.00~10.00

设定说明

在AO输出曲线中，若零偏用“b”表示，增益用k表示，实际输出用Y表示，标准输出用X表示，则实际输出为：Y=kX＋b。其中，AO1、AO2 的零偏系数100%对应10V（或20mA），标准输出是指在无零偏及增益修正下，输出0～10V（或者0 ～20mA)对应模拟输出表示的量。

零偏= 零偏系数×10V(或者20mA)

变频器共支持2路AO输出，AO1、AO2 可用于模拟量方式指示内部运行参数，所指示的参数属性通过参数P5-07、P5-10来选择。

P5-17 **扩展卡RELAY输出延迟时间**

通讯地址:	0xF511	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

扩展卡继电器输出的延迟时间。经过设定的延迟时间，P5-01才输出有效信号。

P5-18 **控制板RELAY1输出延迟时间**

通讯地址:	0xF512	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

控制板继电器1输出的延迟时间。经过设定的延迟时间，P5-02才输出有效信号。

P5-19 **控制板RELAY2输出延时时间**

通讯地址:	0xF513	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

控制板继电器2输出延迟时间。经过设定的延迟时间，P5-03才输出有效信号。

P5-20 **DO1输出延迟时间**

通讯地址:	0xF514	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

DO1输出延迟时间。经过设定的延迟时间，P5-04才输出有效信号。

P5-21 **扩展卡DO2输出延迟时间**

通讯地址:	0xF515	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3600.0s

设定说明

扩展卡DO2输出延迟时间。经过设定的延迟时间，P5-05才输出有效信号。

P5-22 **DO输出端子有效状态选择**

通讯地址:	0xF516	生效方式:	-
最小值:	0	单位：	-
最大值:	11111	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

个位：扩展卡Relay
0：正逻辑
1：反逻辑
十位：控制板Relay1
0：正逻辑
1：反逻辑
百位：控制板Relay2
0：正逻辑
1：反逻辑
千位：控制板DO1
0：正逻辑
1：反逻辑
万位：扩展卡DO2
0：正逻辑
1：反逻辑

设定说明

通过该参数的个位、十位、百位、千位、万位分别设置F5-01~F5-05对应DO端子的有效状态。
0：正逻辑（等效常开接点）
有效状态：DO端子和COM/CME端子内部连通。
无效状态：DO端子和COM/CME端子断开。
1：反逻辑（等效常闭接点）
有效状态：DO端子和COM/CME端子断开。
无效状态：DO端子和COM/CME端子内部连通。

6.7 P6 启停控制

P6-00 **启动方式**

通讯地址:	0xF600	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：直接启动
1：转速跟踪启动
2：异步机矢量预励磁启动（异步电机）

设定说明

0：直接启动
变频器直接启动，适用于大多数负载，启动前加"启动频率”适用于电梯、起重等提升类负载场合。

1：转速跟踪再启动

是指在某些场合，变频器启动前电机已经处于旋转状态，变频器能自动跟踪电机的转速和方向，对旋转中的电机实施平滑无冲击启动。例如变频器在运行中，由于电网瞬时掉电，导致变频器掉电再启动，由于惯性，电机处于旋转状态。在这种状态下，要想重新控制异步电机，变频器必须首先检测出电机当前的实际转速，否则在启动过程中会造成变频器过流、过压等故障情况，严重的可能烧毁变频器功率管。

2：预励磁启动（异步机）

变频器为预励磁启动，该方式只适用于异步电机的SVC 与FVC 控制模式，启动前对电机进行预励磁，可以提高电机的快速响应和减小启动电流，启动时序与直流制动再启动一致。

P6-01 **转速跟踪模式**

通讯地址:	0xF601	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：从停机频率开始

1：从50Hz开始

2：从最大频率开始

3：保留

设定说明

不同模式，再启动时转速跟踪搜索的起始频率值不同。

转速跟踪启动无法搜索电机旋转方向，当前启动指令的电机旋转方向，应该与前一次电机停止时的电机旋转方向相同，如果相反，转速跟踪会失败。

从停机频率开始搜索模式，是从前一次的停机频率开始向0Hz的速度搜索，如果有外力将电机拖动到比停机时更高的速度，则该模式不适用。

P6-02 **转速跟踪快慢**

通讯地址:	0xF602	生效方式:	-
最小值:	1	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	20	更改方式：	实时更改

设定值：

1~100

设定说明

-

P6-03 **启动频率**

通讯地址:	0xF603	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	10.00	数据类型：	无符号16位

默认值: 0.00 更改方式： 实时更改

设定值：

0.00Hz~10.00Hz

设定说明

变频器直接启动的启动频率值。当启动频率值高于给定频率时，变频器处于待机状态，不会启动。

P6-04 **启动频率保持时间**

通讯地址: 0xF604 生效方式: -

最小值: 0.0 单位： s

最大值: 100.0 数据类型： 无符号16位

默认值: 0.0 更改方式： 停机更改

设定值：

0.0s~100.0s

设定说明

输出频率为启动频率并保持一段时间，时间（该设定值）到达后，输出频率才加/减速至给定频率。

P6-05 **启动直流制动电流/预励磁电流**

通讯地址: 0xF605 生效方式: -

最小值: 0 单位： %

最大值: 150 数据类型： 无符号16位

默认值: 0 更改方式： 停机更改

设定值：

0%~150%

设定说明

启动直流制动开启，启动指令发出后，不会直接启动，而是先进行直流制动。直流制动电流越大，制动力越大，100%对应电机额定电流（电流上限为变频器额定电流的80%）。

可通过P6-35设置电流上限，最大将电流上限设置为变频器额定电流的135%。

P6-06 **启动直流制动时间/预励磁时间**

通讯地址: 0xF606 生效方式: -

最小值: 0.0 单位： s

最大值: 100.0 数据类型： 无符号16位

默认值: 0.0 更改方式： 停机更改

设定值：

0.0s~100.0s

设定说明

启动直流制动的制动时间，只在启动方式为直接启动时有效。

P6-07 **加减速方式**

通讯地址:	0xF607	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：直线加减速

1：S曲线加减速

设定说明

选择变频器在启、停动过程中频率变化的方式。

0：直线加减速

输出频率按照直线递增或递减。

1：S曲线加减速

在目标频率实时动态变化的情况下，输出频率按照S曲线实时递增或递减。适用在舒适感要求较高及实时响应快速的场合。

P6-08 **S曲线开始段时间比例**

通讯地址:	0xF608	生效方式:	-
最小值:	0.0	单位:	%
最大值:	70.0	数据类型:	无符号16位
默认值:	30.0	更改方式:	停机更改

设定值:

0.0%~70.0%

设定说明

P6-08（S曲线开始段时间比例）与P6-09(S曲线结束段时间比例）之和要小于等于100%。

P6-09 **S曲线结束段时间比例**

通讯地址:	0xF609	生效方式:	-
最小值:	0.0	单位:	%
最大值:	70.0	数据类型:	无符号16位
默认值:	30.0	更改方式:	停机更改

设定值:

0.0%~70.0%

设定说明

P6-08（S曲线开始段时间比例）＋ P6-09(S曲线结束段时间比例）≤ 100%。

P6-10 **停机方式**

通讯地址:	0xF60A	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0：减速停机

1：自由停机

设定说明

0：减速停机

停机命令有效后，变频器按照减速时间降低输出频率，频率降为0后停机。

1：自由停机

停机命令有效后，变频器立即终止输出，此时电机按照机械惯性自由停机。

P6-11 停机直流制动起始频率

通讯地址:	0xF60B	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

减速停机过程中，当运行频率降低到到该频率时，开始直流制动过程。

P6-12 停机直流制动等待时间

通讯地址:	0xF60C	生效方式:	-
最小值:	0.0	单位：	s
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~100.0s

设定说明

在运行频率降低至停机直流制动起始频率后，变频器先停止输出一段时间，然后再开始直流制动过程。用于防止在较高速度时开始直流制动可能引起的过流等故障。

P6-13 停机直流制动电流

通讯地址:	0xF60D	生效方式:	-
最小值:	0	单位：	%
最大值:	150	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0%~150%

设定说明

启动直流制动开启，启动指令发出后，不会直接启动，而是先进行直流制动。
直流制动电流越大，制动力越大。
100%对应电机额定电流（电流上限为变频器额定电流的 80%）。
可通过P6-35设置电流上限，最大将电流上限设置为变频器额定电流的135%。

P6-14 停机直流制动时间

通讯地址:	0xF60E	生效方式:	-
最小值:	0.0	单位：	s
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
0.0s~100.0s
设定说明
直流制动量保持的时间。此值为0，则直流制动过程取消。

P6-15 制动使用率

通讯地址:	0xF60F	生效方式:	-
最小值:	0	单位：	%
最大值:	100	数据类型：	无符号16位
默认值:	100	更改方式：	停机更改

设定值：
0%~100%
设定说明
制动使用率。

P6-16 转速跟踪闭环电流KP

通讯地址:	0xF610	生效方式:	-
最小值:	0	单位：	-
最大值:	1000	数据类型：	无符号16位
默认值:	500	更改方式：	实时更改

设定值： 0~1000
设定说明
P6-01=0、1、2时有效。飞车启动转速搜索过程中电流抑制PI调节器的比例增益。

P6-17 转矩跟踪闭环电流KI

通讯地址:	0xF611	生效方式:	-
最小值:	0	单位：	-
最大值:	1000	数据类型：	无符号16位
默认值:	800	更改方式：	实时更改

设定值：
0~1000

设定说明

P6-01=0、1、2时有效，飞车启动转速搜索过程中电流抑制PI调节器的积分增益。

P6-18　转速跟踪电流大小

通讯地址:	0xF612	生效方式:	-
最小值:	30	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

30~200

设定说明

异步机飞车启动时，因为转差很大，一般会出现过流。为了避免过流，需要对电流进行限制。该参数用于设定飞车启动转速搜索过程中需要抑制的电机电流大小。

P6-21　去磁时间

通讯地址:	0xF615	生效方式:	-
最小值:	0.00	单位：	s
最大值:	10.00	数据类型：	无符号16位
默认值:	1.00	更改方式：	实时更改

设定值：

0.00s~10.00s

设定说明

矢量模式下，转速跟踪启动（P6-00=1）时，在电机有剩磁时不允许启动变频器，只有变频器断开电压输出最短经过了P6-21设置的去磁时间后，才允许启动变频器。

P6-22　启动预转矩设定

通讯地址:	0xF616	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~200.0%

设定说明

-

P6-26　电磁封星电流

通讯地址:	0xF61A	生效方式:	-
最小值:	0	单位：	%
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

0%~200%

设定说明

-

P6-27 **启动电磁封星时间**

通讯地址:	0xF61B	生效方式:	-
最小值:	0.0	单位:	s
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	停机更改

设定值:

0.0s~100.0s

设定说明

-

P6-28 **停机电磁封星时间**

通讯地址:	0xF61C	生效方式:	-
最小值:	0.0	单位:	s
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	停机更改

设定值:

0.0s~100.0s

设定说明

-

P6-29 **电磁封星电压裕量**

通讯地址:	0xF61D	生效方式:	-
最小值:	20.0	单位:	V
最大值:	100.0	数据类型:	无符号16位
默认值:	20.0	更改方式:	停机更改

设定值:

20.0V~100.0V

设定说明

-

P6-30 **同步机转速追踪试探电流**

通讯地址:	0xF61E	生效方式:	-
最小值:	5.0	单位:	-
最大值:	50.0	数据类型:	无符号16位
默认值:	10.0	更改方式:	停机更改

设定值:

5.0~50.0

设定说明

-

P6-31 **同步机转速追踪最低跟踪频率**

通讯地址: 0xF61F　　生效方式: -
最小值: 0.0　　单位: -
最大值: 100.0　　数据类型: 无符号16位
默认值: 0.0　　更改方式: 停机更改

设定值:
0.0~100.0
设定说明
-

P6-32 **同步机转速跟踪角度补偿**

通讯地址: 0xF620　　生效方式: -
最小值: 0　　单位: -
最大值: 360　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:
0~360
设定说明
-

P6-33 **同步机转速跟踪比例**

通讯地址: 0xF621　　生效方式: -
最小值: 0.1　　单位: -
最大值: 10.0　　数据类型: 无符号16位
默认值: 1.0　　更改方式: 停机更改

设定值:
0.1~10.0
设定说明
-

P6-34 **同步机转速追踪积分**

通讯地址: 0xF622　　生效方式: -
最小值: 0.1　　单位: -
最大值: 10.0　　数据类型: 无符号16位
默认值: 1.0　　更改方式: 停机更改

设定值:
0.1~10.0
设定说明
-

P6-35 **直流制动最大电流限制**

通讯地址: 0xF623　　生效方式: -

最小值:	80	单位：	%
最大值:	135	数据类型：	无符号16位
默认值:	80	更改方式：	停机更改

设定值：

80%~135%

设定说明

基值为变频器额定电流，P6-05、P6-13参数设置的直流制动电流大小会受到该参数设置的最大电流限制。

P6-36 **速度环前馈**

通讯地址:	0xF624	生效方式:	-
最小值:	-200.0	单位：	%
最大值:	200.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-200.0%~200.0%

设定说明

-

6.8 P7 键盘与显示

P7-01 **MF.K键功能选择**

通讯地址:	0xF701	生效方式:	-
最小值:	0	单位：	-
最大值:	4	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：MF.K键无效

1：操作面板命令通道与远程命令通道（端子命令通道或通信命令通道）切换

2：正反转切换

3：正转点动

4：反转点动

设定说明

操作面板上的MF.K键为多功能键，通过该参数设置MF.K键的功能。

0：MF.K 无效(此键无功能)。

1：操作面板命令通道与远程命令通道(端子命令通道或通信命令通道)切换

P0-02=0（操作面板），按下MF.K 键后无效果。

P0-02=1（端子），通过MF.K键可实现端子与操作面板之间的切换。

P0-02=2（通信），通过MF.K键可实现通信与操作面板之间的切换。

2：正反转切换

通过MF.K键切换频率指令的方向。该功能只在命令源运行指令为操作面板时有效。

3：正转点动
通过MF.K键实现正转点动（FJOG）。该功能只在命令源运行指令为操作面板时有效。

4：反转点动
通过MF.K键实现反转点动（RJOG）。该功能只在命令源运行指令为操作面板时有效。

P7-02　　STOP/RESET键功能

通讯地址:	0xF702	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0：只在键盘操作方式下,STOP/RESET键停机功能有效
1：在任何操作方式下,STOP/RESET键停机功能有效

设定说明
操作面板上的STOP/RESET键为停机/复位键，该参数设置STOP/RESET键的功能。
0：仅键盘操作方式下,STOP/RES 键停机功能才有效
1：在任何操作方式下,STOP/RES 键停机功能均有效

P7-03　　LED运行显示参数1

通讯地址:	0xF703	生效方式:	-
最小值:	0x0	单位：	-
最大值:	0xFFFF	数据类型：	无符号16位
默认值:	0x1F	更改方式：	实时更改

设定值：
bit0：运行频率（Hz）
bit1：设定频率（Hz）
bit2：母线电压（V）
bit3：输出电压（V）
bit4：输出电流（A）
bit5：输出功率（kW）
bit6：输出转矩（%）
bit7：DI输入状态
bit8：DO输出状态
bit9：AI1电压（V）
bit10：AI2电压（V）
bit11：AI3电压（V）
bit12：计数值
bit13：长度值
bit14：负载速度显示
bit15：PID设定

设定说明

1、此参数为变频器运行状态下，LED面板上支持显示的参数。

2、通过按下左移位键和右移位键，能够显示各个bit位对应的参数。

3、bit位值为1，表示显示；bit位为0，表示不显示。bit0~bit5位默认出厂时为1。

4、本参数通过十六进制显示。本参数用于设置变频器在运行状态下，操作面板支持显示的参数。若需要显示某参数，则将其相对应bit位的值设为1，再将此二进制数转为十六进制后设于本参数中。 例如，需要显示第bit0、bit7、bit8、bit15位代表的参数，则对应二进制数值为1000 0001 1000 0001，转换为16进制数值为8181H。

P7-04 LED运行显示参数2

通讯地址:	0xF704	生效方式:	-
最小值:	0x0	单位：	-
最大值:	0xFFFF	数据类型：	无符号16位
默认值:	0x0	更改方式：	实时更改

设定值：

bit0：PID反馈
bit1：PLC阶段
bit2：PULSE输入脉冲频率（kHz）
bit3：运行频率2（Hz）
bit4：剩余运行时间
bit5：AI1校正前电压（V）
bit6：AI2校正前电压（V）
bit7：AI3校正前电压（V）
bit8：线速度
bit9：当前上电时间（h）
bit10：当前运行时间（min）
bit11：PULSE输入脉冲频率（Hz）
bit12：通信设定值
bit13：实际反馈速度（Hz）
bit14：主频率X显示（Hz）
bit15：辅频率Y显示（Hz）

设定说明

1、此参数为变频器运行状态下，LED面板上支持显示的参数。
2、通过按下左移位键和右移位键，能够显示各个bit位对应的参数。
3、bit位值为1，表示显示；bit位为0，表示不显示。bit0~bit5位默认出厂时为1。
4、本参数通过十六进制显示。本参数用于设置变频器在运行状态下，操作面板支持显示的参数。若需要显示某参数，则将其相对应bit位的值设为1，再将此二进制数转为十六进制后设于本参数中。 例如，需要显示第bit0、bit7、bit8、bit15位代表的参数，则对应二进制数值为1000 0001 1000 0001，转换为16进制数值为8181H。

P7-05 LED停机显示参数

通讯地址:	0xF705	生效方式:	-

最小值:	0x0	单位：	-
最大值:	0xFFFF	数据类型：	无符号16位
默认值:	0x33	更改方式：	实时更改

设定值：

bit0：设定频率（Hz）
bit1：母线电压（V）
bit2：DI输入状态
bit3：DO输出状态
bit4：AI1电压（V）
bit5：AI2电压（V）
bit6：AI3电压（V）
bit7：计数值
bit8：长度值
bit9：PLC阶段
bit10：负载速度显示
bit11：PID设定
bit12：PULSE输入脉冲频率（kHz）
bit13：保留
bit14：保留
bit15：保留

设定说明

此参数为变频器停机状态下，LED面板上支持显示的参数。通过按下左移位键和右移位键，可以显示各个bit位对应的参数。bit位值为1，表示显示，bit位值为0，表示不显示。该参数通过十六进制显示。

P7-06　负载速度显示系数

通讯地址:	0xF706	生效方式:	-
最小值:	0.0000	单位：	-
最大值:	6.5000	数据类型：	无符号16位
默认值:	1.0000	更改方式：	实时更改

设定值：

0.0000~6.5000

设定说明

指实际负载与电机转速的比值。

P7-07　逆变器模块散热器温度

通讯地址:	0xF707	生效方式:	-
最小值:	-20	单位：	℃
最大值:	120	数据类型：	有符号16位
默认值:	0	更改方式：	不可更改

设定值：

-20℃~120℃

设定说明
逆变器模块的散热器温度。

P7-08 **产品号**

通讯地址:	0xF708	生效方式:	-
最小值:	0	单位:	-
最大值:	999	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:
0~999
设定说明
变频器对应的产品号。

P7-09 **累计运行时间**

通讯地址:	0xF709	生效方式:	-
最小值:	0	单位:	h
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:
0h~65535h
设定说明
变频器的累计运行时间。

P7-10 **性能软件版本号**

通讯地址:	0xF70A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	0.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	不可更改

设定值:
0.00~0.00
设定说明
变频器性能软件版本号。

P7-11 **功能软件版本号**

通讯地址:	0xF70B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	0.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	不可更改

设定值:
0.00~0.00
设定说明
变频器功能软件版本号。

P7-12　负载速度显示小数点位数

通讯地址:	0xF70C	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

0：0位小数位

1：1位小数位

2：2位小数位

3：3位小数位

设定说明

通过该参数设置U0-14（负载速度）的小数点个数。

0：0位小数位

小数点后保留0位小数位。

1：1 位小数位

小数点后保留1位小数位。

2：2位小数位

小数点后保留2位小数位。

3：3位小数位

小数点后保留3位小数位。

P7-13　累计上电时间

通讯地址:	0xF70D	生效方式:	-
最小值:	0	单位：	h
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0h~65535h

设定说明

变频器的累计上电时间。

P7-14　累计耗电量

通讯地址:	0xF70E	生效方式:	-
最小值:	0	单位：	kWh
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0kWh~65535kWh

设定说明

变频器的累计耗电量。

P7-15 **性能临时版本号**

通讯地址:	0xF70F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	0.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	不可更改

设定值:

0.00~0.00

设定说明

变频器性能临时软件版本号。

P7-16 **功能临时版本号**

通讯地址:	0xF710	生效方式:	-
最小值:	0.00	单位:	-
最大值:	0.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	不可更改

设定值:

0.00~0.00

设定说明

变频器功能临时软件版本号。

6.9 P8 辅助功能

P8-00 **点动运行频率**

通讯地址:	0xF800	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P0-10	数据类型:	无符号16位
默认值:	2.00	更改方式:	实时更改

设定值:

0.00Hz~P0-10

设定说明

变频器在点动运行模式下的运行频率。

P8-01 **点动加速时间**

通讯地址:	0xF801	生效方式:	-
最小值:	0.0	单位:	s
最大值:	6500.0	数据类型:	无符号16位
默认值:	20.0	更改方式:	实时更改

设定值:

0.0s~6500.0s

设定说明

变频器在点动运行模式下的加速时间。

P8-02 **点动减速时间**

通讯地址:	0xF802	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器在点动运行模式下的减速时间。

P8-03 **加速时间2**

通讯地址:	0xF803	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器提供四组加速时间，用户可以利用DI端子切换选择。该参数为第二组加速时间。

P8-04 **减速时间2**

通讯地址:	0xF804	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器提供四组减速时间，用户可以利用DI端子切换选择。该参数为第二组减速时间。

P8-05 **加速时间3**

通讯地址:	0xF805	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器提供四组加速时间，用户可利用DI端子切换选择。该参数为第三组加速时间。

P8-06 **减速时间3**

通讯地址:	0xF806	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器提供四组减速时间，用户可利用DI端子切换选择。该参数为第三组减速时间。

P8-07 **加速时间4**

通讯地址:	0xF807	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器提供四组加速时间，用户可利用DI端子切换选择。该参数为第四组加速时间。

P8-08 **减速时间4**

通讯地址:	0xF808	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器提供四组减速时间，用户可利用DI端子切换选择。该参数为第四组减速时间。

P8-09 **跳跃频率1**

通讯地址:	0xF809	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

通过设置跳跃频率，可以使变频器避开负载的机械共振点。该参数是第二个跳跃频率点，设为0，则第二个跳跃频率功能取消。

P8-10 **跳跃频率2**

通讯地址:	0xF80A	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

通过设置跳跃频率，可以使变频器避开负载的机械共振点。该参数是第二个跳跃频率点，设为0，则第二个跳跃频率功能取消。

P8-11 **跳跃频率幅度**

通讯地址:	0xF80B	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	5.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~5.00Hz

设定说明

在加速过程中，运行频率加速到跳跃频率边界，变频器会以当前的运行频率运行一段时间，然后运行频率会跳过跳跃频率，跳跃幅度为2倍的P8-11（跳跃频率幅度）。

在减速过程中，运行频率减速到跳跃频率边界，变频器会以当前的运行频率运行一段时间，然后运行频率会跳过跳跃频率，跳跃幅度为2倍的P8-11（跳跃频率幅度）。

P8-12 **正反转死区时间**

通讯地址:	0xF80C	生效方式:	-
最小值:	0.0	单位：	s
最大值:	3000.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~3000.0s

设定说明

设定变频器正反转过渡过程中，在输出0Hz处的过渡时间。

P8-13 **反向频率禁止**

通讯地址:	0xF80D	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：允许反转

1：禁止反转

设定说明

当P8-13有效时，输入反向命令到变频器，电机以零频率运行。

P8-14　频率低于下限频率运行模式

通讯地址:	0xF80E	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：以下限频率运行

1：停机

2：零速运行

3：自由停机

设定说明

0：以下限频率运行

如果设定频率低于下限频率，则变频器将以下限频率运行。

1：以P6-10方式停机

如果设定频率低于设置的下限频率，则变频器将以P6-10方式停机。

2：零速运行

如果设定频率低于下限频率，则变频器以零速运行。

3：自由停机

如果设定频率低于设置的下限频率，则变频器将自由停机。

P8-15　机械抱闸频率

通讯地址:	0xF80F	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	10.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~10.00Hz

设定说明

-

P8-16　设定累计上电到达时间

通讯地址:	0xF810	生效方式:	-
最小值:	0	单位：	h
最大值:	65000	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0h~65000h

设定说明

用于设置变频器的上电时间，P7-13（累计上电时间）超过P8-16（设定累计上电到达时间）时，DO端子输出有效信号。

P8-17 **设定累计运行到达时间**

通讯地址:	0xF811	生效方式:	-
最小值:	0	单位:	h
最大值:	65000	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0h~65000h

设定说明

用于设置变频器的运行时间，P7-09（累计运行时间）超过P8-17（设定累计运行到达时间）时，DO端子输出有效信号。

P8-18 **启动保护选择**

通讯地址:	0xF812	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：不保护

1：保护

设定说明

变频器自带启动保护功能，可以防止在不知情的状况下，发生上电时或者故障复位时，电机响应运行命令而造成的危险。

P8-19 **频率检测值1**

通讯地址:	0xF813	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P0-10	数据类型:	无符号16位
默认值:	50.00	更改方式:	实时更改

设定值:

0.00Hz~P0-10

设定说明

当运行频率高于频率检测值(FDT1)时，DO端子输出有效信号。当运行频率低于频率检测值(FDT1)减去频率检查滞后值(FDT1)时，DO端子输出无效信号。设定值在0.00Hz到P0-10（最大频率）之间有效。

P8-20 **频率检测滞率1**

通讯地址:	0xF814	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	5.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

频率检测滞后值(FDT1)为P8-19xP8-20。

当运行频率＞8-19时，DO输出有效信号。

当运行频率＜特定值 (P8-19 - (P8-19 x P8-20))，DO输出无效信号。

P8-21　频率到达检出幅度

通讯地址:	0xF815	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

频率到达检出幅度值为(P8-21(频率到达检出幅度）x P0-10（最大频率))。

变频器的运行频率处于特定范围（设定频率±(P0-10 x P8-21))时,

DO 端子输出有效信号。

P8-22　加减速过程中跳跃频率是否有效

通讯地址:	0xF816	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：无效

1：有效

设定说明

设置加减速过程中，跳跃频率是否有效。

0：无效

设为无效时，在加减速过程中，运行频率到达跳跃频率边界，变频器会以运行频率继续运行。

1：有效

设为有效时，在加减速过程中，运行频率到达跳跃频率边界，运行频率会跳过跳跃频率，跳跃幅度为2倍的P8-11（跳跃频率幅度）。

P8-25　加速时间1/加速时间2切换频率点

通讯地址:	0xF819	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于在变频器运行过程中，根据运行频率范围自行选择不同加减速时间。DI端子功能没有设置为16（加减速时间选择端子1）或者17（加减速时间选择端子2）时该功能才有效。设定值在0.00Hz到P0-10（最大频率）之间有效。

P8-26　减速时间1/减速时间2切换频率点

通讯地址:	0xF81A	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于在变频器运行过程中，根据运行频率范围自行选择不同加减速时间。DI端子功能没有设置为16（加减速时间选择端子1）或者17（加减速时间选择端子2）时该功能才有效。设定值在0.00Hz到P0-10（最大频率）之间有效。

P8-27　点动优先

通讯地址:	0xF81B	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：无效

1：有效

设定说明

设置是否端子点动功能的优先级最高。P8-27设置为1时，在运行过程中任意一个DI端子功能（P4-00~P4-09）设置为4（正转点动）或者5（反转点动）时，点动运行状态立即生效。

P8-28　频率检测值2

通讯地址:	0xF81C	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

当运行频率高于频率检测值(FDT2)时，DO端子输出有效信号。当运行频率低于频率检测值(FDT2)减去频率检测滞后值(FDT2)时，DO端子输出无效信号。设定值在0.00Hz到P0-10（最大频率）之间有效。

P8-29 **频率检测滞后率 2**

通讯地址:	0xF81D	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	5.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

频率检测滞后值(FDT2)为P8-19 x P8-20。当运行频率高于P8-28时，DO输出有效信号。当运行频率低于特定值((P8-19 - (P8-19 x P8-20))，DO输出无效信号。

P8-30 **任意到达频率检测值1**

通讯地址:	0xF81E	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

当变频器的运行频率处于频率检测范围内，DO端子输出有效信号。该设定值在0.00Hz到F0-10（最大频率）之间有效。

P8-31 **任意到达频率检出幅度1**

通讯地址:	0xF81F	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

频率到达检测幅度1为P0-10(最大频率) x P8-31，频率检测范围为P8-30（频率到达检测值1）加减P8-31（频率到达检测幅度1），

即：（P8-30） ±（P8-31）×（P0-10）

F8-32 **任意到达频率检测值2**

通讯地址:	0xF820	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

当变频器的运行频率处于频率检测范围内，DO端子输出有效信号。该设定值在0.00Hz到P0-10（最大频率）之间有效。

P8-33　任意到达频率检出幅度2

通讯地址:	0xF821	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

频率到达检出幅度2为P0-10(最大频率) x P8-33，频率检测范围为任意到达频率检查值加减任意到达频率检出幅度，

即（P8-32）-（P8-33）×（P0-10）~（P8-32）+（P8-33）×（P0-10）。

P8-34　零电流检测水平

通讯地址:	0xF822	生效方式:	-
最小值:	0.0	单位：	%
最大值:	300.0	数据类型：	无符号16位
默认值:	5.0	更改方式：	实时更改

设定值：

0.0%~300.0%

设定说明

当变频器的输出电流小于或等于P8-34（零电流检测水平），且持续时间超过F8-35（零电流检测延迟时间），DO端子输出有效信号。

P8-35　零电流检测延迟时间

通讯地址:	0xF823	生效方式:	-
最小值:	0.01	单位：	s
最大值:	600.00	数据类型：	无符号16位
默认值:	0.10	更改方式：	实时更改

设定值：

0.01s~600.00s

设定说明

当变频器的输出电流小于或等于P8-34（零电流检测水平），且持续时间超过F8-35（零电流检测延迟时间），DO端子输出有效信号。

P8-36　输出电流超限值

通讯地址:	0xF824	生效方式:	-
最小值:	0.0	单位：	%
最大值:	300.0	数据类型：	无符号16位

默认值: 200.0 更改方式： 实时更改

设定值：

0.0%~300.0%

设定说明

当变频器的输出电流大于P8-36（输出电流超限值），且持续时间超过P8-37（输出电流超限检测延迟时间)，DO端子输出有效信号。

P8-37 软件过流检测延迟时间

通讯地址: 0xF825 生效方式: -

最小值: 0.00 单位： s

最大值: 600.00 数据类型： 无符号16位

默认值: 0.00 更改方式： 实时更改

设定值：

0.00s~600.00s

设定说明

当变频器的输出电流大于P8-36（输出电流超限值），且持续时间超过F8-37（输出电流超限检测延迟时间)，DO端子输出有效信号。

P8-38 任意到达电流1

通讯地址: 0xF826 生效方式: -

最小值: 0.0 单位： %

最大值: 300.0 数据类型： 无符号16位

默认值: 100.0 更改方式： 实时更改

设定值：

0.0%~300.0%

设定说明

当变频器的输出电流，在P8-38(任意到达电流1)±P8-39(任意到达电流1宽度) x P1-03（电机额定电流）范围内时，DO端子输出有效信号。

P8-39 任意到达电流1幅度

通讯地址: 0xF827 生效方式: -

最小值: 0.0 单位： %

最大值: 300.0 数据类型： 无符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

0.0%~300.0%

设定说明

任意到达电流1幅度值为P8-39(任意到达电流1幅度）x P1-03（电机额定电流）。

P8-40 任意到达电流2

通讯地址: 0xF828 生效方式: -

最小值: 0.0 单位： %

最大值:	300.0	数据类型：	无符号16位
默认值:	100.0	更改方式：	实时更改

设定值：

0.0%~300.0%

设定说明

当变频器的输出电流，在P8-40(任意到达电流2)±P8-41(任意到达电流2幅度）x P1-03（电机额定电流）范围内时，DO端子输出有效信号。

P8-41 任意到达电流2幅度

通讯地址:	0xF829	生效方式:	-
最小值:	0.0	单位：	%
最大值:	300.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~300.0%

设定说明

任意到达电流2宽度值为P8-41(任意到达电流2幅度）x P1-03（电机额定电流）。

P8-42 定时功能选择

通讯地址:	0xF82A	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无效

1：有效

设定说明

当P8-42（定时功能选择）有效时，变频器本次运行时间达到所设置的定时时间后，DO端子输出有效信号。定时时间由P8-43和P8-44设置。

P8-43 定时运行时间选择

通讯地址:	0xF82B	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：定时运行时间(P8-44)设定

1：AI1

2：AI2

3：AI3

设定说明

设置为0时，定时运行时间等于P8-44。

设置为1时，定时运行时间=(AI1电压÷10V) x P8-44。模拟输入量程100%对应 P8-44。
设置为2时，定时运行时间=(AI2电压÷10V) x P8-44。模拟输入量程100%对应 P8-44。

P8-44 **定时运行时间**

通讯地址:	0xF82C	生效方式:	-
最小值:	0.0	单位：	min
最大值:	6500.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：

0.0min~6500.0min

设定说明

定时运行时间由P8-43、P8-44设置。

P8-45 **AI1输入电压保护值下限**

通讯地址:	0xF82D	生效方式:	-
最小值:	0.00	单位：	V
最大值:	P8-46	数据类型：	无符号16位
默认值:	3.10	更改方式：	实时更改

设定值：

0.00V~P8-46

设定说明

当模拟量输入AI1的值大于P8-46（AI1输入电压保护值上限），或小于P8-45（AI1输入电压保护值下限）时，变频器DO端子输出“AI1输入超限”有效信号，用于指示AI1的输入电压是否在设定范围内。

P8-46 **AI1输入电压保护值上限**

通讯地址:	0xF82E	生效方式:	-
最小值:	P8-45	单位：	V
最大值:	11.00	数据类型：	无符号16位
默认值:	6.80	更改方式：	实时更改

设定值：

P8-45~11.00V

设定说明

当模拟量输入AI1的值大于P8-46（AI1输入电压保护值上限），或小于P8-45（AI1输入电压保护值下限）时，变频器DO端子输出“AI1输入超限”有效信号，用于指示AI1的输入电压是否在设定范围内。

P8-47 **模块温度到达**

通讯地址:	0xF82F	生效方式:	-
最小值:	0	单位：	℃

最大值:	100	数据类型：	无符号16位
默认值:	75	更改方式：	实时更改

设定值：

0°C~100°C

设定说明

逆变器散热器温度达到P8-47的设定值时，DO端子输出有效信号。

P8-48 散热风扇控制

通讯地址:	0xF830	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：运行时风扇运转

1：风扇一直运转

设定说明

设置为0：当变频器在运行状态时，风扇运转。当变频器在停机状态时，如果散热器温度高于40度则风扇运转，散热器温度低于40度则风扇不运转。

设置为1：风扇在上电后一直运转。

P8-49 唤醒频率

通讯地址:	0xF831	生效方式:	-
最小值:	P8-51	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

P8-51~P0-10

设定说明

若变频器处于休眠状态，且当前运行命令有效时，当设定频率大于等于P8-49（唤醒频率），经过P8-50（唤醒延迟时间）后，变频器直接启动。

P8-50 唤醒延迟时间

通讯地址:	0xF832	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

若变频器处于休眠状态，且当前运行命令有效时，当设定频率大于等于P8-49（唤醒频率），经过P8-50（唤醒延迟时间）后，变频器直接启动。

P8-51 **休眠频率**

通讯地址:	0xF833	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F8-49	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P8-49

设定说明

变频器运行过程中，当设定频率小于等于P8-51（休眠频率）时，经过P8-52（休眠延迟时间）后，变频器进入休眠状态，并自由停机。

P8-52 **休眠延迟时间**

通讯地址:	0xF834	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

变频器运行过程中，当设定频率小于等于P8-51（休眠频率）时，经过P8-52（休眠延迟时间）后，变频器进入休眠状态，并自由停机。

P8-53 **本次运行到达时间**

通讯地址:	0xF835	生效方式:	-
最小值:	0.0	单位：	min
最大值:	6500.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0min~6500.0min

设定说明

当本次启动的运行时间到达P8-53的设定值后，变频器DO端子输出有效信号。仅对本次有效，前一次运行时间不累加。

P8-55 **紧急停机减速时间**

通讯地址:	0xF837	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	机型确定	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

P8-55作为端子急停减速时间，端子急停功能按照设定减速时间减速，V/f模式减速时间为0s时按照最小单位时间进行减速。

P8-57 **累计耗电量清零**

通讯地址:	0xF839	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：累计耗电量清零无效

1：累计耗电量清零有效

设定说明

该功能码设为1时，变频器输出累计耗电量清零。

P8-58 **输出功率校正系数**

通讯地址:	0xF83A	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	100.0	更改方式：	停机更改

设定值：

0.0%~200.0%

设定说明

当输出功率（U0-05）与期望值不对应时，可以通过该值对输出功率进行线性校正。

6.10 P9 故障与保护

P9-00 **变频器过载抑制使能**

通讯地址:	0xF900	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：禁止

1：允许

设定说明

选择是否启用电机过载保护功能。电机过载保护功能是根据反时限曲线来判断电机是否过载。当检测出电机过载时，变频器会上报过载故障。

0：禁止

禁用电机过载保护功能。当选择“禁止”时，建议在电机前加装热继电器以对电机进行保护。

1：允许

启用电机过载保护功能。

P9-01 **电机过载保护增益**

通讯地址:	0xF901	生效方式:	-
最小值:	0.20	单位:	-
最大值:	10.00	数据类型:	无符号16位
默认值:	1.00	更改方式:	实时更改

设定值:

0.20~10.00

设定说明

电机过载保护增益的值根据电机在某过载点下持续运行而不报过载故障的时间百分比计算。

电机过载保护增益功能用于调整电机过载时变频器实际报过载故障的时间。

P9-02 **电机过载预警系数**

通讯地址:	0xF902	生效方式:	-
最小值:	50	单位:	%
最大值:	100	数据类型:	无符号16位
默认值:	80	更改方式:	实时更改

设定值:

50%~100%

设定说明

电机过载预警系数的值根据电机在某过载点下持续运行而不报过载预报警的时间百分比计算。在电机过载故障保护前，通过DO给控制系统一个预警信号。

该信号用于确定在电机过载保护前多大程度进行预警。电机过载预警系数的值越大，则预警提前量越小。

当变频器输出电流累积量，大于过载时间（电机过载保护反时限曲线的Y值）与P9-02（电机过载预警系数）的乘积后，变频器多功能数字DO输出“电机过载预报警”有效信号。

P9-04 **过压点设置**

通讯地址:	0xF904	生效方式:	-
最小值:	350.0	单位:	V
最大值:	820.0	数据类型:	无符号16位
默认值:	820.0	更改方式:	实时更改

设定值:

350.0V~820.0V

设定说明

当母线电压超出P9-04的设定值时，变频器故障报警E05.00~E07.00。

P9-06 **启动前输出缺相检测选择**

通讯地址:	0xF906	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0：无效

1：有效

设定说明

运行中输出缺相检测大概需要几秒钟的时间，对于缺相后启动存在风险或低频运行的场合。使能该功能，可以快速检测出启动时是否存在输出缺相，但对启动时间有严格要求的场合建议请勿使能该功能。

P9-07 软件对地短路检测选择

通讯地址: 0xF907 生效方式: -

最小值: 0 单位： -

最大值: 3 数据类型： 无符号16位

默认值: 1 更改方式： 停机更改

设定值：

0：不检测

1：上电前检测

2：运行前检测

3：上电前、运行前检测

设定说明

-

P9-08 制动单元动作起始电压

通讯地址: 0xF908 生效方式: -

最小值: 200.0 单位： V

最大值: 2000.0 数据类型： 无符号16位

默认值: 760.0 更改方式： 实时更改

设定值：

200.0V~2000.0V

设定说明

制动单元的动作起始电压，用于调整制动电阻能量消耗效率。当电机处于发电状态时变频器上直流母线的电压会升高，利用制动单元可以控制直流母线上的电压，将电机所产生的再生电能通过制动电阻消耗掉，或者是将再生电能反馈回电源。

应用场景：

V/f控制方式下，当发现电机实际减速时间远远大于设定减速时间，如果变频器加装了制动电阻或能量回馈单元，且变频器输入电压等级为360~420V，此时，可以调整P9-08（制动单元动作起始电压）为690V，以增强制动电阻能耗达到电机快速减速。

P9-09 故障自动复位次数

通讯地址: 0xF909 生效方式: -

最小值: 0 单位： -

最大值: 20 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~20

设定说明

变频器故障自动复位的次数。超过此次数后，变频器保持故障状态。

P9-10 故障自动复位期间故障DO动作选择

通讯地址: 0xF90A 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0：不动作

1：动作

设定说明

变频器故障自动复位期间，数字量输出端子的故障输出功能是否生效。数字量输出端子的故障输出功能通过P5-04=2定义。

P9-11 故障自动复位间隔时间

通讯地址: 0xF90B 生效方式: -

最小值: 0.1 单位： s

最大值: 100.0 数据类型： 无符号16位

默认值: 1.0 更改方式： 实时更改

设定值：

0.1s~100.0s

设定说明

从变频器故障报警到故障自动复位之间的等待时间。

P9-12 输入缺相/接触器吸合保护选择

通讯地址: 0xF90C 生效方式: -

最小值: 0 单位： -

最大值: 13 数据类型： 无符号16位

默认值: 11 更改方式： 实时更改

设定值：

个位：输入缺相保护选择

0：禁止输入缺相故障

1：软件与硬件同时检测到输入缺相报故障

2：软件检测输入缺相故障

3：硬件检测输入缺相故障

十位：接触器吸合/风扇故障保护选择

0：禁止缓冲电阻接触器/风扇故障

1：使能缓冲电阻接触器/风扇故障

设定说明

通过个位和十位分别设置是否对输入缺相或接触器吸合进行保护。

启用输入缺相保护功能后，若三相输入电源不正常，或驱动板、防雷板、主控板、整流桥异常，变频器会报E12.00（输入缺相）故障。

十位，450kW及以下功率机型为接触器吸合保护选择，500kW及以上功率机型为风扇故障选择。

P9-13 故障复位重启间隔时间

通讯地址:	0xF90D	生效方式:	-
最小值:	0.0	单位：	s
最大值:	600.0	数据类型：	无符号16位
默认值:	10.0	更改方式：	实时更改

设定值：

0.0s~600.0s

设定说明

故障复位重启间隔时间。

P9-14 第一次故障类型

通讯地址:	0xF90E	生效方式:	-
最小值:	0	单位：	-
最大值:	99	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~99

设定说明

定义变频器最近三次（第一次、第二次、第三次（即最近一次））的故障代码。由上位机读取通信地址数据获取当前变频器的故障代码，触发变频器上报故障报警。故障代码可以通过操作面板查看。

P9-15 第二次故障类型

通讯地址:	0xF90F	生效方式:	-
最小值:	0	单位：	-
最大值:	99	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~99

设定说明

定义变频器最近三次（第一次、第二次、第三次（即最近一次））的故障代码。由上位机读取通信地址数据获取当前变频器的故障代码，触发变频器上报故障报警。故障代码可以通过操作面板查看。

P9-16　第三次(最近一次)故障类型

通讯地址:	0xF910	生效方式:	-
最小值:	0	单位：	-
最大值:	99	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~99

设定说明

定义变频器最近三次（第一次、第二次、第三次（即最近一次））的故障代码。由上位机读取通信地址数据获取当前变频器的故障代码，触发变频器上报故障报警。故障代码可以通过操作面板查看。

P9-17　第三次(最近一次)故障时频率

通讯地址:	0xF911	生效方式:	-
最小值:	0	单位：	Hz
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0Hz~65535Hz

设定说明

发生最近一次故障时变频器的频率。

P9-18　第三次(最近一次)故障时电流

通讯地址:	0xF912	生效方式:	-
最小值:	0.0	单位：	A
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0A~6553.5A

设定说明

发生最近一次故障时变频器的电流。

P9-19　第三次(最近一次)故障时母线电压

通讯地址:	0xF913	生效方式:	-
最小值:	0.0	单位：	V
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0V~6553.5V

设定说明

发生最近一次故障时变频器的母线电压。

P9-20　第三次(最近一次)故障时输入端子状态

通讯地址:	0xF914	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生最近一次故障时变频器的输入端子状态。

P9-21　第三次(最近一次)故障时输出端子状态

通讯地址:	0xF915	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生最近一次故障时变频器的输出端子状态。

P9-22　第三次(最近一次)故障时变频器状态

通讯地址:	0xF916	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生最近一次故障时变频器的状态。

P9-23　第三次(最近一次)故障时上电时间

通讯地址:	0xF917	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生最近一次故障时变频器的上电时间。

P9-24　第三次(最近一次)故障时运行时间

通讯地址:	0xF918	生效方式:	-

最小值:	0.0	单位：	-
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0~6553.5

设定说明

发生最近一次故障时变频器的运行时间。

P9-25

第三次(最近一次)故障时IGBT温度

通讯地址:	0xF919	生效方式:	-
最小值:	-20	单位：	℃
最大值:	120	数据类型：	有符号16位
默认值:	0	更改方式：	不可更改

设定值：

-20℃~120℃

设定说明

发生最近一次故障时变频器的IGBT温度。

P9-26

第三次(最近一次)故障子码

通讯地址:	0xF91A	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

-

P9-27

第二次故障时频率

通讯地址:	0xF91B	生效方式:	-
最小值:	0	单位：	Hz
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0Hz~65535Hz

设定说明

发生第二次故障时变频器的频率。

P9-28

第二次故障时电流

通讯地址:	0xF91C	生效方式:	-
最小值:	0.0	单位：	A
最大值:	6553.5	数据类型：	无符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0A~6553.5A

设定说明

发生第二次故障时变频器的电流。

P9-29 **第二次故障时母线电压**

通讯地址: 0xF91D 生效方式: -

最小值: 0.0 单位： V

最大值: 6553.5 数据类型： 无符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0V~6553.5V

设定说明

发生第二次故障时变频器的母线电压。

P9-30 **第二次故障时输入端子状态**

通讯地址: 0xF91E 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0~65535

设定说明

发生第二次故障时变频器的输入端子状态。

P9-31 **第二次故障时输出端子状态**

通讯地址: 0xF91F 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0~65535

设定说明

发生第二次故障时变频器的输出端子状态。

P9-32 **第二次故障时变频器状态**

通讯地址: 0xF920 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0~65535

设定说明

发生第二次故障时变频器的状态。

P9-33 **第二次故障时上电时间**

通讯地址:	0xF921	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

发生第二次故障时变频器的上电时间。

P9-34 **第二次故障时运行时间**

通讯地址:	0xF922	生效方式:	-
最小值:	0.0	单位:	-
最大值:	6553.5	数据类型:	无符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0~6553.5

设定说明

发生第二次故障时变频器的运行时间。

P9-35 **第二次故障时IGBT温度**

通讯地址:	0xF923	生效方式:	-
最小值:	-20	单位:	℃
最大值:	120	数据类型:	有符号16位
默认值:	0	更改方式:	不可更改

设定值:

-20℃~120℃

设定说明

发生第二次故障时变频器的IGBT温度。

P9-36 **第二次故障时故障子码**

通讯地址:	0xF924	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

P9-37 **第一次故障时频率**

通讯地址:	0xF925	生效方式:	-
最小值:	0	单位：	Hz
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0Hz~65535Hz

设定说明

发生第一次故障时变频器的频率。

P9-38 **第一次故障时电流**

通讯地址:	0xF926	生效方式:	-
最小值:	0.0	单位：	A
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0A~6553.5A

设定说明

发生第一次故障时变频器的电流。

P9-38 **第一次故障时母线电压**

通讯地址:	0xF927	生效方式:	-
最小值:	0.0	单位：	V
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0V~6553.5V

设定说明

发生第一次故障时变频器的母线电压。

P9-40 **第一次故障时输入端子状态**

通讯地址:	0xF928	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生第一次故障时变频器的输入端子状态。

P9-41 **第一次故障时输出端子状态**

通讯地址:	0xF929	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生第一次故障时变频器的输出端子状态。

P9-42 **第一次故障时变频器状态**

通讯地址:	0xF92A	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生第一次故障时变频器的状态。

P9-43 **第一次故障时上电时间**

通讯地址:	0xF92B	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

发生第一次故障时变频器的上电时间。

P9-44 **第一次故障时运行时间**

通讯地址:	0xF92C	生效方式:	-
最小值:	0.0	单位：	-
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0~6553.5

设定说明

发生第一次故障时变频器的运行时间。

P9-45 **第一次故障时IGBT温度**

通讯地址:	0xF92D	生效方式:	-

最小值:	-20	单位：	℃
最大值:	120	数据类型：	有符号16位
默认值:	0	更改方式：	不可更改

设定值：

-20℃~120℃

设定说明

发生第一次故障时变频器的IGBT温度。

P9-46

第一次故障时故障子码

通讯地址:	0xF92E	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

-

P9-47

故障保护动作选择0

通讯地址:	0xF92F	生效方式:	-
最小值:	0	单位：	-
最大值:	22022	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

个位：E02、E03、E04

0：自由停机

2：故障重启

十位：E05、E06、E07

0：自由停机

2：故障重启

百位：E08

0：自由停机

千位：E09

0：自由停机

2：故障重启

万位：E10

0：自由停机

2：故障重启

设定说明

通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。

0：自由停机
变频器进入自由停机状态。
2：故障重启
变频器将重启。

P9-48 **故障保护动作选择1**

通讯地址:	0xF930	生效方式:	-
最小值:	0	单位：	-
最大值:	50555	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
个位：E11
0：自由停机
1：减速停机
2：故障重启
4：警告
5：取消
十位：E12
0：自由停机
1：减速停机
2：故障重启
4：警告
5：取消
百位：E13
0：自由停机
1：减速停机
2：故障重启
4：警告
5：取消
千位：E14
0：自由停机
万位：E15
0：自由停机
1：减速停机
3：电磁封星
4：警告
5：取消
设定说明
通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。
0：自由停机
变频器进入自由停机状态。

1：减速停机
变频器进入减速停机状态。
2：故障重启
变频器将重启。
3：电磁封星
变频器进入电磁封星状态。
4：警告
变频器继续运行。
5：取消
忽略该故障，不检测。

P9-49 **故障保护动作选择2**

通讯地址:	0xF931	生效方式:	-
最小值:	0	单位：	-
最大值:	55055	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
个位：E16
0：自由停机
1：减速停机
4：警告
5：取消
十位：E17
0：自由停机
1：减速停机
4：警告
5：取消
百位：E18
0：自由停机
千位：E19
0：自由停机
3：电磁封星
4：警告
5：取消
万位：E20
0：自由停机
3：电磁封星
4：警告
5：取消

设定说明
通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。

0：自由停机
变频器进入自由停机状态。
1：减速停机
变频器进入减速停机状态。
2：故障重启
变频器将重启。
3：电磁封星
变频器进入电磁封星状态。
4：警告
变频器继续运行。
5：取消
忽略该故障，不检测。

P9-50 **故障保护动作选择3**

通讯地址:	0xF932	生效方式:	-
最小值:	0	单位：	-
最大值:	55550	数据类型：	无符号16位
默认值:	5040	更改方式：	停机更改

设定值：
个位：保留
0：自由停机
十位：E63
0：自由停机
1：减速停机
4：警告
5：取消
百位：E23
0：自由停机
5：取消
千位：E24
0：自由停机
5：取消
万位：E25
0：自由停机
1：减速停机
4：警告
5：取消
设定说明
通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。
0：自由停机
变频器进入自由停机状态。

1：减速停机
变频器进入减速停机状态。
2：故障重启
变频器将重启。
3：电磁封星
变频器进入电磁封星状态。
4：警告
变频器继续运行。
5：取消
忽略该故障，不检测。

P9-51 **故障保护动作选择4**

通讯地址:	0xF933	生效方式:	-
最小值:	0	单位：	-
最大值:	55555	数据类型：	无符号16位
默认值:	51111	更改方式：	停机更改

设定值：

个位：E26
0：自由停机
1：减速停机
4：警告
5：取消
十位：E27
0：自由停机
1：减速停机
3：电磁封星
4：警告
5：取消
百位：E28
0：自由停机
1：减速停机
3：电磁封星
4：警告
5：取消
千位：E29
0：自由停机
1：减速停机
4：警告
5：取消
万位：E30
0：自由停机
1：减速停机
4：警告
5：取消

设定说明

通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。

0：自由停机

变频器进入自由停机状态。

1：减速停机

变频器进入减速停机状态。

2：故障重启

变频器将重启。

3：电磁封星

变频器进入电磁封星状态。

4：警告

变频器继续运行。

5：取消

忽略该故障，不检测。

P9-52 **故障保护动作选择5**

通讯地址:	0xF934	生效方式:	-
最小值:	0	单位:	-
最大值:	55525	数据类型:	无符号16位
默认值:	101	更改方式:	停机更改

设定值:

个位：E31
0：自由停机
1：减速停机
4：警告
5：取消
十位：E40
0：自由停机
2：故障重启
百位：E41
0：自由停机
1：减速停机
4：警告
5：取消
千位：E42
0：自由停机
1：减速停机
2：故障重启
3：电磁封星
4：警告
5：取消
万位：E43
0：自由停机
1：减速停机
3：电磁封星
4：警告
5：取消

设定说明

通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。

0：自由停机
变频器进入自由停机状态。
1：减速停机
变频器进入减速停机状态。
2：故障重启
变频器将重启。
3：电磁封星
变频器进入电磁封星状态。

4：警告
变频器继续运行。
5：取消
忽略该故障，不检测。

P9-53 **故障保护动作选择6**

通讯地址:	0xF935	生效方式:	-
最小值:	0	单位：	-
最大值:	55555	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
个位：E45
0：自由停机
1：减速停机
4：警告
5：取消
十位：E60
0：自由停机
1：减速停机
4：警告
5：取消
百位：E61
0：自由停机
1：减速停机
4：警告
5：取消
千位：E62
0：自由停机
5：取消
万位：保留
5：取消

设定说明
通过该参数的个位、十位、百位、千位、万位分别设置不同故障类型的故障保护动作。
0：自由停机
变频器进入自由停机状态。
1：减速停机
变频器进入减速停机状态。
2：故障重启
变频器将重启。
3：电磁封星
变频器进入电磁封星状态。

4：警告
变频器继续运行。
5：取消
忽略该故障，不检测。

P9-54 **故障时继续运行频率选择**

通讯地址:	0xF936	生效方式:	-
最小值:	0	单位：	-
最大值:	4	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：
0：以当前的运行频率运行
1：以设定频率运行
2：以上限频率运行
3：以下限频率运行
4：以异常时备用频率运行
设定说明
选择变频器故障时继续运行的频率。当变频器运行过程中产生故障，且该故障的处理方式设置为继续运行时，变频器显示为A**，并以P9-54参数定义的频率运行。

P9-55 **异常备用频率设定**

通讯地址:	0xF937	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	100.0	更改方式：	实时更改

设定值：
0.0%~100.0%
设定说明
变频器的异常备用频率。当变频器运行过程中产生故障，且该故障的处理方式设置为以异常备用频率运行（P9-54=4），则变频器显示A**，并以异常备用频率运行。

P9-56 **电机温度传感器类型**

通讯地址:	0xF938	生效方式:	-
最小值:	0	单位：	-
最大值:	4	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0：AI3
1：PT100
2：PT1000
3：KTY84-130
4：PTC130

设定说明

模拟量输入AI3可以用作电机温度传感器输入，支持PT100、PT1000、PTC130和KTY84四种电机温度传感器，电机温度传感器信号接AI3、GND端，使用时必须正确设置传感器类型。电机温度在U0-34中显示。（设置为0，AI3默认电压采集模式）

P9-57

电机过热保护阈值

通讯地址:	0xF939	生效方式:	-
最小值:	0	单位：	℃
最大值:	200	数据类型：	无符号16位
默认值:	110	更改方式：	实时更改

设定值：

0℃~200℃

设定说明

电机过热保护阈值。当电机温度超过P9-57（电机过热保护阈值）时，变频器上报电机过热故障（E45），并根据P9-48（故障保护动作选择2）中设置的处理方式进行对应处理。

P9-58

电机过热预报警阈值

通讯地址:	0xF93A	生效方式:	-
最小值:	0	单位：	℃
最大值:	200	数据类型：	无符号16位
默认值:	90	更改方式：	实时更改

设定值：

0℃~200℃

设定说明

电机过热预报警阈值。当电机温度超过F9-58（电机过热预报警阈值），且DO输出端子的功能选择设置为39(电机过温)时，DO端子输出有效信号。

P9-59

瞬停不停动作选择

通讯地址:	0xF93B	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无效

1：母线电压恒定控制

2：减速停机

3：晃电抑制

设定说明

变频器在短时停电时能持续运行。当发生停电时，变频器使电机处于发电状态，使母线电压维持在“瞬停不停动作电压”左右，防止变频器因输入电压过低导致欠压故障而停机。

0：无效
不使用瞬停不停功能。
1：母线电压恒定控制
系统发生停电时，母线电压维持在“瞬停不停动作电压”左右。此模式下，当电网恢复供电时，变频器输出频率会按加速时间恢复到目标频率。
2：减速停机
系统发生停电时，变频器处于减速停机状态。此模式下，当电网恢复供电时，变频器继续减速至0Hz停机，直到变频器再次发出启动命令，变频器才会启动。
3：晃电抑制
晃电抑制模式可以解决因电网晃电瞬时停电导致的变频器欠压故障异常停机的问题，P9-66可以设置晃电抑制的时间。

P9-60 **瞬停不停暂停判断电压**

通讯地址:	0xF93C	生效方式:	-
最小值:	80	单位：	%
最大值:	100	数据类型：	无符号16位
默认值:	85	更改方式：	实时更改

设定值：
80%~100%
设定说明
变频器的瞬停不停暂停判断电压，100%对应540V。该值略低于电网断电前的母线电压。
当电网断电时，母线电压维持在F9-62（瞬停不停动作判断电压）左右，待电网恢复供电，母线电压从P9-62（瞬停不停动作判断电压）上升到P9-60（瞬停不停暂停判断电压）。这段时间内变频器的输出频率持续降低，直至母线电压到达P9-60（瞬停不停暂停判断电压）。

P9-61 **瞬停不停电压恢复判断时间**

通讯地址:	0xF93D	生效方式:	-
最小值:	0.0	单位：	s
最大值:	100.0	数据类型：	无符号16位
默认值:	0.5	更改方式：	实时更改

设定值：
0.0s~100.0s
设定说明
母线电压从P9-60（瞬停不停暂停判断电压）上升到停电前电压所需要的时间。

P9-62 **瞬停不停动作判断电压**

通讯地址:	0xF93E	生效方式:	-
最小值:	60	单位：	%
最大值:	100	数据类型：	无符号16位
默认值:	80	更改方式：	实时更改

设定值：
60%~100%
设定说明
发生停电时母线电压维持的电压水平。当发生停电时，母线电压维持在F9-62（瞬停不停动作判断电压）左右。

P9-63

FVC飞车保护时间

通讯地址:	0xF93F	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0~10000
设定说明
-

P9-64

掉载检测水平

通讯地址:	0xF940	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	10.0	更改方式：	实时更改

设定值：
0.0%~100.0%
设定说明
当变频器输出电流小于P9-64（掉载检测水平），且持续时间大于P9-65（掉载检测时间）时，变频器执行掉载保护动作（掉载动作可由P9-49选择，默认自由停机）。
在掉载保护期间，如果负载恢复，则变频器自动恢复为按设定频率运行。

P9-65

掉载检测时间

通讯地址:	0xF941	生效方式:	-
最小值:	0.0	单位：	s
最大值:	60.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：
0.0s~60.0s
设定说明
当变频器输出电流小于P9-64（掉载检测水平），且持续时间大于P9-65（掉载检测时间）时，变频器执行掉载保护动作（掉载动作可由P9-49选择，默认自由停机）。
在掉载保护期间，如果负载恢复，则变频器自动恢复为按设定频率运行。

P9-66

晃电抑制时间

通讯地址:	0xF942	生效方式:	-

最小值:	0.0	单位：	s
最大值:	600.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0s~600.0s

设定说明

-

P9-67

过速度检测值

通讯地址:	0xF943	生效方式:	-
最小值:	0.0	单位：	%
最大值:	50.0	数据类型：	无符号16位
默认值:	5.0	更改方式：	实时更改

设定值：

0.0%~50.0%

设定说明

在过速保护中，当变频器检测到电机的实际转速超过P0-10（最大频率)，超出百分比大于P9-67（过速度检测值），且持续时间大于P9-68（过速度检测时间）时，变频器上报电机过速度故障（E43.00）故障，并根据P9-50（故障保护动作方式）处理。

当P9-68（过速度检测时间）设置为0.0s时，取消过速度故障检测。

过速保护只在变频器运行在有速度传感器矢量控制时(P0-01=1)有效。

P9-68

过速度检测时间

通讯地址:	0xF944	生效方式:	-
最小值:	0.0	单位：	s
最大值:	60.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：

0.0s~60.0s

设定说明

在过速保护中，当变频器检测到电机的实际转速超过P0-10（最大频率)，超出百分比大于P9-67（过速度检测值），且持续时间大于P9-68（过速度检测时间）时，变频器上报电机过速度故障（E43.00）故障，并根据P9-50（故障保护动作方式）处理。

当P9-68（过速度检测时间）设置为0.0s时，取消过速度故障检测。

过速保护只在变频器运行在有速度传感器矢量控制时(P0-01=1)有效。

P9-69

速度偏差过大检测值

通讯地址:	0xF945	生效方式:	-
最小值:	0.0	单位：	%
最大值:	50.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0%~50.0%

设定说明

在速度偏差过大保护中，当变频器检测到电机的实际转速与设定频率出现偏差，偏差量大于P9-69（速度偏差过大检测值），且持续时间大于P9-70（速度偏差过大检测时间）时，变频器上报速度偏差过大故障（E42.00）故障，并根据P9-50（故障保护动作方式）处理。

当P9-70（速度偏差过大检测时间）设置为0.0s时，取消速度偏差过大故障检测。

速度偏差过大保护功能只在变频器运行在矢量控制时有效。

P9-70 **速度偏差过大检测时间**

通讯地址:	0xF946	生效方式:	-
最小值:	0.0	单位：	s
最大值:	60.0	数据类型：	无符号16位
默认值:	5.0	更改方式：	实时更改

设定值：

0.0s~60.0s

设定说明

在速度偏差过大保护中，当变频器检测到电机的实际转速与设定频率出现偏差，偏差量大于P9-69（速度偏差过大检测值），且持续时间大于P9-70（速度偏差过大检测时间）时，变频器上报速度偏差过大故障（E42.00）故障，并根据P9-50（故障保护动作方式）处理。

当P9-70（速度偏差过大检测时间）设置为0.0s时，取消速度偏差过大故障检测。

速度偏差过大保护功能只在变频器运行在矢量控制时有效。

P9-71 **瞬停不停增益Kp**

通讯地址:	0xF947	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	40	更改方式：	实时更改

设定值：

0~100

设定说明

该参数只对“母线电压恒定控制（P9-59=1）”有效。

如果瞬停不停过程容易欠压，请加大瞬停不停增益和瞬停不停积分系数。

P9-72 **瞬停不停积分系数 Ki**

通讯地址:	0xF948	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：

0~100

设定说明

该参数只对“母线电压恒定控制（P9-59=2）”有效。

如果瞬停不停过程容易欠压，请加大瞬停不停增益和瞬停不停积分系数。

P9-73 **瞬停不停动作减速时间**

通讯地址:	0xF949	生效方式:	-
最小值:	0.0	单位：	s
最大值:	300.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0s~300.0s

设定说明

该参数只对“减速停机（P9-59=2）”模式有效。

当母线电压低于P9-62设置的动作电压时，变频器执行减速停机，减速时间由该参数决定，而不是P0-18。

6.11 PA 过程控制PID功能

PA-00 **PID给定源**

通讯地址:	0xFA00	生效方式:	-
最小值:	0	单位：	-
最大值:	6	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：PID数值给定（PA-01）

1：AI1

2：AI2

3：AI3

4：PULSE设定（DI5）

5：通信给定（1000H）

6：多段指令给定

设定说明

用于选择PID的目标量给定通道。PID的设定目标量为相对值，设定的100%对应于被控系统的反馈信号的100%。

0：PID数值给定(PA-01)

PID目标给定值为PA-01（PID数值给定）的值。

1：AI1

PID目标量给定通道为模拟量输入端子AI1输入。

2：AI2

PID目标量给定通道为模拟量输入端子AI2输入。

3：AI3

PID目标量给定通道为模拟量输入端子AI3输入。

4：脉冲设定（DI5）
PID目标量给定通道通过DI输入端子（DI5）脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的频率值。
5：通信给定（1000H）
PID目标量给定通道为通信给定，可通过远程通信输入PID目标量。
6：多段指令给定
选择多段指令做PID目标量给定时，需要通过数字量输入DI端子的不同状态组合，对应不同的设定频率值。4个多段指令端子，可以组合为16种状态，这16个状态对应16个目标频率值。注意：PA-00选择6(多段速)时，PC-51(多段指令0给定方式）不能选择5（PID给定）。

PA-01 **PID数值给定**

通讯地址:	0xFA01	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	50.0	更改方式：	实时更改

设定值：
0.0%~100.0%
设定说明
当PA-00（PID给定源）设定为0时，需设定该参数。该参数值设为100%时，对应反馈量的最大值。

PA-02 **PID反馈源**

通讯地址:	0xFA02	生效方式:	-
最小值:	0	单位：	-
最大值:	8	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0：AI1
1：AI2
2：AI3
3：AI1-AI2
4：PULSE设定（DI5）
5：通信给定
6：AI1+AI2
7：MAX(|AI1|, |AI2|)
8：MIN(|AI1|, |AI2|)
设定说明
用于选择PID的反馈通道。

PA-03 **PID作用方向**

通讯地址:	0xFA03	生效方式:	-

最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：正作用

1：反作用

设定说明

0：正作用

如果反馈信号小于PID的给定信号，变频器输出频率上升。

1：反作用

如果反馈信号小于PID的给定信号，变频器输出频率下降。

PA-04 PID给定反馈量程

通讯地址:	0xFA04	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1000	更改方式：	实时更改

设定值：

0~65535

设定说明

无量纲单位，仅用于当前显示PID给定和反馈量。例如：该参数值设定为1000，PID给定(0%~100%）和反馈量（0~1000）线性对应。

PA-05 比例增益Kp1

通讯地址:	0xFA05	生效方式:	-
最小值:	0.0	单位：	-
最大值:	1000.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0~1000.0

设定说明

PID控制中的比例增益Kp。偏差减小的速度取决于比例系数Kp，Kp越大偏差减小的越快，但是容易引起振荡，尤其是在迟滞环节比较大的情况下，Kp减小，发生振荡的可能性减小，但是调节速度变慢。

PA-06 积分时间Ti1

通讯地址:	0xFA06	生效方式:	-
最小值:	0.01	单位：	s
最大值:	100.00	数据类型：	无符号16位
默认值:	2.00	更改方式：	实时更改

设定值：

0.01s~100.00s

设定说明

PID控制中的积分时间Ti。决定PID调节器积分调节的强度。积分时间越短调节强度越大。

PA-07 微分时间Td1

通讯地址:	0xFA07	生效方式:	-
最小值:	0.000	单位:	s
最大值:	10.000	数据类型:	无符号16位
默认值:	0.000	更改方式:	实时更改

设定值:

0.000s~10.000s

设定说明

PID控制中的微分时间Td。决定PID调节器对偏差变化率调节的强度。微分时间越长调节强度越大。

PA-08 PID反转截止频率

通讯地址:	0xFA08	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	F0-10	数据类型:	无符号16位
默认值:	2.00	更改方式:	实时更改

设定值:

0.00Hz~P0-10

设定说明

当频率源为纯PID时，PID反向截止频率为当前PID输出最小值。当频率源为主+PID时，PA-08对主+PID整体进行作用，输出“主+PID”运算后的频率最小值。

PA-09 PID偏差极限

通讯地址:	0xFA09	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

当偏差值在PID偏差极限之内时，不用进行调节。该参数有助于兼顾系统输出的精度和稳定度。

PA-10 PID微分限幅

通讯地址:	0xFA0A	生效方式:	-
最小值:	0.00	单位:	%
最大值:	100.00	数据类型:	无符号16位
默认值:	0.10	更改方式:	实时更改

设定值：
0.00%~100.00%
设定说明
PID调节器中，微分很容易造成系统振荡，因此，一般把PID微分作用限制在一个较小范围，PA-10是用来设置PID微分输出的范围。

PA-11 **PID给定变化时间**

通讯地址:	0xFA0B	生效方式:	-
最小值:	0.00	单位：	s
最大值:	650.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：
0.00s~650.00s
设定说明
指PID给定值由0.0%变化到100.0%所需时间。

PA-12 **PID反馈滤波时间**

通讯地址:	0xFA0C	生效方式:	-
最小值:	0.00	单位：	s
最大值:	60.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：
0.00s~60.00s
设定说明
对PID反馈量进行滤波，该滤波有利于降低反馈量被干扰的影响，但是会带来过程闭环系统的响应性能下降。

PA-13 **PID偏差增益**

通讯地址:	0xFA0D	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	100.0	更改方式：	实时更改

设定值：
0.0%~100.0%
设定说明
-

PA-14 **PID优化参数**

通讯地址:	0xFA0E	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0~100
设定说明
-

PA-15 **比例增益Kp2**

通讯地址:	0xFA0F	生效方式:	-
最小值:	0.0	单位：	-
最大值:	1000.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：
0.0~1000.0
设定说明
PID控制中的比例增益Kp。偏差减小的速度取决于比例系数Kp，Kp越大偏差减小的越快，但是容易引起振荡，尤其是在迟滞环节比较大的情况下，Kp减小，发生振荡的可能性减小，但是调节速度变慢。

PA-16 **积分时间Ti2**

通讯地址:	0xFA10	生效方式:	-
最小值:	0.01	单位：	s
最大值:	100.00	数据类型：	无符号16位
默认值:	2.00	更改方式：	实时更改

设定值：
0.01s~100.00s
设定说明
PID控制中的积分时间Ti。决定PID调节器积分调节的强度。积分时间越短调节强度越大。

PA-17 **微分时间Td2**

通讯地址:	0xFA11	生效方式:	-
最小值:	0.000	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.000	更改方式：	实时更改

设定值：
0.000s~10.000s
设定说明
PID控制中的微分时间Td。决定PID调节器对偏差变化率调节的强度。微分时间越长调节强度越大。

PA-18 **PID参数切换条件**

通讯地址:	0xFA12	生效方式:	-
最小值:	0	单位：	-

最大值:	7	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：不切换

1：DI端子

2：根据偏差自动切换

3：根据运行频率切换

6：根据卷径自动调节

7：根据最大卷径的百分比自动调节

设定说明

用于两组PID参数切换。

0：不切换

不进行切换。

1：通过DI端子切换

DI端子功能选择要设置为43（PID参数切换端子），当该端子无效时选择参数组1（PA-05~PA-07），端子有效时选择参数组2（PA-15~PA-17）。

2：根据偏差自动切换

给定与反馈之间偏差绝对值小于PA-19（PID参数切换偏差1），PID选择参数组1；给定与反馈之间偏差绝对值大于PA-20（PID参数切换偏差2），PID选择参数组2；给定与反馈之间偏差绝对值处于PA-19（PID参数切换偏差1）和PA-20（PID参数切换偏差2）之间时，PID参数为两组PID参数线性插补值。

3：根据运行频率切换

根据变频器的运行频率自动切换。

6：根据卷径自动调节

选择为根据卷径自动切换时，当前卷径在最大卷径（B0-08）~最小卷径（B0-09）之间变化时，PID参数为两组PID参数线性插补值。最小卷径对应第一组参数（PA-05~PA-07），最大卷径对应第二组参数（PA-15~PA-17）。

7：根据最大卷径的百分比自动调节

选择为根据最大卷径百分比进行调节切换时，当前卷径在最大卷径（B0-08）x PA-20-最大卷径（B0-08）x PA-19之间变化时，PID参数为两组PID参数线性插补值。

PA-19　PID参数切换偏差1

通讯地址:	0xFA13	生效方式:	-
最小值:	0.0	单位：	%
最大值:	PA-20	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0%~PA-20

设定说明

该参数值设为100%时,对应给定与反馈的最大偏差值。设定范围为0.0%~PA-20（PID参数切换偏差2）

PA-20 **PID参数切换偏差2**

通讯地址:	0xFA14	生效方式:	-
最小值:	PA-19	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	80.0	更改方式:	实时更改

设定值:

PA-19~100.0%

设定说明

该参数值设为100%时,对应给定与反馈的最大偏差值。设定范围为PA-19（PID参数切换偏差1）~100.0%。

PA-21 **PID初值**

通讯地址:	0xFA15	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

变频器启动时，PID输出PID初值（PA-21），且持续时间超过PA-22（PID初值保持时间）后，PID才开始闭环调节运算。

PA-22 **PID初值保持时间**

通讯地址:	0xFA16	生效方式:	-
最小值:	0.00	单位:	s
最大值:	650.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00s~650.00s

设定说明

变频器启动时，PID输出PID初值（PA-21），且持续时间超过PA-22（PID初值保持时间）后，PID才开始闭环调节运算。

PA-23 **两次输出偏差正向最大值**

通讯地址:	0xFA17	生效方式:	-
最小值:	0.00	单位:	%
最大值:	100.00	数据类型:	无符号16位
默认值:	1.00	更改方式:	实时更改

设定值:

0.00%~100.00%

设定说明

-

PA-24　两次输出偏差反向最大值

通讯地址:	0xFA18	生效方式:	-
最小值:	0.00	单位：	%
最大值:	100.00	数据类型：	无符号16位
默认值:	1.00	更改方式：	实时更改

设定值：

0.00%~100.00%

设定说明

-

PA-25　PID积分属性

通讯地址:	0xFA19	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：无效

1：有效

设定说明

0：无效：积分暂停无效时，无论多功能数字DI是否有效，积分暂停都无效。

1：有效：积分暂停有效时，当DI端子设为PID暂停功能有效时（如：P4-00设为22），PID积分停止运算，此时仅PID比例和微分作用有效。

PA-26　PID反馈丢失检测值

通讯地址:	0xFA1A	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

用于判断PID反馈是否丢失。当PID反馈量小于PA-26（反馈丢失检测值），且持续时间超过PA-27（PID反馈丢失检测时间）后，变频器上报故障报警（E31.00）。

该参数值设为0，表示不判断反馈丢失。

PA-27　PID反馈丢失检测时间

通讯地址:	0xFA1B	生效方式:	-
最小值:	0.0	单位：	s
最大值:	20.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s~20.0s

设定说明

用于判断PID反馈是否丢失。当PID反馈量小于PA-26（反馈丢失检测值），且持续时间超过PA-27（PID反馈丢失检测时间）后，变频器上报故障报警（E31.00）。

PA-28 **PID停机运算**

通讯地址:	0xFA1C	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：停机不运算

1：停机运算

设定说明

PA-29 **PID饱和积分处理方式选择**

通讯地址:	0xFA1D	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：默认方式

1：积分分离

设定说明

6.12 PB 摆频、定长和计数

PB-00 **摆频设定方式**

通讯地址:	0xFB00	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：相对于中心频率

1：相对于最大频率

设定说明

0：相对中心频率（P0-07频率指令叠加选择），为变摆幅系统，摆幅随中心频率（设定频率）的变化而变化。

1：相对最大频率（P0-10最大频率），为：定摆幅系统，摆幅按最大频率值计算，为固定值。

PB-01 **摆频幅度**

通讯地址:	0xFB01	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

PB-01设为0时摆幅为0，此时摆频不起作用。

PB-02 **突跳频率幅度**

通讯地址:	0xFB02	生效方式:	-
最小值:	0.0	单位:	%
最大值:	50.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~50.0%

设定说明

确定摆幅值及突跳频率的值。摆频运行频率，受上限频率和下限频率的约束。

PB-03 **摆频周期**

通讯地址:	0xFB03	生效方式:	-
最小值:	0.1	单位:	s
最大值:	3000.0	数据类型:	无符号16位
默认值:	10.0	更改方式:	实时更改

设定值:

0.1s~3000.0s

设定说明

一个完整的摆频周期的时间值。

PB-04 **摆频的三角波上升时间系数**

通讯地址:	0xFB04	生效方式:	-
最小值:	0.1	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	50.0	更改方式:	实时更改

设定值:

0.1%~100.0%

设定说明

三角波上升时间系数，是三角波上升时间相对摆频周期PB-03的百分比。

PB-05 **设定长度**

通讯地址:	0xFB05	生效方式:	-

最小值:	0	单位：	m
最大值:	65535	数据类型：	无符号16位
默认值:	1000	更改方式：	实时更改

设定值：

0m~65535m

设定说明

设定定长控制所需要控制的长度值。

PB-06 **实际长度**

通讯地址:	0xFB06	生效方式:	-
最小值:	0	单位：	m
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0m~65535m

设定说明

实际长度为监视值，实际长度(PB-06)=端子采样的脉冲个数÷每米脉冲数（PB-07）。

PB-07 **每米脉冲数**

通讯地址:	0xFB07	生效方式:	-
最小值:	0.1	单位：	-
最大值:	6553.5	数据类型：	无符号16位
默认值:	100.0	更改方式：	实时更改

设定值：

0.1~6553.5

设定说明

长度为1米时所输出的脉冲数，长度脉冲通过DI5端子采集，要将DI5端子功能选择设置长度计数输入（P4-04=27）。

PB-08 **设定计数值**

通讯地址:	0xFB08	生效方式:	-
最小值:	1	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1000	更改方式：	实时更改

设定值：

1~65535

设定说明

计数值到达PB-08时，多功能数字DO输出“设定计数值到达”ON信号。

PB-09 **指定计数值**

通讯地址:	0xFB09	生效方式:	-

最小值:	1	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	1000	更改方式:	实时更改

设定值:

1~65535

设定说明

计数值到达PB-09时，多功能数字DO输出“指定计数值到达”ON信号，PB-09应小于或等于PB-08（设定计数值）。

PB-10 **旋转圈数复位方式**

通讯地址:	0xFB0A	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：上升沿触发

1：电平触发

设定说明

选择触发计圈复位的方式。

0：复位命令上升沿触发

1：复位命令电平触发

PB-11 **旋转圈数复位信号**

通讯地址:	0xFB0B	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：不复位

1：复位

设定说明

计圈圈数清零命令。给命令1时运行圈数清零。

PB-12 **运行圈数是否掉电保存**

通讯地址:	0xFB0C	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：掉电不保存

1：掉电保存

设定说明

设为0运行圈数掉电不保存，设为1运行圈数掉电保存。

PB-13 **旋转圈数归零**

通讯地址:	0xFB0D	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

计圈初始值。

PB-14 **传动比分子**

通讯地址:	0xFB0E	生效方式:	-
最小值:	1	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:

1~65535

设定说明

-

PB-15 **传动比分母**

通讯地址:	0xFB0F	生效方式:	-
最小值:	1	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:

1~65535

设定说明

-

PB-16 **实际运行圈数**

通讯地址:	0xFB10	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值: 0~65535

设定说明

叠加了PB-13后的运行圈数。

PB-17 **运行圈数**

通讯地址:	0xFB11	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

上次计圈清零后的运行圈数

PB-18 **运行圈数精度**

通讯地址:	0xFB12	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：计圈单位为1圈

1：计圈单位为0.1圈

设定说明

0表示计圈单位为1圈，1表示计圈单位为0.1圈。

PB-19 **计圈方向**

通讯地址:	0xFB13	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：正向计圈

1：反向计圈

设定说明

0表示方向一致，1表示方向相反。

6.13 PC 多段指令、简易PLC

PC-00 **多段指令1**

通讯地址:	0xFC00	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

多段速指令频率设定，单位为%，该频率设定值是以相对最大频率的百分比计算，100%对应P0-10（最大频率）。
变频器可通过PC-55~PC-58组合成16个状态，这16个状态对应这16个频率设定值。或者直接使用DI端子功能（12~15）调用多段指令1~16。
多段值1可以通过PC-51选择来源，其他多段值通过功能码数字设定。
多段值输出到浮点连接器，除了作为频率给定，还可以用作转矩、电压等给定输入，%对应额定值。

PC-01 **多段指令2**

通讯地址:	0xFC01	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
-100.0%~100.0%
设定说明
同PC-00

PC-02 **多段指令3**

通讯地址:	0xFC02	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
-100.0%~100.0%
设定说明
同PC-00

PC-03 **多段指令4**

通讯地址:	0xFC03	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
-100.0%~100.0%
设定说明
同PC-00

PC-04 **多段指令5**

通讯地址:	0xFC04	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-05 **多段指令6**

通讯地址: 0xFC05 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-06 **多段指令7**

通讯地址: 0xFC06 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-07 **多段指令8**

通讯地址: 0xFC07 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-08 **多段指令9**

通讯地址: 0xFC08 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-09 **多段指令10**

通讯地址:	0xFC09	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

同PC-00

PC-10 **多段指令11**

通讯地址:	0xFC0A	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

同PC-00

PC-11 **多段指令12**

通讯地址:	0xFC0B	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

同PC-00

PC-12 **多段指令13**

通讯地址:	0xFC0C	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

同PC-00

PC-13 **多段指令14**

通讯地址:	0xFC0D	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-14 **多段指令15**

通讯地址:	0xFC0E	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-15 **多段指令16**

通讯地址:	0xFC0F	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	100.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-100.0%~100.0%

设定说明

同PC-00

PC-16 **简易PLC运行方式**

通讯地址:	0xFC10	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：单次运行结束停机

1：单次运行结束保持终值

2：一直循环

设定说明

简易PLC 作为主频率时，通过设置PC-16来选择简易PLC的运行方式，通过设置PC-17来选择掉电或者停机之后，是否记忆掉电前PLC的运行阶段及运行频率。

0：单次运行结束停机

变频器完成一个单循环后自动停机，需要再次给出运行命令才能启动。

1：单次运行结束保持终值

变频器完成一个单循环后自动保持最后一段的运行频率和方向，停机重新启动后，从PLC初始状态开始运行。

2：一直循环

变频器完成一个循环后自动开始进行下一个循环，直到有停机命令时才停机。

PC-17　简易PLC掉电记忆选择

通讯地址:	0xFC11	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

个位：掉电记忆选择

0：掉电不记忆

1：掉电记忆

十位：停机记忆选择

0：停机不记忆

1：停机记忆

设定说明

简易PLC 作为主频率时，通过设置PC-16来选择简易PLC的运行方式，通过设置PC-17来选择掉电或者停机之后，是否记忆掉电前PLC的运行阶段及运行频率。

个位：掉电记忆选择

每次上电都重新开始PLC过程。选择掉电记忆时，变频器记忆掉电前PLC的运行阶段及运行频率，下次上电时从记忆阶段继续运行。

十位：停机记忆选择

每次启动都重新开始PLC过程。选择停机记忆时，停机时记录前一次PLC的运行阶段及运行频率，下次运行时从记忆阶段继续运行。

PC-18　PLC第0段运行时间

通讯地址:	0xFC12	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-19　PLC第0段加减速时间选择

通讯地址:	0xFC13	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-20　PLC第1段运行时间

通讯地址:	0xFC14	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-21　PLC第1段加减速时间选择

通讯地址:	0xFC15	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-22　PLC第2段运行时间

通讯地址:	0xFC16	生效方式:	-
最小值:	0.0	单位：	s(h)

最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-23 PLC第2段加减速时间选择

通讯地址:	0xFC17	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）

1：第2组加减速时间（P8-03、P8-04）

2：第3组加减速时间（P8-05、P8-06）

3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

FC-24 PLC第3段运行时间

通讯地址:	0xFC18	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-25 PLC第3段加减速时间选择

通讯地址:	0xFC19	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-26　PLC第4段运行时间

通讯地址:	0xFC1A	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-27　PLC第4段加减速时间选择

通讯地址:	0xFC1B	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-28　PLC第5段运行时间

通讯地址:	0xFC1C	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-29 PLC第5段加减速时间选择

通讯地址:	0xFC1D	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-30 PLC第6段运行时间

通讯地址:	0xFC1E	生效方式:	-
最小值:	0.0	单位:	s(h)
最大值:	6553.5	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-31 PLC第6段加减速时间选择

通讯地址:	0xFC1F	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-32 **PLC第7段运行时间**

通讯地址:	0xFC20	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-33 **PLC第7段加减速时间选择**

通讯地址:	0xFC21	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）

1：第2组加减速时间（P8-03、P8-04）

2：第3组加减速时间（P8-05、P8-06）

3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-34 **PLC第8段运行时间**

通讯地址:	0xFC22	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-35 **PLC第8段加减速时间选择**

通讯地址:	0xFC23	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-36　PLC第9段运行时间

通讯地址:	0xFC24	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-37　PLC第9段加减速时间选择

通讯地址:	0xFC25	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-38　PLC第10段运行时间

通讯地址:	0xFC26	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-39 **PLC第10段加减速时间选择**

通讯地址:	0xFC27	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

FC-40 **PLC第11段运行时间**

通讯地址:	0xFC28	生效方式:	-
最小值:	0.0	单位:	s(h)
最大值:	6553.5	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-41 **PLC第11段加减速时间选择**

通讯地址:	0xFC29	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

FC-42 **PLC第12段运行时间**

通讯地址:	0xFC2A	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-43 **PLC第12段加减速时间选择**

通讯地址:	0xFC2B	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）

1：第2组加减速时间（P8-03、P8-04）

2：第3组加减速时间（P8-05、P8-06）

3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-44 **PLC第13段运行时间**

通讯地址:	0xFC2C	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-45 **PLC第13段加减速时间选择**

通讯地址:	0xFC2D	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-46 **PLC第14段运行时间**

通讯地址:	0xFC2E	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-47 **PLC第14段加减速时间选择**

通讯地址:	0xFC2F	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）
1：第2组加减速时间（P8-03、P8-04）
2：第3组加减速时间（P8-05、P8-06）
3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-48 **PLC第15段运行时间**

通讯地址:	0xFC30	生效方式:	-
最小值:	0.0	单位：	s(h)
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0s(h)~6553.5s(h)

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-49 PLC第15段加减速时间选择

通讯地址:	0xFC31	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：第1组加减速时间（P0-17、P0-18）

1：第2组加减速时间（P8-03、P8-04）

2：第3组加减速时间（P8-05、P8-06）

3：第4组加减速时间（P8-07、P8-08）

设定说明

PC-18~PC-49分别定义16个多段速中每段速的运行时间和加减速时间。每段度的运行时间是加速或减速时间，和按恒速目标频率运行时间的总和。

PC-50 PLC运行时间单位

通讯地址:	0xFC32	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：s（秒）

1：h（小时）

设定说明

PLC每段速运行时间的单位。

PC-51 多段指令0给定方式

通讯地址:	0xFC33	生效方式:	-
最小值:	0	单位：	-
最大值:	6	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：多段指令0（PC-00）给定

1：AI1

2：AI2

3：AI3

4：PULSE脉冲（DI5）

5：PID

6：预置频率P0-08给定（UP/DOWN可修改）

设定说明

多段指令0可以通过数字、模拟量、脉冲频率、PID、预置频率等7种方式选择。

0：多段指令0(PC-00)给定

多段指令0的设定频率通过功能码(PC-00)给定。

1：AI1

多段指令0的设定频率通过模拟量输入端子AI1给定。

2：AI2

多段指令0的设定频率通过模拟量输入端子AI2给定。

3：AI3

多段指令0的设定频率通过模拟量输入端子AI3给定。

4：PULSE脉冲（DI5）

多段指令0的设定频率通过脉冲频率给定。

5：PID

多段指令0的设定频率通过PID给定。

6：预置频率（P0-08）

多段指令0的设定频率通过预置频率（P0-08）给定。

6.14 PD 通信参数

PD-00 **波特率**

通讯地址:	0xFD00	生效方式:	-
最小值:	0	单位：	-
最大值:	6009	数据类型：	无符号16位
默认值:	5005	更改方式：	实时更改

设定值：

0：300bps

1：600bps

2：1200bps

3：2400bps

4：4800bps

5：9600bps

6：19200bps

7：38400bps

8：57600bps

9：115200bps

设定说明

用于设定上位机与变频器之间的数据传输速率。波特率越大，通信速度越快。

注意：上位机与变频器设定的波特率必须一致，否则，通信无法进行。

PD-01 **Modbus数据格式**

通讯地址:	0xFD01	生效方式:	-

最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：无校验(8-N-2)

1：偶校验(8-E-1)

2：奇校验(8-O-1)

3：无校验(8-N-1)

设定说明

用于设定上位机与变频器之间的Modbus数据格式。上位机与变频器设定的数据格式必须一致，否则，通信无法进行。

PD-02 **本机地址**

通讯地址:	0xFD02	生效方式:	-
最小值:	1	单位：	-
最大值:	247	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

1~247

设定说明

当本机地址设定为0（广播地址）时，实现上位机广播功能。

当本地地址设定为1~247时，本机地址具有唯一性，是实现上位机与变频器点对点通信的基础。

PD-03 **应答延迟**

通讯地址:	0xFD03	生效方式:	-
最小值:	0	单位：	ms
最大值:	20	数据类型：	无符号16位
默认值:	2	更改方式：	实时更改

设定值：

0ms~20ms

设定说明

变频器接收数据结束到向上位机发送数据的中间间隔时间。

如果应答延时小于系统处理时间，则应答延时以系统处理时间为准，即系统处理完数据后向上位机发送数据。如果应答延时大于系统处理时间，则系统处理完数据后，要延迟等待，直到到达应答延迟时间，才往上位机发送数据。

PD-04 **通信超时时间**

通讯地址:	0xFD04	生效方式:	-
最小值:	0.0	单位：	s
最大值:	60.0	数据类型：	无符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

0.0s~60.0s

设定说明

当设置为0.0s，Modbus通信超时时间无效。通常情况下，都将其设置成无效。在连续通信的系统中，此参数可以监视通信状况。

设置成有效值时，如果本次通信与下一次通信的间隔时间超出PD-04（Modbus通信中断检测时间），系统将报通信故障错误（E16）。

PD-06 通信故障复位使能

通讯地址: 0xFD06 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型： 无符号16位

默认值: 1 更改方式： 停机更改

设定值：

0：不使能

1：使能

设定说明

通信故障复位是否使能。

PD-07 烧录/后台连接波特率

通讯地址: 0xFD07 生效方式: -

最小值: 0 单位： -

最大值: 9 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0：300bps

1：600bps

2：1200bps

3：2400bps

4：4800bps

5：9600bps

6：19200bps

7：38400bps

8：57600bps

9：115200bps

设定说明

-

PD-09 CANopen/CANlink通信状态

通讯地址: 0xFD09 生效方式: -

最小值: 0 单位： -

最大值:	999	数据类型：	无符号16位
默认值:	2	更改方式：	不可更改

设定值：

个位：CANopen

0：停止

1：初始化

2：预运行

8：运行

十位：CANlink

0：停止

1：初始化

2：预运行

8：运行

百位：保留

设定说明

此参数用于监测通信状态，只读。

PD-10 **CANopen/CANlink切换**

通讯地址:	0xFD0A	生效方式:	-
最小值:	1	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

1：CANopen

2：CANlink

设定说明

CAN 通信协议选择，适用于CANlink通信扩展卡：

设置为1，为CANopen 通信;

设置为2，为CANlink通信

PD-12 **CAN波特率**

通讯地址:	0xFD0C	生效方式:	-
最小值:	0	单位：	-
最大值:	6	数据类型：	无符号16位
默认值:	5	更改方式：	停机更改

设定值：

0：20kbps
1：50kbps
2：100kbps
3：125kbps
4：250kbps
5：500kbps
6：1Mbps

设定说明

CAN 通信波特率，包括CANlink、CANopen。在同一个网络中，所有站点的波特率必须一致，否则通信不正常。
只对CANlink通信扩展卡有效。

PD-13 **CAN站号**

通讯地址:	0xFD0D	生效方式:	-
最小值:	1	单位：	-
最大值:	127	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

1~127

设定说明

CAN 站点号，包括CANlink、CANopen。在同一个网络中，所有站点的站号不能有相同，否则通信不正常。
只对CANlink通信扩展卡有效。

PD-14 **单位时间接受的CAN帧数目**

通讯地址:	0xFD0E	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

用于监测总线负载，此参数表示，每秒钟本站接收到的CAN 帧数目。
只对CANlink通信扩展卡有效。

PD-15 **节点接受错误计数器的最大值**

通讯地址:	0xFD0F	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

用于监测总线的错误。此参数表示，本节点的CAN 接受错误计数最大值。
只对CANlink通信扩展卡有效。

PD-16 节点发送错误计数器的最大值

通讯地址:	0xFD10	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

用于监测总线的错误。此参数表示，本节点的CAN 发送错误计数最大值。
只对CANlink通信扩展卡有效。

PD-17 单位时间内总线脱离的次数

通讯地址:	0xFD11	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~65535

设定说明

用于监测总线的错误。此参数表示，本节点的CAN 总线脱离的次数。
只对CANlink通信扩展卡有效。

PD-19 CAN通信掉线系数

通讯地址:	0xFD13	生效方式:	-
最小值:	1	单位：	-
最大值:	15	数据类型：	无符号16位
默认值:	3	更改方式：	停机更改

设定值：

1~15

设定说明

-

PD-24 up/down功能超时断线时间

通讯地址:	0xFD18	生效方式:	-
最小值:	1	单位：	s
最大值:	10	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

0.5s~10s

设定说明

-

PD-37 **DHCP使能**

通讯地址:	0xFD25	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

-

PD-38 **IP地址最高字节**

通讯地址:	0xFD26	生效方式:	-
最小值:	0	单位:	-
最大值:	255	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0~255

设定说明

-

PD-39 **IP地址次高字节**

通讯地址:	0xFD27	生效方式:	-
最小值:	0	单位:	-
最大值:	255	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0~255

设定说明

-

PD-40 **IP地址第三字节**

通讯地址:	0xFD28	生效方式:	-
最小值:	0	单位:	-
最大值:	255	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0~255

设定说明

-

PD-41 **IP地址最低字节**

通讯地址: 0xFD29
最小值: 0
最大值: 255
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~255

设定说明

-

PD-42 **子网掩码最高字节**

通讯地址: 0xFD2A
最小值: 0
最大值: 255
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~255

设定说明

-

PD-43 **子网掩码次高字节**

通讯地址: 0xFD2B
最小值: 0
最大值: 255
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~255

设定说明

-

PD-44 **子网掩码第三字节**

通讯地址: 0xFD2C
最小值: 0
最大值: 255
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~255

设定说明

-

PD-45 **子网掩码最低字节**

通讯地址: 0xFD2D　　生效方式: -
最小值: 0　　单位: -
最大值: 255　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:
0~255
设定说明
-

PD-46 **网关最高字节**

通讯地址: 0xFD2E　　生效方式: -
最小值: 0　　单位: -
最大值: 255　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:
0~255
设定说明
-

PD-47 **网关次高字节**

通讯地址: 0xFD2F　　生效方式: -
最小值: 0　　单位: -
最大值: 255　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:
0~255
设定说明
-

PD-48 **网关第三字节**

通讯地址: 0xFD30　　生效方式: -
最小值: 0　　单位: -
最大值: 255　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:
0~255
设定说明
-

PD-49 **网关最低字节**

通讯地址: 0xFD31　　生效方式: -

最小值: 0 单位: -
最大值: 255 数据类型: 无符号16位
默认值: 0 更改方式: 停机更改
设定值:
0~255
设定说明
-

PD-58 **EtherNet/IP扩展卡错误码**
通讯地址: 0xFD3A 生效方式: -
最小值: 0 单位: -
最大值: 255 数据类型: 无符号16位
默认值: 0 更改方式: 不可更改
设定值:
0~255
设定说明
-

PD-61 **MAC地址高字节**
通讯地址: 0xFD3D 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 停机更改
设定值:
0x0~0xFFFF
设定说明
-

PD-62 **MAC地址中间字节**
通讯地址: 0xFD3E 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 停机更改
设定值:
0x0~0xFFFF
设定说明
-

PD-63 **MAC地址低字节**
通讯地址: 0xFD3F 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位

默认值: 0x0 更改方式: 停机更改

设定值:

0x0~0xFFFF

设定说明

-

PD-94 **Modbus软件版本**

通讯地址: 0xFD5E 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~65535

设定说明

-

PD-95 **CANlink软件版本**

通讯地址: 0xFD5F 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~65535

设定说明

-

PD-96 **CANopen软件版本**

通讯地址: 0xFD60 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~65535

设定说明

-

6.15 PE 用户定制功能码

PE-00 **用户功能码0**

通讯地址: 0xFE00 生效方式: -

最小值: 0 单位: -

最大值:	65535	数据类型：	无符号16位
默认值:	7017	更改方式：	实时更改

设定值：

0~65535

设定说明

PE组是用户定制参数组。用户可以在所有参数中，选择所需要的参数汇总到FE组，作为用户定制参数，以方便查看和更改等操作。

PE-01 **用户功能码1**

通讯地址:	0xFE01	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	7016	更改方式：	实时更改

设定值：

0~65535

设定说明

同FE-00

PE-02 **用户功能码2**

通讯地址:	0xFE02	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0~65535

设定说明

同PE-00

PE-03 **用户功能码3**

通讯地址:	0xFE03	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0~65535

设定说明

同PE-00

PE-04 **用户功能码4**

通讯地址:	0xFE04	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-05 **用户功能码5**

通讯地址: 0xFE05 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-06 **用户功能码6**

通讯地址: 0xFE06 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同FE-00

PE-07 **用户功能码7**

通讯地址: 0xFE07 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-08 **用户功能码8**

通讯地址: 0xFE08 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-09 **用户功能码9**

通讯地址:	0xFE09	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-10 **用户功能码10**

通讯地址:	0xFE0A	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-11 **用户功能码11**

通讯地址:	0xFE0B	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-12 **用户功能码12**

通讯地址:	0xFE0C	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-13 **用户功能码13**

通讯地址:	0xFE0D	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-14 **用户功能码14**

通讯地址:	0xFE0E	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-15 **用户功能码15**

通讯地址:	0xFE0F	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-16 **用户功能码16**

通讯地址:	0xFE10	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-17 **用户功能码17**

通讯地址: 0xFE11 生效方式: -
最小值: 0 单位: -
最大值: 65535 数据类型: 无符号16位
默认值: 0 更改方式: 实时更改

设定值:

0~65535

设定说明

同PE-00

PE-18 **用户功能码18**

通讯地址: 0xFE12 生效方式: -
最小值: 0 单位: -
最大值: 65535 数据类型: 无符号16位
默认值: 0 更改方式: 实时更改

设定值:

0~65535

设定说明

同PE-00

PE-19 **用户功能码19**

通讯地址: 0xFE13 生效方式: -
最小值: 0 单位: -
最大值: 65535 数据类型: 无符号16位
默认值: 0 更改方式: 实时更改

设定值:

0~65535

设定说明

同PE-00

PE-20 **用户功能码20**

通讯地址: 0xFE14 生效方式: -
最小值: 0 单位: -
最大值: 65535 数据类型: 无符号16位
默认值: 6768 更改方式: 实时更改

设定值:

0~65535

设定说明

同PE-00

PE-21 **用户功能码21**

通讯地址: 0xFE15 生效方式: -

最小值: 0
最大值: 65535
默认值: 6769
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:
0~65535

设定说明
同PE-00

PE-22 **用户功能码22**

通讯地址: 0xFE16
最小值: 0
最大值: 65535
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:
0~65535

设定说明
同PE-00

PE-23 **用户功能码23**

通讯地址: 0xFE17
最小值: 0
最大值: 65535
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:
0~65535

设定说明
同PE-00

PE-24 **用户功能码24**

通讯地址: 0xFE18
最小值: 0
最大值: 65535
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:
0~65535

设定说明
同PE-00

PE-25 **用户功能码25**

通讯地址: 0xFE19
最小值: 0
最大值: 65535
生效方式: -
单位: -
数据类型: 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同FE-00

PE-26 **用户功能码26**

通讯地址: 0xFE1A 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-27 **用户功能码27**

通讯地址: 0xFE1B 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-28 **用户功能码28**

通讯地址: 0xFE1C 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-29 **用户功能码29**

通讯地址: 0xFE1D 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 实时更改

设定值：

0~65535

设定说明

同PE-00

PE-30 **用户功能码30**

通讯地址:	0xFE1E	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

PE-31 **用户功能码31**

通讯地址:	0xFE1F	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

同PE-00

6.16 PP 用户参数

PP-00 **用户密码**

通讯地址:	0x1F00	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

设置用户密码

PP-01 **参数初始化**

通讯地址:	0x1F01	生效方式:	-
最小值:	0	单位:	-
最大值:	503	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值：

0：无操作

1：恢复出厂参数模式1

2：清除记录信息

4：备份用户当前参数

501：恢复用户备份参数

503：恢复出厂参数模式2

设定说明

设置变频器进行参数初始化时的对应动作。

0：无操作

变频器不进行任何操作。

1：恢复出厂参数模式1

变频器功能参数大部分恢复为厂家出厂参数，但是电机参数、频率指令小数点（P0-22）、故障记录信息、累计运行时间（P7-09）、累计上电时间（P7-13）、累计耗电量（PP-14）、逆变器模块散热器温度（P7-07）不恢复。

2：清除记录信息

清除变频器故障记录信息、累计运行时间（P7-09）、累计上电时间（P7-13）、累计耗电量（P7-14）。

4：备份用户当前参数

备份当前用户所设置的参数设定值。

501：恢复用户备份参数

恢复通过设置PP-01为4时所备份的参数设定值。

503：恢复出厂参数模式2

除了厂家参数FF组、PP-00、PP-01不恢复，其他变频器功能参数都恢复为厂家出厂参数。

PP-02　功能参数显示选择

通讯地址:	0x1F02	生效方式:	-
最小值:	0	单位：	-
最大值:	1111	数据类型：	无符号16位
默认值:	1111	更改方式：	实时更改

设定值：

个位：U组显示选择
0：隐藏
1：显示
十位：A组显示选择
0：隐藏
1：显示
百位：B组显示选择
0：隐藏
1：显示
千位：C组显示选择
0：隐藏
1：显示

设定说明

设置U组、A组、B组、C组参数是否在操作面板上显示。

PP-03　个性参数方式显示选择

通讯地址:	0x1F03	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	11	更改方式：	实时更改

设定值：

个位：用户定制参数组显示选择
0：不显示
1：显示
十位：用户变更参数组选择
0：不显示
1：显示

设定说明

通过个位或十位分别设置用户定制参数组和用户变更参数组是否在操作面板上显示。

PP-04　功能码修改属性

通讯地址:	0x1F04	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：可修改
1：不可修改

设定说明

是否可修改功能码参数。

6.17 A0 转矩控制和限定参数

A0-00 **速度/转矩控制方式**

通讯地址:	0xA000	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：速度控制

1：转矩控制

设定说明

在矢量控制（FVC 或SVC）下，有两种控制方式：速度控制和转矩控制。

A0-01 **转矩设定源选择**

通讯地址:	0xA001	生效方式:	-
最小值:	0	单位:	-
最大值:	7	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：驱动转矩上限数字设定（A0-03）

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定（1000H）

6：MIN(AI1,AI2)

7：MAX(AI1,AI2)

设定说明

用于选择转矩设定指令，共有8种转矩设定方式。

A0-03 **转矩数字设定**

通讯地址:	0xA003	生效方式:	-
最小值:	-200.0	单位:	%
最大值:	200.0	数据类型:	有符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

-200.0%~200.0%

设定说明

转矩模式下数字设定值。转矩设定采用相对值，100.0%对应电机额定转矩（可通过U0-06查看电机输出转矩，100%对应电机额定转矩）。设定范围-200.0%~200.0%。当转矩给定值为正时，变频器正向运行；当转矩给定值为负时，变频器反向运行。

A0-04 **转矩滤波时间**

通讯地址:	0xA004	生效方式:	-
最小值:	0.000	单位:	s
最大值:	5.000	数据类型:	无符号16位
默认值:	0.000	更改方式:	实时更改

设定值:

0.000s~5.000s

设定说明

转矩滤波时间。

A0-05 **速度极限数字设定**

通讯地址:	0xA005	生效方式:	-
最小值:	-120.0	单位:	%
最大值:	120.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-120.0%~120.0%

设定说明

在转矩控制模式时，可以通过速度极限数字设定限制频率上限，百分比是相对于最大频率（P0-10）。

A0-06 **视窗模式调频系数**

通讯地址:	0xA006	生效方式:	-
最小值:	0.0	单位:	-
最大值:	50.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0~50.0

设定说明

-

A0-07 **转矩加速时间**

通讯地址:	0xA007	生效方式:	-
最小值:	0.00	单位:	s
最大值:	650.00	数据类型:	无符号16位
默认值:	1.00	更改方式:	实时更改

设定值:

0.00s~650.00s

设定说明

-

A0-08 **转矩减速时间**

通讯地址:	0xA008	生效方式:	-
最小值:	0.00	单位:	s
最大值:	650.00	数据类型:	无符号16位
默认值:	1.00	更改方式:	实时更改

设定值:

0.00s~650.00s

设定说明

-

A0-09 **速度极限设定源选择**

通讯地址:	0xA009	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：A0-05设定

1：频率源设定

设定说明

转矩模式下，频率极限的设定源

0：通过A0-05数字设定

1：频率极限为当前运行的目标频率

A0-10 **速度极限偏置/视窗频率**

通讯地址:	0xA00A	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P0-10	数据类型:	无符号16位
默认值:	5.00	更改方式:	实时更改

设定值:

0.00Hz~P0-10

设定说明

速度极限偏置，实际速度超过速度极限偏置则限制输出转矩。

A0-11 **速度极限偏置有效**

通讯地址:	0xA00B	生效方式:	-
最小值:	0	单位:	-
最大值:	2	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

0：双向偏置有效

1：单向偏置有效

2：视窗模式

设定说明

0：双向偏置有效

正向和反向都增加速度极限偏置频率

1：单向偏置有效

只反向增加速度极限偏置频率

2：视窗模式

主机传过来的转矩，只是做为从机的转矩上限，从机转矩设定值由速度环计算调节。使用视窗模式需要设置视窗频率，增大或减小从机接收到转矩信号后的可用极限转矩。

A0-12 频率加速时间

通讯地址:	0xA00C	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

-

A0-13 频率减速时间

通讯地址:	0xA00D	生效方式:	-
最小值:	0.0	单位：	s
最大值:	6500.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：

0.0s~6500.0s

设定说明

-

A0-14 转矩模式切换

通讯地址:	0xA00E	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：不切换

1：停机切换为速度模式

2：停机目标转矩为0

设定说明

-

6.18 A1 虚拟DI、虚拟DO

A1-00 **虚拟VDI1端子功能选择**

通讯地址:	0xA100	生效方式:	-
最小值:	0	单位:	-
最大值:	97	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置虚拟VDI1端子功能。
0：无功能
DI端子无任何功能。
1：正转运行
变频器的运行方式为正转运行。FWD（即FORWORD）。两线式1（P4-11=0）时为正向运行；两线式2（P4-11=1）时为运行命令。
2：反转运行
变频器的运行方式为反转运行。REV（即REVERSE）。三线式1（P4-11=2）时为反向运行；三线式2（P4-11=3）时为正反运行方向。

3：三线式运行控制
确定变频器运行方式是三线控制模式。如果要通过端子设定运行指令，参数P4-11（端子命令方式）设置为2（三线式1）或者3（三线式2），端子功能要设置为此功能。三线控制模式包括三线式1和三线式2两种模式。
4：正转点动（FJOG）
变频器的运行方式为正转点动运行。点动模式下，变频器短暂低速运行，一般用于对现场设备进行维护和调试的场景。
5：反转点动（RJOG）
变频器的运行方式为反转点动运行。
6：端子UP
通过端子给定频率时修改频率的递增指令。端子有效相当于一直按着递增键，端子无效相当于松开递增键。
7：端子DOWN
通过端子给定频率时修改频率的递减指令。端子有效相当于一直按着递减键，端子无效相当于松开递减键。
8：自由停机
变频器接到停机命令后，立即终止输出，负载按照机械惯性自由停止。变频器通过停止输出来停机,这时,电机的电源被切断,拖动系统处于自由制动状态。由于停机时间的长短由拖动系统的惯性决定,也称为惯性停机。
9：故障复位（RESET）：对变频器的故障进行复位，与键盘上的STOP/RES 键功能相同。用此功能可实现远距离故障复位。
10：运行暂停
端子选择此功能，变频器进行减速停机，所有运行参数均被记忆（如PLC 参数、摆频参数、PID参数）。端子无效后，变频器恢复之前所记忆的运行状态。
11：外部故障常开输入
当外部信号送给变频器后，变频器报故障E15。
12~15：多段指令端子1~4
变频器选择多段指令作为主频率。可通过这四个端子的16种状态，实现16段速度或者16个指令的设定。应用场景：不需要连续调整变频器运行频率，只需使用若干个频率值的应用场合。
16、17：加减速选择端子1~2
提供4 组加减速时间，通过这两个端子的4种状态，可实现4组加减速时间的切换。加速时间指变频器从零频，加速到加减速基准频率(P0-25 确定)所需时间；减速时间指变频器从加减速基准频率(P0-25 确定)，减速到零频所需时间。
18：频率源切换
用来选择不同的频率指令输入方法。通过P0-07（频率指令叠加选择）设置频率指令。
19：UP/DOWN设定清零
当通过面板设定主频率时，端子有效时可清除已设置的频率值（该频率值是指通过键盘上递增键、递减键或者端子UP/端子DOWN所设置的频率值），使给定频率恢复到P0-08设定的值。

20：运行命令切换端子1
当通过端子设置运行指令时（P0-02=1），端子有效时可进行端子控制与键盘控制的切换。
当通过通信设置运行指令时（P0-02=2），端子有效时可进行通信控制与键盘控制的切换。
21：加减速禁止
变频器维持当前运行频率（停机命令除外），不受外部输入频率变化的影响。
22：PID暂停
PID 暂时失效，变频器维持当前的输出频率，不再进行频率源的PID调节。
23：PLC状态复位
使变频器恢复到简易PLC 的初始状态。
24：摆频暂停
在摆频工艺功能中，端子有效时使摆频功能暂停（变频器以中心频率输出）。
25：计数器输入
在计数工艺功能中，端子有效时输入计数脉冲。
26；计数器复位
在计数工艺功能中，端子有效时对计数器状态进行清零处理。
27：长度计数输入
在定长工艺功能中，端子有效时输入长度计数。
28：长度复位
在定长工艺功能中，端子有效时使长度清零。
29：转矩控制禁止
端子有效时，变频器进行转矩控制模式到速度控制模式的切换；端子无效时，恢复到转
矩控制模式。
30：脉冲输入
当DI5作为脉冲输入的端子时，DI5端子必须选择此功能。
32：立即直流制动
变频器直接切换到直流制动状态。直流制动是指变频器向异步电机定子绕组中通入直流，形成静止磁场，此时电机处于能耗制动状态，转子切割该静止磁场而产生制动转矩，使电机迅速停止。
33：外部故障常闭输入
当外部信号送给变频器后，变频器报出故障E15。
34：频率修改使能
如果端子有效，允许修改频率；如果端子无效，禁止修改频率。
35：PID作用方向取反
PID 作用方向与PA-03（PID作用方向）设定的方向相反。
36：外部停机端子1
当通过操作面板设置运行指令时（P0-02=0），使变频器停机，相当于键盘上STOP/RES 键的功能。
37：控制命令切换端子2
在端子和通信设定运行指令之间进行切换。
如果用端子控制运行命令，端子有效时系统切换为通信控制；

如果用通信控制运行命令，端子有效时系统切换为端子控制。
38：PID 积分暂停
PID 的积分调节功能暂停，但PID的比例调节和微分调节功能仍然有效。
39：频率源X与预置频率切换
主频率源x切换为P0-08(预置频率)。
40：频率源Y与预置频率切换
辅频率源y切换为P0-08(预置频率)。
41：保留
42：零伺服使能
该端子生效，变频器减速到0Hz，然后进入0伺服状态
43：PID参数切换
当PID参数切换条件设置为“通过DI端子切换”时（PA-18=1），若端子无效，PID参数使用PA-05~PA-07（比例增益KP1、积分时间TI1、微分时间TD1）的设定值；若端子有效，PID参数使用PA-15~PA-17（比例增益KP2、积分时间TI2、微分时TD2）的设定值。
44：用户自定义故障1
变频器报故障E27，变频器会根据P9-49（故障保护动作选择）的设定值进行处理。
45：用户自定义故障2
变频器报故障E28，变频器会根据P9-49（故障保护动作选择）的设定值进行处理。
46：速度控制/ 转矩控制切换
变频器在转矩控制与速度控制模式之间切换。
A0-00(速度/转矩控制方式)设置为0，端子有效时，控制方式为转矩模式；端子无效时，控制方式为速度模式。
A0-00(速度/转矩控制方式)设置为1，端子有效时，控制方式为速度模式；端子无效时，控制方式为转矩模式。
47：紧急停机
系统处于紧急状态时，变频器按照P8-55（端子急停减速时间）减速，V/f 模式急停减速时间为0s时按照最小单位时间进行减速。该输入端子无需持续处于闭合状态，即使处于闭合状态的时间仅仅为一瞬间，也会紧急停止。与一般的减速时间不同，在经过紧急停止减速时间后断开紧急停机输入端子，如果此时变频器端子运行信号仍处于闭合状态，变频器也不会启动，需先断开运行端子后再次输入端子运行指令，变频器才会重新启动。
48：外部停机端子2
在任何运行指令方式下（面板控制、端子控制、通信控制），变频器减速停机。此时减速时间固定为减速时间4（P8-08）。
49：减速直流制动
变频器先减速到P6-11（停机直流制动起始频率），然后进入直流制动状态。
50：本次运行时间清零
变频器本次运行计时时间被清零。如果本次运行时间小于P8-53（本次运行到达时间）的设定值（大于0），在此过程中端子有效，本次运行计时清零。如果本次运行时间大于P8-53的设定值（大于0），此时端子有效，本次运行计时不清零。
51：两线制/ 三线制切换
用于在两线式和三线式控制之间进行切换。

P4-11 设为0（两线式1），端子有效时，切换为三线式1。端子无效时，为两线式1。
P4-11 设为1（两线式2），端子有效时，切换为三线式2。
P4-11 设为2（三线式1），端子有效时，切换为两线式1。
P4-11 设为3（三线式2），端子有效时，切换为两线式2。
52：电磁封星
该端子生效，变频器进入电磁封星状态
53：计圈信号
使用厚度累积计算卷径时，该端子用来进行记圈。
54：卷径复位
该端子生效，复位初始卷径。使用张力模式的情况下，在换卷的时候，需要复位初始卷径。
55：初始卷径1
56：初始卷径2
使用张力模式情况下，通过端子组合选择初始卷径B0-11/12/13，两者都不生效选择最小卷径B0-09作为初始卷径，仅初始卷径1端子生效时选择B0-11作为初始卷径，仅初始卷径2端子生效时选择B0-12作为初始卷径，两者都生效时选择B0-13作为初始卷径
57：预驱动
该端子生效，变频器切换到预驱动速度模式。使用张力模式的情况下，在需要自动换卷，待换卷的轴需要进行线速度同步，需要使能该功能。换卷完成后，失效该端子，张力功能可正常实现。
58：收放卷切换
使用张力模式情况下，用来切换收/放卷切换。
59：卷径计算停止
该端子生效后，卷径计算停止。使用张力模式情况下，如需要自动换卷，预驱动，为了不影响卷径计算，可以禁止卷径计算。
60：退出张力模式
使用张力模式情况下，用来退出张力控制模式。
61：端子张力提升
该端子生效后，在张力转矩的基础上，提升一定的比例，而在DI端子撤销后，按照时间逐渐将提升部分撤销掉
62：厚度选择1
63：厚度选择2
使用张力模式情况下，通过端子组合选择材料厚度B0-32/33/34/35，两者都不生效选材料厚度选择B0-32，仅厚度选择1端子生效时材料厚度选择B0-33，仅厚度选择2端子生效时材料厚度选择B0-34，两者都生效时材料厚度选择B0-35
64~89：保留
90：水冷系统故障
T13机型当水冷系统发生故障时，该端子接收信号，变频器报出故障E64
91：低液位故障
T13机型当水箱液位过低时，该端子接收信号，变频器报出警告A63

92：计算圈数复位
该端子生效，计数圈数清零
93：保留
94：抱闸工艺固化参数1
95：抱闸工艺固化参数2
96：切换收/放卷切换
97：电机组参数选择端子2，用于切换不同电机组，配合41号端子功能可以做到第三组和第四组电机切换切换

A1-01 **虚拟VDI2端子功能选择**

通讯地址:	0xA101	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置VDI2端子功能，端子功能选择同A1-00

A1-02　虚拟VDI3端子功能选择

通讯地址:	0xA102	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置VDI3端子功能，端子功能选择同A1-00

A1-03　虚拟VDI4端子功能选择

通讯地址:	0xA103	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置VDI4端子功能，端子功能选择同A1-00

A1-04　虚拟VDI5端子功能选择

通讯地址:	0xA104	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

设置VDI5端子功能，端子功能选择同A1-00

A1-05　VDI端子状态设置模式

通讯地址:	0xA105	生效方式:	-
最小值:	0	单位：	-
最大值:	22222	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

个位：VDI1
0：功能码设定(A1-06)
1：DO状态
2：DI状态
十位：VDI2
0：功能码设定(A1-06)
1：DO状态
2：DI状态
百位：VDI3
0：功能码设定(A1-06)
1：DO状态
2：DI状态
千位：VDI4
0：功能码设定(A1-06)
1：DO状态
2：DI状态
万位：VDI5
0：功能码设定(A1-06)
1：DO状态
2：DI状态

设定说明

虚拟VDI的状态可以有两种设定方式,并通过A1-05来选择。
设置为0:VDI是否为有效状态(A1-06),取决于VDO输出为有效或无效,且VDIx唯一绑定VDOx(x为1~5)
设置为1、2:通过参数A1-05,VDI*是否为有效状态通过DO*/DI*状态决定

A1-06　虚拟VDI端子状态设置

通讯地址:	0xA106	生效方式:	-
最小值:	0	单位：	-
最大值:	11111	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

个位：VDI1
0：无效
1：有效
十位：VDI2
0：无效
1：有效
百位：VDI3
0：无效
1：有效
千位：VDI4
0：无效
1：有效
万位：VDI5
0：无效
1：有效

设定说明

通过个位~万位分别设置虚拟数字量输入端子VDIx（x为1~5）的状态是否有效。

A1-07　AI1端子功能选择（当作DI）

通讯地址:	0xA107	生效方式:	-
最小值:	0	单位:	-
最大值:	97	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明 同P4-00

A1-08 **AI2端子功能选择（当作DI）**

通讯地址:	0xA108	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明 同F4-00

A1-09 **AI3端子功能选择（当作DI）**

通讯地址:	0xA109	生效方式:	-
最小值:	0	单位：	-
最大值:	97	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无功能
1：正转运行（FWD）
2：反转运行（REV）
3：三线式运行控制
4：正转点动（FJOG）
5：反转点动（RJOG）
6：端子UP
7：端子DOWN
8：自由停机
9：故障复位（RESET）
10：运行暂停
11：外部故障常开输入
12：多段指令端子1
13：多段指令端子2
14：多段指令端子3
15：多段指令端子4
16：加减速选择端子1
17：加减速选择端子2
18：频率源切换
19：UP/DOWN设定清零（端子、键盘）
20：运行命令切换端子
21：加减速禁止
22：PID暂停
23：PLC状态复位
24：摆频暂停
25：计数器输入（DI5）
26：计数器复位
27：长度计数输入（DI5）
28：长度复位
29：转矩控制禁止
30：脉冲输入
31：保留
32：立即直流制动
33：外部故障常闭输入
34：频率修改使能
35：PID作用方向取反
36：外部停机端子1
37：控制命令切换端子2
38：PID积分暂停
39：频率源X与预置频率切换
40：频率源Y与预置频率切换

41：电机选择端子1
42：零伺服使能
43：PID参数切换
44：用户自定义故障1
45：用户自定义故障2
46：速度控制/转矩控制切换
47：紧急停机
48：外部停机端子2
49：减速直流制动
50：本次运行时间清零
51：两线式/三线式切换
52：电磁封星
53：厚度叠加
54：卷径复位
55：初始卷径1
56：初始卷径2
57：预驱动
58：收放卷切换
59：卷径计算停止
60：退出张力模式
61：端子张力提升
62：厚度选择1
63：厚度选择2
90：水冷系统故障
91：低液位故障
92：计算圈数复位
93：保留
94：开闸状态反馈
95：关闸状态反馈
96：电缆卷筒收放卷切换
97：电机选择端子2

设定说明

同F4-00

A1-10　AI作为DI有效状态选择

通讯地址:	0xA10A	生效方式:	-
最小值:	0	单位：	-
最大值:	111	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

个位：AI1
0：高电平有效
1：低电平有效
十位：AI2
0：高电平有效
1：低电平有效
百位：AI3
0：高电平有效
1：低电平有效

设定说明

0：高电平有效
AI端子为高电平时，A1-10对应位的值设置为0时，此时认为AI端子有效，A1-10设置为1时，此时认为AI端子无效。
1：低电平有效
AI端子为低电平时，A1-10对应位的值设置为0时，此时认为AI端子无效，A1-10设置为1时，此时认为AI端子有效。

6.19 A2 第2电机参数

A2-00 **电机类型选择**

通讯地址:	0xA200	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：普通异步电机
1：变频异步电机
2：同步机

设定说明

变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动。负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。
普通异步电机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。

A2-01 **电机额定功率**

通讯地址:	0xA201	生效方式:	-
最小值:	0.1	单位：	kW
最大值:	1000.0	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.1kW~1000.0kW

设定说明

电机额定功率是指电机正常工作时的功率。它的值为(电机额定电压 × 电机额定电流)。选择电机功率时，应在电机能够满足机械负载要求的前提下，经济合理的选择电机功率。要考虑电机的发热、允许过载能力和启动能力等因素。

A2-02 电机额定电压

通讯地址:	0xA202	生效方式:	-
最小值:	1	单位：	V
最大值:	2000	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

1V~2000V

设定说明

电机额定电压是指电机正常工作时的电压，一般指线电压。

A2-03 电机额定电流

通讯地址:	0xA203	生效方式:	-
最小值:	0.01	单位：	A
最大值:	6553.5	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01A~655.35A(功率≤55kW)

0.1A~6553.5A(功率>55kW)

设定说明

电机额定电流是指电机正常工作时的电流，一般指线电流。

A2-04 电机额定频率

通讯地址:	0xA204	生效方式:	-
最小值:	0.01	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01Hz~P0-10

设定说明

电机额定频率指的是电机在额定运行状态下，定子绕组所接电源的频率。

A2-05 电机额定转速

通讯地址:	0xA205	生效方式:	-
最小值:	1	单位：	rpm
最大值:	65535	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：
1rpm~65535rpm
设定说明
电机额定转速指的是电机在额定运行状态下，转子的转速，单位为“转/分钟”（rpm）。

A2-06 异步/同步电机定子电阻

通讯地址:	0xA206	生效方式:	-
最小值:	0.0001	单位：	Ω
最大值:	65.535	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：
0.001Ω~65.535Ω(功率≤55kW)
0.0001Ω~6.5535Ω(功率>55kW)
设定说明
异步电机定子电阻是指异步电机定子绕组的直流电阻，该参数可通过电机参数辨识获得。精度0.001(功率≤55kW)，精度0.0001(功率>55kW)

A2-07 异步电机转子电阻

通讯地址:	0xA207	生效方式:	-
最小值:	0.0001	单位：	Ω
最大值:	65.535	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：
0.001Ω~65.535Ω(功率≤55kW)
0.0001Ω~6.5535Ω(功率>55kW)
设定说明
异步电机转子电阻是指异步电机转子绕组的直流电阻，该参数可通过电机静止参数辨识或动态参数辨识获得。精度0.001(功率≤55kW)，精度0.0001(功率>55kW)

A2-08 异步电机漏感抗

通讯地址:	0xA208	生效方式:	-
最小值:	0.001	单位：	mH
最大值:	655.35	数据类型：	无符号16位
默认值:	默认值	更改方式：	停机更改

设定值：
0.01mH~655.35mH(功率≤55kW)
0.001mH~65.535mH(功率>55kW)

设定说明

异步电机漏感抗是电机绕组漏磁通引起的。在电机的绕组中，通入电流，将产生磁通，根据磁通的路径，可以分为：主磁通和漏磁通两部分。描述漏磁通可以用一个感抗表示，就是漏感抗。该参数可通过电机静止参数辨识或动态参数辨识获得。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

A2-09 异步电机互感抗

通讯地址:	0xA209	生效方式:	-
最小值:	0.001	单位：	mH
最大值:	655.35	数据类型：	无符号16位
默认值:	机型确定	更改方式：	停机更改

设定值：

0.01mH~655.35mH(功率≤55kW)

0.001mH~65.535mH(功率>55kW)

设定说明

当电机的一线圈中的电流发生变化时，在临近的另一线圈中产生感应电动势，这个互感电动势可以通过互感抗参数来表示。

电机的互感抗可以大致分为两种，一种是定子或者转子的相间感抗，即定子的某一相和另一相之间的电抗，还有另一种是定子和转子之间的感抗。第一种的感抗是不随转子旋转变化的，而第二种会随着转子的转动，感抗也发生相应的变化。

这两种都是电机的互感抗，该参数可通过电机动态参数辨识获得。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

A2-10 异步电机空载电流

通讯地址:	0xA20A	生效方式:	-
最小值:	0.01	单位：	A
最大值:	A2-03	数据类型：	无符号16位
默认值:	4.2	更改方式：	停机更改

设定值：

0.01A~P1-03(功率≤55kW)

0.1A~P1-03(功率>55kW)

设定说明

异步电机空载电流是指电机空载运行时定子三相绕组中通过的电流，该参数可通过电机动态参数辨识获得。

A2-11 异步机铁芯饱和系数1

通讯地址:	0xA20B	生效方式:	-
最小值:	50.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	86.0	更改方式：	实时更改

设定值：

50.0%~100.0%

设定说明
异步机铁芯饱和系数1

A2-12 **异步机铁芯饱和系数2**

通讯地址:	0xA20C	生效方式:	-
最小值:	100.0	单位:	%
最大值:	150.0	数据类型:	无符号16位
默认值:	130.0	更改方式:	实时更改

设定值:
100.0%~150.0%
设定说明
异步机铁芯饱和系数2

A2-13 **异步机铁芯饱和系数3**

通讯地址:	0xA20D	生效方式:	-
最小值:	100.0	单位:	%
最大值:	170.0	数据类型:	无符号16位
默认值:	140.0	更改方式:	实时更改

设定值:
100.0%~170.0%
设定说明
异步机铁芯饱和系数3

A2-14 **异步机铁芯饱和系数4**

通讯地址:	0xA20E	生效方式:	-
最小值:	100.0	单位:	%
最大值:	180.0	数据类型:	无符号16位
默认值:	150.0	更改方式:	实时更改

设定值:
100.0%~180.0%
设定说明
异步机铁芯饱和系数4

A2-17 **同步电机D轴电感**

通讯地址:	0xA211	生效方式:	-
最小值:	0.001	单位:	mH
最大值:	655.35	数据类型:	无符号16位
默认值:	默认值	更改方式:	停机更改

设定值:
0.01mH~655.35mH(功率≤55kW)
0.001mH~65.535mH(功率>55kW)

设定说明

同步电机D轴电感是指同步电机主磁极轴（纵轴）的电感值。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

A2-18 同步电机Q轴电感

通讯地址:	0xA212	生效方式:	-
最小值:	0.001	单位：	mH
最大值:	655.35	数据类型：	无符号16位
默认值:	默认值	更改方式：	停机更改

设定值：

0.01mH~655.35mH(功率≤55kW)

0.001mH~65.535mH(功率>55kW)

设定说明

同步电机Q轴电感是指同步电机转子相临磁极轴线间的中心线(交轴)的电感值。精度0.01(功率≤55kW)，精度0.001(功率>55kW)

A2-19 同步电机反电动势系数

通讯地址:	0xA213	生效方式:	-
最小值:	0.0	单位：	V
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：

0.0V~6553.5V

设定说明

为对应的A2-04设定额定频率下的电机反电动势线有效值。

A2-20 滤波时间常数(PMVVC使用)

通讯地址:	0xA214	生效方式:	-
最小值:	0.003	单位：	-
最大值:	65.535	数据类型：	无符号16位
默认值:	0.100	更改方式：	实时更改

设定值：

0.003~65.535

设定说明

PMVVC使用滤波时间常数。

A2-21 振荡抑制增益(PMVVC使用)

通讯地址:	0xA215	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：
0~65535
设定说明
PMVVC使用振荡抑制增益系数。

A2-23 摩擦力矩百分比

通讯地址:	0xA217	生效方式:	-
最小值:	0.00	单位：	%
最大值:	100.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	停机更改

设定值：
0.00%~100.00%
设定说明
-

A2-24 电机极对数

通讯地址:	0xA218	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	2	更改方式：	实时更改

设定值：
0~65535
设定说明
-

A2-26 参数辨识运行方向(惯量辨识和同步机)

通讯地址:	0xA21A	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：
0：反转运行
1：正转运行
设定说明
-

A2-27 编码器线数

通讯地址:	0xA21B	生效方式:	-
最小值:	1	单位：	-
最大值:	20000	数据类型：	无符号16位
默认值:	1024	更改方式：	停机更改

设定值：

1~20000

设定说明

编码器线数是指编码器码盘每转一圈发出的脉冲数。在有速度传感器矢量控制模式下（FVC），必须设置编码器线数与编码器名牌正确匹配，否则电机运行异常。

A2-28 编码器类型

通讯地址:	0xA21C	生效方式:	-
最小值:	0	单位:	-
最大值:	5	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：ABZ增量编码器

1：23位编码器

2：旋转变压器

设定说明

编码器分为增量式和绝对式两类。

增量式编码器是将位移转换成周期性的电信号，再把这个电信号转变成计数脉冲，用脉

冲的个数表示位移的大小。

绝对式编码器的每一个位置对应一个确定的数字码，因此它的示值只与测量的起始和终

止位置有关，而与测量的中间过程无关。

A2-29 PG信号滤波

通讯地址:	0xA21D	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

0：非自适应滤波

1：自适应滤波

2：固定互锁

3：自动互锁

设定说明

-

A2-30 编码器接线标志

通讯地址:	0xA21E	生效方式:	-
最小值:	0	单位:	-
最大值:	11	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

个位：AB信号的方向或旋转方向
0：正向
1：反向
十位：保留
设定说明
-

A2-31 **编码器零点位置角**

通讯地址:	0xA21F	生效方式:	-
最小值:	0.0	单位：	°
最大值:	359.9	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：
0.0°~359.9°
设定说明
-

A2-32 **电机齿轮比分子**

通讯地址:	0xA220	生效方式:	-
最小值:	1	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：
1~65535
设定说明
-

A2-33 **电机齿轮比分母**

通讯地址:	0xA221	生效方式:	-
最小值:	1	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：
1~65535
设定说明
-

A2-34 **旋变极对数**

通讯地址:	0xA222	生效方式:	-
最小值:	1	单位：	-
最大值:	32	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

1~32

设定说明

旋转变压器是一种电磁式传感器，又称同步分解器。它是一种测量角度用的小型交流电
动机，用来测量旋转物体的转轴角位移和角速度，由定子和转子组成。旋变极对数是指
旋转变压器的磁极对数，极对数越高，精度越高。

A2-36 PG断线检测使能

通讯地址:	0xA224	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

个位：PG断线检测

0：不使能

1：使能

十位：保留

设定说明

PG断线检测是否使能。

A2-37 参数辨识选择

通讯地址:	0xA225	生效方式:	-
最小值:	0	单位：	-
最大值:	14	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无操作

1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0)

2：异步机动态参数辨识(支持带负载动态参数辨识)

3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO)

4：异步机动态参数辨识2(增加惯量辨识仅支持FVC)

5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC)

11：同步机带载参数辨识(不调反电动势)

12：同步机空载动态完整参数辨识

13：同步机静态参数辨识(不参数辨识编码器安装角)

14：同步机惯量辨识(仅支持FVC)

设定说明

0：无操作

不参数辨识

1：异步机静态部分参数辨识
异步机静止部分参数参数辨识，电机与负载很难脱离，且不允许动态参数辨识运行的场合。辨识部分电机参数：A2-06（电机定子电阻）、A2-07（异步电机转子电阻）、A2-08（异步电机漏感抗），其他参数使用默认值。
2：异步机动态参数辨识
电机与应用系统可以较高转速转动的场合，支持空载、轻载（50%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A2-06（异步电机定子电阻）、A2-07（异步电机转子电阻）、A2-08（异步电机漏感抗）、A2-09（异步电机互感抗）、A2-10（异步电机空载电流）、A2-30（编码器相序）。
3：异步机静态完整参数辨识
异步机静态完整参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识所有电机参数：A2-06（电机定子电阻）、A2-07（异步电机转子电阻）、A2-08（异步电机漏感抗）、A2-09（异步电机互感抗）、A2-10（异步电机空载电流）。
4：异步机动态参数辨识2(增加惯量辨识 仅支持FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（80%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A2-06（电机定子电阻）、A2-07（异步电机转子电阻）、A2-08（异步电机漏感抗）、A2-09（异步电机互感抗）、A2-10（异步电机空载电流）、A2-30（编码器相序）、F2-35（系统惯量）。
5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（10%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A2-06（电机定子电阻）、A2-07（异步电机转子电阻）、A2-08（异步电机漏感抗）、A2-09（异步电机互感抗）、A2-10（异步电机空载电流）、A2-30（编码器相序）。
11：同步机带载参数辨识(不调反电动势)
同步机带载参数辨识，电机与负载很难脱离的场合。FVC模式下辨识的电机参数：A2-06（电机定子电阻）、A2-17（同步机D轴电感）、A2-18（同步机Q轴电感）、A2-20（滤波时间常数）、A2-21（振荡抑制增益）、A2-30（编码器相序）、A2-31（编码器零点位置角）。其他模式辨识的电机参数：A2-06（电机定子电阻）、A2-17（同步机D轴电感）、A2-18（同步机Q轴电感）、A2-20（滤波时间常数）、A2-21（振荡抑制增益）。
12：同步机空载动态完整参数辨识
同步机空载动态完整参数辨识，电机与负载可以脱离运行的场合。FVC模式下辨识的电机参数：A2-06（电机定子电阻）、A2-17（同步机D轴电感）、A2-18（同步机Q轴电感）、A2-19（同步机反电动势）、A2-20（滤波时间常数）、A2-21（振荡抑制增益）、A2-30（编码器相序）、A2-31（编码器零点位置角）。其他模式辨识的电机参数：A2-06（电机定子电阻）、A2-17（同步机D轴电感）、A2-18（同步机Q轴电感）、A2-19（同步机反电动势）、A2-20（滤波时间常数）、A2-21（振荡抑制增益）。

13：同步机静态参数辨识(不参数辨识编码器安装角)
同步机静态参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识的电机参数：A2-06（电机定子电阻）、A2-17（同步机D轴电感）、A2-18（同步机Q轴电感）、A2-20（滤波时间常数）、A2-21（振荡抑制增益）。
14：同步机惯量辨识(仅支持FVC)
同步机惯量辨识，需要高动态响应的场合，参数辨识时需要连接负载。辨识的电机参数：P2-35（系统惯量）、P2-36（电机和负载惯量）。

A2-38 低速速度环Kp

通讯地址:	0xA226	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：
1~200
设定说明
速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。低速速度环Kp是低速时使用。

A2-39 低速速度环Ti

通讯地址:	0xA227	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.500	更改方式：	实时更改

设定值：
0.001s~10.000s
设定说明
速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。低速速度环Ti是低速时使用。

A2-40 切换频率1

通讯地址:	0xA228	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	F2-05	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：
0.00Hz~P2-05

设定说明

速度环PI参数分低速和高速两组。运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01；运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。

A2-41 高速速度环Kp

通讯地址:	0xA229	生效方式:	-
最小值:	1	单位:	-
最大值:	200	数据类型:	无符号16位
默认值:	20	更改方式:	实时更改

设定值:

1~200

设定说明

速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。高速速度环Kp是高速时使用的。

A2-42 高速速度环Ti

通讯地址:	0xA22A	生效方式:	-
最小值:	0.001	单位:	s
最大值:	10.000	数据类型:	无符号16位
默认值:	1.000	更改方式:	实时更改

设定值:

0.001s~10.000s

设定说明

速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。高速速度环Ti是高速时使用。

A2-43 切换频率2

通讯地址:	0xA22B	生效方式:	-
最小值:	F2-02	单位:	Hz
最大值:	F0-10	数据类型:	无符号16位
默认值:	10.00	更改方式:	实时更改

设定值:

P2-02~P0-10

设定说明

速度环PI参数分低速和高速两组，运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。

A2-44 VC转差补偿调整

通讯地址:	0xA22C	生效方式:	-
最小值:	50	单位：	%
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

50%~200%

设定说明

SVC控制模式下，此参数可调节电机的稳速精度，例如电机运行频率低于变频器输出频率时，可增大该参数。

FVC控制模式下，此参数可以调节同样负载下变频器的输出电流大小，如在大功率变频器中，若带载能力较弱时，可逐渐调小此参数。一般情况下，无需调整此参数值。

A2-45 速度反馈滤波时间

通讯地址:	0xA22D	生效方式:	-
最小值:	0.000	单位：	s
最大值:	0.100	数据类型：	无符号16位
默认值:	0.004	更改方式：	实时更改

设定值：

0.000s~0.100s

设定说明

在FVC控制模式下（P0-01=1），速度环反馈滤波时间有效，通过调节该参数改善电机稳定性，速度环反馈滤波时间增大，可以改善电机稳定性，动态响应变弱；速度环反馈滤波时间减小，动态响应加强。该参数值过小时会引起电机振荡。一般情况下，电机的稳定性可满足要求，无需调节该参数。

A2-46 VC减速过励磁增益

通讯地址:	0xA22E	生效方式:	-
最小值:	0	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	64	更改方式：	实时更改

设定值：

0~200

设定说明

-

A2-47　速度控制下转矩上限源（电动）

通讯地址:	0xA22F	生效方式:	-
最小值:	0	单位：	-
最大值:	7	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）
1：AI1
2：AI2
3：AI3
4：PULSE脉冲设定（DI5）
5：通信给定
6：MIN(AI1,AI2)
7：MAX(AI1,AI2)

设定说明

0：上限数字设定(P2-10)
速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。
1：AI1
速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。
2：AI2
速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。
3：AI3
速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。
4：PULSE脉冲设定（DI5）
速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的转矩值。
5：通信给定
主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。
6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。

A2-48　速度控制下转矩上限设定（电动）

通讯地址:	0xA230	生效方式:	-
最小值:	0.0	单位：	%

最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：

0.0%~200.0%

设定说明

电动状态下的转矩上限，以变频器额定电流为基值。

A2-49　速度控制下转矩上限源（发电）

通讯地址:	0xA231	生效方式:	-
最小值:	0	单位：	-
最大值:	8	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定

6：MIN(AI1,AI2)

7：MAX(AI1,AI2)

8：上限数字设定（P2-12）

设定说明

0：上限数字设定(P2-10)

速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。

1：AI1

速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

2：AI2

速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

3：AI3

速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。

4：PULSE脉冲设定（DI5）

速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的频率值。

5：通信给定

主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合

6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。
8上限数字设定（P2-12）
速度控制转矩上限通过上限数字设定，设定值为P2-12（制动转矩上限数字设定）的值。

A2-50　速度控制下转矩上限设定（发电）

通讯地址:	0xA232	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：
0.0%~200.0%
设定说明
发电状态下的转矩上限，以变频器额定电流为基值。

A2-51　低速电流环Kp调整

通讯地址:	0xA233	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：
0.1~10.0
设定说明
-

A2-52　低速电流环Ki调整

通讯地址:	0xA234	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：
0.1~10.0
设定说明
-

A2-53　高速电流环Kp调整

通讯地址:	0xA235	生效方式:	-

最小值: 0.1
最大值: 10.0
默认值: 1.0
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.1~10.0

设定说明

-

A2-54 高速电流环Ki调整

通讯地址: 0xA236
最小值: 0.1
最大值: 10.0
默认值: 1.0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.1~10.0

设定说明

-

A2-55 零速锁定速度环Kp

通讯地址: 0xA237
最小值: 1
最大值: 100
默认值: 30
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

1~100

设定说明

-

A2-56 零速锁定速度环Ti

通讯地址: 0xA238
最小值: 0.001
最大值: 10.000
默认值: 0.500
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.001s~10.000s

设定说明

-

A2-57 惯量补偿增益

通讯地址: 0xA239
最小值: 1
最大值: 200
生效方式: -
单位: -
数据类型: 无符号16位

默认值: 1 更改方式: 实时更改

设定值:

1~200

设定说明

-

A2-58 零速锁定速度环切换频率

通讯地址: 0xA23A 生效方式: -

最小值: 0.00 单位: Hz

最大值: P2-02 数据类型: 无符号16位

默认值: 0.05 更改方式: 实时更改

设定值:

0.00Hz~P2-02

设定说明

-

A2-59 最大输出电压系数

通讯地址: 0xA23B 生效方式: -

最小值: 100 单位: -

最大值: 110 数据类型: 无符号16位

默认值: 100 更改方式: 实时更改

设定值:

100~110

设定说明

最大输出电压系数表示变频器最大输出电压的提升能力。

加大P2-21可以提高电机弱磁区的最大带载能力，但是电机电流纹波增加，会加重电机发热量；反之电机弱磁区的最大带载能力会下降，但是电机电流纹波减少，会减轻电机发热量。一般无需调节。

A2-60 输出电压滤波时间

通讯地址: 0xA23C 生效方式: -

最小值: 0.000 单位: s

最大值: 0.010 数据类型: 无符号16位

默认值: 0.000 更改方式: 实时更改

设定值:

0.000s~0.010s

设定说明

-

A2-61 零速锁定

通讯地址: 0xA23D 生效方式: -

最小值: 0 单位: -

最大值: 1
默认值: 0
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

A2-62 矢量过压抑制KP

通讯地址: 0xA23E
最小值: 0
最大值: 1000
默认值: 40
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~1000

设定说明

-

A2-63 加速补偿增益

通讯地址: 0xA23F
最小值: 0
最大值: 200
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~200

设定说明

-

A2-64 加速度补偿滤波时间

通讯地址: 0xA240
最小值: 0
最大值: 500
默认值: 10
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~500

设定说明

-

A2-65 矢量过压抑制使能

通讯地址: 0xA241
最小值: 0
最大值: 1
生效方式: -
单位: -
数据类型: 无符号16位

默认值: 1 更改方式： 实时更改

设定值：

0：不使能

1：使能

设定说明

-

A2-66 设定转矩滤波截止频率

通讯地址: 0xA242 生效方式: -

最小值: 50 单位： Hz

最大值: 1000 数据类型： 无符号16位

默认值: 500 更改方式： 停机更改

设定值：

50Hz~1000Hz

设定说明

-

A2-67 同步机初始位置角检测电流

通讯地址: 0xA243 生效方式: -

最小值: 50 单位： -

最大值: 180 数据类型： 无符号16位

默认值: 80 更改方式： 实时更改

设定值：

50~180

设定说明

-

A2-68 速度环参数自动计算使能

通讯地址: 0xA244 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型： 无符号16位

默认值: 0 更改方式： 停机更改

设定值：

0：不使能

1：使能

设定说明

-

A2-69 期望速度环带宽(高速)

通讯地址: 0xA245 生效方式: -

最小值: 0 单位： Hz

最大值: 3 数据类型： 无符号16位

默认值: 0 更改方式: 停机更改

设定值:

0Hz~3Hz

设定说明

-

A2-70 期望速度环带宽(低速)

通讯地址: 0xA246 生效方式: -

最小值: 1 单位: Hz

最大值: 10000 数据类型: 无符号16位

默认值: 100 更改方式: 实时更改

设定值:

1Hz~10000Hz

设定说明

-

A2-71 期望速度环带宽(零速)

通讯地址: 0xA247 生效方式: -

最小值: 1 单位: Hz

最大值: 10000 数据类型: 无符号16位

默认值: 100 更改方式: 实时更改

设定值:

1Hz~10000Hz

设定说明

-

A2-72 期望速度环阻尼比: (一般不更改)

通讯地址: 0xA248 生效方式: -

最小值: 0.100 单位: -

最大值: 65.000 数据类型: 无符号16位

默认值: 1.000 更改方式: 实时更改

设定值:

0.100~65.000

设定说明

-

A2-73 系统惯量(等效为启动时间)

通讯地址: 0xA249 生效方式: -

最小值: 0.001 单位: s

最大值: 50.000 数据类型: 无符号16位

默认值: 0.100 更改方式: 停机更改

设定值:

0.001s~50.000s

设定说明

-

A2-74　电机单机惯量（kg·m²）

通讯地址:	0xA24A	生效方式:	-
最小值:	0.001	单位：	-
最大值:	50.000	数据类型：	无符号16位
默认值:	0.001	更改方式：	停机更改

设定值：

0.001~50.000

设定说明

-

A2-75　惯量辨识最大频率

通讯地址:	0xA24B	生效方式:	-
最小值:	20	单位：	%
最大值:	100	数据类型：	无符号16位
默认值:	80	更改方式：	停机更改

设定值：

20%~100%

设定说明

-

A2-76　惯量辨识加速时间

通讯地址:	0xA24C	生效方式:	-
最小值:	1.0	单位：	s
最大值:	50.0	数据类型：	无符号16位
默认值:	10.0	更改方式：	停机更改

设定值：

1.0s~50.0s

设定说明

-

A2-77　速度环动态优化测试带宽1

通讯地址:	0xA24D	生效方式:	-
最小值:	1.0	单位：	Hz
最大值:	200.0	数据类型：	无符号16位
默认值:	5.0	更改方式：	不可更改

设定值：

1.0Hz~200.0Hz

设定说明

-

A2-78 **速度环动态优化测试带宽2**

通讯地址:	0xA24E	生效方式:	-
最小值:	1.0	单位:	Hz
最大值:	200.0	数据类型:	无符号16位
默认值:	10.0	更改方式:	不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A2-79 **速度环动态优化测试带宽3**

通讯地址:	0xA24F	生效方式:	-
最小值:	1.0	单位:	Hz
最大值:	100.0	数据类型:	无符号16位
默认值:	15.0	更改方式:	不可更改

设定值:

1.0Hz~100.0Hz

设定说明

-

A2-80 **速度环动态优化测试带宽4**

通讯地址:	0xA250	生效方式:	-
最小值:	1.0	单位:	Hz
最大值:	200.0	数据类型:	无符号16位
默认值:	20.0	更改方式:	不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A2-81 **惯量辨识及动态设定速度**

通讯地址:	0xA251	生效方式:	-
最小值:	0	单位:	-
最大值:	100	数据类型:	无符号16位
默认值:	30	更改方式:	停机更改

设定值:

0~100

设定说明

-

A2-82 **转子时间常数校验使能**

通讯地址: 0xA252 生效方式: -
最小值: 0 单位: -
最大值: 1 数据类型: 无符号16位
默认值: 0 更改方式: 不可更改

设定值:

0：不使能

1：使能

设定说明

-

A2-83 **转子时间常数校验转矩幅值**

通讯地址: 0xA253 生效方式: -
最小值: 10 单位: %
最大值: 100 数据类型: 无符号16位
默认值: 30 更改方式: 不可更改

设定值:

10%~100%

设定说明

-

A2-84 **转子时间常数校验次数**

通讯地址: 0xA254 生效方式: -
最小值: 1 单位: -
最大值: 6 数据类型: 无符号16位
默认值: 3 更改方式: 不可更改

设定值:

1~6

设定说明

-

A2-85 **惯量辨识使能**

通讯地址: 0xA255 生效方式: -
最小值: 0 单位: -
最大值: 1 数据类型: 无符号16位
默认值: 0 更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

A2-86 **惯量辨识速度环带宽设置值**

通讯地址: 0xA256　　生效方式: -
最小值: 0.1　　单位: Hz
最大值: 100.0　　数据类型: 无符号16位
默认值: 10.0　　更改方式: 停机更改

设定值:
0.1Hz~100.0Hz
设定说明
-

A2-87 **反电势计算使能**

通讯地址: 0xA257　　生效方式: -
最小值: 0　　单位: -
最大值: 1　　数据类型: 无符号16位
默认值: 0　　更改方式: 不可更改

设定值:
0：不使能
1：使能
设定说明
-

A2-88 **惯量辨识模式**

通讯地址: 0xA258　　生效方式: -
最小值: 0　　单位: -
最大值: 1　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:
0：加减速模式
1：三角波模式
设定说明
-

A2-89 **惯量辨识加减速系数**

通讯地址: 0xA259　　生效方式: -
最小值: 0.1　　单位: -
最大值: 10.0　　数据类型: 无符号16位
默认值: 1.0　　更改方式: 停机更改

设定值:
0.1~10.0
设定说明
-

A2-90 **解耦控制使能**

通讯地址: 0xA25A　　生效方式: -
最小值: 0　　单位: -
最大值: 1　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:

0：不使能
1：使能

设定说明

-

A2-91 **发电功率限制使能**

通讯地址: 0xA25B　　生效方式: -
最小值: 0　　单位: -
最大值: 1　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:

0：不使能
1：使能

设定说明

-

A2-92 **发电功率限制**

通讯地址: 0xA25C　　生效方式: -
最小值: 0.0　　单位: %
最大值: 200.0　　数据类型: 无符号16位
默认值: 20.0　　更改方式: 停机更改

设定值:

0.0%~200.0%

设定说明

-

A2-93 **闭环矢量磁通闭环与转矩线性度优化选择**

通讯地址: 0xA25D　　生效方式: -
最小值: 0　　单位: -
最大值: 1111　　数据类型: 无符号16位
默认值: 10　　更改方式: 停机更改

设定值:

个位：转矩模式磁通闭环使能
0：不使能
1：使能
十位：速度模式磁通闭环使能
0：不使能
1：使能
百位：速度模式转矩上限转矩线性化使能
0：不使能
1：使能
千位：转矩基值选择
0：选择电机额定电流
1：选择电机额定转矩电流
设定说明
-

A2-94　变频器输出电流上限

通讯地址:	0xA25E	生效方式:	-
最小值:	0.0	单位：	%
最大值:	170.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	停机更改

设定值：
0.0%~170.0%
设定说明
-

A2-95　第2电机控制方式

通讯地址:	0xA25F	生效方式:	-
最小值:	0	单位：	-
最大值:	5	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：无速度传感器矢量控制（SVC）
1：有速度传感器矢量控制（FVC）
2：V/f控制
3：保留
4：保留
5：同步机速度开环控制（PMVVC）
设定说明
0：SVC控制（无速度传感器矢量控制）
无速度传感器矢量控制，是一种开环矢量控制，适用于通常的高性能控制场合，一台变频器只能驱动一台电机。如机床、离心机、拉丝机、注塑机等负载。

1：FVC控制（有速度传感器矢量控制）
有速度传感器矢量控制，是一种闭环矢量控制，电机端必须加装编码器，变频器必须选配与编码器同类型的PG卡。适用于高精度的速度控制或转矩控制的场合。一台变频器只能驱动一台电机。如高速造纸机械、起重机械、电梯等负载。
2：V/f 控制（速度开环控制）
适用于对负载控制性能要求不高的场合，如风机、泵类负载。当用于一台变频器拖动多台电机的场合时，只能使用V/f控制方式。
3、4：保留
5：PMVVC（同步机速度开环控制）
适用于风机、水泵等精度要求不高的负载。

A2-96　第2电机加减速时间选择

通讯地址:	0xA260	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：加速时间1
1：加速时间2
2：加速时间3
3：加速时间4
设定说明

A2-97　第2电机转矩提升

通讯地址:	0xA261	生效方式:	-
最小值:	0.0	单位：	%
最大值:	30.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
0.0%~30.0%
设定说明
转矩提升功能一般应用于变频器低频情况下。V/f控制方式下变频器的输出力矩和频率成正比，在低频的情况下，电机低速运行时转矩很低，通过设置该参数提高变频器输出电压，使电流增大提高输出力矩。
使用该功能时不可将转矩提升功能调的太大，否则会出现报过载保护。

A2-98　第2电机振荡抑制增益模式

通讯地址:	0xA262	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	3	更改方式：	停机更改

设定值：

0：无效

1：保留

2：保留

3：有效

设定说明

V/f模式下，对于大多数的电机，低频时会出现速度振荡与电流振荡的现象，振荡可能会导致变频器过流。使能振荡抑制，可以消除振荡。

A2-99　第2电机振荡抑制增益

通讯地址:	0xA263	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0~100

设定说明

振荡增益越大，抑制效果越强。

6.20 A3 第3电机参数

A3-00　电机类型选择

通讯地址:	0xA300	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：普通异步电机

1：变频异步电机

2：同步机

设定说明

变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动；负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。

普通异步电机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。

A3-01　电机额定功率

通讯地址:	0xA301	生效方式:	-
最小值:	0.1	单位：	kW
最大值:	1000.0	数据类型：	无符号16位

默认值:	1.5	更改方式：	停机更改

设定值：

0.1kW~1000.0kW

设定说明

电机额定功率是指电机正常工作时的功率。它的值为(电机额定电压 x 电机额定电流)。选择电机功率时，应在电机能够满足机械负载要求的前提下，经济合理的选择电机功率。要考虑电机的发热、允许过载能力和启动能力等因素。

A3-02 电机额定电压

通讯地址:	0xA302	生效方式:	-
最小值:	1	单位：	V
最大值:	2000	数据类型：	无符号16位
默认值:	380	更改方式：	停机更改

设定值：

1V~2000V

设定说明

电机额定电压是指电机正常工作时的电压，一般指线电压。

A3-03 电机额定电流

通讯地址:	0xA303	生效方式:	-
最小值:	0.1	单位：	A
最大值:	6553.5	数据类型：	无符号16位
默认值:	9.0	更改方式：	停机更改

设定值：

0.1A~6553.5A

设定说明

电机额定电流是指电机正常工作时的电流，一般指线电流。

A3-04 电机额定频率

通讯地址:	0xA304	生效方式:	-
最小值:	0.01	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	停机更改

设定值：

0.01Hz~P0-10

设定说明

电机额定频率指的是电机在额定运行状态下，定子绕组所接电源的频率。

A3-05 电机额定转速

通讯地址:	0xA305	生效方式:	-
最小值:	1	单位：	rpm
最大值:	65535	数据类型：	无符号16位

默认值: 1460 更改方式： 停机更改

设定值：

1rpm~65535rpm

设定说明

电机额定转速指的是电机在额定运行状态下，转子的转速，单位为“转/分钟”（rpm）。

A3-06 异步/同步电机定子电阻

通讯地址: 0xA306 生效方式: -

最小值: 0.001 单位： Ω

最大值: 65.535 数据类型： 无符号16位

默认值: 1.204 更改方式： 停机更改

设定值：

0.001Ω~65.535Ω

设定说明

异步电机定子电阻是指异步电机定子绕组的直流电阻，该参数可通过电机参数辨识获得。

A3-07 异步电机转子电阻

通讯地址: 0xA307 生效方式: -

最小值: 0.001 单位： Ω

最大值: 65.535 数据类型： 无符号16位

默认值: 0.908 更改方式： 停机更改

设定值：

0.001Ω~65.535Ω

设定说明

异步电机转子电阻是指异步电机转子绕组的直流电阻，该参数可通过电机静止参数辨识或动态参数辨识获得。

A3-08 异步电机漏感抗

通讯地址: 0xA308 生效方式: -

最小值: 0.01 单位： mH

最大值: 655.35 数据类型： 无符号16位

默认值: 5.28 更改方式： 停机更改

设定值：

0.01mH~655.35mH

设定说明

异步电机漏感抗是电机绕组漏磁通引起的。在电机的绕组中，通入电流，将产生磁通，根据磁通的路径，可以分为：主磁通和漏磁通两部分。描述漏磁通可以用一个感抗表示，就是漏感抗。该参数可通过电机静止参数辨识或动态参数辨识获得。

A3-09　异步电机互感抗

通讯地址:	0xA309	生效方式:	-
最小值:	0.1	单位:	mH
最大值:	6553.5	数据类型:	无符号16位
默认值:	156.8	更改方式:	停机更改

设定值:

0.1mH~6553.5mH

设定说明

当电机的一线圈中的电流发生变化时，在临近的另一线圈中产生感应电动势，这个互感电动势可以通过互感抗参数来表示。

电机的互感抗可以大致分为两种，一种是定子或者转子的相间感抗，即定子的某一相和另一相之间的电抗，还有另一种是定子和转子之间的感抗。第一种的感抗是不随转子旋转变化的，而第二种会随着转子的转动，感抗也发生相应的变化。

这两种都是电机的互感抗，该参数可通过电机动态参数辨识获得。

A3-10　异步电机空载电流

通讯地址:	0xA30A	生效方式:	-
最小值:	0.1	单位:	A
最大值:	A3-03	数据类型:	无符号16位
默认值:	4.2	更改方式:	停机更改

设定值:

0.1A~A3-03

设定说明

异步电机空载电流是指电机空载运行时定子三相绕组中通过的电流，该参数可通过电机动态参数辨识获得。

A3-11　异步机铁芯饱和系数1

通讯地址:	0xA30B	生效方式:	-
最小值:	50.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	86.0	更改方式:	实时更改

设定值:

50.0%~100.0%

设定说明

异步机铁芯饱和系数1

A3-12　异步机铁芯饱和系数2

通讯地址:	0xA30C	生效方式:	-
最小值:	100.0	单位:	%
最大值:	150.0	数据类型:	无符号16位
默认值:	130.0	更改方式:	实时更改

设定值:

100.0%~150.0%

设定说明

异步机铁芯饱和系数2

A3-13 异步机铁芯饱和系数3

通讯地址:	0xA30D	生效方式:	-
最小值:	100.0	单位:	%
最大值:	170.0	数据类型:	无符号16位
默认值:	140.0	更改方式:	实时更改

设定值:

100.0%~170.0%

设定说明

异步机铁芯饱和系数3

A3-14 异步机铁芯饱和系数4

通讯地址:	0xA30E	生效方式:	-
最小值:	100.0	单位:	%
最大值:	180.0	数据类型:	无符号16位
默认值:	150.0	更改方式:	实时更改

设定值:

100.0%~180.0%

设定说明

异步机铁芯饱和系数4

A3-17 同步电机D轴电感

通讯地址:	0xA311	生效方式:	-
最小值:	0.01	单位:	mH
最大值:	655.35	数据类型:	无符号16位
默认值:	15.86	更改方式:	停机更改

设定值:

0.01mH~655.35mH

设定说明

同步电机D轴电感是指同步电机主磁极轴（纵轴）的电感值。

A3-18 同步电机Q轴电感

通讯地址:	0xA312	生效方式:	-
最小值:	0.01	单位:	mH
最大值:	655.35	数据类型:	无符号16位
默认值:	15.86	更改方式:	停机更改

设定值:

0.01mH~655.35mH

设定说明

同步电机Q轴电感是指同步电机转子相临磁极轴线间的中心线（交轴）的电感值。

A3-19 同步电机反电动势系数

通讯地址:	0xA313	生效方式:	-
最小值:	0.0	单位：	V
最大值:	6553.5	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：

0.0V~6553.5V

设定说明

为对应的A3-04设定额定频率下的电机反电动势线有效值。

A3-20 滤波时间常数(PMVVC使用)

通讯地址:	0xA314	生效方式:	-
最小值:	0.003	单位：	-
最大值:	65.535	数据类型：	无符号16位
默认值:	0.100	更改方式：	实时更改

设定值：

0.003~65.535

设定说明

PMVVC使用滤波时间常数。

A3-21 振荡抑制增益(PMVVC使用)

通讯地址:	0xA315	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

0~65535

设定说明

PMVVC使用振荡抑制增益系数。

A3-23 摩擦力矩百分比

通讯地址:	0xA317	生效方式:	-
最小值:	0.00	单位：	%
最大值:	100.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	停机更改

设定值：

0.00%~100.00%

设定说明

-

A3-24　电机极对数

通讯地址:	0xA318	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	2	更改方式:	实时更改

设定值:

0~65535

设定说明

-

A3-26　参数辨识运行方向(惯量辨识和同步机)

通讯地址:	0xA31A	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

0：反转运行

1：正转运行

设定说明

-

A3-27　编码器线数

通讯地址:	0xA31B	生效方式:	-
最小值:	1	单位:	-
最大值:	20000	数据类型:	无符号16位
默认值:	1024	更改方式:	停机更改

设定值:

1~20000

设定说明

编码器线数是指编码器码盘每转一圈发出的脉冲数。在有速度传感器矢量控制模式下（FVC），必须设置编码器线数与编码器名牌正确匹配，否则电机运行异常。

A3-28　编码器类型

通讯地址:	0xA31C	生效方式:	-
最小值:	0	单位:	-
最大值:	5	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：ABZ增量编码器

1：23位编码器

2：旋转变压器

设定说明

编码器分为增量式和绝对式两类。
增量式编码器是将位移转换成周期性的电信号，再把这个电信号转变成计数脉冲，用脉
冲的个数表示位移的大小。
绝对式编码器的每一个位置对应一个确定的数字码，因此它的示值只与测量的起始和终
止位置有关，而与测量的中间过程无关。

A3-29 PG信号滤波

通讯地址:	0xA31D	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:
0：非自适应滤波
1：自适应滤波
2：固定互锁
3：自动互锁
设定说明
-

A3-30 编码器接线标志

通讯地址:	0xA31E	生效方式:	-
最小值:	0	单位:	-
最大值:	11	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:
个位：AB信号的方向或旋转方向
0：正向
1：反向
十位：保留
设定说明
-

A3-31 编码器零点位置角

通讯地址:	0xA31F	生效方式:	-
最小值:	0.0	单位:	°
最大值:	359.9	数据类型:	无符号16位
默认值:	0.0	更改方式:	停机更改

设定值:
0.0°~359.9°

设定说明

-

A3-32 电机齿轮比分子

通讯地址:	0xA320	生效方式:	-
最小值:	1	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

1~65535

设定说明

-

A3-33 电机齿轮比分母

通讯地址:	0xA321	生效方式:	-
最小值:	1	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

1~65535

设定说明

-

A3-34 旋变极对数

通讯地址:	0xA322	生效方式:	-
最小值:	1	单位:	-
最大值:	32	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

1~32

设定说明

旋转变压器是一种电磁式传感器，又称同步分解器。它是一种测量角度用的小型交流电
动机，用来测量旋转物体的转轴角位移和角速度，由定子和转子组成。旋变极对数是指
旋转变压器的磁极对数，极对数越高，精度越高。

A3-36 PG断线检测使能

通讯地址:	0xA324	生效方式:	-
最小值:	0	单位:	-
最大值:	11	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值：

个位：PG断线检测

0：不使能

1：使能

十位：保留

设定说明

PG断线检测是否使能。

A3-37 参数辨识选择

通讯地址:	0xA325	生效方式:	-
最小值:	0	单位：	-
最大值:	14	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无操作

1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0)

2：异步机动态参数辨识(支持带负载动态参数辨识)

3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO)

4：异步机动态参数辨识2(增加惯量辨识仅支持FVC)

5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC)

11：同步机带载参数辨识(不调反电动势)

12：同步机空载动态完整参数辨识

13：同步机静态参数辨识(不参数辨识编码器安装角)

14：同步机惯量辨识(仅支持FVC)

设定说明

0：无操作

不参数辨识

1：异步机静态部分参数辨识

异步机静止部分参数参数辨识，电机与负载很难脱离，且不允许动态参数辨识运行的场合。辨识部分电机参数：A3-06（电机定子电阻）、A3-07（异步电机转子电阻）、A3-08（异步电机漏感抗），其他参数使用默认值。

2：异步机动态参数辨识

电机与应用系统可以较高转速转动的场合，支持空载、轻载（50%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A3-06（异步电机定子电阻）、A3-07（异步电机转子电阻）、A3-08（异步电机漏感抗）、A3-09（异步电机互感抗）、A3-10（异步电机空载电流）、A3-30（编码器相序）。

3：异步机静态完整参数辨识

异步机静态完整参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识所有电机参数：A3-06（电机定子电阻）、A3-07（异步电机转子电阻）、A3-08（异步电机漏感抗）、A3-09（异步电机互感抗）、A3-10（异步电机空载电流）。

4：异步机动态参数辨识2(增加惯量辨识 仅支持FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（80%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A3-06（电机定子电阻）、A3-07（异步电机转子电阻）、A3-08（异步电机漏感抗）、A3-09（异步电机互感抗）、A3-10（异步电机空载电流）、A3-30（编码器相序）、P2-35（系统惯量）。
5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（10%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A3-06（电机定子电阻）、A3-07（异步电机转子电阻）、A3-08（异步电机漏感抗）、A3-09（异步电机互感抗）、A3-10（异步电机空载电流）、A3-30（编码器相序）。
11：同步机带载参数辨识(不调反电动势)
同步机带载参数辨识，电机与负载很难脱离的场合。FVC模式下辨识的电机参数：A3-06（电机定子电阻）、A3-17（同步机D轴电感）、A3-18（同步机Q轴电感）、A3-20（滤波时间常数）、A3-21（振荡抑制增益）、A3-30（编码器相序）、A3-31（编码器零点位置角）。其他模式辨识的电机参数：A3-06（电机定子电阻）、A3-17（同步机D轴电感）、A3-18（同步机Q轴电感）、A3-20（滤波时间常数）、A3-21（振荡抑制增益）。
12：同步机空载动态完整参数辨识
同步机空载动态完整参数辨识，电机与负载可以脱离运行的场合。FVC模式下辨识的电机参数：A3-06（电机定子电阻）、A3-17（同步机D轴电感）、A3-18（同步机Q轴电感）、A3-19（同步机反电动势）、A3-20（滤波时间常数）、A3-21（振荡抑制增益）、A3-30（编码器相序）、A3-31（编码器零点位置角）。其他模式辨识的电机参数：A3-06（电机定子电阻）、A3-17（同步机D轴电感）、A3-18（同步机Q轴电感）、A3-19（同步机反电动势）、A3-20（滤波时间常数）、A3-21（振荡抑制增益）。
13：同步机静态参数辨识(不参数辨识编码器安装角)
同步机静态参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识的电机参数：A3-06（电机定子电阻）、A3-17（同步机D轴电感）、A3-18（同步机Q轴电感）、A3-20（滤波时间常数）、A3-21（振荡抑制增益）。
14：同步机惯量辨识(仅支持FVC)
同步机惯量辨识，需要高动态响应的场合，参数辨识时需要连接负载。辨识的电机参数：P2-35（系统惯量）、P2-36（电机和负载惯量）。

A3-38 低速速度环Kp

通讯地址:	0xA326	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：
1~200

设定说明

速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。低速速度环Kp是低速时使用。

A3-39 低速速度环Ti

通讯地址:	0xA327	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.500	更改方式：	实时更改

设定值：

0.001s~10.000s

设定说明

速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。低速速度环Ti是低速时使用。

A3-40 切换频率1

通讯地址:	0xA328	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P2-05	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：

0.00Hz~P2-05

设定说明

速度环PI参数分低速和高速两组。运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01；运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。

A3-41 高速速度环Kp

通讯地址:	0xA329	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	20	更改方式：	实时更改

设定值：

1~200

设定说明

速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。高速速度环Kp是高速时使用的。

A3-42 **高速速度环Ti**

通讯地址:	0xA32A	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	1.000	更改方式：	实时更改

设定值：

0.001s~10.000s

设定说明

速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。高速速度环Ti是高速时使用。

A3-43 **切换频率2**

通讯地址:	0xA32B	生效方式:	-
最小值:	P2-02	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	10.00	更改方式：	实时更改

设定值：

P2-02~P0-10

设定说明

速度环PI参数分低速和高速两组，运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。

A3-44 **VC转差补偿调整**

通讯地址:	0xA32C	生效方式:	-
最小值:	50	单位：	%
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

50%~200%

设定说明

SVC控制模式下，此参数可调节电机的稳速精度，例如电机运行频率低于变频器输出频率时，可增大该参数。

FVC控制模式下，此参数可以调节同样负载下变频器的输出电流大小，如在大功率变频器中，若带载能力较弱时，可逐渐调小此参数。一般情况下，无需调整此参数值。

A3-45 **速度反馈滤波时间**

通讯地址:	0xA32D	生效方式:	-
最小值:	0.000	单位：	s

最大值:	0.100	数据类型：	无符号16位
默认值:	0.004	更改方式：	实时更改

设定值：

0.000s~0.100s

设定说明

在FVC控制模式下（P0-01=1），速度环反馈滤波时间有效，通过调节该参数改善电机稳定性，速度环反馈滤波时间增大，可以改善电机稳定性，动态响应变弱；速度环反馈滤波时间减小，动态响应加强。该参数值过小时会引起电机振荡。一般情况下，电机的稳定性可满足要求，无需调节该参数。

A3-46 VC减速过励磁增益

通讯地址:	0xA32E	生效方式:	-
最小值:	0	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	64	更改方式：	实时更改

设定值：

0~200

设定说明

-

A3-47 速度控制下转矩上限源（电动）

通讯地址:	0xA32F	生效方式:	-
最小值:	0	单位：	-
最大值:	7	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定

6：MIN(AI1,AI2)

7：MAX(AI1,AI2)

设定说明

0：上限数字设定(P2-10)

速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。

1：AI1

速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

2：AI2
速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。
3：AI3
速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。
4：PULSE脉冲设定（DI5）
速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的转矩值。
5：通信给定
主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。
6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。

A3-48　速度控制下转矩上限设定（电动）

通讯地址:	0xA330	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：
0.0%~200.0%
设定说明
电动状态下的转矩上限，以变频器额定电流为基值。

A3-49　速度控制下转矩上限源（发电）

通讯地址:	0xA331	生效方式:	-
最小值:	0	单位：	-
最大值:	8	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）
1：AI1
2：AI2
3：AI3
4：PULSE脉冲设定（DI5）
5：通信给定
6：MIN(AI1,AI2)
7：MAX(AI1,AI2)
8：上限数字设定（P2-12）

设定说明

0：上限数字设定(P2-10)
速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。
1：AI1
速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。
2：AI2
速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。
3：AI3
速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。
4：PULSE脉冲设定（DI5）
速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的频率值。
5：通信给定
主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合
6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。
8上限数字设定（P2-12）
速度控制转矩上限通过上限数字设定，设定值为P2-12（制动转矩上限数字设定）的值。

A3-50　速度控制下转矩上限设定（发电）

通讯地址:	0xA332	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位

默认值: 150.0 更改方式： 实时更改

设定值：

0.0%~200.0%

设定说明

发电状态下的转矩上限，以变频器额定电流为基值。

A3-51 低速电流环Kp调整

通讯地址: 0xA333 生效方式: -

最小值: 0.1 单位： -

最大值: 10.0 数据类型： 无符号16位

默认值: 1.0 更改方式： 实时更改

设定值：

0.1~10.0

设定说明

-

A3-52 低速电流环Ki调整

通讯地址: 0xA334 生效方式: -

最小值: 0.1 单位： -

最大值: 10.0 数据类型： 无符号16位

默认值: 1.0 更改方式： 实时更改

设定值：

0.1~10.0

设定说明

-

A3-53 高速电流环Kp调整

通讯地址: 0xA335 生效方式: -

最小值: 0.1 单位： -

最大值: 10.0 数据类型： 无符号16位

默认值: 1.0 更改方式： 实时更改

设定值：

0.1~10.0

设定说明

-

A3-54 高速电流环Ki调整

通讯地址: 0xA336 生效方式: -

最小值: 0.1 单位： -

最大值: 10.0 数据类型： 无符号16位

默认值: 1.0 更改方式： 实时更改

设定值：

0.1~10.0

设定说明

-

A3-55 零速锁定速度环Kp

通讯地址:	0xA337	生效方式:	-
最小值:	1	单位:	-
最大值:	100	数据类型:	无符号16位
默认值:	30	更改方式:	实时更改

设定值:

1~100

设定说明

-

A3-56 零速锁定速度环Ti

通讯地址:	0xA338	生效方式:	-
最小值:	0.001	单位:	s
最大值:	10.000	数据类型:	无符号16位
默认值:	0.500	更改方式:	实时更改

设定值:

0.001s~10.000s

设定说明

-

A3-57 惯量补偿增益

通讯地址:	0xA339	生效方式:	-
最小值:	1	单位:	-
最大值:	200	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:

1~200

设定说明

-

A3-58 零速锁定速度环切换频率

通讯地址:	0xA33A	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P2-02	数据类型:	无符号16位
默认值:	0.05	更改方式:	实时更改

设定值:

0.00Hz~P2-02

设定说明

-

A3-59 最大输出电压系数

通讯地址:	0xA33B	生效方式:	-
最小值:	100	单位:	-
最大值:	110	数据类型:	无符号16位
默认值:	100	更改方式:	实时更改

设定值:

100~110

设定说明

最大输出电压系数表示变频器最大输出电压的提升能力。

加大P2-21可以提高电机弱磁区的最大带载能力，但是电机电流纹波增加，会加重电机发热量；反之电机弱磁区的最大带载能力会下降，但是电机电流纹波减少，会减轻电机发热量。一般无需调节。

A3-60 输出电压滤波时间

通讯地址:	0xA33C	生效方式:	-
最小值:	0.000	单位:	s
最大值:	0.010	数据类型:	无符号16位
默认值:	0.000	更改方式:	实时更改

设定值:

0.000s~0.010s

设定说明

-

A3-61 零速锁定

通讯地址:	0xA33D	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

-

A3-62 矢量过压抑制KP

通讯地址:	0xA33E	生效方式:	-
最小值:	0	单位:	-
最大值:	1000	数据类型:	无符号16位
默认值:	40	更改方式:	实时更改

设定值：
0~1000
设定说明
-

A3-63 加速补偿增益

通讯地址:	0xA33F	生效方式:	-
最小值:	0	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0~200
设定说明
-

A3-64 加速度补偿滤波时间

通讯地址:	0xA340	生效方式:	-
最小值:	0	单位：	-
最大值:	500	数据类型：	无符号16位
默认值:	10	更改方式：	实时更改

设定值：
0~500
设定说明
-

A3-65 矢量过压抑制使能

通讯地址:	0xA341	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：
0：不使能
1：使能
设定说明
-

A3-66 设定转矩滤波截止频率

通讯地址:	0xA342	生效方式:	-
最小值:	50	单位：	Hz
最大值:	1000	数据类型：	无符号16位
默认值:	500	更改方式：	停机更改

设定值：

50Hz~1000Hz

设定说明

-

A3-67 同步机初始位置角检测电流

通讯地址:	0xA343	生效方式:	-
最小值:	50	单位:	-
最大值:	180	数据类型:	无符号16位
默认值:	80	更改方式:	实时更改

设定值:

50~180

设定说明

-

A3-68 速度环参数自动计算使能

通讯地址:	0xA344	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

-

A3-69 期望速度环带宽(高速)

通讯地址:	0xA345	生效方式:	-
最小值:	0	单位:	Hz
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0Hz~3Hz

设定说明

-

A3-70 期望速度环带宽(低速)

通讯地址:	0xA346	生效方式:	-
最小值:	1	单位:	Hz
最大值:	10000	数据类型:	无符号16位
默认值:	100	更改方式:	实时更改

设定值:

1Hz~10000Hz

设定说明

-

A3-71 **期望速度环带宽(零速)**

通讯地址:	0xA347	生效方式:	-
最小值:	1	单位:	Hz
最大值:	10000	数据类型:	无符号16位
默认值:	100	更改方式:	实时更改

设定值:

1Hz~10000Hz

设定说明

-

A3-72 **期望速度环阻尼比: (一般不更改)**

通讯地址:	0xA348	生效方式:	-
最小值:	0.100	单位:	-
最大值:	65.000	数据类型:	无符号16位
默认值:	1.000	更改方式:	实时更改

设定值:

0.100~65.000

设定说明

-

A3-73 **系统惯量(等效为启动时间)**

通讯地址:	0xA349	生效方式:	-
最小值:	0.001	单位:	s
最大值:	50.000	数据类型:	无符号16位
默认值:	0.100	更改方式:	停机更改

设定值:

0.001s~50.000s

设定说明

-

A3-74 **电机单机惯量（kg·m²)**

通讯地址:	0xA34A	生效方式:	-
最小值:	0.001	单位:	-
最大值:	50.000	数据类型:	无符号16位
默认值:	0.001	更改方式:	停机更改

设定值:

0.001~50.000

设定说明

-

A3-75 **惯量辨识最大频率**

通讯地址: 0xA34B
最小值: 20
最大值: 100
默认值: 80
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 停机更改

设定值:

20%~100%

设定说明

-

A3-76 **惯量辨识加速时间**

通讯地址: 0xA34C
最小值: 1.0
最大值: 50.0
默认值: 10.0
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 停机更改

设定值:

1.0s~50.0s

设定说明

-

A3-77 **速度环动态优化测试带宽1**

通讯地址: 0xA34D
最小值: 1.0
最大值: 200.0
默认值: 5.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A3-78 **速度环动态优化测试带宽2**

通讯地址: 0xA34E
最小值: 1.0
最大值: 200.0
默认值: 10.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A3-79 **速度环动态优化测试带宽3**

通讯地址: 0xA34F
生效方式: -

最小值: 1.0
最大值: 100.0
默认值: 15.0
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~100.0Hz

设定说明

-

A3-80 速度环动态优化测试带宽4

通讯地址: 0xA350
最小值: 1.0
最大值: 200.0
默认值: 20.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A3-81 惯量辨识及动态设定速度

通讯地址: 0xA351
最小值: 0
最大值: 100
默认值: 30
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~100

设定说明

-

A3-82 转子时间常数校验使能

通讯地址: 0xA352
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0：不使能

1：使能

设定说明

-

A3-83 转子时间常数校验转矩幅值

通讯地址: 0xA353
最小值: 10
生效方式: -
单位: %

最大值: 100
默认值: 30
数据类型: 无符号16位
更改方式: 不可更改

设定值：

10%~100%

设定说明

-

A3-84 转子时间常数校验次数

通讯地址: 0xA354
最小值: 1
最大值: 6
默认值: 3
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 不可更改

设定值：

1~6

设定说明

-

A3-85 惯量辨识使能

通讯地址: 0xA355
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值：

0：不使能

1：使能

设定说明

-

A3-86 惯量辨识速度环带宽设置值

通讯地址: 0xA356
最小值: 0.1
最大值: 100.0
默认值: 10.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 停机更改

设定值：

0.1Hz~100.0Hz

设定说明

-

A3-87 反电势计算使能

通讯地址: 0xA357
最小值: 0
最大值: 1
生效方式: -
单位: -
数据类型: 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0：不使能

1：使能

设定说明

-

A3-88 惯量辨识模式

通讯地址: 0xA358 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型： 无符号16位

默认值: 0 更改方式： 停机更改

设定值：

0：加减速模式

1：三角波模式

设定说明

-

A3-89 惯量辨识加减速系数

通讯地址: 0xA359 生效方式: -

最小值: 0.1 单位： -

最大值: 10.0 数据类型： 无符号16位

默认值: 1.0 更改方式： 停机更改

设定值：

0.1~10.0

设定说明

-

A3-90 解耦控制使能

通讯地址: 0xA35A 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型： 无符号16位

默认值: 0 更改方式： 停机更改

设定值：

0：不使能

1：使能

设定说明

-

A3-91 发电功率限制使能

通讯地址: 0xA35B 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型: 无符号16位
默认值: 0 更改方式: 停机更改

设定值：

0：不使能

1：使能

设定说明

-

A3-92 发电功率限制

通讯地址: 0xA35C 生效方式: -
最小值: 0.0 单位: %
最大值: 200.0 数据类型: 无符号16位
默认值: 20.0 更改方式: 停机更改

设定值：

0.0%~200.0%

设定说明

-

A3-93 闭环矢量磁通闭环与转矩线性度优化选择

通讯地址: 0xA35D 生效方式: -
最小值: 0 单位: -
最大值: 1111 数据类型: 无符号16位
默认值: 10 更改方式: 停机更改

设定值：

个位：转矩模式磁通闭环使能

0：不使能

1：使能

十位：速度模式磁通闭环使能

0：不使能

1：使能

百位：速度模式转矩上限转矩线性化使能

0：不使能

1：使能

千位：转矩基值选择

0：选择电机额定电流

1：选择电机额定转矩电流

设定说明

-

A3-94 变频器输出电流上限

通讯地址: 0xA35E 生效方式: -
最小值: 0.0 单位: %

最大值:	170.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	停机更改

设定值：

0.0%~170.0%

设定说明

-

A3-95 第3电机控制方式

通讯地址:	0xA35F	生效方式:	-
最小值:	0	单位：	-
最大值:	5	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无速度传感器矢量控制（SVC）

1：有速度传感器矢量控制（FVC）

2：V/f控制

3：保留

4：保留

5：同步机速度开环控制（PMVVC）

设定说明

0：SVC控制（无速度传感器矢量控制）

无速度传感器矢量控制，是一种开环矢量控制，适用于通常的高性能控制场合，一台变频器只能驱动一台电机。如机床、离心机、拉丝机、注塑机等负载。

1：FVC控制（有速度传感器矢量控制）

有速度传感器矢量控制，是一种闭环矢量控制，电机端必须加装编码器，变频器必须选配与编码器同类型的PG卡。适用于高精度的速度控制或转矩控制的场合。一台变频器只能驱动一台电机。如高速造纸机械、起重机械、电梯等负载。

2：V/f 控制（速度开环控制）

适用于对负载控制性能要求不高的场合，如风机、泵类负载。当用于一台变频器拖动多台电机的场合时，只能使用V/f控制方式。

3、4：保留

5：PMVVC（同步机速度开环控制）

适用于风机、水泵等精度要求不高的负载。

A3-96 第3电机加减速时间选择

通讯地址:	0xA360	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：加速时间1
1：加速时间2
2：加速时间3
3：加速时间4
设定说明

A3-97　第3电机转矩提升

通讯地址:	0xA361	生效方式:	-
最小值:	0.0	单位：	%
最大值:	30.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：
0.0%~30.0%
设定说明
转矩提升功能一般应用于变频器低频情况下。V/f控制方式下变频器的输出力矩和频率成正比，在低频的情况下，电机低速运行时转矩很低，通过设置该参数提高变频器输出电压，使电流增大提高输出力矩。
使用该功能时不可将转矩提升功能调的太大，否则会出现报过载保护。

A3-98　第3电机振荡抑制增益模式

通讯地址:	0xA362	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	3	更改方式：	停机更改

设定值：
0：无效
1：保留
2：保留
3：有效
设定说明
V/f模式下，对于大多数的电机，低频时会出现速度振荡与电流振荡的现象，振荡可能会导致变频器过流。使能振荡抑制，可以消除振荡。

A3-99　第3电机振荡抑制增益

通讯地址:	0xA363	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0~100

设定说明

振荡增益越大，抑制效果越强。

6.21 A4 第4电机参数

A4-00 **电机类型选择**

通讯地址:	0xA400	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：普通异步电机

1：变频异步电机

2：同步机

设定说明

变频电机的特点是根据负荷调整频率，改变转速。电压低的地方，变频电机可以降低频率，可靠启动；负荷轻的地方，可以用变频电机降低频率，减少转速和电流，节约电能。

普通异步电机适用于电压正常但经常满负荷的场所。由于是按恒频恒压设计，不可能完全适应变频调速的要求。

A4-01 **电机额定功率**

通讯地址:	0xA401	生效方式:	-
最小值:	0.1	单位：	kW
最大值:	1000.0	数据类型：	无符号16位
默认值:	1.5	更改方式：	停机更改

设定值：

0.1kW~1000.0kW

设定说明

电机额定功率是指电机正常工作时的功率。它的值为(电机额定电压 x 电机额定电流)。选择电机功率时，应在电机能够满足机械负载要求的前提下，经济合理的选择电机功率。要考虑电机的发热、允许过载能力和启动能力等因素。

A4-02 **电机额定电压**

通讯地址:	0xA402	生效方式:	-
最小值:	1	单位：	V
最大值:	2000	数据类型：	无符号16位
默认值:	380	更改方式：	停机更改

设定值：

1V~2000V

设定说明

电机额定电压是指电机正常工作时的电压，一般指线电压。

A4-03 **电机额定电流**

通讯地址:	0xA403	生效方式:	-
最小值:	0.1	单位：	A
最大值:	6553.5	数据类型：	无符号16位
默认值:	9.0	更改方式：	停机更改

设定值：

0.1A~6553.5A

设定说明

电机额定电流是指电机正常工作时的电流，一般指线电流。

A4-04 **电机额定频率**

通讯地址:	0xA404	生效方式:	-
最小值:	0.01	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	50.00	更改方式：	停机更改

设定值：

0.01Hz~F0-10

设定说明

电机额定频率指的是电机在额定运行状态下，定子绕组所接电源的频率。

A4-05 **电机额定转速**

通讯地址:	0xA405	生效方式:	-
最小值:	1	单位：	rpm
最大值:	65535	数据类型：	无符号16位
默认值:	1460	更改方式：	停机更改

设定值：

1rpm~65535rpm

设定说明

电机额定转速指的是电机在额定运行状态下，转子的转速，单位为“转/分钟”（rpm）。

A4-06 **异步/同步电机定子电阻**

通讯地址:	0xA406	生效方式:	-
最小值:	0.001	单位：	Ω
最大值:	65.535	数据类型：	无符号16位
默认值:	1.204	更改方式：	停机更改

设定值：

0.001Ω~65.535Ω

设定说明

异步电机定子电阻是指异步电机定子绕组的直流电阻，该参数可通过电机参数辨识获得。

A4-07 异步电机转子电阻

通讯地址:	0xA407	生效方式:	-
最小值:	0.001	单位：	Ω
最大值:	65.535	数据类型：	无符号16位
默认值:	0.908	更改方式：	停机更改

设定值：

0.001Ω~65.535Ω

设定说明

异步电机转子电阻是指异步电机转子绕组的直流电阻，该参数可通过电机静止参数辨识或动态参数辨识获得。

A4-08 异步电机漏感抗

通讯地址:	0xA408	生效方式:	-
最小值:	0.01	单位：	mH
最大值:	655.35	数据类型：	无符号16位
默认值:	5.28	更改方式：	停机更改

设定值：

0.01mH~655.35mH

设定说明

异步电机漏感抗是电机绕组漏磁通引起的。在电机的绕组中，通入电流，将产生磁通，根据磁通的路径，可以分为：主磁通和漏磁通两部分。描述漏磁通可以用一个感抗表示，就是漏感抗。该参数可通过电机静止参数辨识或动态参数辨识获得。

A4-09 异步电机互感抗

通讯地址:	0xA409	生效方式:	-
最小值:	0.1	单位：	mH
最大值:	6553.5	数据类型：	无符号16位
默认值:	156.8	更改方式：	停机更改

设定值：

0.1mH~6553.5mH

设定说明

当电机的一线圈中的电流发生变化时，在临近的另一线圈中产生感应电动势，这个互感电动势可以通过互感抗参数来表示。

电机的互感抗可以大致分为两种，一种是定子或者转子的相间感抗，即定子的某一相和另一相之间的电抗，还有另一种是定子和转子之间的感抗。第一种的感抗是不随转子旋转变化的，而第二种会随着转子的转动，感抗也发生相应的变化。

这两种都是电机的互感抗，该参数可通过电机动态参数辨识获得。

A4-10 异步电机空载电流

通讯地址:	0xA40A	生效方式:	-
最小值:	0.1	单位:	A
最大值:	A4-03	数据类型:	无符号16位
默认值:	4.2	更改方式:	停机更改

设定值:

0.1A~A4-03

设定说明

异步电机空载电流是指电机空载运行时定子三相绕组中通过的电流，该参数可通过电机动态参数辨识获得。

A4-11 异步机铁芯饱和系数1

通讯地址:	0xA40B	生效方式:	-
最小值:	50.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	86.0	更改方式:	实时更改

设定值:

50.0%~100.0%

设定说明

异步机铁芯饱和系数1

A4-12 异步机铁芯饱和系数2

通讯地址:	0xA40C	生效方式:	-
最小值:	100.0	单位:	%
最大值:	150.0	数据类型:	无符号16位
默认值:	130.0	更改方式:	实时更改

设定值:

100.0%~150.0%

设定说明

异步机铁芯饱和系数2

A4-13 异步机铁芯饱和系数3

通讯地址:	0xA40D	生效方式:	-
最小值:	100.0	单位:	%
最大值:	170.0	数据类型:	无符号16位
默认值:	140.0	更改方式:	实时更改

设定值:

100.0%~170.0%

设定说明

异步机铁芯饱和系数3

A4-14 **异步机铁芯饱和系数4**

通讯地址:	0xA40E	生效方式:	-
最小值:	100.0	单位:	%
最大值:	180.0	数据类型:	无符号16位
默认值:	150.0	更改方式:	实时更改

设定值:

100.0%~180.0%

设定说明

异步机铁芯饱和系数4

A4-17 **同步电机D轴电感**

通讯地址:	0xA411	生效方式:	-
最小值:	0.01	单位:	mH
最大值:	655.35	数据类型:	无符号16位
默认值:	15.86	更改方式:	停机更改

设定值:

0.01mH~655.35mH

设定说明

同步电机D轴电感是指同步电机主磁极轴（纵轴）的电感值。

A4-18 **同步电机Q轴电感**

通讯地址:	0xA412	生效方式:	-
最小值:	0.01	单位:	mH
最大值:	655.35	数据类型:	无符号16位
默认值:	15.86	更改方式:	停机更改

设定值:

0.01mH~655.35mH

设定说明

同步电机Q轴电感是指同步电机转子相临磁极轴线间的中心线（交轴）的电感值。

A4-19 **同步电机反电动势系数**

通讯地址:	0xA413	生效方式:	-
最小值:	0.0	单位:	V
最大值:	6553.5	数据类型:	无符号16位
默认值:	0.0	更改方式:	停机更改

设定值:

0.0V~6553.5V

设定说明

为对应的A4-04设定额定频率下的电机反电动势线有效值。

A4-20 **滤波时间常数(PMVVC使用)**

通讯地址:	0xA414	生效方式:	-

最小值:	0.003	单位：	-
最大值:	65.535	数据类型：	无符号16位
默认值:	0.100	更改方式：	实时更改

设定值：

0.003~65.535

设定说明

PMVVC使用滤波时间常数。

A4-21 振荡抑制增益(PMVVC使用)

通讯地址:	0xA415	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

0~65535

设定说明

PMVVC使用振荡抑制增益系数。

A4-23 摩擦力矩百分比

通讯地址:	0xA417	生效方式:	-
最小值:	0.00	单位：	%
最大值:	100.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	停机更改

设定值：

0.00%~100.00%

设定说明

-

A4-24 电机极对数

通讯地址:	0xA418	生效方式:	-
最小值:	0	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	2	更改方式：	实时更改

设定值：

0~65535

设定说明

-

A4-26 参数辨识运行方向(惯量辨识和同步机)

通讯地址:	0xA41A	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位

默认值: 1 更改方式： 停机更改

设定值：

0：反转运行

1：正转运行

设定说明

-

A4-27 编码器线数

通讯地址: 0xA41B 生效方式: -

最小值: 1 单位： -

最大值: 20000 数据类型： 无符号16位

默认值: 1024 更改方式： 停机更改

设定值：

1~20000

设定说明

编码器线数是指编码器码盘每转一圈发出的脉冲数。在有速度传感器矢量控制模式下（FVC），必须正确设置编码器脉冲数，否则电机运行异常。

A4-28 编码器类型

通讯地址: 0xA41C 生效方式: -

最小值: 0 单位： -

最大值: 5 数据类型： 无符号16位

默认值: 0 更改方式： 停机更改

设定值：

0：ABZ增量编码器

1：23位编码器

2：旋转变压器

设定说明

编码器分为增量式和绝对式两类。

增量式编码器是将位移转换成周期性的电信号，再把这个电信号转变成计数脉冲，用脉

冲的个数表示位移的大小。

绝对式编码器的每一个位置对应一个确定的数字码，因此它的示值只与测量的起始和终

止位置有关，而与测量的中间过程无关。

A4-29 PG信号滤波

通讯地址: 0xA41D 生效方式: -

最小值: 0 单位： -

最大值: 3 数据类型： 无符号16位

默认值: 1 更改方式： 停机更改

设定值：

0：非自适应滤波
1：自适应滤波
2：固定互锁
3：自动互锁
设定说明
-

A4-30 编码器接线标志

通讯地址:	0xA41E	生效方式:	-
最小值:	0	单位：	-
最大值:	11	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
个位：AB信号的方向或旋转方向
0：正向
1：反向
十位：保留
设定说明
-

A4-31 编码器零点位置角

通讯地址:	0xA41F	生效方式:	-
最小值:	0.0	单位：	°
最大值:	359.9	数据类型：	无符号16位
默认值:	0.0	更改方式：	停机更改

设定值：
0.0°~359.9°
设定说明
-

A4-32 电机齿轮比分子

通讯地址:	0xA420	生效方式:	-
最小值:	1	单位：	-
最大值:	65535	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：
1~65535
设定说明
-

A4-33 电机齿轮比分母

通讯地址:	0xA421	生效方式:	-

最小值:	1	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

1~65535

设定说明

-

A4-34 旋变极对数

通讯地址:	0xA422	生效方式:	-
最小值:	1	单位:	-
最大值:	32	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

1~32

设定说明

旋转变压器是一种电磁式传感器，又称同步分解器。它是一种测量角度用的小型交流电
动机，用来测量旋转物体的转轴角位移和角速度，由定子和转子组成。旋变极对数是指
旋转变压器的磁极对数，极对数越高，精度越高。

A4-36 PG断线检测使能

通讯地址:	0xA424	生效方式:	-
最小值:	0	单位:	-
最大值:	11	数据类型:	无符号16位
默认值:	1	更改方式:	停机更改

设定值:

个位：PG断线检测

0：不使能

1：使能

十位：保留

设定说明

PG断线检测是否使能。

A4-37 参数辨识选择

通讯地址:	0xA425	生效方式:	-
最小值:	0	单位:	-
最大值:	14	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：无操作
1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0)
2：异步机动态参数辨识(支持带负载动态参数辨识)
3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO)
4：异步机动态参数辨识2(增加惯量辨识仅支持FVC)
5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC)
11：同步机带载参数辨识(不调反电动势)
12：同步机空载动态完整参数辨识
13：同步机静态参数辨识(不参数辨识编码器安装角)
14：同步机惯量辨识(仅支持FVC)

设定说明

0：无操作
不参数辨识
1：异步机静态部分参数辨识
异步机静止部分参数参数辨识，电机与负载很难脱离，且不允许动态参数辨识运行的场合。辨识部分电机参数：A4-06（电机定子电阻）、A4-07（异步电机转子电阻）、A4-08（异步电机漏感抗），其他参数使用默认值。
2：异步机动态参数辨识
电机与应用系统可以较高转速转动的场合，支持空载、轻载（50%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A4-06（异步电机定子电阻）、A4-07（异步电机转子电阻）、A4-08（异步电机漏感抗）、A4-09（异步电机互感抗）、A4-10（异步电机空载电流）、A4-30（编码器相序）。
3：异步机静态完整参数辨识
异步机静态完整参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识所有电机参数：A4-06（电机定子电阻）、A4-07（异步电机转子电阻）、A4-08（异步电机漏感抗）、A4-09（异步电机互感抗）、A4-10（异步电机空载电流）。
4：异步机动态参数辨识2(增加惯量辨识 仅支持FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（80%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A4-06（电机定子电阻）、A4-07（异步电机转子电阻）、A4-08（异步电机漏感抗）、A4-09（异步电机互感抗）、A4-10（异步电机空载电流）、A4-30（编码器相序）、P2-35（系统惯量）。
5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC)
电机与应用系统可以较高转速转动的场合，支持空载、轻载（10%负载以下）、纯惯量负载状态下参数辨识。辨识所有电机参数：A4-06（电机定子电阻）、A4-07（异步电机转子电阻）、A4-08（异步电机漏感抗）、A4-09（异步电机互感抗）、A4-10（异步电机空载电流）、A4-30（编码器相序）。

11：同步机带载参数辨识(不调反电动势)
同步机带载参数辨识，电机与负载很难脱离的场合。FVC模式下辨识的电机参数：A4-06（电机定子电阻）、A4-17（同步机D轴电感）、A4-18（同步机Q轴电感）、A4-20（滤波时间常数）、A4-21（振荡抑制增益）、A4-30（编码器相序）、A4-31（编码器零点位置角）。其他模式辨识的电机参数：A4-06（电机定子电阻）、A4-17（同步机D轴电感）、A4-18（同步机Q轴电感）、A4-20（滤波时间常数）、A4-21（振荡抑制增益）。
12：同步机空载动态完整参数辨识
同步机空载动态完整参数辨识，电机与负载可以脱离运行的场合。FVC模式下辨识的电机参数：A4-06（电机定子电阻）、A4-17（同步机D轴电感）、A4-18（同步机Q轴电感）、A4-19（同步机反电动势）、A4-20（滤波时间常数）、A4-21（振荡抑制增益）、A4-30（编码器相序）、A4-31（编码器零点位置角）。其他模式辨识的电机参数：A4-06（电机定子电阻）、A4-17（同步机D轴电感）、A4-18（同步机Q轴电感）、A4-19（同步机反电动势）、A4-20（滤波时间常数）、A4-21（振荡抑制增益）。
13：同步机静态参数辨识(不参数辨识编码器安装角)
同步机静态参数辨识，电机与负载很难脱离，且不允许动态完整参数辨识运行的场合。辨识的电机参数：A4-06（电机定子电阻）、A4-17（同步机D轴电感）、A4-18（同步机Q轴电感）、A4-20（滤波时间常数）、A4-21（振荡抑制增益）。
14：同步机惯量辨识(仅支持FVC)
同步机惯量辨识，需要高动态响应的场合，参数辨识时需要连接负载。辨识的电机参数：P2-35（系统惯量）、P2-36（电机和负载惯量）。

A4-38 低速速度环Kp

通讯地址:	0xA426	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	30	更改方式：	实时更改

设定值：
1~200
设定说明
速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。低速速度环Kp是低速时使用。

A4-39 低速速度环Ti

通讯地址:	0xA427	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.500	更改方式：	实时更改

设定值：
0.001s~10.000s

设定说明

速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。低速速度环Ti是低速时使用。

A4-40 切换频率1

通讯地址:	0xA428	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P2-05	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：

0.00Hz~P2-05

设定说明

速度环PI参数分低速和高速两组。运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01；运行频率大于P2-05（切换频率2）时，速度环PI调节参数为P2-03和P2-04。切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。

A4-41 高速速度环Kp

通讯地址:	0xA429	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	20	更改方式：	实时更改

设定值：

1~200

设定说明

速度环PID控制参数的Kp，速度环Kp的大小影响电机速度的响应快慢。Kp数值越大，调节灵敏度越高，调节力度越大；Kp数值越小，调节灵敏度就越小，调节力度越小。高速速度环Kp是高速时使用的。

A4-42 高速速度环Ti

通讯地址:	0xA42A	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	1.000	更改方式：	实时更改

设定值：

0.001s~10.000s

设定说明

速度环积分时间常数的倒数为积分增益，速度环积分时间常数的大小影响电机稳态速度误差的大小及速度环系统的稳定性，速度环积分时间常数增大，速度环响应变慢，此时需要增大速度环比例增益，以提高速度环响应时间。高速速度环Ti是高速时使用。

A4-43 切换频率2

通讯地址:	0xA42B	生效方式:	-
最小值:	F2-02	单位：	Hz
最大值:	F0-10	数据类型：	无符号16位
默认值:	10.00	更改方式：	实时更改

设定值：

P2-02~P0-10

设定说明

速度环PI参数分低速和高速两组，运行频率小于P2-02（切换频率1）时，速度环PI调节参数为P2-00和P2-01。运行频率大于P2-05（切换频率2）时，速度环PI调节参数为

P2-03和P2-04。切换频率1和切换频率2之间的速度环PI参数，为两组PI参数线性切换。该参数的设定值应小于P2-05（切换频率2）。

A4-44 VC转差补偿调整

通讯地址:	0xA42C	生效方式:	-
最小值:	50	单位：	%
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

50%~200%

设定说明

SVC控制模式下，此参数可调节电机的稳速精度，例如电机运行频率低于变频器输出频率时，可增大该参数。

FVC控制模式下，此参数可以调节同样负载下变频器的输出电流大小，如在大功率变频器中，若带载能力较弱时，可逐渐调小此参数。一般情况下，无需调整此参数值。

A4-45 速度反馈滤波时间

通讯地址:	0xA42D	生效方式:	-
最小值:	0.000	单位：	s
最大值:	0.100	数据类型：	无符号16位
默认值:	0.004	更改方式：	实时更改

设定值：

0.000s~0.100s

设定说明

在FVC控制模式下（P0-01=1），速度环反馈滤波时间有效，通过调节该参数改善电机稳定性，速度环反馈滤波时间增大，可以改善电机稳定性，动态响应变弱；速度环反馈滤波时间减小，动态响应加强。该参数值过小时会引起电机振荡。一般情况下，电机的稳定性可满足要求，无需调节该参数。

A4-46 VC减速过励磁增益

通讯地址:	0xA42E	生效方式:	-
最小值:	0	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	64	更改方式：	实时更改

设定值：

0~200

设定说明

-

A4-47 速度控制下转矩上限源（电动）

通讯地址:	0xA42F	生效方式:	-
最小值:	0	单位：	-
最大值:	7	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：上限数字设定（P2-10）

1：AI1

2：AI2

3：AI3

4：PULSE脉冲设定（DI5）

5：通信给定

6：MIN(AI1,AI2)

7：MAX(AI1,AI2)

设定说明

0：上限数字设定(P2-10)

速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。

1：AI1

速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

2：AI2

速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

3：AI3

速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的转矩值。

4：PULSE脉冲设定（DI5）
速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的转矩值。
5：通信给定
主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合。
6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。

A4-48　速度控制下转矩上限设定（电动）

通讯地址:	0xA430	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：
0.0%~200.0%
设定说明
电动状态下的转矩上限，以变频器额定电流为基值。

A4-49　速度控制下转矩上限源（发电）

通讯地址:	0xA431	生效方式:	-
最小值:	0	单位：	-
最大值:	8	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：
0：上限数字设定（P2-10）
1：AI1
2：AI2
3：AI3
4：PULSE脉冲设定（DI5）
5：通信给定
6：MIN(AI1,AI2)
7：MAX(AI1,AI2)
8：上限数字设定（P2-12）
设定说明
0：上限数字设定(P2-10)
速度控制转矩上限通过上限数字设定，设定值为P2-10（速度控制转矩上限数字设定）的值。

1：AI1
速度控制转矩上限通过模拟量输入端子AI1输入，AI1端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。
2：AI2
速度控制转矩上限通过模拟量输入端子AI2输入，AI2端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。
3：AI3
速度控制转矩上限通过模拟量输入端子AI3输入，AI3端子输入电流或电压信号，根据设定AI曲线来计算出对应的频率值。
4：PULSE脉冲设定（DI5）
速度控制转矩上限通过DI输入端子DI5脉冲频率来给定，根据脉冲频率与运行频率的对应关系曲线计算出对应的频率值。
5：通信给定
主频率值由通信给定。可通过远程通信输入运行频率，变频器需要安装通信卡才能实现与上位机的通信。适用于远距离控制或多台设备系统集中控制等场合
6：MIN(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最小值输入。
7：MAX(AI1,AI2)
速度控制转矩上限通过模拟量输入端子AI1输入与模拟量输入端子AI2输入的最大值输入。
8上限数字设定（P2-12）
速度控制转矩上限通过上限数字设定，设定值为P2-12（制动转矩上限数字设定）的值。

A4-50　速度控制下转矩上限设定（发电）

通讯地址:	0xA432	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位
默认值:	150.0	更改方式：	实时更改

设定值：
0.0%~200.0%
设定说明
发电状态下的转矩上限，以变频器额定电流为基值。

A4-51　低速电流环Kp调整

通讯地址:	0xA433	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	实时更改

设定值：
0.1~10.0

设定说明

-

A4-52 **低速电流环Ki调整**

通讯地址:	0xA434	生效方式:	-
最小值:	0.1	单位:	-
最大值:	10.0	数据类型:	无符号16位
默认值:	1.0	更改方式:	实时更改

设定值:

0.1~10.0

设定说明

-

A4-53 **高速电流环Kp调整**

通讯地址:	0xA435	生效方式:	-
最小值:	0.1	单位:	-
最大值:	10.0	数据类型:	无符号16位
默认值:	1.0	更改方式:	实时更改

设定值:

0.1~10.0

设定说明

-

A4-54 **高速电流环Ki调整**

通讯地址:	0xA436	生效方式:	-
最小值:	0.1	单位:	-
最大值:	10.0	数据类型:	无符号16位
默认值:	1.0	更改方式:	实时更改

设定值:

0.1~10.0

设定说明

-

A4-55 **零速锁定速度环Kp**

通讯地址:	0xA437	生效方式:	-
最小值:	1	单位:	-
最大值:	100	数据类型:	无符号16位
默认值:	30	更改方式:	实时更改

设定值:

1~100

设定说明

-

A4-56 **零速锁定速度环Ti**

通讯地址:	0xA438	生效方式:	-
最小值:	0.001	单位：	s
最大值:	10.000	数据类型：	无符号16位
默认值:	0.500	更改方式：	实时更改

设定值：

0.001s~10.000s

设定说明

-

A4-57 **惯量补偿增益**

通讯地址:	0xA439	生效方式:	-
最小值:	1	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

1~200

设定说明

-

A4-58 **零速锁定速度环切换频率**

通讯地址:	0xA43A	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P2-02	数据类型：	无符号16位
默认值:	0.05	更改方式：	实时更改

设定值：

0.00Hz~P2-02

设定说明

-

A4-59 **最大输出电压系数**

通讯地址:	0xA43B	生效方式:	-
最小值:	100	单位：	-
最大值:	110	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

100~110

设定说明

最大输出电压系数表示变频器最大输出电压的提升能力。

加大P2-21可以提高电机弱磁区的最大带载能力，但是电机电流纹波增加，会加重电机发热量；反之电机弱磁区的最大带载能力会下降，但是电机电流纹波减少，会减轻电机发热量。一般无需调节。

A4-60 **输出电压滤波时间**

通讯地址: 0xA43C
最小值: 0.000
最大值: 0.010
默认值: 0.000
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.000s~0.010s

设定说明

-

A4-61 **零速锁定**

通讯地址: 0xA43D
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

A4-62 **矢量过压抑制KP**

通讯地址: 0xA43E
最小值: 0
最大值: 1000
默认值: 40
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~1000

设定说明

-

A4-63 **加速补偿增益**

通讯地址: 0xA43F
最小值: 0
最大值: 200
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~200

设定说明

-

A4-64 **加速度补偿滤波时间**

通讯地址: 0xA440
最小值: 0
最大值: 500
默认值: 10
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~500

设定说明

-

A4-65 **矢量过压抑制使能**

通讯地址: 0xA441
最小值: 0
最大值: 1
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0：不使能

1：使能

设定说明

-

A4-66 **设定转矩滤波截止频率**

通讯地址: 0xA442
最小值: 50
最大值: 1000
默认值: 500
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 停机更改

设定值:

50Hz~1000Hz

设定说明

-

A4-67 **同步机初始位置角检测电流**

通讯地址: 0xA443
最小值: 50
最大值: 180
默认值: 80
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

50~180

设定说明

-

A4-68　速度环参数自动计算使能

通讯地址: 0xA444　　生效方式: -
最小值: 0　　单位: -
最大值: 1　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

A4-69　期望速度环带宽(高速)

通讯地址: 0xA445　　生效方式: -
最小值: 0　　单位: Hz
最大值: 3　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:

0Hz~3Hz

设定说明

-

A4-70　期望速度环带宽(低速)

通讯地址: 0xA446　　生效方式: -
最小值: 1　　单位: Hz
最大值: 10000　　数据类型: 无符号16位
默认值: 100　　更改方式: 实时更改

设定值:

1Hz~10000Hz

设定说明

-

A4-71　期望速度环带宽(零速)

通讯地址: 0xA447　　生效方式: -
最小值: 1　　单位: Hz
最大值: 10000　　数据类型: 无符号16位
默认值: 100　　更改方式: 实时更改

设定值:

1Hz~10000Hz

设定说明

-

A4-72 **期望速度环阻尼比: (一般不更改)**

通讯地址: 0xA448 生效方式: -
最小值: 0.100 单位: -
最大值: 65.000 数据类型: 无符号16位
默认值: 1.000 更改方式: 实时更改

设定值:
0.100~65.000
设定说明
-

A4-73 **系统惯量(等效为启动时间)**

通讯地址: 0xA449 生效方式: -
最小值: 0.001 单位: s
最大值: 50.000 数据类型: 无符号16位
默认值: 0.100 更改方式: 停机更改

设定值:
0.001s~50.000s
设定说明
-

A4-74 **电机单机惯量（kg·m²）**

通讯地址: 0xA44A 生效方式: -
最小值: 0.001 单位: -
最大值: 50.000 数据类型: 无符号16位
默认值: 0.001 更改方式: 停机更改

设定值:
0.001~50.000
设定说明
-

A4-75 **惯量辨识最大频率**

通讯地址: 0xA44B 生效方式: -
最小值: 20 单位: %
最大值: 100 数据类型: 无符号16位
默认值: 80 更改方式: 停机更改

设定值:
20%~100%
设定说明
-

A4-76 **惯量辨识加速时间**

通讯地址: 0xA44C 生效方式: -

最小值: 1.0
最大值: 50.0
默认值: 10.0
单位: s
数据类型: 无符号16位
更改方式: 停机更改

设定值:

1.0s~50.0s

设定说明

-

A4-77 速度环动态优化测试带宽1

通讯地址: 0xA44D
最小值: 1.0
最大值: 200.0
默认值: 5.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A4-78 速度环动态优化测试带宽2

通讯地址: 0xA44E
最小值: 1.0
最大值: 200.0
默认值: 10.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~200.0Hz

设定说明

-

A4-79 速度环动态优化测试带宽3

通讯地址: 0xA44F
最小值: 1.0
最大值: 100.0
默认值: 15.0
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

1.0Hz~100.0Hz

设定说明

-

A4-80 速度环动态优化测试带宽4

通讯地址: 0xA450
最小值: 1.0
最大值: 200.0
生效方式: -
单位: Hz
数据类型: 无符号16位

默认值: 20.0 更改方式： 不可更改

设定值：

1.0Hz~200.0Hz

设定说明

-

A4-81 惯量辨识及动态设定速度

通讯地址: 0xA451 生效方式: -

最小值: 0 单位： -

最大值: 100 数据类型： 无符号16位

默认值: 30 更改方式： 停机更改

设定值：

0~100

设定说明

-

A4-82 转子时间常数校验使能

通讯地址: 0xA452 生效方式: -

最小值: 0 单位： -

最大值: 1 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0：不使能

1：使能

设定说明

-

A4-83 转子时间常数校验转矩幅值

通讯地址: 0xA453 生效方式: -

最小值: 10 单位： %

最大值: 100 数据类型： 无符号16位

默认值: 30 更改方式： 不可更改

设定值：

10%~100%

设定说明

-

A4-84 转子时间常数校验次数

通讯地址: 0xA454 生效方式: -

最小值: 1 单位： -

最大值: 6 数据类型： 无符号16位

默认值: 3 更改方式： 不可更改

设定值：
1~6
设定说明
-

A4-85　惯量辨识使能

通讯地址:	0xA455	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：不使能
1：使能
设定说明
-

A4-86　惯量辨识速度环带宽设置值

通讯地址:	0xA456	生效方式:	-
最小值:	0.1	单位：	Hz
最大值:	100.0	数据类型：	无符号16位
默认值:	10.0	更改方式：	停机更改

设定值：
0.1Hz~100.0Hz
设定说明
-

A4-87　反电势计算使能

通讯地址:	0xA457	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：
0：不使能
1：使能
设定说明
-

A4-88　惯量辨识模式

通讯地址:	0xA458	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：加减速模式
1：三角波模式
设定说明
-

A4-89　惯量辨识加减速系数

通讯地址:	0xA459	生效方式:	-
最小值:	0.1	单位：	-
最大值:	10.0	数据类型：	无符号16位
默认值:	1.0	更改方式：	停机更改

设定值：
0.1~10.0
设定说明
-

A4-90　解耦控制使能

通讯地址:	0xA45A	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：不使能
1：使能
设定说明
-

A4-91　发电功率限制使能

通讯地址:	0xA45B	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：不使能
1：使能
设定说明
-

A4-92　发电功率限制

通讯地址:	0xA45C	生效方式:	-
最小值:	0.0	单位：	%
最大值:	200.0	数据类型：	无符号16位

默认值: 20.0 更改方式: 停机更改

设定值:

0.0%~200.0%

设定说明

-

A4-93 闭环矢量磁通闭环与转矩线性度优化选择

通讯地址: 0xA45D 生效方式: -

最小值: 0 单位: -

最大值: 1111 数据类型: 无符号16位

默认值: 10 更改方式: 停机更改

设定值:

个位：转矩模式磁通闭环使能

0：不使能

1：使能

十位：速度模式磁通闭环使能

0：不使能

1：使能

百位：速度模式转矩上限转矩线性化使能

0：不使能

1：使能

千位：转矩基值选择

0：选择电机额定电流

1：选择电机额定转矩电流

设定说明

-

A4-94 变频器输出电流上限

通讯地址: 0xA45E 生效方式: -

最小值: 0.0 单位: %

最大值: 170.0 数据类型: 无符号16位

默认值: 150.0 更改方式: 停机更改

设定值:

0.0%~170.0%

设定说明

-

A4-95 第4电机控制方式

通讯地址: 0xA45F 生效方式: -

最小值: 0 单位: -

最大值: 5 数据类型: 无符号16位

默认值: 0 更改方式: 停机更改

设定值：

0：无速度传感器矢量控制（SVC）

1：有速度传感器矢量控制（FVC）

2：V/f控制

3：保留

4：保留

5：同步机速度开环控制（PMVVC）

设定说明

0：SVC控制（无速度传感器矢量控制）

无速度传感器矢量控制，是一种开环矢量控制，适用于通常的高性能控制场合，一台变频器只能驱动一台电机。如机床、离心机、拉丝机、注塑机等负载。

1：FVC控制（有速度传感器矢量控制）

有速度传感器矢量控制，是一种闭环矢量控制，电机端必须加装编码器，变频器必须选配与编码器同类型的PG卡。适用于高精度的速度控制或转矩控制的场合。一台变频器只能驱动一台电机。如高速造纸机械、起重机械、电梯等负载。

2：V/f 控制（速度开环控制）

适用于对负载控制性能要求不高的场合，如风机、泵类负载。当用于一台变频器拖动多台电机的场合时，只能使用V/f控制方式。

3、4：保留

5：PMVVC（同步机速度开环控制）

适用于风机、水泵等精度要求不高的负载。

A4-96　第4电机加减速时间选择

通讯地址:	0xA460	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：加速时间1

1：加速时间2

2：加速时间3

3：加速时间4

设定说明

A4-97　第4电机转矩提升

通讯地址:	0xA461	生效方式:	-
最小值:	0.0	单位：	%
最大值:	30.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~30.0%

设定说明

转矩提升功能一般应用于变频器低频情况下。V/f控制方式下变频器的输出力矩和频率成正比，在低频的情况下，电机低速运行时转矩很低，通过设置该参数提高变频器输出电压，使电流增大提高输出力矩。

使用该功能时不可将转矩提升功能调的太大，否则会出现报过载保护。

A4-98 第4电机振荡抑制增益模式

通讯地址:	0xA462	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	3	更改方式：	停机更改

设定值：

0：无效

1：保留

2：保留

3：有效

设定说明

V/f模式下，对于大多数的电机，低频时会出现速度振荡与电流振荡的现象，振荡可能会导致变频器过流。使能振荡抑制，可以消除振荡。

A4-99 第4电机振荡抑制增益

通讯地址:	0xA463	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0~100

设定说明

振荡增益越大，抑制效果越强。

6.22 A5 控制优化参数

A5-00 DPWM切换上限频率

通讯地址:	0xA500	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	12.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

变频器有CPWM和DPWM两种PWM调制发波方式，运行频率大于A5-00切换频率时，为DPWM调制；运行频率小于A5-00切换频率时，为CPWM调制。DPWM调制可提高变频器效率，CPWM调制可减小电机噪声。
调整参数A5-00到最大频率可以减少电机噪音。

A5-01　PWM调制方式

通讯地址:	0xA501	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：异步调制
1：同步调制
2：同步调制模式2
3：同步调制模式3

设定说明

0:异步调制
指载波频率和信号波频率不同步的调制方式。通常保持载波频率不变,当信号波频率发生变化时,载波比也会随之变化。
1:同步调制
指载波频率和信号波频率保持同步的调制方式。载波频率和信号频率同时发生变化,而载波比保持不变。所以在一个周期内形成横的SPWM脉冲的个数是固定的,等效正弦波对称性较好。
2：同步调制模式2
3：同步调制模式3

A5-02　死区补偿模式选择

通讯地址:	0xA502	生效方式:	-
最小值:	0	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	2	更改方式：	停机更改

设定值：

0：不补偿
1：补偿模式1
2：补偿模式2

设定说明

变频器同桥臂上下开关管的开关信号必须要有死区。死区补偿可以改善电机低频运行时的电流波形。

A5-03　随机PWM深度

通讯地址:	0xA503	生效方式:	-
最小值:	0	单位：	-

最大值:	10	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0~10

设定说明

如果电机噪声大，A5-03设为非0值，可以改善电机噪声，值越大，效果越好，但太大可能会影响电机控制。调试时可以先设置为1，根据现场应用情况慢慢增大，每次增加1。

A5-04 快速限流使能

通讯地址:	0xA504	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：不使能

1：使能

设定说明

快速限流功能可最大限度减小过流故障，保护变频器正常运行。

在起重等提升场合，建议关闭此功能。

A5-05 采样延时时间

通讯地址:	0xA505	生效方式:	-
最小值:	1	单位：	-
最大值:	13	数据类型：	无符号16位
默认值:	5	更改方式：	实时更改

设定值：

1~13

设定说明

-

A5-06 欠压点设置

通讯地址:	0xA506	生效方式:	-
最小值:	150.0	单位：	V
最大值:	700.0	数据类型：	无符号16位
默认值:	350.0	更改方式：	实时更改

设定值：

150.0V~700.0V

设定说明

当母线电压低于A5-06的设定值时，变频器报E09.00故障。

A5-13　功能部分设定母线电压

通讯地址: 0xA50D　　生效方式: -
最小值: 100　　单位: -
最大值: 20000　　数据类型: 无符号16位
默认值: 5310　　更改方式: 不可更改

设定值:

100~20000

设定说明

-

A5-14　温度校正使能

通讯地址: 0xA50E　　生效方式: -
最小值: 0　　单位: -
最大值: 1　　数据类型: 无符号16位
默认值: 0　　更改方式: 停机更改

设定值:

0：不使能

1：使能

设定说明

-

A5-16　显示参数地址1

通讯地址: 0xA510　　生效方式: -
最小值: 0　　单位: -
最大值: 100　　数据类型: 无符号16位
默认值: 0　　更改方式: 不可更改

设定值:

0~100

设定说明

-

A5-17　显示参数地址2

通讯地址: 0xA511　　生效方式: -
最小值: 0　　单位: -
最大值: 100　　数据类型: 无符号16位
默认值: 1　　更改方式: 不可更改

设定值:

0~100

设定说明

-

A5-18 **显示参数地址3**

通讯地址:	0xA512	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	2	更改方式：	不可更改

设定值：

0~100

设定说明

-

A5-19 **显示参数地址4**

通讯地址:	0xA513	生效方式:	-
最小值:	0	单位：	-
最大值:	100	数据类型：	无符号16位
默认值:	3	更改方式：	不可更改

设定值：

0~100

设定说明

-

A5-21 **低速载频设置**

通讯地址:	0xA515	生效方式:	-
最小值:	0.0	单位：	-
最大值:	16.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0~16.0

设定说明

V/f或闭环矢量(FVC)模式有效，可以设置电机运行在低速时的载频，以优化电机噪声。生效载频取P0-15、A5-21两个参数设定载频中的较小者(A5-21设置值大于等于4K时，A5-21的设置值才有效；A5-21设置值小于4K时，则取4K)。

A5-22 **死区补偿辨识使能**

通讯地址:	0xA516	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：不使能

1：使能

设定说明

-

6.23 A6 AI曲线设定

A6-00 **曲线4最小输入**

通讯地址:	0xA600	生效方式:	-
最小值:	-10.00	单位:	V
最大值:	A6-02	数据类型:	有符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

-10.00V~A6-02

设定说明

对应AI曲线4上最小输入点的x轴，即最小模拟量输入电压（或最小模拟量输入电流）。

A6-01 **曲线4最小输入对应设定**

通讯地址:	0xA601	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线4上最小输入点的y轴，即AI最小输入对应的设定量。

A6-02 **曲线4拐点1输入**

通讯地址:	0xA602	生效方式:	-
最小值:	A6-00	单位:	V
最大值:	A6-04	数据类型:	有符号16位
默认值:	3.00	更改方式:	实时更改

设定值:

A6-00~A6-04

设定说明

对应AI曲线4上拐点1的x轴，即拐点1处的模拟量输入电压（或模拟量输入电流）。

A6-03 **曲线4拐点1输入对应设定**

通讯地址:	0xA603	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	30.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线4上拐点1的y轴，即拐点1处的对应的设定量。

A6-04 **曲线4拐点2输入**

通讯地址:	0xA604	生效方式:	-
最小值:	A6-02	单位:	V
最大值:	A6-06	数据类型:	有符号16位
默认值:	6.00	更改方式:	实时更改

设定值:

A6-02~A6-06

设定说明

对应AI曲线4上拐点2的x轴，即拐点2处的模拟量输入电压（或模拟量输入电流）。

A6-05 **曲线4拐点2输入对应设定**

通讯地址:	0xA605	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	60.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线4上拐点2的y轴，即拐点2处的对应的设定量。

A6-06 **曲线4最大输入**

通讯地址:	0xA606	生效方式:	-
最小值:	A6-04	单位:	V
最大值:	10.00	数据类型:	有符号16位
默认值:	10.00	更改方式:	实时更改

设定值:

A6-04~10.00V

设定说明

对应AI曲线4上最大输入点的x轴，即最大模拟量输入电压（或最大模拟量输入电流）。

A6-07 **曲线4最大输入对应设定**

通讯地址:	0xA607	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线4上最大输入点的y轴，即AI最大输入对应的设定量。

A6-08 **曲线5最小输入**

通讯地址:	0xA608	生效方式:	-
最小值:	-10.00	单位:	V
最大值:	A6-10	数据类型:	有符号16位
默认值:	-10.00	更改方式:	实时更改

设定值:

-10.00V~A6-10

设定说明

对应AI曲线5上最小输入点的x轴，即最小模拟量输入电压（或最小模拟量输入电流）。

A6-09 **曲线5最小输入对应设定**

通讯地址:	0xA609	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	-100.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线5上最小输入点的y轴，即AI最小输入对应的设定量。

A6-10 **曲线5拐点1输入**

通讯地址:	0xA60A	生效方式:	-
最小值:	A6-08	单位:	V
最大值:	A6-12	数据类型:	有符号16位
默认值:	-3.00	更改方式:	实时更改

设定值:

A6-08~A6-12

设定说明

对应AI曲线5上拐点1的x轴，即拐点1处的模拟量输入电压（或模拟量输入电流）。

A6-11 **曲线5拐点1输入对应设定**

通讯地址:	0xA60B	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	-30.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线5上拐点1的y轴，即拐点1处的对应的设定量。

A6-12 **曲线5拐点2输入**

通讯地址:	0xA60C	生效方式:	-
最小值:	A6-10	单位:	V
最大值:	A6-14	数据类型:	有符号16位
默认值:	3.00	更改方式:	实时更改

设定值:

A6-10~A6-14

设定说明

对应AI曲线5上拐点2的x轴，即拐点2处的模拟量输入电压（或模拟量输入电流）。

A6-13 **曲线5拐点2输入对应设定**

通讯地址:	0xA60D	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	30.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线5上拐点2的y轴，即拐点2处的对应的设定量。

A6-14 **曲线5最大输入**

通讯地址:	0xA60E	生效方式:	-
最小值:	A6-12	单位:	V
最大值:	10.00	数据类型:	有符号16位
默认值:	10.00	更改方式:	实时更改

设定值:

A6-12~10.00V

设定说明

对应AI曲线5上最大输入点的x轴，即最大模拟量输入电压（或最大模拟量输入电流）。

A6-15 **曲线5最大输入对应设定**

通讯地址:	0xA60F	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

对应AI曲线5上最大输入点的y轴，即AI最大输入对应的设定量。

A6-16 **AI1增益**

通讯地址: 0xA610 生效方式: -
最小值: -10.00 单位: -
最大值: 10.00 数据类型: 有符号16位
默认值: 1.00 更改方式: 实时更改

设定值:

-10.00~10.00

设定说明

AI1校正电压增益。

A6-17 **AI1偏移**

通讯地址: 0xA611 生效方式: -
最小值: -100.0 单位: %
最大值: 100.0 数据类型: 有符号16位
默认值: 0.0 更改方式: 实时更改

设定值:

-100.0%~100.0%

设定说明

AI1校正电压零偏系数。

A6-18 **AI2增益**

通讯地址: 0xA612 生效方式: -
最小值: -10.00 单位: -
最大值: 10.00 数据类型: 有符号16位
默认值: 1.00 更改方式: 实时更改

设定值:

-10.00~10.00

设定说明

AI2校正电压增益。

A6-19 **AI2偏移**

通讯地址: 0xA613 生效方式: -
最小值: -100.0 单位: %
最大值: 100.0 数据类型: 有符号16位
默认值: 0.0 更改方式: 实时更改

设定值:

-100.0%~100.0%

设定说明

AI2校正电压零偏系数。

A6-20 **AI3增益**

通讯地址: 0xA614 生效方式: -

最小值: -10.00
最大值: 10.00
默认值: 1.00
单位: -
数据类型: 有符号16位
更改方式: 实时更改

设定值:

-10.00~10.00

设定说明

AI3校正电压增益。

A6-21 AI3偏移

通讯地址: 0xA615
最小值: -100.0
最大值: 100.0
默认值: 0.0
生效方式: -
单位: %
数据类型: 有符号16位
更改方式: 实时更改

设定值:

-100.0%~100.0%

设定说明

AI3校正电压零偏系数。

A6-22 AI断线检测阈值

通讯地址: 0xA616
最小值: 0.0
最大值: 100.0
默认值: 0.0
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0%~100.0%

设定说明

AI断线检测阈值，100%对应10V。

A6-23 AI断线检测时间

通讯地址: 0xA617
最小值: 0.0
最大值: 6553.5
默认值: 0.0
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0s~6553.5s

设定说明

AI断线检测时间，单位0.1s。

A6-24 AI1设定跳跃点

通讯地址: 0xA618
最小值: -100.0
最大值: 100.0
生效方式: -
单位: %
数据类型: 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

AI1端子设定的跳跃点。

A6-25 AI1设定跳跃幅度

通讯地址: 0xA619 生效方式: -

最小值: 0.0 单位： %

最大值: 100.0 数据类型： 无符号16位

默认值: 0.1 更改方式： 实时更改

设定值：

0.0%~100.0%

设定说明

AI1端子设定的跳跃幅度。

A6-26 AI2设定跳跃点

通讯地址: 0xA61A 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

AI2端子设定的跳跃点。

A6-27 AI2设定跳跃幅度

通讯地址: 0xA61B 生效方式: -

最小值: 0.0 单位： %

最大值: 100.0 数据类型： 无符号16位

默认值: 0.1 更改方式： 实时更改

设定值：

0.0%~100.0%

设定说明

AI2端子设定的跳跃幅度。

A6-28 AI3设定跳跃点

通讯地址: 0xA61C 生效方式: -

最小值: -100.0 单位： %

最大值: 100.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 实时更改

设定值：

-100.0%~100.0%

设定说明

AI3端子设定的跳跃点。

A6-29 **AI3设定跳跃幅度**

通讯地址:	0xA61D	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.1	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

AI3端子设定的跳跃幅度。

A6-30 **模拟量断线检测使能**

通讯地址:	0xA61E	生效方式:	-
最小值:	0	单位:	-
最大值:	111	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

个位：AI1断线检测使能

0：不使能

1：使能

十位：AI2断线检测使能

0：不使能

1：使能

百位：AI3断线检测使能

0：不使能

1：使能

设定说明

AI1断线检测使能后，当AI1检测电压小于A6-22设定阈值且持续时间超过A6-23设定时间时，变频器报故障E48.01。

AI2断线检测使能后，当AI2检测电压小于A6-22设定阈值且持续时间超过A6-23设定时间时，变频器报故障E48.02。

AI3断线检测使能后，当AI3检测电压小于A6-22设定阈值且持续时间超过A6-23设定时间时，变频器报故障E48.03。

6.24 A8 同步控制参数

A8-00 **本机地址**

通讯地址:	0xA800	生效方式:	-

最小值: 0
最大值: 124
默认值: 1
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~124

设定说明

-

A8-01 波特率

通讯地址: 0xA801
最小值: 5
最大值: 6
默认值: 6
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

5~6

设定说明

-

A8-02 通信超时时间

通讯地址: 0xA802
最小值: 0.0
最大值: 10.0
默认值: 1.0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0~10.0

设定说明

-

A8-10 速度同步选择

通讯地址: 0xA80A
最小值: 0
最大值: 3
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：无效
1：主机
2：从机
3：中间点

设定说明

-

A8-11 **同步方式选择**

通讯地址: 0xA80B
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0：速度同步

设定说明

-

A8-12 **跟随主机站号（从机有效）**

通讯地址: 0xA80C
最小值: 1
最大值: 124
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

1~124

设定说明

-

A8-14 **从机配置参数**

通讯地址: 0xA80E
最小值: 0
最大值: 1
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：不跟随主机启停命令

1：跟随主机启停命令

设定说明

-

A8-15 **加速时间（位置有效）**

通讯地址: 0xA80F
最小值: 0.0
最大值: 100.0
默认值: 0.0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0~100.0

设定说明

位置同步时的加速时间

A8-16 **减速时间（位置有效）**

通讯地址: 0xA810
最小值: 0.0
最大值: 100.0
默认值: 0.0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0~100.0

设定说明

位置同步时的减速时间

A8-17 **电子齿轮比分子**

通讯地址: 0xA811
最小值: 1
最大值: 65535
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

1~65535

设定说明

-

A8-18 **电子齿轮比分母**

通讯地址: 0xA812
最小值: 1
最大值: 65535
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

1~65535

设定说明

-

A8-36 **通信超时补偿方式**

通讯地址: 0xA824
最小值: 0
最大值: 2
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：自动补偿
1：根据波特率计算
2：功能码设定(A8-37)

设定说明

-

A8-37 **通信延时时间数字设定**

通讯地址: 0xA825 生效方式: -
最小值: 0 单位: μs
最大值: 20000 数据类型: 无符号16位
默认值: 156 更改方式: 停机更改

设定值:

0μs~20000μs

设定说明

-

A8-42 **主机发送频率源选择（主机有效）**

通讯地址: 0xA82A 生效方式: -
最小值: 0 单位: -
最大值: 2 数据类型: 无符号16位
默认值: 0 更改方式: 停机更改

设定值:

0：反馈频率
1：运行频率
2：自动切换

设定说明

-

A8-50 **负荷分配主从机选择**

通讯地址: 0xA832 生效方式: -
最小值: 0 单位: -
最大值: 2 数据类型: 无符号16位
默认值: 0 更改方式: 停机更改

设定值:

0：无效
1：主机
2：从机

设定说明

-

A8-52 **跟随主机站号（从机有效）**

通讯地址: 0xA834 生效方式: -
最小值: 1 单位: -
最大值: 127 数据类型: 无符号16位
默认值: 1 更改方式: 停机更改

设定值:

1~127

设定说明

-

A8-54 **从机配置参数（负荷分配）**

通讯地址:	0xA836	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：不跟随主机启停命令

1：跟随主机启停命令

设定说明

-

A8-55 **转矩加速时间**

通讯地址:	0xA837	生效方式:	-
最小值:	0.00	单位：	s
最大值:	600.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00s~600.00s

设定说明

-

A8-56 **转矩减速时间**

通讯地址:	0xA838	生效方式:	-
最小值:	0.00	单位：	s
最大值:	600.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00s~600.00s

设定说明

-

A8-57 **频率增益**

通讯地址:	0xA839	生效方式:	-
最小值:	-10.00	单位：	-
最大值:	10.00	数据类型：	有符号16位
默认值:	1.00	更改方式：	停机更改

设定值：

-10.00~10.00

设定说明

-

A8-58 **频率偏置**

通讯地址:	0xA83A	生效方式:	-
最小值:	-100.00	单位:	%
最大值:	100.00	数据类型:	有符号16位
默认值:	0.00	更改方式:	停机更改

设定值:

-100.00%~100.00%

设定说明

-

A8-59 **转矩增益**

通讯地址:	0xA83B	生效方式:	-
最小值:	-10.00	单位:	-
最大值:	10.00	数据类型:	有符号16位
默认值:	1.00	更改方式:	停机更改

设定值:

-10.00~10.00

设定说明

-

A8-60 **转矩偏置**

通讯地址:	0xA83C	生效方式:	-
最小值:	-100.00	单位:	%
最大值:	100.00	数据类型:	有符号16位
默认值:	0.00	更改方式:	停机更改

设定值:

-100.00%~100.00%

设定说明

-

A8-61 **主机发送频率源选择（主机有效）**

通讯地址:	0xA83D	生效方式:	-
最小值:	0	单位:	-
最大值:	2	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：反馈频率

1：运行频率

2：自动切换

设定说明

-

A8-62　主机发送频率切换点（主机有效）

通讯地址:	0xA83E	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	600.00	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：

0.00Hz~600.00Hz

设定说明

-

A8-63　负荷分配从机转矩下限

通讯地址:	0xA83F	生效方式:	-
最小值:	0.0	单位：	%
最大值:	50.0	数据类型：	无符号16位
默认值:	5.0	更改方式：	停机更改

设定值：

0.0%~50.0%

设定说明

-

A8-70　下垂控制主从机选择

通讯地址:	0xA846	生效方式:	-
最小值:	0	单位：	-
最大值:	3	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无效

1：主机

2：从机

3：自下垂

设定说明

-

A8-71　下垂控制方式选择

通讯地址:	0xA847	生效方式:	-
最小值:	2	单位：	-
最大值:	2	数据类型：	无符号16位
默认值:	2	更改方式：	停机更改

设定值：

2：主从机下垂（主从机有效）

设定说明

-

A8-72　跟随主机站号（从机有效）

通讯地址:	0xA848	生效方式:	-
最小值:	1	单位：	-
最大值:	124	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

1~124

设定说明

-

A8-74　从机配置参数（下垂控制）

通讯地址:	0xA84A	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：不跟随主机启停命令

1：跟随主机启停命令

设定说明

-

A8-77　下垂率

通讯地址:	0xA84D	生效方式:	-
最小值:	0.00	单位：	%
最大值:	100.00	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：

0.00%~100.00%

设定说明

-

A8-82　下垂控制转矩电流滤波时间

通讯地址:	0xA852	生效方式:	-
最小值:	1	单位：	-
最大值:	5000	数据类型：	无符号16位
默认值:	10	更改方式：	实时更改

设定值：

1~5000

设定说明

-

A8-83 **下垂控制下垂频率滤波时间**

通讯地址:	0xA853	生效方式:	-
最小值:	0.00	单位:	-
最大值:	2.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~2.00

设定说明

-

6.25 A9 矢量控制补充参数

A9-00 **异步机在线辨识转子时间常数**

通讯地址:	0xA900	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：不辨识

1：辨识

设定说明

-

A9-01 **异步机FVC辨识转子电阻增益**

通讯地址:	0xA901	生效方式:	-
最小值:	0	单位:	-
最大值:	100	数据类型:	无符号16位
默认值:	5	更改方式:	实时更改

设定值:

0~100

设定说明

-

A9-02 **异步机FVC辨识转子电阻起始频率**

通讯地址:	0xA902	生效方式:	-
最小值:	2	单位:	Hz
最大值:	100	数据类型:	无符号16位
默认值:	7	更改方式:	实时更改

设定值：
2Hz~100Hz
设定说明
-

A9-03 **异步机FVC观测磁场系数**

通讯地址:	0xA903	生效方式:	-
最小值:	30	单位：	-
最大值:	150	数据类型：	无符号16位
默认值:	40	更改方式：	实时更改

设定值：
30~150
设定说明
-

A9-04 **异步机弱磁区最大转矩限制系数**

通讯地址:	0xA904	生效方式:	-
最小值:	30	单位：	-
最大值:	150	数据类型：	无符号16位
默认值:	80	更改方式：	实时更改

设定值：
30~150
设定说明
-

A9-05 **异步机SVC速度滤波时间**

通讯地址:	0xA905	生效方式:	-
最小值:	5	单位：	ms
最大值:	32	数据类型：	无符号16位
默认值:	15	更改方式：	实时更改

设定值：
5ms~32ms
设定说明
-

A9-06 **SVC优化选择**

通讯地址:	0xA906	生效方式:	-
最小值:	0	单位：	-
最大值:	4	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：无特殊处理
1：根据负载变化限制最小同步频率
2：低速运行时输出固定大小电流
3：低速运行时输出固定大小电流
4：小转矩优化

设定说明

-

A9-07 **异步机SVC磁场调节带宽**

通讯地址:	0xA907	生效方式:	-
最小值:	0.0	单位：	-
最大值:	8.0	数据类型：	无符号16位
默认值:	2.0	更改方式：	实时更改

设定值：

0.0~8.0

设定说明

-

A9-08 **SVC参数1**

通讯地址:	0xA908	生效方式:	-
最小值:	30	单位：	-
最大值:	170	数据类型：	无符号16位
默认值:	100	更改方式：	实时更改

设定值：

30~170

设定说明

-

A9-09 **SVC参数2**

通讯地址:	0xA909	生效方式:	-
最小值:	0.1	单位：	Hz
最大值:	1.0	数据类型：	无符号16位
默认值:	0.3	更改方式：	停机更改

设定值：

0.1Hz~1.0Hz

设定说明

-

A9-10 **SVC参数3**

通讯地址:	0xA90A	生效方式:	-
最小值:	80	单位：	-
最大值:	100	数据类型：	无符号16位

默认值: 95 更改方式: 停机更改

设定值:

80~100

设定说明

-

A9-11 SVC参数4

通讯地址: 0xA90B 生效方式: -

最小值: 10 单位: -

最大值: 3000 数据类型: 无符号16位

默认值: 200 更改方式: 停机更改

设定值:

10~3000

设定说明

-

A9-12 SVC转速跟踪禁止反转

通讯地址: 0xA90C 生效方式: -

最小值: 0 单位: -

最大值: 1 数据类型: 无符号16位

默认值: 0 更改方式: 停机更改

设定值:

0：无效

1：使能

设定说明

A9-12 设置为1使能后，SVC转速跟踪启动（P6-00设置为1）时，在电机速度为反向时（例如风机，有外力将电机拖到反转），无法搜索到电机速度。

在使用SVC转速跟踪启动功能时，希望电机为正转，但出现启动异常反转现象，可将A9-12设置为使能。

A9-13 异步机快速识别定子电阻系数1

通讯地址: 0xA90D 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 10 更改方式: 停机更改

设定值:

0~65535

设定说明

-

A9-14 异步机快速识别定子电阻系数2

通讯地址: 0xA90E 生效方式: -

最小值: 0
最大值: 65535
默认值: 10
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~65535

设定说明

-

A9-17 同步机实时角度

通讯地址: 0xA911
最小值: 0.0
最大值: 359.9
默认值: 0.0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0.0~359.9

设定说明

-

A9-18 同步机初始位置角检测

通讯地址: 0xA912
最小值: 0
最大值: 2
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0：每次运行都检测

1：不检测

2：上电第一次运行检测

设定说明

-

A9-20 弱磁方式选择

通讯地址: 0xA914
最小值: 0
最大值: 3
默认值: 1
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：自动弱磁

1：同步机调整法弱磁

2：同步机混合方式弱磁

3：不弱磁

设定说明

-

A9-21 **同步机弱磁增益**

通讯地址: 0xA915 生效方式: -
最小值: 0 单位: -
最大值: 50 数据类型: 无符号16位
默认值: 5 更改方式: 实时更改

设定值:
0~50
设定说明
-

A9-22 **同步机输出电压上限裕量**

通讯地址: 0xA916 生效方式: -
最小值: 0 单位: %
最大值: 50 数据类型: 无符号16位
默认值: 5 更改方式: 实时更改

设定值:
0%~50%
设定说明
-

A9-23 **同步机最大出力调整增益**

通讯地址: 0xA917 生效方式: -
最小值: 20 单位: %
最大值: 300 数据类型: 无符号16位
默认值: 100 更改方式: 实时更改

设定值:
20%~300%
设定说明
-

A9-24 **同步机计算励磁电流调整增益**

通讯地址: 0xA918 生效方式: -
最小值: 40 单位: %
最大值: 200 数据类型: 无符号16位
默认值: 100 更改方式: 实时更改

设定值:
40%~200%
设定说明
-

A9-25 **同步机SVC速度估算积分增益**

通讯地址: 0xA919 生效方式: -

最小值:	5	单位:	%
最大值:	1000	数据类型:	无符号16位
默认值:	30	更改方式:	实时更改

设定值:

5%~1000%

设定说明

-

A9-26 同步机SVC速度估算比例增益

通讯地址:	0xA91A	生效方式:	-
最小值:	5	单位:	%
最大值:	300	数据类型:	无符号16位
默认值:	20	更改方式:	实时更改

设定值:

5%~300%

设定说明

-

A9-27 同步机SVC估计速度滤波

通讯地址:	0xA91B	生效方式:	-
最小值:	10	单位:	-
最大值:	2000	数据类型:	无符号16位
默认值:	100	更改方式:	实时更改

设定值:

10~2000

设定说明

-

A9-28 同步机SVC最低载波频率

通讯地址:	0xA91C	生效方式:	-
最小值:	0.8	单位:	-
最大值:	P0-15	数据类型:	无符号16位
默认值:	2.0	更改方式:	实时更改

设定值:

0.8~P0-15

设定说明

-

A9-29 同步机SVC低速励磁电流

通讯地址:	0xA91D	生效方式:	-
最小值:	0	单位:	%
最大值:	80	数据类型:	无符号16位

默认值: 30 更改方式: 实时更改

设定值:

0%~80%

设定说明

-

A9-30 低速闭环电流(VVC使用)

通讯地址: 0xA91E 生效方式: -

最小值: 0 单位: %

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 实时更改

设定值:

0%~65535%

设定说明

-

A9-31 振荡抑制阻尼系数(VVC使用)

通讯地址: 0xA91F 生效方式: -

最小值: 0 单位: %

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 实时更改

设定值:

0%~65535%

设定说明

-

A9-32 同步机控制保留参数8

通讯地址: 0xA920 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 实时更改

设定值:

0~65535

设定说明

-

A9-33 同步机控制保留参数9

通讯地址: 0xA921 生效方式: -

最小值: 0 单位: -

最大值: 5 数据类型: 无符号16位

默认值: 0 更改方式: 停机更改

设定值:

0~5

设定说明

-

A9-34　同步机控制保留参数10

通讯地址:	0xA922	生效方式:	-
最小值:	0	单位:	%
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0%~65535%

设定说明

-

A9-35　性能第一次故障子码

通讯地址:	0xA923	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

A9-36　性能第二次故障子码

通讯地址:	0xA924	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

A9-37　性能第三次故障子码

通讯地址:	0xA925	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

A9-40 低速是否开启闭电流(VVC使用)

通讯地址:	0xA928	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

-

A9-41 低速闭环电流(VVC使用)

通讯地址:	0xA929	生效方式:	-
最小值:	30	单位:	%
最大值:	200	数据类型:	无符号16位
默认值:	50	更改方式:	停机更改

设定值:

30%~200%

设定说明

-

A9-42 振荡抑制阻尼系数(VVC使用)

通讯地址:	0xA92A	生效方式:	-
最小值:	0	单位:	%
最大值:	500	数据类型:	无符号16位
默认值:	100	更改方式:	实时更改

设定值:

0%~500%

设定说明

-

A9-43 初始位置补偿角(VVC使用)

通讯地址:	0xA92B	生效方式:	-
最小值:	0	单位:	-
最大值:	5	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0~5

设定说明

-

A9-44　同步机初始位置补偿角度

通讯地址:	0xA92C	生效方式:	-
最小值:	0.0	单位：	-
最大值:	360.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0~360.0

设定说明

-

A9-45　同步机低速处理使能

通讯地址:	0xA92D	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：不使能

1：使能

设定说明

-

A9-46　同步机低速处理切换频率

通讯地址:	0xA92E	生效方式:	-
最小值:	0.01	单位：	-
最大值:	P0-10	数据类型：	无符号16位
默认值:	5.00	更改方式：	停机更改

设定值：

0.01~P0-10

设定说明

-

A9-47　同步机低速处理电流

通讯地址:	0xA92F	生效方式:	-
最小值:	10	单位：	-
最大值:	200	数据类型：	无符号16位
默认值:	100	更改方式：	停机更改

设定值：

10~200

设定说明

-

A9-48 同步机低速处理反馈抑制系数

通讯地址:	0xA930	生效方式:	-
最小值:	0	单位:	-
最大值:	300	数据类型:	无符号16位
默认值:	32	更改方式:	停机更改

设定值:

0~300

设定说明

-

A9-49 同步机节能控制使能

通讯地址:	0xA931	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：不使能

1：使能

设定说明

-

A9-50 最大弱磁电流限制余量

通讯地址:	0xA932	生效方式:	-
最小值:	200	单位:	-
最大值:	1000	数据类型:	无符号16位
默认值:	1000	更改方式:	停机更改

设定值:

200~1000

设定说明

-

A9-51 异步机参数辨识高级设置

通讯地址:	0xA933	生效方式:	-
最小值:	0	单位:	-
最大值:	1111	数据类型:	无符号16位
默认值:	111	更改方式:	停机更改

设定值:

个位：转子电阻与漏感辨识直流偏置选择
0：标准偏置
1：大偏置
十位：新的转子电阻与漏感辨识算法
0：不使能
1：使能
百位：新的互感静态辨识算法
0：不使能
1：使能
千位：定子电阻辨识算法选择
0：电流开环
1：电流闭环

设定说明

-

A9-52　U0-06反馈转矩选择

通讯地址:	0xA934	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	实时更改

设定值：

0：电动转矩为正，发电转矩为负
1：速度正方向的转矩方向为正，相反为负

设定说明

-

A9-54　管压降

通讯地址:	0xA936	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	700	更改方式：	停机更改

设定值：

0~10000

设定说明

-

A9-55　死区时间0

通讯地址:	0xA937	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	352	更改方式：	停机更改

设定值：

0~10000

设定说明

-

A9-56 **死区时间1**

通讯地址:	0xA938	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1052	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-57 **死区时间2**

通讯地址:	0xA939	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1270	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-58 **死区时间3**

通讯地址:	0xA93A	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1358	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-59 **死区时间4**

通讯地址:	0xA93B	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1404	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-60 **死区时间5**

通讯地址:	0xA93C	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1449	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-61 **死区时间6**

通讯地址:	0xA93D	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1661	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-62 **死区时间7**

通讯地址:	0xA93E	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1689	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-63 **死区补偿量电流0**

通讯地址:	0xA93F	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	94	更改方式:	停机更改

设定值:

0~10000

设定说明

-

A9-64 **死区补偿量电流1**

通讯地址: 0xA940 生效方式: -
最小值: 0 单位: -
最大值: 10000 数据类型: 无符号16位
默认值: 376 更改方式: 停机更改

设定值:
0~10000
设定说明
-

A9-65 **死区补偿量电流2**

通讯地址: 0xA941 生效方式: -
最小值: 0 单位: -
最大值: 10000 数据类型: 无符号16位
默认值: 658 更改方式: 停机更改

设定值:
0~10000
设定说明
-

A9-66 **死区补偿量电流3**

通讯地址: 0xA942 生效方式: -
最小值: 0 单位: -
最大值: 10000 数据类型: 无符号16位
默认值: 940 更改方式: 停机更改

设定值:
0~10000
设定说明
-

A9-67 **死区补偿量电流4**

通讯地址: 0xA943 生效方式: -
最小值: 0 单位: -
最大值: 10000 数据类型: 无符号16位
默认值: 1222 更改方式: 停机更改

设定值:
0~10000
设定说明
-

A9-68 **死区补偿量电流5**

通讯地址: 0xA944 生效方式: -

最小值: 0
最大值: 10000
默认值: 1504
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

A9-69 死区补偿量电流6

通讯地址: 0xA945
最小值: 0
最大值: 10000
默认值: 3478
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

A9-70 死区补偿量电流7

通讯地址: 0xA946
最小值: 0
最大值: 10000
默认值: 5452
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

A9-71 弹性振荡抑制使能

通讯地址: 0xA947
最小值: 0
最大值: 2
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0：关闭
1：目标频率自适应
2：给定频率

设定说明

-

A9-72 弹性振荡抑制滤波时间

通讯地址: 0xA948
生效方式: -

最小值: 20　　单位: ms
最大值: 1000　　数据类型: 无符号16位
默认值: 300　　更改方式: 实时更改
设定值:
20ms~1000ms
设定说明
-

A9-73　弹性振荡抑制增益
通讯地址: 0xA949　　生效方式: -
最小值: 10　　单位: -
最大值: 1000　　数据类型: 无符号16位
默认值: 100　　更改方式: 实时更改
设定值:
10~1000
设定说明
-

6.26 AC AIAO校正

AC-00　AI1实测电压1
通讯地址: 0xAC00　　生效方式: -
最小值: -10.000　　单位: V
最大值: 10.000　　数据类型: 有符号16位
默认值: 2.000　　更改方式: 实时更改
设定值:
-10.000V~10.000V
设定说明
对AI1端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI1校正前电压（U0-21）。

AC-01　AI1显示电压1
通讯地址: 0xAC01　　生效方式: -
最小值: -10.000　　单位: V
最大值: 10.000　　数据类型: 有符号16位
默认值: 2.000　　更改方式: 实时更改
设定值:
-10.000V~10.000V

设定说明

对AI1端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI1校正前电压（U0-21）。

AC-02 **AI1实测电压2**

通讯地址:	0xAC02	生效方式:	-
最小值:	-10.000	单位：	V
最大值:	10.000	数据类型：	有符号16位
默认值:	8.000	更改方式：	实时更改

设定值：

-10.000V~10.000V

设定说明

对AI1端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI1校正前电压（U0-21）。

AC-03 **AI1显示电压2**

通讯地址:	0xAC03	生效方式:	-
最小值:	-10.000	单位：	V
最大值:	10.000	数据类型：	有符号16位
默认值:	8.000	更改方式：	实时更改

设定值：

-10.000V~10.000V

设定说明

对AI1端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI1校正前电压（U0-21）。

AC-04 **AI2实测电压1**

通讯地址:	0xAC04	生效方式:	-
最小值:	-10.000	单位：	V
最大值:	10.000	数据类型：	有符号16位
默认值:	2.000	更改方式：	实时更改

设定值：

-10.000V~10.000V

设定说明

对AI2端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI2校正前电压（U0-22）。

AC-05 **AI2显示电压1**

通讯地址:	0xAC05	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	2.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI2端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI2校正前电压（U0-22）。

AC-06 **AI2实测电压2**

通讯地址:	0xAC06	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	8.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI2端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI2校正前电压（U0-22）。

AC-07 **AI2显示电压2**

通讯地址:	0xAC07	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	8.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI2端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI2校正前电压（U0-22）。

AC-08 **AI3实测电压1**

通讯地址:	0xAC08	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	2.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI3端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI3校正前电压（U0-23）。

AC-09 **AI3显示电压1**

通讯地址:	0xAC09	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	2.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI3端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI3校正前电压（U0-23）。

AC-10 **AI3实测电压2**

通讯地址:	0xAC0A	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	8.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI3端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI3校正前电压（U0-23）。

AC-11 **AI3显示电压2**

通讯地址:	0xAC0B	生效方式:	-
最小值:	-10.000	单位:	V
最大值:	10.000	数据类型:	有符号16位
默认值:	8.000	更改方式:	实时更改

设定值:

-10.000V~10.000V

设定说明

对AI3端子进行模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的AI3校正前电压（U0-23）。

AC-12 **AO1实测电压1**

通讯地址: 0xAC0C
最小值: -10.000
最大值: 10.000
默认值: 2.000
生效方式: -
单位: V
数据类型: 有符号16位
更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO1端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-13 **AO1目标电压1**

通讯地址: 0xAC0D
最小值: -10.000
最大值: 10.000
默认值: 2.000
生效方式: -
单位: V
数据类型: 有符号16位
更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO1端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-14 **AO1实测电压2**

通讯地址: 0xAC0E
最小值: -10.000
最大值: 10.000
默认值: 8.000
生效方式: -
单位: V
数据类型: 有符号16位
更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO1端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-15 **AO1目标电压2**

通讯地址: 0xAC0F
最小值: -10.000
最大值: 10.000
默认值: 8.000
生效方式: -
单位: V
数据类型: 有符号16位
更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO1端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-16 **AO2实测电压1**

通讯地址: 0xAC10 生效方式: -
最小值: -10.000 单位: V
最大值: 10.000 数据类型: 有符号16位
默认值: 2.000 更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO2端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目
标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-17 **AO2目标电压1**

通讯地址: 0xAC11 生效方式: -
最小值: -10.000 单位: V
最大值: 10.000 数据类型: 有符号16位
默认值: 2.000 更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO2端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目
标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-18 **AO2实测电压2**

通讯地址: 0xAC12 生效方式: -
最小值: -10.000 单位: V
最大值: 10.000 数据类型: 有符号16位
默认值: 8.000 更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO2端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目
标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-19 **AO2目标电压2**

通讯地址: 0xAC13 生效方式: -
最小值: -10.000 单位: V
最大值: 10.000 数据类型: 有符号16位
默认值: 8.000 更改方式: 实时更改

设定值:

-10.000V~10.000V

设定说明

对AO2端子进行模拟量电压校正时,通过2个点形成一条校正的曲线，每个点对应一个目

标电压和实测电压。目标电压是预期输出电压，实测电压是实际测量的输出电压。

AC-20 **PT100实测电压1**

通讯地址:	0xAC14	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	0.440	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT100模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-21 **PT100显示电压1**

通讯地址:	0xAC15	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	0.440	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT100模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-22 **PT100实测电压2**

通讯地址:	0xAC16	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	2.160	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT100模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-23 **PT100显示电压2**

通讯地址:	0xAC17	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	2.160	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT100模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-24 **PT1000实测电压1**

通讯地址:	0xAC18	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	1.136	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT1000模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-25 **PT1000显示电压1**

通讯地址:	0xAC19	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	1.136	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT1000模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-26 **PT1000实测电压2**

通讯地址:	0xAC1A	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	2.122	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT1000模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-27　PT1000显示电压2

通讯地址:	0xAC1B	生效方式:	-
最小值:	0.000	单位:	V
最大值:	3.300	数据类型:	有符号16位
默认值:	2.122	更改方式:	实时更改

设定值:

0.000V~3.300V

设定说明

对AI3端子进行PT1000模拟量电压校正时，通过2个点形成一条校正的曲线，每个点对应一个实测电压和显示电压。实测电压是仪表实际测量的电压值，显示电压是显示的PTC校正前电压（U0-47）。

AC-28　AO1实测电流1

通讯地址:	0xAC1C	生效方式:	-
最小值:	0.000	单位:	mA
最大值:	20.000	数据类型:	无符号16位
默认值:	4.000	更改方式:	实时更改

设定值:

0.000mA~20.000mA

设定说明

对AO1端子进行模拟量电流校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电流和实测电流。目标电流是预期输出电流，实测电流是实际测量的输出电流。

AC-29　AO1目标电流1

通讯地址:	0xAC1D	生效方式:	-
最小值:	0.000	单位:	mA
最大值:	20.000	数据类型:	无符号16位
默认值:	4.000	更改方式:	实时更改

设定值:

0.000mA~20.000mA

设定说明

对AO1端子进行模拟量电流校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电流和实测电流。目标电流是预期输出电流，实测电流是实际测量的输出电流。

AC-30　AO1实测电流2

通讯地址:	0xAC1E	生效方式:	-

最小值: 0.000 单位: mA
最大值: 20.000 数据类型: 无符号16位
默认值: 16.000 更改方式: 实时更改

设定值:

0.000mA~20.000mA

设定说明

对AO1端子进行模拟量电流校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电流和实测电流。目标电流是预期输出电流，实测电流是实际测量的输出电流。

AC-31 **AO1目标电流2**

通讯地址: 0xAC1F 生效方式: -
最小值: 0.000 单位: mA
最大值: 20.000 数据类型: 无符号16位
默认值: 16.000 更改方式: 实时更改

设定值:

0.000mA~20.000mA

设定说明

对AO1端子进行模拟量电流校正时,通过2个点形成一条校正的曲线，每个点对应一个目标电流和实测电流。目标电流是预期输出电流，实测电流是实际测量的输出电流。

6.27 AF 过程数据地址映射

AF-00 **RPDO1-SubIndex0-H**

通讯地址: 0xAF00 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-01 **RPDO1-SubIndex0-L**

通讯地址: 0xAF01 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-02 **RPDO1-SubIndex1-H**

通讯地址:	0xAF02	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-03 **RPDO1-SubIndex1-L**

通讯地址:	0xAF03	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-04 **RPDO1-SubIndex2-H**

通讯地址:	0xAF04	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-05 **RPDO1-SubIndex2-L**

通讯地址:	0xAF05	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-06 **RPDO1-SubIndex3-H**

通讯地址:	0xAF06	生效方式:	-
最小值:	0x0	单位:	-

最大值: 0xFFFF
默认值: 0x0
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-07 RPDO1-SubIndex3-L

通讯地址: 0xAF07
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-08 RPDO2-SubIndex0-H

通讯地址: 0xAF08
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-09 RPDO2-SubIndex0-L

通讯地址: 0xAF09
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-10 RPDO2-SubIndex1-H

通讯地址: 0xAF0A
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-11 RPDO2-SubIndex1-L

通讯地址:	0xAF0B	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-12 RPDO2-SubIndex2-H

通讯地址:	0xAF0C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-13 RPDO2-SubIndex2-L

通讯地址:	0xAF0D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-14 RPDO2-SubIndex3-H

通讯地址:	0xAF0E	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-15 **RPDO2-SubIndex3-L**

通讯地址: 0xAF0F
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-16 **RPDO3-SubIndex0-H**

通讯地址: 0xAF10
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-17 **RPDO3-SubIndex0-L**

通讯地址: 0xAF11
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-18 **RPDO3-SubIndex1-H**

通讯地址: 0xAF12
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-19 **RPDO3-SubIndex1-L**

通讯地址: 0xAF13
最小值: 0x0
生效方式: -
单位: -

最大值: 0xFFFF
默认值: 0x0
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-20 RPDO3-SubIndex2-H

通讯地址: 0xAF14
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-21 RPDO3-SubIndex2-L

通讯地址: 0xAF15
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-22 RPDO3-SubIndex3-H

通讯地址: 0xAF16
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-23 RPDO3-SubIndex3-L

通讯地址: 0xAF17
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-24 RPDO4-SubIndex0-H

通讯地址:	0xAF18	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-25 RPDO4-SubIndex0-L

通讯地址:	0xAF19	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-26 RPDO4-SubIndex1-H

通讯地址:	0xAF1A	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-27 RPDO4-SubIndex1-L

通讯地址:	0xAF1B	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-28 **RPDO4-SubIndex2-H**

通讯地址: 0xAF1C　　生效方式: -
最小值: 0x0　　单位: -
最大值: 0xFFFF　　数据类型: 无符号16位
默认值: 0x0　　更改方式: 实时更改

设定值:
0x0~0xFFFF
设定说明
-

AF-29 **RPDO4-SubIndex2-L**

通讯地址: 0xAF1D　　生效方式: -
最小值: 0x0　　单位: -
最大值: 0xFFFF　　数据类型: 无符号16位
默认值: 0x0　　更改方式: 实时更改

设定值:
0x0~0xFFFF
设定说明
-

AF-30 **RPDO4-SubIndex3-H**

通讯地址: 0xAF1E　　生效方式: -
最小值: 0x0　　单位: -
最大值: 0xFFFF　　数据类型: 无符号16位
默认值: 0x0　　更改方式: 实时更改

设定值:
0x0~0xFFFF
设定说明
-

AF-31 **RPDO4-SubIndex3-L**

通讯地址: 0xAF1F　　生效方式: -
最小值: 0x0　　单位: -
最大值: 0xFFFF　　数据类型: 无符号16位
默认值: 0x0　　更改方式: 实时更改

设定值:
0x0~0xFFFF
设定说明
-

AF-32 **TPDO1-SubIndex0-H**

通讯地址: 0xAF20　　生效方式: -
最小值: 0x0　　单位: -

最大值: 0xFFFF
默认值: 0x0
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-33 TPDO1-SubIndex0-L

通讯地址: 0xAF21
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-34 TPDO1-SubIndex1-H

通讯地址: 0xAF22
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-35 TPDO1-SubIndex1-L

通讯地址: 0xAF23
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-36 TPDO1-SubIndex2-H

通讯地址: 0xAF24
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-37 TPDO1-SubIndex2-L

通讯地址:	0xAF25	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-38 TPDO1-SubIndex3-H

通讯地址:	0xAF26	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-39 TPDO1-SubIndex3-L

通讯地址:	0xAF27	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-40 TPDO2-SubIndex0-H

通讯地址:	0xAF28	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-41 **TPDO2-SubIndex0-L**

通讯地址:	0xAF29	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-42 **TPDO2-SubIndex1-H**

通讯地址:	0xAF2A	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-43 **TPDO2-SubIndex1-L**

通讯地址:	0xAF2B	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-44 **TPDO2-SubIndex2-H**

通讯地址:	0xAF2C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-45 **TPDO2-SubIndex2-L**

通讯地址:	0xAF2D	生效方式:	-
最小值:	0x0	单位:	-

最大值: 0xFFFF
默认值: 0x0
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-46 TPDO2-SubIndex3-H

通讯地址: 0xAF2E
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-47 TPDO2-SubIndex3-L

通讯地址: 0xAF2F
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-48 TPDO3-SubIndex0-H

通讯地址: 0xAF30
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-49 TPDO3-SubIndex0-L

通讯地址: 0xAF31
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-50 TPDO3-SubIndex1-H

通讯地址:	0xAF32	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-51 TPDO3-SubIndex1-L

通讯地址:	0xAF33	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-52 TPDO3-SubIndex2-H

通讯地址:	0xAF34	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-53 TPDO3-SubIndex2-L

通讯地址:	0xAF35	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-54 **TPDO3-SubIndex3-H**

通讯地址: 0xAF36 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-55 **TPDO3-SubIndex3-L**

通讯地址: 0xAF37 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-56 **TPDO4-SubIndex0-H**

通讯地址: 0xAF38 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-57 **TPDO4-SubIndex0-L**

通讯地址: 0xAF39 生效方式: -
最小值: 0x0 单位: -
最大值: 0xFFFF 数据类型: 无符号16位
默认值: 0x0 更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-58 **TPDO4-SubIndex1-H**

通讯地址: 0xAF3A 生效方式: -
最小值: 0x0 单位: -

最大值: 0xFFFF
默认值: 0x0
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-59 TPDO4-SubIndex1-L

通讯地址: 0xAF3B
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-60 TPDO4-SubIndex2-H

通讯地址: 0xAF3C
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-61 TPDO4-SubIndex2-L

通讯地址: 0xAF3D
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-62 TPDO4-SubIndex3-H

通讯地址: 0xAF3E
最小值: 0x0
最大值: 0xFFFF
默认值: 0x0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-63 TPDO4-SubIndex3-L

通讯地址:	0xAF3F	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

-

AF-66 RPDO有效个数

通讯地址:	0xAF42	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	不可更改

设定值:

0x0~0xFFFF

设定说明

-

AF-67 TPDO有效个数

通讯地址:	0xAF43	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	不可更改

设定值:

0x0~0xFFFF

设定说明

-

6.28 B0 控制模式、线速度、卷径相关

B0-00 张力控制模式

通讯地址:	0xB000	生效方式:	-
最小值:	0	单位:	-
最大值:	4	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：无效
1：开环转矩控制模式
2：闭环速度控制模式
3：闭环转矩控制模式
4：恒线速度控制模式

设定说明

设置该参数进行张力控制模式选择。

0：无效

可用于方向判断和参数辨识等基本操作。

1：开环转矩控制模式

无需张力/位置检测和反馈，转矩模式运行，变频器控制输出转矩，控制材料上的张力。推荐使用有速度传感器矢量控制（FVC），以获得理想的控制效果。

2：闭环速度控制模式

需要张力/位置检测和反馈，速度模式运行，变频器在通过线速度和卷径折算的主频率给定的基础上，叠加PID闭环运算进行调整，控制输出频率，以达到设定的张力或位置稳定。控制方式可选择无速度传感器矢量控制（SVC）、V/f控制或有速度传感器矢量控制（FVC）。

3：闭环转矩控制模式

需要张力检测和反馈，转矩模式运行，变频器在开环转矩控制模式的转矩给定基础上，叠加PID闭环运算进行调整，控制输出转矩，以达到设定的张力。推荐使用有速度传感器矢量控制（FVC），以获得理想的控制效果。

4：恒线速度控制模式

速度模式运行，变频器根据卷径的变化，调整自身的运行频率，以保证系统以恒定的线速度运行。控制方式可选择无速度传感器矢量控制（SVC）、V/f控制或有速度传感器矢量控制（FVC）。

B0-01　卷曲模式

通讯地址:	0xB001	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：收卷
1：放卷

设定说明

该参数与DI端子功能58（收放卷切换端子）配合以确定卷曲模式。当收放卷切换端子无效，卷曲模式与该参数设置相同；当收放卷切换端子生效，卷曲模式与该参数设置相反。

B0-02　放卷反向收紧选择

通讯地址:	0xB002	生效方式:	-
最小值:	0.0	单位：	m/min

最大值:	500.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0m/min~500.0m/min

设定说明

参数设置为0时，材料零速时，放卷轴不出力，材料不收紧。参数设置为0.1~500.0m/min，放卷轴在空转或材料松弛时以该设定线速度反向运行，材料零速状况下，保持出力，材料收紧。

B0-03 机械传动比

通讯地址:	0xB003	生效方式:	-
最小值:	0.01	单位：	-
最大值:	300.00	数据类型：	无符号16位
默认值:	1.00	更改方式：	实时更改

设定值：

0.01~300.00

设定说明

该参数定义为电机转速与卷轴转速之比，应根据实际机械传动结构进行设置。采用线速度计算卷径（B0-07=0）时，该参数越大，运算卷径值越大，反之越小。可参考此规律，根据卷径运算值与实际值的偏差对该参数进行修正。

B0-04 线速度输入源

通讯地址:	0xB004	生效方式:	-
最小值:	0	单位：	-
最大值:	6	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：无输入

1：AI1

2：AI2

3：AI3

4：PULSE输入（DI5）

5：通信设定（1000H）

6：通信设定（731AH）

设定说明

0：无输入

1~6：通过以上通道输入线速度时，需要根据标幺关系合理设置最大线速度值（B0-05），其中1000H地址通信设定按照百分比设定，731AH地址通信设定为直接数字设定，且数字设定范围为0~B0-05。

B0-05 最大线速度

通讯地址:	0xB005	生效方式:	-

最小值:	0.0	单位：	m/min
最大值:	6500.0	数据类型：	无符号16位
默认值:	1000.0	更改方式：	实时更改

设定值：

0.0m/min~6500.0m/min

设定说明

该参数用于设置最大线速度。

对应B0-04通道1~5输入100.0%时对应的实际线速度值（与生产需求最大线速度不一定相同，设置时避免混淆）。采用线速度计算卷径（B0-07=0）时，该参数越大，卷径值越大，反之越小。可参考此规律，根据卷径运算值与实际值的偏差对该参数进行修正。

B0-06 卷径计算最低线速度

通讯地址:	0xB006	生效方式:	-
最小值:	0.0	单位：	m/min
最大值:	6500.0	数据类型：	无符号16位
默认值:	20.0	更改方式：	实时更改

设定值：

0.0m/min~6500.0m/min

设定说明

该参数仅当B0-07=0时生效。

线速度低于该参数，保持当前卷径值，线速度高于该参数，进行卷径运算。对于运行频率低或加速过程卷径运算不准确的场合，可通过合理设置该参数解决。

B0-07 卷径计算方法选择

通讯地址:	0xB007	生效方式:	-
最小值:	0	单位：	-
最大值:	7	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：通过线速度计算

1：通过厚度累计计算

2：AI1输入

3：AI2输入

4：AI3输入

5：PULSE输入（DI5）

6：通信给定

7：B0-14设定

设定说明

0：通过线速度计算

该运算方式与材料厚度无关，根据线速度和运行频率实时运算，误差不累积。

1：通过厚度累计计算
该运算方式无需线速度，根据材料厚度和记圈信号累积计算，运算结果平稳，但误差累积。
2~6：卷径可通过通道2~6获取，以满足卷径通过传感器直接测量或卷径运算在变频器外实现的场合。采用以上通道时，需根据标幺关系正确设置最大卷径（B0-08）。如采用AI1作为卷径通道时，AI1输入100.0%对应的卷径值应为最大卷径（B0-08）量值。
7：B0-14设定
卷径通道配置为7时，卷径值通过参数B0 14直接设定，可作为额外通信地址使用，或者在调试时手动设置卷径使用。

B0-08　最大卷径

通讯地址:	0xB008	生效方式:	-
最小值:	0.1	单位：	mm
最大值:	6000.0	数据类型：	无符号16位
默认值:	500.0	更改方式：	实时更改

设定值：
0.1mm~6000.0mm
设定说明
实际满卷卷径。

B0-09　空卷卷径

通讯地址:	0xB009	生效方式:	-
最小值:	0.1	单位：	mm
最大值:	6000.0	数据类型：	无符号16位
默认值:	100.0	更改方式：	实时更改

设定值：
0.1mm~6000.0mm
设定说明
实际空卷卷径。

B0-10　初始卷径源

通讯地址:	0xB00A	生效方式:	-
最小值:	0	单位：	-
最大值:	4	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：B0-11~B0-13设定
1：AI1设定
2：AI2设定
3：AI3设定
4：通信给定(1000H)

设定说明

B0-10参数用于选择初始卷径的输入通道。此时，初始卷径源受DI功能55，DI功能56（初始卷径选择端子）影响，并与卷曲模式相关。

0：B0-11~B0-13设定

默认参数下，初始卷径源根据卷曲模式确定为B0-08或B0-09。

1~4：初始卷径可通过通道1~4获取。采用以上通道时，需根据标幺关系正确设置最大卷径（B0¬08）。

B0-11 **初始卷径1**

通讯地址:	0xB00B	生效方式:	-
最小值:	0.1	单位:	mm
最大值:	6000.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.1mm~6000.0mm

设定说明

初始卷径1~3，参见参数B0-10。

B0-12 **初始卷径2**

通讯地址:	0xB00C	生效方式:	-
最小值:	0.1	单位:	mm
最大值:	6000.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.1mm~6000.0mm

设定说明

初始卷径1~3，参见参数B0-10。

B0-13 **初始卷径3**

通讯地址:	0xB00D	生效方式:	-
最小值:	0.1	单位:	mm
最大值:	6000.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.1mm~6000.0mm

设定说明

初始卷径1~3，参见参数B0-10。

B0-14 **当前卷径值**

通讯地址:	0xB00E	生效方式:	-
最小值:	0.1	单位:	mm
最大值:	6000.0	数据类型:	无符号16位

默认值:	100.0	更改方式：	实时更改

设定值：

0.1mm~6000.0mm

设定说明

该参数实时显示当前卷径值。修改此参数可以修改当前卷径值，卷径运算结果会覆盖此参数(B0-07=7除外)，也可作为复位卷径的一种方式。

B0-15 卷径滤波时间

通讯地址:	0xB00F	生效方式:	-
最小值:	0.00	单位：	s
最大值:	10.00	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：

0.00s~10.00s

设定说明

该参数仅当B0-07=0时生效。

用户可设置该参数对卷径运算结果滤波，抑制卷径的抖动。该参数设置越大，卷径运算值越平滑，同时引起的卷径变化延时越大。规律：当卷径线性变化时，运算卷径滞后于实际卷径的时间基本等于该参数值。

B0-16 卷径变化率

通讯地址:	0xB010	生效方式:	-
最小值:	0.0	单位：	-
最大值:	1000.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0~1000.0

设定说明

该参数仅当B0-07=0时生效。

用户可修改该参数为非0值，来限制卷径在单位时间内的变化量值，可避免运算卷径在异常情况下变化过快。设置过小会过度限制卷径变化，影响卷径运算实时性，请根据实际情况合理设置（可通过计算线速度为100.0m/min时最大变化率填入该参数）。

B0-17 卷径变化方向限制

通讯地址:	0xB011	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：功能关闭

1：收卷禁止递减、放卷禁止递增

设定说明

该参数仅当B0-07=0时生效。

设置该参数对卷径变化方向进行限制，请在合理设置B0-16的情况下使用，否则若出现卷径异常波动，会引起卷径运算结果偏差过大。

B0-18 运行中卷径复位允许

通讯地址:	0xB012	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0~1

设定说明

设置该参数，允许在运行状态下的卷径复位动作。

B0-19 预驱动速度增益

通讯地址:	0xB013	生效方式:	-
最小值:	-100.0	单位：	%
最大值:	200.0	数据类型：	有符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

-100.0%~200.0%

设定说明

预驱动时，根据线速度和卷径自动折算出运行频率，以保证与材料线速度匹配。调试时，若线速度略有偏差，可设置该参数以增加/减少预驱动运行频率，实现更精确的线速度匹配。

B0-20 预驱动转矩限幅源

通讯地址:	0xB014	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	1	更改方式：	停机更改

设定值：

0：根据P2-09设定

1：根据张力控制转矩设定

设定说明

在转矩控制张力模式下，自动生成目标转矩，满足材料张力需求。在普通运行模式下，目标转矩也可以根据P2-09选择通道来进行设定。该参数为预驱动模式下目标转矩的来源提供了上述选择，用户可根据需求自行选择。

0：目标转矩根据P2-09选择通道设定。

1：目标转矩根据张力控制开环转矩设定（仅供模式1和模式3使用）。

B0-21 **预驱动转矩修正**

通讯地址:	0xB015	生效方式:	-
最小值:	-100.0	单位:	%
最大值:	100.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-100.0%~100.0%

设定说明

参数在B0-20=1时生效，用于在预驱动模式下，对张力控制转矩进行修正。为避免B0-20=1时，转矩限制太小，引起预驱动加速过慢，可限制预驱动模式下的最小转矩限制。

B0-23 **预驱动加速时间**

通讯地址:	0xB017	生效方式:	-
最小值:	0.0	单位:	s
最大值:	6000.0	数据类型:	无符号16位
默认值:	20.0	更改方式:	实时更改

设定值:

0.0s~6000.0s

设定说明

B0-23、B0-24、B0-40为一组时间配置，对应的是卷径为最小卷径时的加、减速时间，随着卷径增大，加、减速时间等比例增大，以避免大卷时加、减速过快，引起冲击。

B0-24 **预驱动减速时间**

通讯地址:	0xB018	生效方式:	-
最小值:	0.0	单位:	s
最大值:	6000.0	数据类型:	无符号16位
默认值:	20.0	更改方式:	实时更改

设定值:

0.0s~6000.0s

设定说明

B0-23、B0-24、B0-40为一组时间配置，对应的是卷径为最小卷径时的加、减速时间，随着卷径增大，加、减速时间等比例增大，以避免大卷时加、减速过快，引起冲击。

B0-25 **预驱动卷径计算允许**

通讯地址:	0xB019	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~1

设定说明

参数仅在B0 07=1时生效。

厚度累积运算卷径时，卷径随卷轴旋转圈数增加/减少，此时可通过设置该参数有效，来避免预驱动时卷径运算失效而引起的累积误差。用户可根据实际操作情况，来进行选择。

B0-26 张力频率限幅

通讯地址:	0xB01A	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	50.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

限幅比例（相对于线速度同步频率）。

B0-27 张力频率限幅偏置

通讯地址:	0xB01B	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	100.00	数据类型：	无符号16位
默认值:	5.00	更改方式：	实时更改

设定值：

0.00Hz~100.00Hz

设定说明

限幅偏置（固定频率值）。

B0-28 张力频率限幅使能

通讯地址:	0xB01C	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：不使能

1：使能

设定说明

B0-00=2：B0-28作用为速度闭环PID调节限幅使能

0：根据B0-26和B0-27限幅（受限于上限频率）

1：限制为B0-27固定频率

速度模式下，为保证系统稳定性，采用开环给定加闭环调节时，闭环调节量应该进行限制，避免系统振荡。为此，在速度闭环调节时，默认情况下（B0-28=0），闭环调节量可根据同步频率（收卷机与当前线速度匹配的运行频率）和速度闭环限幅偏置根据下列公式获取闭环调节频率。

闭环调节频率上限=同步频率 × B0-26 + B0-27
设置B0-28=1时，闭环调节调节频率上限为固定频率B0-27
B0-00≠2：B0-28作用为速度极限限幅使能（对收卷有效）
0：不限幅（受限于上限频率）
1：根据B0-26和B0-27限幅
转矩模式下，默认状况下（B0-28=0），收卷频率上限不限制；为防止断料飞车，可设置以上参数对收卷上限频率进行限制。设置B0-28=1时，根据同步频率（收卷机与当前线速度匹配的运行频率）和频率限幅偏置根据下列公式获取收卷频率上限。
收卷频率上限=同步频率 ×（1+B0-26）+ B0-27

B0-29 **每圈脉冲数**

通讯地址:	0xB01D	生效方式:	-
最小值:	1	单位:	-
最大值:	60000	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:
1~60000
设定说明
该参数表示卷轴每旋转一圈所对应的脉冲数。

B0-30 **每层圈数**

通讯地址:	0xB01E	生效方式:	-
最小值:	1	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1	更改方式:	实时更改

设定值:
1~10000
设定说明
该参数表示材料绕满一层所对应的圈数，一般用于线材，带材场合设置为1。

B0-31 **材料厚度设定源**

通讯地址:	0xB01F	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:
0：数字设定
1：AI1设定
2：AI2设定
3：AI3设定
设定说明
该参数用以选择材料厚度的输入通道。

0：数字设定
此时，材料厚度受DI功能62，DI功能63（材料厚度选择端子）影响。
1~3：初始卷径可通过通道1~3获取。采用以上通道时，需根据标幺关系正确设置材料最大厚度（B0-36）。

B0-32 **材料厚度0**

通讯地址:	0xB020	生效方式:	-
最小值:	0.01	单位：	mm
最大值:	100.00	数据类型：	无符号16位
默认值:	0.01	更改方式：	实时更改

设定值：
0.01mm~100.00mm
设定说明
材料厚度0~3，见参数B0-31。

B0-33 **材料厚度1**

通讯地址:	0xB021	生效方式:	-
最小值:	0.01	单位：	mm
最大值:	100.00	数据类型：	无符号16位
默认值:	0.01	更改方式：	实时更改

设定值：
0.01mm~100.00mm
设定说明
材料厚度0~3，见参数B0-31。

B0-34 **材料厚度2**

通讯地址:	0xB022	生效方式:	-
最小值:	0.01	单位：	mm
最大值:	100.00	数据类型：	无符号16位
默认值:	0.01	更改方式：	实时更改

设定值：
0.01mm~100.00mm
设定说明
材料厚度0~3，见参数B0-31。

B0-35 **材料厚度3**

通讯地址:	0xB023	生效方式:	-
最小值:	0.01	单位：	mm
最大值:	100.00	数据类型：	无符号16位
默认值:	0.01	更改方式：	实时更改

设定值：
0.01mm~100.00mm

设定说明

材料厚度0~3，见参数B0-31。

B0-36 最大厚度

通讯地址:	0xB024	生效方式:	-
最小值:	0.01	单位：	mm
最大值:	100.00	数据类型：	无符号16位
默认值:	1.00	更改方式：	实时更改

设定值：

0.01mm~100.00mm

设定说明

材料最大厚度，见参数B0-31。

B0-37 停机免卷径复位

通讯地址:	0xB025	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	实时更改

设定值：

0：不使能

1：使能

设定说明

该功能码设为1时，停机时卷径自动复位为初始卷径，与DI端子功能54作用类似

B0-38 闭环张力转矩模式选择

通讯地址:	0xB026	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：转矩由纯PID运算

1：转矩由主+PID运算

设定说明

主转矩即B0-00=1模式下的运算转矩值。

相比主+PID模式，纯PID模式下，配置摩擦和惯量补偿等依旧生效，仅对应张力转矩一项无效。

配置为主+PID模式时，请准确配置PID反馈值对应100.0%时所对应的张力值，并输入参数B1-02。

B0-40 最小预驱动转矩限制

通讯地址:	0xB028	生效方式:	-
最小值:	0.0	单位：	%

最大值:	100.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

B0-23、B0-24、B0-40为一组时间配置，对应的是卷径为最小卷径时的加、减速时间，随着卷径增大，加、减速时间等比例增大，以避免大卷时加、减速过快，引起冲击。

B0-41 **恒线速度源选择**

通讯地址:	0xB029	生效方式:	-
最小值:	0	单位：	-
最大值:	5	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：AI1

1：AI2

2：AI3

3：PULSE脉冲设定（DI5）

4：通信设定（1000H）

5：通信设定（731AH）

设定说明

0~2：模拟量通道设定。

3：脉冲设定。

4：通信1000H地址设置，按百分比设定。

5：通信731AH地址设置，直接数字设定，数字设定范围是0~B0-05。

用于设置恒线速度控制模式下，目标线速度通道。同样根据最大线速度（B0-05）进行标定。

6.29 B1 张力设定

B1-00 **张力设定源**

通讯地址:	0xB100	生效方式:	-
最小值:	0	单位：	-
最大值:	5	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：B0-01设定
1：AI1设定
2：AI2设定
3：AI3设定
4：PULSE脉冲设定（DI5）
5：通信设定（1000H）

设定说明

0：B1-01数字设定
1~5：以上通道输入均表示目标张力相对于最大张力的百分比，需要根据标幺关系合理设置最大张力（B1-02）。

B1-01 张力数字设定

通讯地址:	0xB101	生效方式:	-
最小值:	0	单位：	N
最大值:	65000	数据类型：	无符号16位
默认值:	50	更改方式：	实时更改

设定值：

0N~65000N

设定说明

张力数字设定，见B1-00通道0。

B1-02 最大张力

通讯地址:	0xB102	生效方式:	-
最小值:	0	单位：	N
最大值:	65000	数据类型：	无符号16位
默认值:	500	更改方式：	实时更改

设定值：

0N~65000N

设定说明

该参数用来设定最大张力，对应B1-00通道1~5输入100.0%时对应的张力值。在实际张力不满足需求时，在不改变AI或脉冲输入信号或曲线的情况下，可通过调整该参数来进行修正。

B1-03 零速阈值

通讯地址:	0xB103	生效方式:	-
最小值:	0.0	单位：	%
最大值:	20.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0%~20.0%

设定说明

运行频率低于该参数，根据B1-04进行启动摩擦张力补偿。运行频率高于该参数，不进行启动摩擦张力补偿。百分比基准：P0-10最大频率。

B1-04　零速张力提升

通讯地址:	0xB104	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

该参数量值对应设定张力百分比，根据材料张力承受范围合理设置。在保证启动的前提下，该参数设置应尽量小。

B1-05　转矩模式频率加速时间

通讯地址:	0xB105	生效方式:	-
最小值:	0.0	单位:	s
最大值:	6500.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0s~6500.0s

设定说明

设置B1-05和B1-06参数，改变频率上限随时间变化的斜率。

张力模式下，频率上限影响电机出力。一般不需要设置，特殊情况可根据出力需求，设置B1-05和B1-06参数。

B1-06　转矩模式频率减速时间

通讯地址:	0xB106	生效方式:	-
最小值:	0.0	单位:	s
最大值:	6500.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0s~6500.0s

设定说明

设置B1-05和B1-06参数，改变频率上限随时间变化的斜率。

张力模式下，频率上限影响电机出力。一般不需要设置，特殊情况可根据出力需求，设置B1-05和B1-06参数。

B1-07　摩擦力补偿

通讯地址:	0xB107	生效方式:	-
最小值:	0.0	单位:	%
最大值:	50.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~50.0%

设定说明

张力模式下，变频器根据张力设定和卷径自动设定目标转矩，根据该参数设置增加（收卷）/减少（放卷）目标转矩，以抵消摩擦力给材料张力带来的影响。该参数量值对应变频器额定转矩的百分比。

B1-08　机械惯量补偿系数

通讯地址:	0xB108	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

参考实际机械飞轮惯量设置该参数。对于一般圆柱机械卷轴，机械飞轮惯量理论值可依照如下公式进行：式中g为重力加速度9.8m/s^2，γ为机械材料密度，b为机械轴长度，D为机械轴外径，D0为机械轴内径（实心轴为0），i为传动比，单位参照国际单位制。设置值可根据加减速过程中材料张力变化的实际情况进行调整。

B1-09　加速惯量补偿修正量

通讯地址:	0xB109	生效方式:	-
最小值:	0.0	单位:	%
最大值:	200.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.0%~200.0%

设定说明

由于理论惯量和实际惯量必然存在偏差，在惯量参数设置后，惯量补偿效果可能达不到理想状况。可通过设置该组参数来微调以优化控制效果。以收卷加速为例，若材料张力偏小，则可以增加参数B1-09以加强补偿效果，否则减小该参数；减速同理。该组参数可为调试提供一定便利。

B1-10　减速惯量补偿修正量

通讯地址:	0xB10A	生效方式:	-
最小值:	0.0	单位:	%
最大值:	200.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.0%~200.0%

设定说明

由于理论惯量和实际惯量必然存在偏差，在惯量参数设置后，惯量补偿效果可能达不到理想状况。可通过设置该组参数来微调以优化控制效果。以收卷加速为例，若材料张力偏小，则可以增加参数B1-09以加强补偿效果，否则减小该参数；减速同理。该组参数可为调试提供一定便利。

B1-11 **材料密度**

通讯地址:	0xB10B	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0~65535

设定说明

参考实际材料属性设置该组参数，请同时设置准确的机械传动比B0-03。根据该组参数，卷轴直径和材料卷径，变频器自动运算获取材料的飞轮惯量。

B1-12 **材料宽度**

通讯地址:	0xB10C	生效方式:	-
最小值:	0	单位:	mm
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0mm~65535mm

设定说明

参考实际材料属性设置该组参数，请同时设置准确的机械传动比B0-03。根据该组参数，卷轴直径和材料卷径，变频器自动运算获取材料的飞轮惯量。

B1-13 **惯量补偿退出延时**

通讯地址:	0xB10D	生效方式:	-
最小值:	0	单位:	ms
最大值:	1000	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0ms~1000ms

设定说明

惯量补偿退出延时时间。

B1-14 **零速补偿过度频率**

通讯地址:	0xB10E	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	20.00	数据类型:	无符号16位
默认值:	2.00	更改方式:	实时更改

设定值:

0.00Hz~20.00Hz

设定说明

该参数提供了零速张力提升在阈值点平滑切换的选择。

B1-15　开环转矩反向允许

通讯地址:	0xB10F	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0：禁止转矩反向

1：允许转矩反向

设定说明

该参数仅当B0-00=1或B0-00=3时生效。

加入摩擦和惯量补偿后，转矩运算值很可能出现负值。可通过设置该参数选择转矩反向时的处理办法。默认限制转矩方向，开启以允许反向。

B1-16　张力闭环转矩限幅

通讯地址:	0xB110	生效方式:	-
最小值:	0.0	单位:	%
最大值:	200.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.0%~200.0%

设定说明

该参数用于限制闭环转矩控制（B0-00=3）模式下，转矩闭环调节量相对于开环给定转矩的百分比。

B1-17　摩擦力补偿修正系数

通讯地址:	0xB111	生效方式:	-
最小值:	-50.0	单位:	-
最大值:	50.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

-50.0~50.0

设定说明

摩擦力在多数运行场合并不恒定，可能随运行频率发生变化。使用B1-07未必能实现理想的摩擦补偿效果，此时可配合该参数使用，实现方式详见参数B1-18。该参数量值对应变频器额定转矩的百分比。

B1-18　摩擦力补偿曲线

通讯地址:	0xB112	生效方式:	-
最小值:	0	单位:	-
最大值:	3	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：频率
1：线速度
2：多段摩擦力补偿曲线1
3：多段摩擦力补偿曲线2

设定说明

目前提供了5种不同的摩擦力补偿方式适应复杂的摩擦力变化规律。
0：根据运行频率补偿有些场合，摩擦力会随着系统运行频率发生变化，设置成该模式时，摩擦力补偿量值由下述公式决定：摩擦补偿转矩=B1-07×（1+线速度折算频率÷最大频率×B1-17）。
1：根据线速度补偿与方式0类似，此时补偿修正依据线速度，摩擦力补偿量值由下述公式决定：摩擦补偿转矩=B1-07×（1+线速度÷最大线速度×B1-17）。
2：多段摩擦力补偿曲线1有些场合，摩擦力不随频率线性变化，此时可通过多段曲线的方式，根据线速度折算频率，获取动摩擦力补偿值实现。详见参数B1-19~B1-24。
3：多段摩擦力补偿曲线2与补偿曲线1相比，补偿曲线2更加灵活，但需要设置的参数更多。详见参数B1-19~B1-30。

B1-19　多段摩擦力补偿转矩1

通讯地址:	0xB113	生效方式:	-
最小值:	0.0	单位：	-
最大值:	50.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0~50.0

设定说明

用于多段摩擦力补偿曲线1、2。
B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-20　多段摩擦力补偿转矩2

通讯地址:	0xB114	生效方式:	-
最小值:	0.0	单位：	-
最大值:	50.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	实时更改

设定值：

0.0~50.0

设定说明

用于多段摩擦力补偿曲线1、2。
B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-21　多段摩擦力补偿转矩3

通讯地址:	0xB115	生效方式:	-
最小值:	0.0	单位：	-
最大值:	50.0	数据类型：	无符号16位

默认值: 0.0 更改方式: 实时更改

设定值:

0.0~50.0

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-22 多段摩擦力补偿转矩4

通讯地址: 0xB116 生效方式: -

最小值: 0.0 单位: -

最大值: 50.0 数据类型: 无符号16位

默认值: 0.0 更改方式: 实时更改

设定值:

0.0~50.0

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-23 多段摩擦力补偿转矩5

通讯地址: 0xB117 生效方式: -

最小值: 0.0 单位: -

最大值: 50.0 数据类型: 无符号16位

默认值: 0.0 更改方式: 实时更改

设定值:

0.0~50.0

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-24 多段摩擦力补偿转矩6

通讯地址: 0xB118 生效方式: -

最小值: 0.0 单位: -

最大值: 50.0 数据类型: 无符号16位

默认值: 0.0 更改方式: 实时更改

设定值:

0.0~50.0

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-25 多段摩擦力补偿拐点1

通讯地址: 0xB119 生效方式: -

最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-26 多段摩擦力补偿拐点2

通讯地址:	0xB11A	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-27 多段摩擦力补偿拐点3

通讯地址:	0xB11B	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-28 多段摩擦力补偿拐点4

通讯地址:	0xB11C	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-29 **多段摩擦力补偿拐点5**

通讯地址:	0xB11D	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-30 **多段摩擦力补偿拐点6**

通讯地址:	0xB11E	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	P0-10	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00Hz~P0-10

设定说明

用于多段摩擦力补偿曲线1、2。

B1-18=2时，参数B1-19~B1-24生效；B1-18=3时，B1-19~B1-30生效。

B1-31 **张力建立使能**

通讯地址:	0xB11F	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：

0：关闭

1：开启

设定说明

闭环控制模式，参数B1-31=0时关闭预速建张功能，参数B1-31=1时开启预速建张功能。

B1-32 **张力建立死区**

通讯地址:	0xB120	生效方式:	-
最小值:	0.0	单位：	%
最大值:	100.0	数据类型：	无符号16位
默认值:	2.0	更改方式：	实时更改

设定值：

0.0%~100.0%

设定说明

预速建张功能开启且当PID反馈小于B1-32设定值时PID运算停止。

B1-33 张力建立频率

通讯地址:	0xB121	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	P0-10	数据类型:	无符号16位
默认值:	0.10	更改方式:	实时更改

设定值:

0.00Hz~P0-10

设定说明

预速建张功能开启且未进入建张死区时的运行频率。

B1-34 端子转矩提升比例

通讯地址:	0xB122	生效方式:	-
最小值:	0.0	单位:	%
最大值:	500.0	数据类型:	无符号16位
默认值:	50.0	更改方式:	实时更改

设定值:

0.0%~500.0%

设定说明

张力提升DI端子功能（DI功能61）使能后，在张力转矩的基础上，提升一定的比例，而在DI端子撤销后，按照时间逐渐将提升部分撤销掉。

B1-35 端子转矩提升撤销时间

通讯地址:	0xB123	生效方式:	-
最小值:	0.0	单位:	s
最大值:	50.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0s~50.0s

设定说明

张力提升DI端子功能（DI功能61）使能后，在张力转矩的基础上，提升一定的比例，而在DI端子撤销后，按照时间逐渐将提升部分撤销掉。

B1-37 初始卷径自学习使能

通讯地址:	0xB125	生效方式:	-
最小值:	0	单位:	-
最大值:	1	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：关闭
1：开启
设定说明
预速建张功能开启时可配置初始卷径自学习功能，实现初始卷径自动辨识，仅适用于摆杆控制。B1-37=1时开启该功能，B1-37=0时关闭该功能。

B1-38 **摆杆长度**

通讯地址:	0xB126	生效方式:	-
最小值:	1	单位：	mm
最大值:	65535	数据类型：	无符号16位
默认值:	300	更改方式：	停机更改

设定值：
1mm~65535mm
设定说明
初始卷径自学习后的摆杆长度。

B1-39 **摆杆角度**

通讯地址:	0xB127	生效方式:	-
最小值:	0.1	单位：	°
最大值:	360.0	数据类型：	无符号16位
默认值:	40.0	更改方式：	停机更改

设定值：
0.1°~360.0°
设定说明
初始卷径自学习后的摆杆角度。

6.30 B2 锥度

B2-00 **锥度曲线**

通讯地址:	0xB200	生效方式:	-
最小值:	0	单位：	-
最大值:	1	数据类型：	无符号16位
默认值:	0	更改方式：	停机更改

设定值：
0：曲线锥度
1：多段直线锥度
设定说明
参数用于选择锥度曲线产生方式。
0：特定曲线锥度根据锥度设定和锥度补偿修正量（B2-03）生成曲线锥度曲线，详细说明参见B2-03参数说明。
1：多段直线锥度详细参数B2-08~B2-19。

B2-01 **张力锥度源选择**

通讯地址:	0xB201	生效方式:	-
最小值:	0	单位:	-
最大值:	4	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：B2-02设定

1：AI1设定

2：AI2设定

3：AI3设定

4：通信设定（1000H）

设定说明

0：B2-02数字设定。

1~3：根据模拟量通道1~3设定。

4：通信1000H地址设置。

B2-02 **锥度数字设定**

通讯地址:	0xB202	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

锥度数字设定，见B2-01通道0。

B2-03 **锥度补偿修正量**

通讯地址:	0xB203	生效方式:	-
最小值:	0	单位:	mm
最大值:	10000	数据类型:	无符号16位
默认值:	0	更改方式:	实时更改

设定值:

0mm~10000mm

设定说明

锥度补偿修正量。与锥度设定共同实现曲线锥度，锥度值可依照如下公式确定（锥度有多种方式实现，当前软件选取如下典型的一种实现方式）：

F=F_0{1-K[1-(D_0+D_ 1)/(D+D_1)]}

F为锥度后设定张力；

F_0为锥度前设定张力，

根据参数B1-00设定；K为锥度值，

根据参数B2-01设定；D_0为卷轴直径，

根据参数B0-14设定；D_1为锥度补偿修正量。

根据参数B0-09设定；D为当前卷径，

B2-05　对外锥度AO输出设定源

通讯地址:	0xB205	生效方式:	-
最小值:	0	单位:	-
最大值:	4	数据类型:	无符号16位
默认值:	0	更改方式:	停机更改

设定值:

0：B2-06设定

1：AI1设定

2：AI2设定

3：AI3设定

4：通信设定（1000H）

设定说明

有些场合，材料张力由外部执行部件决定。此时可以利用对外锥度输出功能实现对外部执行部件的控制，以达到张力锥度的目的。

对外锥度最大值决定了FMP或AO（P5-06~P5-08）选择对外锥度输出（DO功能19）时，最大锥度输出值，即空卷时所对应 的输出值。其量值设定通道由该参数决定。

0：B2-06数字设定。

1~3：根据模拟量通道1~3设定。

4：通信1000H地址设定。

B2-06　对外锥度设定

通讯地址:	0xB206	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

对外锥度最大值数字设定，见B2-05通道0。

B2-08　最小卷径锥度值

通讯地址:	0xB208	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	100.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

最小卷径对应的锥度值

B2-09　直线锥度切换点1

通讯地址:	0xB209	生效方式:	-

最小值: B0-09
最大值: B0-08
默认值: 150.0
单位: mm
数据类型: 无符号16位
更改方式: 实时更改

设定值:

B0-09~B0-08

设定说明

多点直线锥度曲线设定的卷径值1

B2-10 切换点1锥度值

通讯地址: 0xB20A
最小值: 0.0
最大值: 100.0
默认值: 100.0
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0%~100.0%

设定说明

多点直线锥度曲线设定的锥度值1

B2-11 直线锥度切换点2

通讯地址: 0xB20B
最小值: B2-09
最大值: B0-08
默认值: 200.0
生效方式: -
单位: mm
数据类型: 无符号16位
更改方式: 实时更改

设定值:

B2-09~B0-08

设定说明

多点直线锥度曲线设定的卷径值2

B2-12 切换点2锥度值

通讯地址: 0xB20C
最小值: 0.0
最大值: 100.0
默认值: 90.0
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0%~100.0%

设定说明

多点直线锥度曲线设定的锥度值2

B2-13 直线锥度切换点3

通讯地址: 0xB20D
最小值: B2-11
最大值: B0-08
生效方式: -
单位: mm
数据类型: 无符号16位

默认值: 250.0 更改方式： 实时更改

设定值：

B2-11~B0-08

设定说明

多点直线锥度曲线设定的卷径值3

B2-14 切换点3锥度值

通讯地址: 0xB20E 生效方式: -

最小值: 0.0 单位： %

最大值: 100.0 数据类型： 无符号16位

默认值: 80.0 更改方式： 实时更改

设定值：

0.0%~100.0%

设定说明

多点直线锥度曲线设定的锥度值3

B2-15 直线锥度切换点4

通讯地址: 0xB20F 生效方式: -

最小值: B2-13 单位： mm

最大值: B0-08 数据类型： 无符号16位

默认值: 300.0 更改方式： 实时更改

设定值：

B2-13~B0-08

设定说明

多点直线锥度曲线设定的卷径值4

B2-16 切换点4锥度值

通讯地址: 0xB210 生效方式: -

最小值: 0.0 单位： %

最大值: 100.0 数据类型： 无符号16位

默认值: 70.0 更改方式： 实时更改

设定值：

0.0%~100.0%

设定说明

多点直线锥度曲线设定的锥度值4

B2-17 直线锥度切换点5

通讯地址: 0xB211 生效方式: -

最小值: B2-15 单位： mm

最大值: B0-08 数据类型： 无符号16位

默认值: 400.0 更改方式： 实时更改

设定值：

B2-15~B0-08

设定说明

多点直线锥度曲线设定的卷径值5

B2-18 **切换点5锥度值**

通讯地址:	0xB212	生效方式:	-
最小值:	0.0	单位:	%
最大值:	100.0	数据类型:	无符号16位
默认值:	50.0	更改方式:	实时更改

设定值:

0.0%~100.0%

设定说明

多点直线锥度曲线设定的锥度值5

B2-19 **最大卷径锥度值**

通讯地址:	0xB213	生效方式:	-
最小值:	0.0	单位:	-
最大值:	100.0	数据类型:	无符号16位
默认值:	30.0	更改方式:	实时更改

设定值:

0.0~100.0

设定说明

最大卷径对应的锥度值

6.31 B6 通信自由映射配置参数

B6-00 **源地址1**

通讯地址:	0xB600	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0xE012	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址1。

B6-01 **映射地址1**

通讯地址:	0xB601	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x500E	更改方式:	实时更改

设定值：
0x0~0xFFFF
设定说明
通信自由映射目标地址1。

B6-02 **写增益1**

通讯地址:	0xB602	生效方式:	-
最小值:	0.00	单位：	-
最大值:	100.00	数据类型：	无符号16位
默认值:	10.00	更改方式：	实时更改

设定值：
0.00~100.00
设定说明
通信自由映射写入系数1。
设为10.00时，通信写入数据放大10倍。
设为0.10时，通信写入数据缩小为1/10。

B6-03 **读增益1**

通讯地址:	0xB603	生效方式:	-
最小值:	0.00	单位：	-
最大值:	100.00	数据类型：	无符号16位
默认值:	0.10	更改方式：	实时更改

设定值：
0.00~100.00
设定说明
通信自由映射读取系数1。
设为10.00时，通信读取数据放大10倍。
设为0.10时，通信读取数据缩小为1/10。

B6-04 **源地址2**

通讯地址:	0xB604	生效方式:	-
最小值:	0x0	单位：	-
最大值:	0xFFFF	数据类型：	无符号16位
默认值:	0x0	更改方式：	实时更改

设定值：
0x0~0xFFFF
设定说明
通信自由映射源地址2。

B6-05 **映射地址2**

通讯地址:	0xB605	生效方式:	-
最小值:	0x0	单位：	-

最大值:	0xFFFF	数据类型：	无符号16位
默认值:	0x0	更改方式：	实时更改

设定值：

0x0~0xFFFF

设定说明

通信自由映射目标地址2。

B6-06 **写增益2**

通讯地址:	0xB606	生效方式:	-
最小值:	0.00	单位：	-
最大值:	100.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00~100.00

设定说明

通信自由映射写入系数2。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-07 **读增益2**

通讯地址:	0xB607	生效方式:	-
最小值:	0.00	单位：	-
最大值:	100.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00~100.00

设定说明

通信自由映射读取系数2。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-08 **源地址3**

通讯地址:	0xB608	生效方式:	-
最小值:	0x0	单位：	-
最大值:	0xFFFF	数据类型：	无符号16位
默认值:	0x0	更改方式：	实时更改

设定值：

0x0~0xFFFF

设定说明

通信自由映射源地址3。

B6-09 **映射地址3**

通讯地址:	0xB609	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址3。

B6-10 **写增益3**

通讯地址:	0xB60A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数3。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-11 **读增益3**

通讯地址:	0xB60B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数3。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-12 **源地址4**

通讯地址:	0xB60C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址4。

B6-13 **映射地址4**

通讯地址:	0xB60D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址4。

B6-14 **写增益4**

通讯地址:	0xB60E	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数4。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-15 **读增益4**

通讯地址:	0xB60F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数4。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-16 **源地址5**

通讯地址:	0xB610	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址5。

B6-17 **映射地址5**

通讯地址:	0xB611	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址5。

B6-18 **写增益5**

通讯地址:	0xB612	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数5。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-19 **读增益5**

通讯地址:	0xB613	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数5。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-20 **源地址6**

通讯地址:	0xB614	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址6。

B6-21 **映射地址6**

通讯地址:	0xB615	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址6。

B6-22 **写增益6**

通讯地址:	0xB616	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数6。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-23 **读增益6**

通讯地址:	0xB617	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数6。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-24 **源地址7**

通讯地址:	0xB618	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址7。

B6-25 **映射地址7**

通讯地址:	0xB619	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址7。

B6-26 **写增益7**

通讯地址:	0xB61A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数7。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-27 **读增益7**

通讯地址:	0xB61B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数7。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-28 **源地址8**

通讯地址:	0xB61C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址8。

B6-29 **映射地址8**

通讯地址:	0xB61D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址8。

B6-30 **写增益8**

通讯地址:	0xB61E	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数8。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-31 **读增益8**

通讯地址:	0xB61F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数8。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-32 **源地址9**

通讯地址:	0xB620	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址9。

B6-33 **映射地址9**

通讯地址:	0xB621	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址9。

B6-34 **写增益9**

通讯地址:	0xB622	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数9。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-35 **读增益9**

通讯地址:	0xB623	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数9。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-36 **源地址10**

通讯地址:	0xB624	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址10。

B6-37 **映射地址10**

通讯地址:	0xB625	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址10。

B6-38 **写增益10**

通讯地址:	0xB626	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数10。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-39 **读增益10**

通讯地址:	0xB627	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数10。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-40 **源地址11**

通讯地址:	0xB628	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址11。

B6-41 **映射地址11**

通讯地址:	0xB629	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址11。

B6-42 **写增益11**

通讯地址:	0xB62A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数11。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-43 **读增益11**

通讯地址:	0xB62B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数11。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-44 **源地址12**

通讯地址:	0xB62C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址12。

B6-45 **映射地址12**

通讯地址:	0xB62D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址12。

B6-46 **写增益12**

通讯地址:	0xB62E	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数12。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-47 **读增益12**

通讯地址:	0xB62F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数12。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-48 **源地址13**

通讯地址:	0xB630	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址13。

B6-49 **映射地址13**

通讯地址:	0xB631	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址13。

B6-50 **写增益13**

通讯地址:	0xB632	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数13。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-51 **读增益13**

通讯地址:	0xB633	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数13。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-52 **源地址14**

通讯地址:	0xB634	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址14。

B6-53 **映射地址14**

通讯地址:	0xB635	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址14。

B6-54 **写增益14**

通讯地址:	0xB636	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数14。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-55 **读增益14**

通讯地址:	0xB637	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数14。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-56 **源地址15**

通讯地址:	0xB638	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址15。

B6-57 **映射地址15**

通讯地址:	0xB639	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址15。

B6-58 **写增益15**

通讯地址:	0xB63A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数15。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-59 **读增益15**

通讯地址:	0xB63B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数15。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-60 **源地址16**

通讯地址:	0xB63C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址16。

B6-61 **映射地址16**

通讯地址:	0xB63D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址16。

B6-62 **写增益16**

通讯地址:	0xB63E	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数16。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-63 **读增益16**

通讯地址:	0xB63F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数16。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-64 **源地址17**

通讯地址:	0xB640	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址17。

B6-65 **映射地址17**

通讯地址:	0xB641	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址17。

B6-66 **写增益17**

通讯地址:	0xB642	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数17。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-67 **读增益17**

通讯地址:	0xB643	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数17。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-68 **源地址18**

通讯地址:	0xB644	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址18。

B6-69 **映射地址18**

通讯地址:	0xB645	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址18。

B6-70 **写增益18**

通讯地址:	0xB646	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数18。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-71 **读增益18**

通讯地址:	0xB647	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数18。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-72 **源地址19**

通讯地址:	0xB648	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址19。

B6-73 **映射地址19**

通讯地址:	0xB649	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址19。

B6-74 **写增益19**

通讯地址:	0xB64A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数19。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-75 **读增益19**

通讯地址:	0xB64B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数19。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-76 **源地址20**

通讯地址:	0xB64C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址20。

B6-77 **映射地址20**

通讯地址:	0xB64D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址20。

B6-78 **写增益20**

通讯地址:	0xB64E	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数20。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-79 **读增益20**

通讯地址:	0xB64F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数20。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-80 **源地址21**

通讯地址:	0xB650	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址21。

B6-81 **映射地址21**

通讯地址:	0xB651	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址21。

B6-82 **写增益21**

通讯地址:	0xB652	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数21。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-83 **读增益21**

通讯地址:	0xB653	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数21。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-84 **源地址22**

通讯地址:	0xB654	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址22。

B6-85 **映射地址22**

通讯地址:	0xB655	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址22。

B6-86 **写增益22**

通讯地址:	0xB656	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数22。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-87 **读增益22**

通讯地址:	0xB657	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数22。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-88 **源地址23**

通讯地址:	0xB658	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址23。

B6-89 **映射地址23**

通讯地址:	0xB659	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址23。

B6-90 **写增益23**

通讯地址:	0xB65A	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数23。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-91 **读增益23**

通讯地址:	0xB65B	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数23。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-92 **源地址24**

通讯地址:	0xB65C	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址24。

B6-93 **映射地址24**

通讯地址:	0xB65D	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址24。

B6-94 **写增益24**

通讯地址:	0xB65E	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数24。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-95 **读增益24**

通讯地址:	0xB65F	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数24。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

B6-96 **源地址25**

通讯地址:	0xB660	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射源地址25。

B6-97 **映射地址25**

通讯地址:	0xB661	生效方式:	-
最小值:	0x0	单位:	-
最大值:	0xFFFF	数据类型:	无符号16位
默认值:	0x0	更改方式:	实时更改

设定值:

0x0~0xFFFF

设定说明

通信自由映射目标地址25。

B6-98 **写增益25**

通讯地址:	0xB662	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射写入系数25。

设为10.00时，通信写入数据放大10倍。

设为0.10时，通信写入数据缩小为1/10。

B6-99 **读增益25**

通讯地址:	0xB663	生效方式:	-
最小值:	0.00	单位:	-
最大值:	100.00	数据类型:	无符号16位
默认值:	0.00	更改方式:	实时更改

设定值:

0.00~100.00

设定说明

通信自由映射读取系数25。

设为10.00时，通信读取数据放大10倍。

设为0.10时，通信读取数据缩小为1/10。

6.32 B7 抱闸控制参数

B7-01 **开闸频率（正）**

通讯地址:	0xB701	生效方式:	-
最小值:	0.00	单位:	-
最大值:	20.00	数据类型:	无符号16位
默认值:	2.00	更改方式:	实时更改

设定值:

0.00~20.00

设定说明

B7-02 **开闸频率（反）**

通讯地址:	0xB702	生效方式:	-
最小值:	0.00	单位:	-
最大值:	20.00	数据类型:	无符号16位
默认值:	2.00	更改方式:	实时更改

设定值:

0.00~20.00

设定说明

B7-03 **开闸转矩（正）**

通讯地址:	0xB703	生效方式:	-
最小值:	0.0	单位:	-
最大值:	200.0	数据类型:	无符号16位
默认值:	30.0	更改方式:	实时更改

设定值:

0.0~200.0

设定说明

B7-04 **开闸转矩（反）**

通讯地址:	0xB704	生效方式:	-
最小值:	0.0	单位:	-
最大值:	200.0	数据类型:	无符号16位
默认值:	30.0	更改方式:	实时更改

设定值:

0.0~200.0

设定说明

B7-05 **开闸时间**

通讯地址:	0xB705	生效方式:	-
最小值:	0.00	单位:	-
最大值:	5.00	数据类型:	无符号16位
默认值:	0.50	更改方式:	实时更改

设定值:

0.00~5.00

设定说明

B7-06 **关闸频率（正）**

通讯地址:	0xB706	生效方式:	-
最小值:	0.00	单位：	-
最大值:	20.00	数据类型：	无符号16位
默认值:	2.00	更改方式：	实时更改

设定值：

0.00~20.00

设定说明

B7-07 **关闸频率（反）**

通讯地址:	0xB707	生效方式:	-
最小值:	0.00	单位：	-
最大值:	20.00	数据类型：	无符号16位
默认值:	2.00	更改方式：	实时更改

设定值：

0.00~20.00

设定说明

B7-08 **关闸延迟时间**

通讯地址:	0xB708	生效方式:	-
最小值:	0.00	单位：	-
最大值:	5.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	实时更改

设定值：

0.00~5.00

设定说明

B7-09 **关闸时间**

通讯地址:	0xB709	生效方式:	-
最小值:	0.00	单位：	-
最大值:	5.00	数据类型：	无符号16位
默认值:	0.50	更改方式：	实时更改

设定值：

0.00~5.00

设定说明

B7-10 **停机励磁时间**

通讯地址: 0xB70A
最小值: 0.00
最大值: 5.00
默认值: 0.00
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.00~5.00

设定说明

B7-11 **再启动等待时间**

通讯地址: 0xB70B
最小值: 0.00
最大值: 5.00
默认值: 0.00
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.00~5.00

设定说明

B7-12 **启动方向**

通讯地址: 0xB70C
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0：与运行方向一致

1：始终为正

设定说明

B7-13 **预转矩来源**

通讯地址: 0xB70D
最小值: 0
最大值: 2
默认值: 2
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0：自动

1：预转矩记忆

2：关闭

设定说明

B7-14 **预转矩设定值（正转）**

通讯地址: 0xB70E
最小值: 0.0
最大值: 2000.0
默认值: 0.0
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0%~2000.0%

设定说明

B7-15 **预转矩设定值（反转）**

通讯地址: 0xB70F
最小值: 0.0
最大值: 2000.0
默认值: 0.0
生效方式: -
单位: %
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.0%~2000.0%

设定说明

B7-16 **电流加减速时间**

通讯地址: 0xB710
最小值: 0.00
最大值: 5.00
默认值: 0.50
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.00s~5.00s

设定说明

B7-17 **指令反向使能**

通讯地址: 0xB711
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~1

设定说明

B7-18 **开闸超时判断时间**

通讯地址: 0xB712
生效方式: -

最小值: 0.00
最大值: 5.00
默认值: 0.50
单位: s
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.00s~5.00s

设定说明

B7-19 制动器失效保护使能

通讯地址: 0xB713
最小值: 0
最大值: 1
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~1

设定说明

B7-20 制动器失效保护角度

通讯地址: 0xB714
最小值: 0
最大值: 360
默认值: 60
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0~360

设定说明

B7-21 频率异常检测周期

通讯地址: 0xB715
最小值: 0.00
最大值: 100.00
默认值: 50.00
生效方式: -
单位: s
数据类型: 无符号16位
更改方式: 实时更改

设定值:

0.00s~100.00s

设定说明

B7-22 频率跟随误差

通讯地址: 0xB716
最小值: 0
最大值: 30
生效方式: -
单位: %
数据类型: 无符号16位

默认值: 20 更改方式: 实时更改

设定值:

0%~30%

设定说明

B7-23 **频率跟随检测周期**

通讯地址: 0xB717 生效方式: -

最小值: 0.00 单位: s

最大值: 100.00 数据类型: 无符号16位

默认值: 50.00 更改方式: 实时更改

设定值:

0.00s~100.00s

设定说明

B7-24 **转矩到达限幅检测时间**

通讯地址: 0xB718 生效方式: -

最小值: 0.00 单位: s

最大值: 500.00 数据类型: 无符号16位

默认值: 0.00 更改方式: 实时更改

设定值:

0.00s~500.00s

设定说明

6.33 C0 第2电机死区时间参数

C0-00 **管压降**

通讯地址: 0xC000 生效方式: -

最小值: 0 单位: -

最大值: 10000 数据类型: 无符号16位

默认值: 700 更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-01 **死区时间0**

通讯地址: 0xC001 生效方式: -

最小值: 0 单位: -

最大值: 10000
默认值: 352
数据类型: 无符号16位
更改方式: 停机更改

设定值:
0~10000
设定说明
-

C0-02 **死区时间1**

通讯地址: 0xC002
最小值: 0
最大值: 10000
默认值: 1052
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:
0~10000
设定说明
-

C0-03 **死区时间2**

通讯地址: 0xC003
最小值: 0
最大值: 10000
默认值: 1270
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:
0~10000
设定说明
-

C0-04 **死区时间3**

通讯地址: 0xC004
最小值: 0
最大值: 10000
默认值: 1358
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:
0~10000
设定说明
-

C0-05 **死区时间4**

通讯地址: 0xC005
最小值: 0
最大值: 10000
默认值: 1404
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值：
0~10000
设定说明
-

C0-06 **死区时间5**

通讯地址:	0xC006	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	1449	更改方式：	停机更改

设定值：
0~10000
设定说明
-

C0-07 **死区时间6**

通讯地址:	0xC007	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	1661	更改方式：	停机更改

设定值：
0~10000
设定说明
-

C0-08 **死区时间7**

通讯地址:	0xC008	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	1689	更改方式：	停机更改

设定值：
0~10000
设定说明
-

C0-09 **死区补偿量电流0**

通讯地址:	0xC009	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	94	更改方式：	停机更改

设定值：
0~10000

设定说明

-

C0-10 **死区补偿量电流1**

通讯地址: 0xC00A
最小值: 0
最大值: 10000
默认值: 376
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-11 **死区补偿量电流2**

通讯地址: 0xC00B
最小值: 0
最大值: 10000
默认值: 658
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-12 **死区补偿量电流3**

通讯地址: 0xC00C
最小值: 0
最大值: 10000
默认值: 940
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-13 **死区补偿量电流4**

通讯地址: 0xC00D
最小值: 0
最大值: 10000
默认值: 1222
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-14 **死区补偿量电流5**

通讯地址: 0xC00E
最小值: 0
最大值: 10000
默认值: 1504
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-15 **死区补偿量电流6**

通讯地址: 0xC00F
最小值: 0
最大值: 10000
默认值: 3478
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C0-16 **死区补偿量电流7**

通讯地址: 0xC010
最小值: 0
最大值: 10000
默认值: 5452
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

6.34 C1 第3电机死区时间参数

C1-00 **管压降**

通讯地址: 0xC100
最小值: 0
最大值: 10000
默认值: 700
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C1-01 **死区时间0**

通讯地址:	0xC101	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	352	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C1-02 **死区时间1**

通讯地址:	0xC102	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1052	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C1-03 **死区时间2**

通讯地址:	0xC103	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1270	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C1-04 **死区时间3**

通讯地址:	0xC104	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1358	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C1-05 **死区时间4**

通讯地址:	0xC105	生效方式:	-

最小值: 0
最大值: 10000
默认值: 1404
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C1-06 **死区时间5**

通讯地址: 0xC106
最小值: 0
最大值: 10000
默认值: 1449
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C1-07 **死区时间6**

通讯地址: 0xC107
最小值: 0
最大值: 10000
默认值: 1661
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C1-08 **死区时间7**

通讯地址: 0xC108
最小值: 0
最大值: 10000
默认值: 1689
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C1-09 **死区补偿量电流0**

通讯地址: 0xC109
最小值: 0
最大值: 10000
生效方式: -
单位: -
数据类型: 无符号16位

默认值: 94 更改方式： 停机更改

设定值：

0~10000

设定说明

-

C1-10 死区补偿量电流1

通讯地址: 0xC10A 生效方式: -

最小值: 0 单位： -

最大值: 10000 数据类型： 无符号16位

默认值: 376 更改方式： 停机更改

设定值：

0~10000

设定说明

-

C1-11 死区补偿量电流2

通讯地址: 0xC10B 生效方式: -

最小值: 0 单位： -

最大值: 10000 数据类型： 无符号16位

默认值: 658 更改方式： 停机更改

设定值：

0~10000

设定说明

-

C1-12 死区补偿量电流3

通讯地址: 0xC10C 生效方式: -

最小值: 0 单位： -

最大值: 10000 数据类型： 无符号16位

默认值: 940 更改方式： 停机更改

设定值：

0~10000

设定说明

-

C1-13 死区补偿量电流4

通讯地址: 0xC10D 生效方式: -

最小值: 0 单位： -

最大值: 10000 数据类型： 无符号16位

默认值: 1222 更改方式： 停机更改

设定值：

0~10000

设定说明

-

C1-14 **死区补偿量电流5**

通讯地址:	0xC10E	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1504	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C1-15 **死区补偿量电流6**

通讯地址:	0xC10F	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	3478	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C1-16 **死区补偿量电流7**

通讯地址:	0xC110	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	5452	更改方式:	停机更改

设定值:

0~10000

设定说明

-

6.35 C2 第4电机死区时间参数

C2-00 **管压降**

通讯地址:	0xC200	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	700	更改方式:	停机更改

设定值：
0~10000
设定说明
-

C2-01 **死区时间0**

通讯地址:	0xC201	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	352	更改方式：	停机更改

设定值：
0~10000
设定说明
-

C2-02 **死区时间1**

通讯地址:	0xC202	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	1052	更改方式：	停机更改

设定值：
0~10000
设定说明
-

C2-03 **死区时间2**

通讯地址:	0xC203	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	1270	更改方式：	停机更改

设定值：
0~10000
设定说明
-

C2-04 **死区时间3**

通讯地址:	0xC204	生效方式:	-
最小值:	0	单位：	-
最大值:	10000	数据类型：	无符号16位
默认值:	1358	更改方式：	停机更改

设定值：
0~10000

设定说明

-

C2-05 **死区时间4**

通讯地址:	0xC205	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1404	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C2-06 **死区时间5**

通讯地址:	0xC206	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1449	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C2-07 **死区时间6**

通讯地址:	0xC207	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1661	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C2-08 **死区时间7**

通讯地址:	0xC208	生效方式:	-
最小值:	0	单位:	-
最大值:	10000	数据类型:	无符号16位
默认值:	1689	更改方式:	停机更改

设定值:

0~10000

设定说明

-

C2-09 **死区补偿量电流0**

通讯地址: 0xC209
最小值: 0
最大值: 10000
默认值: 94
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-10 **死区补偿量电流1**

通讯地址: 0xC20A
最小值: 0
最大值: 10000
默认值: 376
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-11 **死区补偿量电流2**

通讯地址: 0xC20B
最小值: 0
最大值: 10000
默认值: 658
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-12 **死区补偿量电流3**

通讯地址: 0xC20C
最小值: 0
最大值: 10000
默认值: 940
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-13 **死区补偿量电流4**

通讯地址: 0xC20D
生效方式: -

最小值: 0
最大值: 10000
默认值: 1222
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-14 死区补偿量电流5

通讯地址: 0xC20E
最小值: 0
最大值: 10000
默认值: 1504
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-15 死区补偿量电流6

通讯地址: 0xC20F
最小值: 0
最大值: 10000
默认值: 3478
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

C2-16 死区补偿量电流7

通讯地址: 0xC210
最小值: 0
最大值: 10000
默认值: 5452
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 停机更改

设定值:

0~10000

设定说明

-

6.36 U0 通用监视参数

U0-00 **运行频率**

通讯地址: 0x7000
最小值: 0.00
最大值: 0.00
默认值: 0.00
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0.00Hz~0.00Hz

设定说明

变频器的运行频率(Hz)。

U0-01 **设定频率**

通讯地址: 0x7001
最小值: 0.00
最大值: 0.00
默认值: 0.00
生效方式: -
单位: Hz
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0.00Hz~0.00Hz

设定说明

变频器的设定频率(Hz)。

U0-02 **母线电压**

通讯地址: 0x7002
最小值: 0.0
最大值: 0.0
默认值: 0.0
生效方式: -
单位: V
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0.0V~0.0V

设定说明

变频器的母线电压(V)。

U0-03 **输出电压**

通讯地址: 0x7003
最小值: 0
最大值: 0
默认值: 0
生效方式: -
单位: V
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0V~0V

设定说明

变频器的输出电压(V)。

U0-04 **输出电流**

通讯地址:	0x7004	生效方式:	-
最小值:	0.0	单位:	A
最大值:	0.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0A~0.0A

设定说明

变频器的输出电流(A)。

U0-05 **输出功率**

通讯地址:	0x7005	生效方式:	-
最小值:	0.0	单位:	kW
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0kW~0.0kW

设定说明

变频器的输出功率(kW)。

U0-06 **输出转矩**

通讯地址:	0x7006	生效方式:	-
最小值:	0.0	单位:	%
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0%~0.0%

设定说明

变频器的输出转矩(%)。

U0-07 **DI输入状态**

通讯地址:	0x7007	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

显示每一个DI端子的输入状态，十六进制显示，转化为二进制后每一个bit位代表每一个DI端子状态。bit位的值对应状态如下：

1：DI端子处于有效状态

0：DI端子处于无效状态

bit位对应的功能如下：
bit0：DI1
bit1：DI2
bit2：DI3
bit3：DI4
bit4：DI5
bit5：DI6
bit6：DI7
bit7：DI8
bit8：DI9
bit9：DI10
bit10：DI11
bit11：DI12
bit12：DI13
bit13：DI14
bit14：DI15
bit15：保留

U0-08　DO输出状态

通讯地址:	0x7008	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：
0~0
设定说明
显示每一个DO端子的输出状态，十六进制显示，转化为二进制后每一个bit位代表每一个DO端子状态。
bit位的值对应状态如下：
1：DO端子处于有效状态
0：DO端子处于无效状态
bit位对应的功能如下：
bit0：FMR
bit1：DO3（本体控制板继电器）
bit2：DO4（MD38IO扩展板继电器）
bit3：DO1（本体控制板）
bit4：DO2（MD38IO扩展板）
bit5：VDO1
bit6：VDO2
bit7：VDO3
bit8：VDO4
bit9：VDO5
bit10~bit15：保留

U0-09 **AI1电压**

通讯地址: 0x7009 生效方式: -
最小值: 0.00 单位: V
最大值: 0.00 数据类型: 有符号16位
默认值: 0.00 更改方式: 不可更改

设定值:
0.00V~0.00V
设定说明
-

U0-10 **AI2电压**

通讯地址: 0x700A 生效方式: -
最小值: 0.00 单位: V
最大值: 0.00 数据类型: 有符号16位
默认值: 0.00 更改方式: 不可更改

设定值:
0.00V~0.00V
设定说明
-

U0-11 **AI3电压**

通讯地址: 0x700B 生效方式: -
最小值: 0.00 单位: V
最大值: 0.00 数据类型: 有符号16位
默认值: 0.00 更改方式: 不可更改

设定值:
0.00V~0.00V
设定说明
-

U0-12 **计数值**

通讯地址: 0x700C 生效方式: -
最小值: 0 单位: -
最大值: 0 数据类型: 无符号16位
默认值: 0 更改方式: 不可更改

设定值:
0~0
设定说明
计数功能中显示计数值。

U0-13 **长度值**

通讯地址: 0x700D 生效方式: -

最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

定长功能中显示长度值。

U0-14 负载速度显示

通讯地址:	0x700E	生效方式:	-
最小值:	0	单位：	rpm
最大值:	65535	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0rpm~65535rpm

设定说明

用设定频率计算出来的转速（公式为n=60f÷p，其中f为U0-01对应频率，p为电机极对数）。

在停机时，本参数显示设定频率×系数（P7-06设定值）

在运行时，本参数显示运行频率×系数（P7-06设定值）

U0-15 PID设定

通讯地址:	0x700F	生效方式:	-
最小值:	0.0	单位：	%
最大值:	0.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0%~0.0%

设定说明

本参数（PID设定） = PID 设定（百分比）× PA-04（PID给定反馈量程）。

U0-16 PID反馈

通讯地址:	0x7010	生效方式:	-
最小值:	0.0	单位：	%
最大值:	0.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0%~0.0%

设定说明

本参数（PID反馈） = PID 反馈（百分比）× PA-04（PID给定反馈量程）。

U0-17 **PLC阶段**

通讯地址:	0x7011	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

显示PLC阶段，一共16 段速。

U0-18 **PULSE输入脉冲频率**

通讯地址:	0x7012	生效方式:	-
最小值:	0.00	单位：	kHz
最大值:	0.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	不可更改

设定值：

0.00kHz~0.00kHz

设定说明

显示DI5高速脉冲采样频率

U0-19 **反馈速度**

通讯地址:	0x7013	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	0.00	数据类型：	有符号16位
默认值:	0.00	更改方式：	不可更改

设定值：

0.00Hz~0.00Hz

设定说明

参数P7-12的十位（负载速度显示小数点位数）设定为1 时，U0-19 小数点个数为1，显示范围为-500.0Hz~+500.0Hz。

参数P7-12的 十位设定为2 时，U0-19 小数点个数为2，显示范围-320.00Hz~320.00Hz。

U0-20 **剩余运行时间**

通讯地址:	0x7014	生效方式:	-
最小值:	0.0	单位：	min
最大值:	0.0	数据类型：	无符号16位
默认值:	0.0	更改方式：	不可更改

设定值：

0.0min~0.0min

设定说明

显示定时运行时，剩余运行时间。

U0-21 **AI1校正前电压**

通讯地址:	0x7015	生效方式:	-
最小值:	0.000	单位:	V
最大值:	0.000	数据类型:	有符号16位
默认值:	0.000	更改方式:	不可更改

设定值:

0.000V~0.000V

设定说明

显示模拟量输入采样电压/ 电流的实际值。

实际使用的电压/ 电流经过了线性校正，使采样电压/ 电流与实际输入电压/ 电流偏差更小。实际使用的校正电压/ 电流见U0-09。

U0-22 **AI2校正前电压**

通讯地址:	0x7016	生效方式:	-
最小值:	0.000	单位:	V
最大值:	0.000	数据类型:	有符号16位
默认值:	0.000	更改方式:	不可更改

设定值:

0.000V~0.000V

设定说明

显示模拟量输入采样电压/ 电流的实际值。

实际使用的电压/ 电流经过了线性校正，使采样电压/ 电流与实际输入电压/ 电流偏差更小。实际使用的校正电压/ 电流见U0-10。

U0-23 **AI3校正前电压**

通讯地址:	0x7017	生效方式:	-
最小值:	0.000	单位:	V
最大值:	0.000	数据类型:	有符号16位
默认值:	0.000	更改方式:	不可更改

设定值:

0.000V~0.000V

设定说明

显示模拟量输入采样电压/ 电流的实际值。

实际使用的电压/ 电流经过了线性校正，使采样电压/ 电流与实际输入电压/ 电流偏差更小。实际使用的校正电压/ 电流见U0-01。

U0-24 **线速度**

通讯地址:	0x7018	生效方式:	-
最小值:	0	单位:	m/min
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0m/min~0m/min

设定说明

显示脉冲线速度。

U0-25 **当前上电时间**

通讯地址:	0x7019	生效方式:	-
最小值:	0	单位:	min
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0min~0min

设定说明

-

U0-26 **当前运行时间**

通讯地址:	0x701A	生效方式:	-
最小值:	0.0	单位:	min
最大值:	0.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0min~0.0min

设定说明

-

U0-27 **PULSE输入脉冲频率**

通讯地址:	0x701B	生效方式:	-
最小值:	0	单位:	Hz
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0Hz~0Hz

设定说明

显示DI5高速脉冲采样频率，与U0-18为同一数据，但是显示的单位不同。

U0-28 **通信设定值**

通讯地址:	0x701C	生效方式:	-
最小值:	0.00	单位:	%
最大值:	0.00	数据类型:	有符号16位
默认值:	0.00	更改方式:	不可更改

设定值:

0.00%~0.00%

设定说明

显示通过通信地址0x1000 写入的数据。百分比基数根据地址0x1000 的设定值作用决定。

U0-29 编码器反馈速度

通讯地址:	0x701D	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	0.00	数据类型：	有符号16位
默认值:	0.00	更改方式：	不可更改

设定值：

0.00Hz~0.00Hz

设定说明

显示由编码器实际测得的电机运行频率。

U0-30 主频率X显示

通讯地址:	0x701E	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	0.00	数据类型：	有符号16位
默认值:	0.00	更改方式：	不可更改

设定值：

0.00Hz~0.00Hz

设定说明

显示主频率设定值。

U0-31 辅频率Y显示

通讯地址:	0x701F	生效方式:	-
最小值:	0.00	单位：	Hz
最大值:	0.00	数据类型：	有符号16位
默认值:	0.00	更改方式：	不可更改

设定值：

0.00Hz~0.00Hz

设定说明

显示辅助频率设定值。

U0-32 查看任意内存地址值

通讯地址:	0x7020	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

-

U0-33 **同步机转子位置**

通讯地址:	0x7021	生效方式:	-
最小值:	0.0	单位:	°
最大值:	0.0	数据类型:	无符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0°~0.0°

设定说明

-

U0-34 **电机温度**

通讯地址:	0x7022	生效方式:	-
最小值:	0	单位:	℃
最大值:	0	数据类型:	有符号16位
默认值:	0	更改方式:	不可更改

设定值:

0℃~0℃

设定说明

显示通过AI1采样的电机温度值。电机温度检测见P9-56（电机温度传感器类型）介绍。

U0-35 **目标转矩**

通讯地址:	0x7023	生效方式:	-
最小值:	0.0	单位:	%
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0%~0.0%

设定说明

显示当前转矩上限设定值，百分比基数为电机额定转矩。

U0-36 **旋变位置**

通讯地址:	0x7024	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-37 **功率因数角**

通讯地址:	0x7025	生效方式:	-
最小值:	0.0	单位:	°
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0°~0.0°

设定说明

显示当前运行的功率因数角度。

U0-38 **ABZ位置**

通讯地址:	0x7026	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

显示当前ABZ的AB相脉冲计数。该值为4 倍频后的脉冲个数， 如显示为4000， 则编码器实际走过的脉冲个数为4000÷4=1000。当编码器正转时该值自增，当编码器反转时该值自减。自增到65535 时从0重新开始计数，自减到0时从65535 重新开始计数。查看该值可以判断编码器安装是否正常。

U0-39 **V/f分离目标电压**

通讯地址:	0x7027	生效方式:	-
最小值:	0	单位:	V
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0V~0V

设定说明

显示运行在V/f 分离状态时，目标输出电压。

U0-40 **V/f分离输出电压**

通讯地址:	0x7028	生效方式:	-
最小值:	0	单位:	V
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0V~0V

设定说明

显示运行在V/f 分离状态时，当前实际输出电压。

U0-41 **DI输入状态直观显示**

通讯地址:	0x7029	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

DI端子状态显示：亮为高电平；灭为低电平

U0-42 **DO输出状态直观显示**

通讯地址:	0x702A	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

DO端子状态显示：亮为高电平；灭为低电平

U0-43 **DI功能状态直观显示**

通讯地址:	0x702B	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

显示端子功能1~40是否有效。键盘共有5个数码管，数码管从右到左分别代表功能1~8、9~16、17~24、25~32、33~40。每个数码管可代表8个功能选择，数码管定义如图：DI端子功能显示：亮为高电平；灭为低电平

U0-44 **DO功能状态直观显示**

通讯地址:	0x702C	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

显示端子功能41~59是否有效。键盘共有5个数码管，数码管从右到左分别代表功能41~48、49~56、57~59。每个数码管可代表8个功能选择，数码管定义如下图。DI端子功能显示：亮为高电平；灭为低电平

U0-45 故障子码

通讯地址:	0x702D	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

显示故障子码。

U0-46 逆变模块温度

通讯地址:	0x702E	生效方式:	-
最小值:	0	单位：	℃
最大值:	0	数据类型：	有符号16位
默认值:	0	更改方式：	不可更改

设定值：

0℃~0℃

设定说明

逆变器模块的散热器温度。

U0-47 PTC通道校正前电压

通讯地址:	0x702F	生效方式:	-
最小值:	0.000	单位：	V
最大值:	0.000	数据类型：	有符号16位
默认值:	0.000	更改方式：	不可更改

设定值：

0.000V~0.000V

设定说明

-

U0-48 PTC通道校正后电压

通讯地址:	0x7030	生效方式:	-
最小值:	0.000	单位：	V
最大值:	0.000	数据类型：	有符号16位
默认值:	0.000	更改方式：	不可更改

设定值：

0.000V~0.000V

设定说明

-

U0-49 **零伺服偏差脉冲数**

通讯地址:	0x7031	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	有符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

零伺服初始位置与当前位置脉冲差值。

U0-50 **卷径**

通讯地址:	0x7032	生效方式:	-
最小值:	0	单位:	mm
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0mm~0mm

设定说明

当前卷径数值。

U0-51 **张力(锥度后)**

通讯地址:	0x7033	生效方式:	-
最小值:	0	单位:	N
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0N~0N

设定说明

锥度后张力设定值。

U0-58 **Z信号计数器**

通讯地址:	0x703A	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

显示当前ABZ 或UVW 编码器Z 相脉冲计数。当编码器每正转或反转一圈，对应该值加1或减1，查看该值可以检测编码器安装是否正常。

U0-59 **设定频率(%)**

通讯地址:	0x703B	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

显示当前设定频率，百分比基数是变频器最大频率(P0-10)。

U0-60 **运行频率(%)**

通讯地址:	0x703C	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

显示当前运行频率，百分比基数是变频器最大频率(P0-10)。

U0-61 **变频器状态**

通讯地址:	0x703D	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

变频器运行状态1

1：正转

2：反转

3：停机

4：电机参数辨识中

5：故障

6：警告

U0-62 **当前故障编码**

通讯地址:	0x703E	生效方式:	-

最小值: 0 单位: -
最大值: 0 数据类型: 无符号16位
默认值: 0 更改方式: 不可更改

设定值:

0~0

设定说明

-

U0-63 运行频率(下垂后)

通讯地址: 0x703F 生效方式: -
最小值: 0.00 单位: Hz
最大值: 0.00 数据类型: 有符号16位
默认值: 0.00 更改方式: 不可更改

设定值:

0.00Hz~0.00Hz

设定说明

-

U0-64 反电动势

通讯地址: 0x7040 生效方式: -
最小值: 0.0 单位: V
最大值: 0.0 数据类型: 无符号16位
默认值: 0.0 更改方式: 不可更改

设定值:

0.0V~0.0V

设定说明

电机反电动势数值。

U0-65 启动辨识定子电阻

通讯地址: 0x7041 生效方式: -
最小值: 0 单位: -
最大值: 0 数据类型: 无符号16位
默认值: 0 更改方式: 不可更改

设定值:

0~0

设定说明

-

U0-66 通信扩展卡型号

通讯地址: 0x7042 生效方式: -
最小值: 0 单位: -
最大值: 0 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~0

设定说明

-

U0-67 通信扩展卡版本号

通讯地址: 0x7043 生效方式: -

最小值: 0 单位: -

最大值: 0 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~0

设定说明

-

U0-68 DP卡变频器状态

通讯地址: 0x7044 生效方式: -

最小值: 0 单位: -

最大值: 0 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~0

设定说明

0：停机；1：运行

0：正转；1：反转

变频器是否故障

0：无故障

1：故障

频率是否到达预设

0：没有

1：到达

DP通讯是否正常

0：正常

1：不正常

变频器控制量为通讯控制

变频器控制命令为通讯控制

速度控制/转矩控制

故障代码（主码），请查阅具体故障说明

U0-69 传送DP卡的速度/0.01Hz

通讯地址: 0x7045 生效方式: -

最小值: 0.00
最大值: 0.00
默认值: 0.00
单位: Hz
数据类型: 有符号16位
更改方式: 不可更改

设定值:

0.00Hz~0.00Hz

设定说明

-

U0-70 传送DP卡转速/rpm

通讯地址: 0x7046
最小值: 0
最大值: 0
默认值: 0
生效方式: -
单位: rpm
数据类型: 有符号16位
更改方式: 不可更改

设定值:

0rpm~0rpm

设定说明

-

U0-71 通信卡专用电流显示

通讯地址: 0x7047
最小值: 0.0
最大值: 0.0
默认值: 0.0
生效方式: -
单位: A
数据类型: 有符号16位
更改方式: 不可更改

设定值:

0.0A~0.0A

设定说明

-

U0-72 通信卡出错状态

通讯地址: 0x7048
最小值: 0
最大值: 0
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

0~0

设定说明

-

U0-73 滤波前目标转矩

通讯地址: 0x7049
最小值: 0.0
最大值: 0.0
生效方式: -
单位: %
数据类型: 有符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

转矩模式时，显示未滤波目标转矩。

U0-74 滤波后目标转矩

通讯地址: 0x704A 生效方式: -

最小值: 0.0 单位： %

最大值: 0.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

转矩模式时，显示滤波目标转矩。

U0-75 加减速后设定转矩

通讯地址: 0x704B 生效方式: -

最小值: 0.0 单位： %

最大值: 0.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

转矩模式时，显示加减速后设定转矩。

U0-76 电动转矩上限

通讯地址: 0x704C 生效方式: -

最小值: 0.0 单位： %

最大值: 0.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

电动状态下的转矩上限，以变频器额定电流为基值。

U0-77 发电转矩上限

通讯地址: 0x704D 生效方式: -

最小值: 0.0 单位： %

最大值: 0.0 数据类型： 有符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

发电状态下的转矩上限，以变频器额定电流为基值。

U0-80 EtherCAT从站站点正名

通讯地址:	0x7050	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

-

U0-81 EtherCAT从站站点别名

通讯地址:	0x7051	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

-

U0-82 EtherCAT ESM传输错误码

通讯地址:	0x7052	生效方式:	-
最小值:	0	单位：	-
最大值:	0	数据类型：	无符号16位
默认值:	0	更改方式：	不可更改

设定值：

0~0

设定说明

-

U0-83 EtherCAT XML文件版本号

通讯地址:	0x7053	生效方式:	-
最小值:	0.00	单位：	-
最大值:	0.00	数据类型：	无符号16位
默认值:	0.00	更改方式：	不可更改

设定值：

0.00~0.00

设定说明

-

U0-84 **EtherCAT 同步丢失次数**

通讯地址:	0x7054	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-85 **单位时间内EtherCAT端口0无效帧及错误最大值**

通讯地址:	0x7055	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-86 **单位时间内EtherCAT端口1无效帧及错误最大值**

通讯地址:	0x7056	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-87 **单位时间内EtherCAT转发错误最大值**

通讯地址:	0x7057	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-88　单位时间内EtherCAT数据帧处理单元错误计数最大值

通讯地址:	0x7058	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-89　单位时间内EtherCAT端口连接丢失最大值

通讯地址:	0x7059	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U0-96　异步机矢量在线观测空载电流

通讯地址:	0x7060	生效方式:	-
最小值:	0.0	单位:	A
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0A~0.0A

设定说明

-

U0-97　异步机矢量在线观测互感抗

通讯地址:	0x7061	生效方式:	-
最小值:	0.0	单位:	mH
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0mH~0.0mH

设定说明

-

U0-52　累计耗电量(kWh)

通讯地址:	0x7034	生效方式:	-

最小值: 0
最大值: 0
默认值: 0
单位: kWh
数据类型: 无符号16位
更改方式: 不可更改

设定值:
0kWh~0kWh
设定说明
累计耗电量计算，P7-14=U0-52。

U0-53 **累计耗电量(MWh)**
通讯地址: 0x7035
最小值: 0
最大值: 0
默认值: 0
生效方式: -
单位: MWh
数据类型: 无符号16位
更改方式: 不可更改
设定值:
0MWh~0MWh
设定说明
1000U0-52=U0-53。

U0-54 **累计耗电量(GWh)**
通讯地址: 0x7036
最小值: 0
最大值: 0
默认值: 0
生效方式: -
单位: GWh
数据类型: 无符号16位
更改方式: 不可更改
设定值:
0GWh~0GWh
设定说明
1000U0-53=U0-54。

6.37 U1 张力控制监视参数

U1-00 **线速度**
通讯地址: 0x7100
最小值: 0.0
最大值: 0.0
默认值: 0.0
生效方式: -
单位: m/min
数据类型: 无符号16位
更改方式: 不可更改
设定值:
0.0m/min~0.0m/min
设定说明
-

U1-01 **当前卷径值**

通讯地址: 0x7101 生效方式: -
最小值: 0.0 单位: mm
最大值: 0.0 数据类型: 无符号16位
默认值: 0.0 更改方式: 不可更改

设定值:
0.0mm~0.0mm
设定说明
-

U1-02 **线速度同步频率**

通讯地址: 0x7102 生效方式: -
最小值: 0.00 单位: Hz
最大值: 0.00 数据类型: 有符号16位
默认值: 0.00 更改方式: 不可更改

设定值:
0.00Hz~0.00Hz
设定说明
-

U1-03 **频率PID输出**

通讯地址: 0x7103 生效方式: -
最小值: 0.00 单位: Hz
最大值: 0.00 数据类型: 有符号16位
默认值: 0.00 更改方式: 不可更改

设定值:
0.00Hz~0.00Hz
设定说明
-

U1-04 **当前设定张力**

通讯地址: 0x7104 生效方式: -
最小值: 0 单位: N
最大值: 0 数据类型: 无符号16位
默认值: 0 更改方式: 不可更改

设定值:
0N~0N
设定说明
-

U1-05 **锥度后设定张力**

通讯地址: 0x7105 生效方式: -

最小值: 0
最大值: 0
默认值: 0
单位: N
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0N~0N

设定说明

-

U1-06 张力控制设定转矩

通讯地址: 0x7106
最小值: 0.0
最大值: 0.0
默认值: 0.0
生效方式: -
单位: %
数据类型: 有符号16位
更改方式: 不可更改

设定值:

0.0%~0.0%

设定说明

-

U1-07 转矩PID输出

通讯地址: 0x7107
最小值: 0.0
最大值: 0.0
默认值: 0.0
生效方式: -
单位: %
数据类型: 有符号16位
更改方式: 不可更改

设定值:

0.0%~0.0%

设定说明

-

U1-08 张力控制模式

通讯地址: 0x7108
最小值: 0
最大值: 0
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0~0

设定说明

-

U1-09 张力PID给定

通讯地址: 0x7109
最小值: 0.0
最大值: 0.0
生效方式: -
单位: %
数据类型: 无符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

-

U1-10 张力PID反馈

通讯地址: 0x710A 生效方式: -

最小值: 0.0 单位： %

最大值: 0.0 数据类型： 无符号16位

默认值: 0.0 更改方式： 不可更改

设定值：

0.0%~0.0%

设定说明

-

U1-11 张力PID比例增益

通讯地址: 0x710B 生效方式: -

最小值: 0 单位： -

最大值: 0 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0~0

设定说明

-

U1-12 张力PID积分时间Ti

通讯地址: 0x710C 生效方式: -

最小值: 0 单位： s

最大值: 0 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0s~0s

设定说明

-

U1-13 张力PID微分时间Td

通讯地址: 0x710D 生效方式: -

最小值: 0 单位： s

最大值: 0 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0s~0s

设定说明

-

U1-14 **张力时间**

通讯地址:	0x710E	生效方式:	-
最小值:	0	单位:	s
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0s~0s

设定说明

-

U1-15 **卷曲模式**

通讯地址:	0x710F	生效方式:	-
最小值:	0	单位:	-
最大值:	0	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~0

设定说明

-

U1-18 **电缆卷筒垂直应用计算转矩上限**

通讯地址:	0x7112	生效方式:	-
最小值:	0.0	单位:	%
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0%~0.0%

设定说明

-

U1-19 **电缆卷筒垂直应用计算转矩下限**

通讯地址:	0x7113	生效方式:	-
最小值:	0.0	单位:	%
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0%~0.0%

设定说明

-

U1-20 **电缆卷筒垂直应用实际转矩上限**

通讯地址:	0x7114	生效方式:	-
最小值:	0.0	单位:	%
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0%~0.0%

设定说明

-

U1-21 **电缆卷筒垂直应用实际转矩下限**

通讯地址:	0x7115	生效方式:	-
最小值:	0.0	单位:	%
最大值:	0.0	数据类型:	有符号16位
默认值:	0.0	更改方式:	不可更改

设定值:

0.0%~0.0%

设定说明

-

6.38 U2 同步控制监视参数

U2-00 **位置偏差**

通讯地址:	0x7200	生效方式:	-
最小值:	-32768	单位:	-
最大值:	32767	数据类型:	有符号16位
默认值:	0	更改方式:	不可更改

设定值:

-32768~32767

设定说明

-

U2-01 **从机有效设定频率**

通讯地址:	0x7201	生效方式:	-
最小值:	-327.68	单位:	Hz
最大值:	327.67	数据类型:	有符号16位
默认值:	0.00	更改方式:	不可更改

设定值:

-327.68Hz~327.67Hz

设定说明

-

U2-02 **从机频率修正值**

通讯地址:	0x7202	生效方式:	-
最小值:	0.00	单位:	Hz
最大值:	655.35	数据类型:	无符号16位
默认值:	0.00	更改方式:	不可更改

设定值:

0.00Hz~655.35Hz

设定说明

-

U2-03 **从机位置同步状态**

通讯地址:	0x7203	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

U2-04 **从机位置补偿量**

通讯地址:	0x7204	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

U2-05 **从机接收主机发送时间间隔**

通讯地址:	0x7205	生效方式:	-
最小值:	0	单位:	-
最大值:	65535	数据类型:	无符号16位
默认值:	0	更改方式:	不可更改

设定值:

0~65535

设定说明

-

U2-06 **从机接收时间间隔**

通讯地址: 0x7206 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~65535

设定说明

-

U2-07 **从机接受主机脉冲增量**

通讯地址: 0x7207 生效方式: -

最小值: 0 单位: -

最大值: 65535 数据类型: 无符号16位

默认值: 0 更改方式: 不可更改

设定值:

0~65535

设定说明

-

U2-08 **从机脉冲增量**

通讯地址: 0x7208 生效方式: -

最小值: -32768 单位: -

最大值: 32767 数据类型: 有符号16位

默认值: 0 更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-09 **从机时间补偿量**

通讯地址: 0x7209 生效方式: -

最小值: -32768 单位: -

最大值: 32767 数据类型: 有符号16位

默认值: 0 更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-10 **加速度滤波后**

通讯地址: 0x720A
最小值: 0
最大值: 65535
默认值: 0
生效方式: -
单位: -
数据类型: 无符号16位
更改方式: 不可更改

设定值:

0~65535

设定说明

-

U2-11 **从机接受主机频率**

通讯地址: 0x720B
最小值: -32768
最大值: 32767
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-12 **主机发送频率**

通讯地址: 0x720C
最小值: -32768
最大值: 32767
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-13 **主机发送位置增量**

通讯地址: 0x720D
最小值: -32768
最大值: 32767
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-14 **主机发送时间间隔**

通讯地址: 0x720E
生效方式: -

最小值: -32768
最大值: 32767
默认值: 0
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-15 从机接收运行命令字

通讯地址: 0x720F
最小值: -32768
最大值: 32767
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-16 当前拍位置

通讯地址: 0x7210
最小值: -32768
最大值: 32767
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-17 主机位置

通讯地址: 0x7211
最小值: -32768
最大值: 32767
默认值: 0
生效方式: -
单位: -
数据类型: 有符号16位
更改方式: 不可更改

设定值:

-32768~32767

设定说明

-

U2-23 设定同步模式

通讯地址: 0x7217
最小值: -32768
最大值: 32767
生效方式: -
单位: -
数据类型: 有符号16位

默认值: 0 更改方式： 不可更改

设定值：

-32768~32767

设定说明

-

U2-24 实际同步模式

通讯地址: 0x7218 生效方式: -

最小值: -32768 单位： -

最大值: 32767 数据类型： 有符号16位

默认值: 0 更改方式： 不可更改

设定值：

-32768~32767

设定说明

-

U2-25 方向改变标志

通讯地址: 0x7219 生效方式: -

最小值: -32768 单位： -

最大值: 32767 数据类型： 有符号16位

默认值: 0 更改方式： 不可更改

设定值：

-32768~32767

设定说明

-

U2-27 电子齿轮比后频率

通讯地址: 0x721B 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0~65535

设定说明

-

U2-28 电子齿轮比后滤波后频率

通讯地址: 0x721C 生效方式: -

最小值: 0 单位： -

最大值: 65535 数据类型： 无符号16位

默认值: 0 更改方式： 不可更改

设定值：

0~65535

设定说明

-

第七章 故障诊断及对策

7.1 安全注意事项

安全注意事项

危险

- 严禁在电源接通的状态下进行接线，请务必将所有断路器保持在 OFF 状态。否则会有触电的危险。

警告

- 请保证变频器按照当地法规进行接地。否则会有触电危险或火灾危险。
- 变频器带电后请勿拆卸外壳或触摸内部电路。否则会有触电危险。
- 故障查检必须由专业人员进行，非专业人员严禁对变频器进行查检、维护、维修。否则会有触电危险或火灾危险。
- 将变频器安装在封闭的柜内或机壳箱内时，请用冷却风扇或冷却空调等充分冷却，以使变频器进气温度保持在 50°C以下。否则会导致过热或火灾。
- 请按规定扭矩锁紧所有螺钉。否则可能有火灾或触电危险。
- 请确认产品的输入电压在铭牌的额定电压范围内，否则会有触电或火灾危险。
- 变频器附近请勿放置易燃易爆物品。

注意

- 进行安装作业时，请用布或纸等遮住变频器的上部，以防止钻孔时的金属屑、油、水等进入变频器内部。如果异物进入变频器内部，可能导致变频器故障。
- 作业结束后，请拿掉这些布或纸。如果继续盖在上面，则会使通气性变差，导致变频器异常发热。
- 操作变频器时，请遵守静电防止措施（ESD）规定的步骤，否则会因静电而损坏变频器内部的电路。

7.2 试运行前调整指南

- V/f控制模式（P0-01=2）

  该种模式是在电机没有编码器速度反馈的应用场合下使用，对电机参数不敏感，只需要正确设置电机的额定电压和额定频率值。

问题与故障	处理对策
运行中电机振荡	减少V/f振荡抑制增益（P3-11），以5为单位减少（最小减少到5）。
大功率启动报过流	降低转矩提升（P3-01），以0.5%为单位调节。
运行中电流偏大	正确设置电机的额定电压（P1-02）、额定频率（P1-04）。 降低转矩提升（P3-01），以0.5%为单位调节。
电机噪音大	适当增加载频频率值（P0-15），以1.0kHz为单位升高。 1、升高载波频率变频器会降容（具体细节咨询厂家）。 2、升高载波频率电机漏电流会增大）。
突卸重载报过压、减速报过压	确认过压失速使能（P3-23）设定成使能状态； 增大过压失速增益（P3-24/P3-25），以10为单位增大（最大到100）。 减小过压失速动作电压（P3-22出厂770V），以10V为单位减小（最小到700V）。
突加重载报过流、加速报过流	增大过流失速增益（P3-20），以10为单位增大（最大到100）。 减小过流失速动作电流（P3-18出厂150%），以10%为单位减小（最小到50%）。

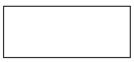
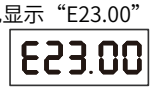
- 开环矢量控制模式（P0-01=0，出厂默认值）
  该控制模式是在电机没有编码器速度反馈的应用场合下，对电机的速度和转矩进行控制。
- 该控制模式下需要进行电机参数辨识，完成电机参数的自动整定。

问题与故障	处理对策
电机启动过程中报过载或过流故障	电机参数（P1-01~P1-05）按电机铭牌设定。 进行电机参数辨识（P1-37），有条件情况下最好进行电机动态完整参数辨识。
5Hz以下转矩或速度响应慢、电机振动	改善转矩和速度的响应，需要加强速度环比例调节（P2-00按10为单位增大设定值）或者降低速度环积分时间（P2-01按0.05为单位降低）。 如果出现振动，需要减弱P2-00、增大P2-01参数值。
5Hz以上转矩或速度响应慢、电机振动。	改善转矩和速度的响应，需要加强速度环比例调节（P2-03按10为单位增大设定值）或者降低速度环积分时间（P2-04按0.05为单位降低）。 如果出现振动，需要减弱P2-03、增大P2-04参数值。
速度精度低	当电机带载速度偏差过大时，需增大矢量转差补偿增益（P2-06），按10%为单位增减。
速度波动大	当电机速度有异常波动时，可适当增加速度滤波时间（A9-05），按0.001s为单位增加。
电机噪音大	适当增加载频频率值（P0-15），以1.0kHz为单位升高。（注意：1、升高载波频率变频器会降容（具体细节咨询厂家）。2、升高载波频率电机漏电流会增大）。
电机转矩不足或出力不够	转矩上限是否被限制，速度模式下提高转矩上限（P2-10）；转矩模式下增大转矩指令。

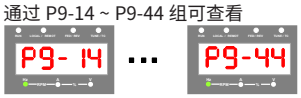
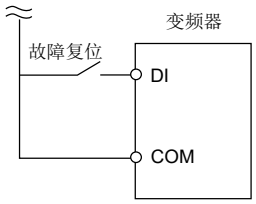
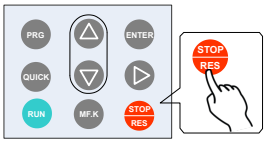
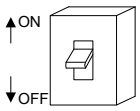
- 闭环矢量控制模式（P0-01=1）
  该模式是在电机有编码器速度反馈应用场合下使用，需要正确设置编码器线数、编码器类型和信号方向，完成电机参数的自动整定。

问题与故障	处理对策
启动报过流或过载故障	正确设置编码器线数、类型、编码器方向。
电机转动过程中报过载或过流故障	电机参数（P1-01~P1-05）按电机铭牌设定。 进行电机参数辨识（P1-37），有条件的情况下最好进行电机动态完整参数辨识。
5Hz以下转矩或速度响应慢、电机振动	改善转矩和速度的响应，需要加强速度环比例调节（P2-00按10为单位增大设定值）或者降低速度环积分时间（P2-01按0.05为单位降低）。 如果出现振动，需要减弱该P2-00、P2-01参数值。
5Hz以上转矩或速度响应慢、电机振动。	改善转矩和速度的响应，需要加强速度环比例调节（P2-03按10为单位增大设定值）或者降低速度环积分时间（P2-04按0.05为单位降低）。 如果出现振动，需要减弱该P2-03、P2-04参数值。
速度波动大	当电机速度有异常波动时，可适当增加速度滤波时间（P2-07），按0.001s为单位增加。
电机噪音大	适当增加载频频率值（P0-15），以1.0kHz为单位升高。 1、升高载波频率变频器会降容（具体细节咨询厂家）。 2、升高载波频率电机漏电流会增大）。
电机转矩不足或出力不够	转矩上限是否被限制，速度模式下提高转矩上限（P2-10）；转矩模式下增大转矩指令。

7.3 常见故障处理

序号	故障现象	可能原因	解决方法
1	上电无显示 	电网电压没有或者过低	检查输入电源
		变频器驱动板上的开关电源故障	检查控制板上24V和10V输出电压是否正常
		控制板与驱动板、键盘之间线断	重新拔插键盘的芯和排线试试
		变频器缓冲电阻损坏	寻求厂家服务
		控制板、键盘故障	
		整流桥损坏	
2	上电一直显示HC 	驱动板与控制板之间的连线接触不良	重新拔插键盘的芯和排线试试
		控制板上相关器件损坏	寻求厂家服务
		电机或者电机线有对地短路	
		霍尔故障	
		电网电压过低	
3	上电显示“E23.00”报警 	电机或者输出线对地短路	用摇表测量电机和输出线的绝缘
		变频器损坏	寻求厂家服务
4	上电变频器显示正常，运行后显示“HC”并停机 	风扇损坏或者堵转	更换风扇
		外围控制端子接线有短路	排除外部短路故障
5	频繁报E14.00（模块过热）故障	载频设置太高	降低载频（P0-15）
		风扇损坏或者风道堵塞	更换风扇、清理风道
		变频器内部器件损坏（热敏电阻或其他）	寻求厂家服务
6	变频器运行后电机不转动	变频器及电机之间连线错误	重新确认变频器与电机之间连线正确
		变频器参数设置错误（电机参数）	恢复出厂参数，重新设置使用参数组
			检查编码器参数设置正确、电机额定参数设置正确，如电机额定频率、额定转速等
			检查P0-01（控制方式）、P0-02（运行方式）、设置正确
			V/f模式下，重载启动下，调整P3-01（转矩提升）参数
		驱动板与控制板连线接触不良	重新拔插连接线，确认接线牢固
		驱动板故障	寻求厂家服务
7	DI端子失效	参数设置错误	检查并重新设置P4组相关参数
		外部信号错误	重新接外部信号线
		OP与+24V跳线松动	重新确认OP与+24V跳线，并确保紧固
		控制板故障	寻求厂家服务
8	闭环矢量控制时，电机速度无法提升	编码器故障	更换码盘并重新确认接线
		编码器接错线或者接触不良	重新接线，确保接触良好
		PG卡故障	更换PG卡
		驱动板故障	寻求厂家服务
9	变频器频繁报过流和过压故障	电机参数设置不对	重新设置电机参数或者进行电机参数辨识
		加减速时间不合适	设置合适的加减速时间
		负载波动	寻求厂家服务
10	上电（或运行）报E17.00	软启动接触器未吸合	检查接触器电缆是否松动
			检查接触器是否有故障
			检查接触器24V供电电源是否有故障
			寻求厂家服务
11	减速或减速停机时电机自由停机或无制动能力	编码器断线或过压失速保护生效	有速度传感器矢量控制模式下时（P0-01=1），请检查编码器接线
			如果已配置制动电阻，需将“过压失速使能”选择为“无效”（设置P3-23=0），关闭过压失速

7.4 故障复位

阶段	措施	备注
故障时	通过操作面板显示查看记录	通过 P9-14 ~ P9-44 组可查看 
故障复位前	从操作面板显示的故障类型上查找故障原因并解除故障，解除故障原因后再复位	请参考“7.5 故障码处理”进行处理
解除故障复位方法	1）将 DI 设定为功能 3（P4-00~P4-09=9 故障复位），确认已经取消变频器的运行命令后，复位功能端子有效。	
	2）确认已经取消变频器的运行命令后，按下面板上红色停机复位键使其复位	按面板红色停机复位键 
	3）给变频器重新上电后自动复位 暂时将主回路电源切断，待操作面板上显示的内容消失后再次接通电源	
	4）使用 Modbus-RTU 串口通信功能的可通过通信方式复位。 在 P0-02=2（通信控制）时，确认已经取消变频器的运行命令后，通过上位机对 2000H 通信地址写入“7”（故障复位），可使变频器在故障源清除后进行复位 [注]	

NOTE

◆ [注] 具体可参考“附录 A：Modbus 通信协议介绍”。

7.5 故障码处理

变频器使用过程中可能会遇到下列故障类型情况，请参考下述方法进行简单故障分析。

故障码	故障码名称	故障原因	处理措施
E01.01	硬件故障	硬件故障	联系厂家
E02.00	加速过电流	变频器输出回路存在接地或短路	检测电机或者中断接触器是否发生短路。
		控制方式为FVC或者SVC且没有进行参数辨识	按照电机铭牌设置电机参数，进行电机参数辨识。
		急加速工况，加速时间设定太短	增大加速时间（P0-17）。
		过流失速抑制设定不合适	确认过流失速抑制功能（P3-19）已经使能； 过流失速动作电流（P3-18）设定值太大，推荐在120%到160%之内调整； 过流失速抑制增益（P3-20）设定太小，推荐在20到40之内调整。
		手动转矩提升或V/f曲线不合适	调整手动提升转矩或V/f曲线。
		对正在旋转的电机进行启动	选择转速追踪启动或等待电机停止后再启动。
		受外部干扰	通过历史故障记录，查看故障时电流值是否达到过流（P3–18）； 如未达到，则判断是外部干扰，需排查外部干扰源，解除故障； 如排查后无外部干扰源，则可能是驱动板或霍尔器件损坏，需联系厂家更换。
E03.00	减速过电流	变频器输出回路存在接地或短路	检测电机是否发生断路或短路。
		控制方式为FVC或者SVC且没有进行参数辨识	按照电机铭牌设置电机参数，进行电机参数辨识。
		急减速工况，减速时间设定太短	增大减速时间（P0–18）。
		过流失速抑制设定不合适	确认过流失速抑制功能（P3-19）已经使能； 过流失速动作电流（P3-18）设定值太大，推荐在120%到150%之内调整； 过流失速抑制增益（P3-20）设定太小，推荐在20到40之内调整。
		没有加装制动单元和制动电阻	加装制动单元及电阻。
		受外部干扰	通过历史故障记录，查看故障时电流值是否达到过流（P3–18）； 如未达到，则判断是外部干扰，需排查外部干扰源，解除故障； 如排查后无外部干扰源，则可能是驱动板或霍尔器件损坏，需联系厂家更换。
E04.00	恒速过电流	受外部干扰	通过历史故障记录，查看故障时电流值是否达到过流（P3–18）： 如未达到，则判断是外部干扰，需排查外部干扰源，解除故障； 如排查后无外部干扰源，则可能是驱动板或霍尔器件损坏，需联系厂家更换。
		变频器输出回路存在接地或短路	检测电机是否发生短路或断路。
		控制方式为FVC或者SVC且没有进行参数辨识	按照电机铭牌设置电机参数，进行电机参数辨识。
		过流失速抑制设定不合适	确认过流失速抑制功能（P3-19）已经使能； 过流失速动作电流（P3-18）设定值太大，推荐在120%到150%之内调整； 过流失速抑制增益（P3-20）设定太小，推荐在20到40之内调整。
		变频器选型偏小	在稳定运行状态下，若运行电流已超过电机额定电流或变频器额定输出电流值，请选用功率等级更大的变频器。

故障码	故障码名称	故障原因	处理措施
E05.00	加速过电压	输入电网电压偏高	将电压调至正常范围。
		加速过程中存在外力拖动电机运行	取消外力或加装制动电阻； 过压抑制最大上升频率（P3-26）较小，推荐在5Hz到15Hz之内调整，有外力拖动的场合调整此参数。
		过压抑制设定不合适	确认过压抑制功能（P3-23）已经使能； 过压抑制动作电压（P3-22）设定值太大，推荐在770V~700V之内调整；过压抑制增益（P3-24）设定太小，推荐在30到50之内调整。
		没有加装制动单元和制动电阻	加装制动单元及电阻。
		加速时间过短	增大加速时间。
E06.00	减速过电压	过压抑制设定不合适	确认过压抑制功能（P3-23）已经使能； 过压抑制动作电压（P3-22）设定值太大，推荐在770V~700V之内调整；过压抑制增益（P3-24）设定太小，推荐在30到50之内调整。
		减速过程中存在外力拖动电机运行	取消外力或加装制动电阻； 过压抑制最大上升频率（P3-26）较小，推荐在5Hz到15Hz之内调整，有外力拖动的场合调整此参数。
		减速时间过短	增大减速时间。
		没有加装制动单元和制动电阻	加装制动单元及电阻。
E07.00	恒速过电压	过压抑制设定不合适	确认过压抑制功能（P3-23）已经使能； 过压抑制动作电压（P3-22）设定值太大，推荐在770V~700V之内调整；过压抑制频率增益（P3-24）设定太小，推荐在30到50之内调整。
		运行过程中存在外力拖动电机运行	取消外力或加装制动电阻； 过压抑制最大上升频率（P3-26）较小，推荐在5Hz到15Hz之内调整，有外力拖动的场合调整此参数。
E08.00	缓冲电阻故障	输入电压不在规定的范围内，由于输入电压的关系使接触器反复吸合断开	检查输入电网电压是否波动大； 将电压调至要求的范围内，确保母线电压波动不处于接触器吸合点上下波动。
E09.00	欠压故障	瞬时停电	使能瞬停不停功能（P9-59），可以防止瞬时停电欠压故障。
		变频器输入端电压不在要求的范围	调整电压到正常范围。
		母线电压不正常	寻求技术支持。
		整流部分、逆变驱动板、逆变控制板异常	寻求技术支持。
E10.00	变频器过载	负载是否过大或发生电机堵转	减小负载并检查电机及机械情况。
E11.00	电机过载	电机保护参数F9-01设定是否合适	正确设定此参数，增大P9-01，可以延长电机过载时间。
		负载是否过大或发生电机堵转	减小负载并检查电机及机械情况。
E12.00	输入缺相	三相输入电源不正常	检查输入RST接线以及三相输入电压是否正常；
			检查输入RST接线有无接到地线的情况。
		驱动板、防雷板、主控板、整流桥异常	寻求技术支持。

故障码	故障码名称	故障原因	处理措施
E13.00	输出缺相	电机故障	检测电机是否断路。
		变频器到电机的引线不正常	排除外围故障。
		电机运行时变频器三相输出不平衡	检查电机三相绕组是否正常并排除故障。
		驱动板、IGBT模块异常	寻求技术支持。
E14.00	变频器过热	环境温度过高	降低环境温度。
		风道堵塞	清理风道。
		风扇损坏	更换风扇。
		模块热敏电阻损坏	寻求技术支持。
		模块损坏	寻求技术支持。
E15.01	外部设备常开故障	通过多功能端子DI常开输入外部故障	排查外围故障，确认机械允许重新启动（P8-18），复位运行。
		通过虚拟IO功能常开输入外部故障	确认A1组虚拟IO组参数设置正确，复位运行。
E15.02	外部设备故障	通过多功能端子DI常闭输入外部故障	排查外围故障，确认机械允许重新启动（P8-18），复位运行。
		通过虚拟IO功能常闭输入外部故障	确认A1组虚拟IO组参数设置正确，复位运行。
E16.01	Modbus通信超时	Modbus通信超时	排查RS485通信线缆连接是否正确；查看Pd-04 设定值与PLC通信周期是否合理。
E16.02	三通端子防护盖没接警告	CANopen 配置的PDO映射与实际通信映射不一致	检查PE/AF组参数的PDO映射。
E16.11	CANopen通信超时	CANopen通信超时	排查CAN通信线缆连接是否正确； 查看参数 Fd-15~17，确认干扰情况。
E16.15	通信超时故障	同步控制通讯超时	排查同步控制参数或超时时间设置大于0。
E16.21	CANlink心跳超时	CANlink 心跳超时	排查CAN通信线缆连接是否正确；查看参数 Pd-15~17，确认干扰情况。
E16.22	CANlink站号冲突	CANlink 站号冲突	修改网络中相同的CAN 站号，参数为PD-13。
E16.41	PROFIBUS DP通信超时	DP 通信超时	排查 DP 通信线缆连接是否正确。
E17.00	接触器故障	驱动板和电源异常	更换驱动板或电源板。
		接触器异常	更换接触器。
		防雷板异常	更换防雷板。
E18.00	电流检测回路故障	变频器电流采样异常	检查主回路是否上电。
		变频器电流采样异常	霍尔传感器损坏、电流采样电流损坏，联系厂家
E19.02	同步机磁极位置角参数辨识故障	同步机磁极位置角参数辨识故障	可能未接电机，或输出缺相。
E19.06	快速定子电阻参数辨识故障	定子电阻参数辨识故障	没接入电机； 请确认电机额定电流参数（P1-03）按电机铭牌设定。
E19.07	定子电阻参数辨识故障	定子电阻参数辨识故障	没接入电机； 请确认电机额定电流参数（P1-03）按电机铭牌设定。
E19.08	定子电阻参数辨识无法结束	定子电阻参数辨识故障	没接入电机； 请确认电机额定电流参数（P1-03）按电机铭牌设定。
E19.09	异步机瞬态漏感参数辨识故障	异步机瞬态漏感参数辨识故障	可能未接电机，或输出缺相； 确认有效连接电机。
E19.10	异步机漏感参数辨识故障	异步机瞬态漏感参数辨识故障	可能未接电机，或输出缺相； 确认有效连接电机。

故障码	故障码名称	故障原因	处理措施
E19.11	电机参数辨识故障	惯量参数辨识故障	请确认电机额定电流参数（P1-03）按电机铭牌设定； 增加惯量参数辨识及动态设定速度（P2-43）设定值。
E19.20	电机参数辨识故障	同步机空载零点位置角参数辨识过程超时	检查反馈Z信号。
E19.23	同步机磁极位置角参数辨识故障（逐波限流）	同步机磁极位置参数辨识故障	请确认电机额定电流参数（P1-03）按电机铭牌设定； 减小同步机初始位置角检测电流（P2-29）设定值； 检查启动时电机是否在旋转； 检查电机直轴电感Ld(P1-17)是否过小(0.1mH)。
E19.24	异步机瞬态漏感参数辨识故障（逐波限流）	DP 通信超时	变频器功率选型偏小； 根据电机功率选择合适的变频器。
E20.00	ABZ编码器断线故障	编码器断线	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.01	编码器硬件断线故障	编码器故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.02	ABZ编码器软件检测断线故障	编码器断线故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.03	同步机空载参数辨识编码器AB信号故障	同步机空载参数辨识编码器故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.04	同步机空载参数辨识编码器绝对位置信号故障	同步机空载参数辨识编码器故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.06	同步机ABZ编码器带载参数辨识Z信号丢失故障	同步机带载参数辨识编码器故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.07	同步机ABZ编码器空载参数辨识Z信号丢失故障	同步机空载参数辨识编码器故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.08	编码器线数错误	同步机空载参数辨识编码器故障	修正断线部位； 检查PG电缆接线是否正确； 确认 PG 电缆电源的接线； 确认编码器线数是否与编码器线数（P1-27）设定值一致； 检查AB信号线接线是否正确。
E20.09	同步机带载参数辨识编码器绝对位置信号故障	同步机参数辨识编码器故障	编码器z信号异常，请确认PG卡接线。
E20.10	同步机编码器Z信号校准故障	同步机编码器故障	编码器z信号异常，请确认PG卡接线。
E20.11	异步机空载电流参数辨识编码器故障	异步机闭环矢量空载参数辨识编码器故障	正确连接编码器； 请确认编码器线数是否与编码器线数（P1-27）设定值一致。
E20.12	编码器故障	编码器反馈速度与SVC估算速度偏差较大	检查编码器是否断线； 确认电机参数是否设置正确； 确认是否进行电机参数辨识。
E20.13	编码器故障	旋变编码器硬件断线故障	检查编码器接线。
E20.17	23位编码器断线故障	23位编码器断线故障	检查编码器接线。

故障码	故障码名称	故障原因	处理措施
E21.01	EEPROM不间断操作超时	EEPROM读写异常	如果是通信写功能码，确认是否操作的是相应功能码的RAM地址，各组功能码的RAM地址映射，查看参数地址表示规则。
		EEPROM读写异常	如果EEPROM芯片损坏，联系厂家更换控制板。
E21.02	EEPROM读故障	EEPROM读写异常	如果是通信写功能码，确认是否操作的是相应功能码的RAM地址，各组功能码的RAM地址映射，查看参数地址表示规则。
		EEPROM读写异常	如果EEPROM芯片损坏，联系厂家更换控制板。
E21.03	EEPROM操作超时	EEPROM读写异常	如果是通信写功能码，确认是否操作的是相应功能码的RAM地址，各组功能码的RAM地址映射，查看参数地址表示规则。
		EEPROM读写异常	如果EEPROM芯片损坏，联系厂家更换控制板。
E21.04	EEPROM缓冲区溢出	EEPROM读写异常	如果是通信写功能码，确认是否操作的是相应功能码的RAM地址，各组功能码的RAM地址映射，查看参数地址表示规则。
		EEPROM读写异常	如果EEPROM芯片损坏，联系厂家更换控制板。
E22.00	定子电阻参数辨识结果警告	参数辨识出的定子电阻超出合理范围	电机额定电压、额定电流参数设定错误，请按电机铭牌正确设定F1组电机额定电压（P1-02）、电机额定电流（P1-03）参数。
E22.01	转子电阻参数辨识结果警告	参数辨识出的异步机转子电阻超出合理范围	确认是在电机已经静止的情况下进行参数辨识。
E22.02	空载电流和互感参数辨识结果警告	参数辨识出的异步机空载电流以及互感超出合理范围。若报出此类警告，变频器会根据已知的电机参数计算一个互感和空载电流值，可能和最优的值存在一定差别	按电机铭牌正确设定P1组电机参数； 参数辨识前请确认电机为空载。
E22.03	反电动势参数辨识结果警告	参数辨识出的同步机反电势超出合理范围	确认电机额定电压参数（P1-02）按电机铭牌设定； 参数辨识时确认电机为空载状态。
E22.04	惯量参数辨识结果警告	惯量参数辨识故障	请确认电机额定电流参数（P1-03）按电机铭牌设定。
E23.00	变频器输出对地短路检测时过流	电机对地短路	更换、检查电缆或电机，是否存在对地短路。
E24.00	输出相间短路	电机相间短路	输出UVW中存在两相短路。
E25.00	整流故障	输入电网电压异常	检查输入电源是否过高或过低。
		整流单元异常	寻求厂家服务。
E26.00	累计运行时间到达故障	累计运行时间达到设定值	使用参数初始化功能清除记录信息。
E27.00	用户自定义故障1	通过多功能端子DI输入用户自定义故障1的信号	复位运行。
		通过虚拟IO功能输入用户自定义故障1的信号	复位运行。
E28.00	用户自定义故障2	通过多功能端子DI输入用户自定义故障2的信号	复位运行。
		通过虚拟IO功能输入用户自定义故障2的信号	复位运行。
E29.00	累计上电时间到达故障	累计上电时间达到设定值	使用参数初始化功能清除记录信息。
E30.00	输出掉载	变频器运行电流小于P9-64	确认负载是否脱离或P9-64、P9-65参数设置是否符合实际运行工况。
E31.00	运行PID时PID反馈丢失	PID反馈小于PA-26设定值	检查PID反馈信号或设置PA-26为一个合适值。
E40.00	逐波限流故障	负载是否过大或发生电机堵转	减小负载并检查电机及机械情况。
		变频器选型偏小	选用功率等级更大的变频器。

第八章　日常保养与维护

8.1 日常保养

安全注意事项

危险

- 请勿在电源接通条状态下进行操作接线，否则有触电危险！
- 进行检查前，请切断所有的设备电源，切断变频器输入电源后，因变频器内部直流电容上仍有残压，请至少等待几分钟待电源指示灯熄灭后方可操作，再次上电操作时，需要等待变频器规定的间隔上电时间；
- 在变频器上电后，请勿更改接线、拆下线缆、拆下选配卡和更换冷却风扇，否则有触电危险;
- 请务必将电机的接地端子接地，否则与电机外壳接触有触电危险；
- 非专业电气人员，请勿进行维护、保养和维修；
- 安装、接线、调试、修理、检查和元器件更换，请由熟悉变频器的安装、调试、维修、电气专业施工人员进行。

警告

- 请勿在拆下变频器外壳下，使变频器处于运行状态；
- 为说明产品细节部分，本说明书中的图解有时为拆下外罩和端盖状态，请务必在安装有规定的外罩下和安全遮盖物下遵照说明书运行变频器；
- 请按指定的拧固力紧固螺钉端子，防止连接松动导致电线连接处发热而引发火灾；
- 请勿接错主回路输入电压的范围，防止因输入变频器的额定电压超出变频器允许的范围，导致运行异常；
- 请勿使易燃物紧密接触变频器或将变频器安装易燃物体上。

注意

- 请遵照本说明书指示正确更换风扇。特别针对风扇出风口方向，如果方向错误，会导致冷却效果差，不能发挥冷却作用；
- 在变频器运行时，请勿拆装电机。否则会引起触电和变频器损坏；
- 对控制回路接线时，请使用屏蔽性电缆；
- 防止变频器异动作，同时将屏蔽层单端可靠接地。
- 请勿更改变频器回路，否则会引起变频器损坏；
- 请正确连接变频器输出回路端子同电机回路接线端子；
- 如果需要更改电机运行方向，请任意调换变频器输出端子；
- 请勿操作已损坏的变频器，以免波及变频器以外的设备器件损坏。

8.1.1 日常检查项目

由于环境的温度、湿度、粉尘及振动的影响，会导致变频器内部的器件老化，导致变频器潜在的故障发生或降低了变频器的使用寿命。因此，有必要对变频器实施日常和定期的保养及维护，特别是针对高温环境、频繁起停场合、存在交流电源和负载波动环境、存在大震动或冲击的环境、存在粉尘 / 盐酸类腐蚀性环境中应该缩短定期检查周期间隔。

为确保变频器功能正常和产品免受损坏，请每日对以下项目进行确认，请复印该检查确认表进行使用，每次确认后在确认栏上盖签“确认”章。

检查项目	检查内容	故障时对策	确认栏
电机	电机是否存在异常声音和振动现象	● 确认机械连接是否异常； ● 确认电机是否缺相； ● 确认电机固定螺丝是否牢固。	
风扇	变频器和电机冷却风扇使用异常	● 确认变频器冷却风扇是否运行； ● 确认电机侧冷却风扇是否异常； ● 确认通风通道是否堵塞； ● 确认环境温度是否在允许范围内。	
安装环境	电柜和线缆槽是否异常	● 确认变频器进出线缆是否有绝缘破损； ● 确认安装固定支架是否有震动； ● 确认铜排和连接线缆端子是否有松动和被腐蚀穿。	
负载	变频器运行电流是否超出变频器额定和电机额定一定时间	● 确认电机参数设置是否正确； ● 确认电机是否过载； ● 确认机械振动是否过大（正常情况＜ 0.6g）。	
输入电压	主回路和控制回路间电源电压是否	● 确认输入电压是否在允许范围内； ● 确认周围是否有大负载起动。	

8.2 定期检查

8.2.1 定期检查项目

请定期对运行中难以检查的地方检查， 应始终保持变频器处于清洁状态，有效清除变频器上表面积尘，防止积尘进入变频器内部，特别是金属粉尘，有效清除变频器散热风扇的油污。

危险

- 为防止触电，请勿在带电状态下进行检查作业，否则有触电危险。
- 检查前请切断所有设备的电源，并等待 10 分钟以上，以免变频器内部电容的残余电压造成危险。

检查项目	检查内容	故障时对策	检查栏
整机	表面是否有垃圾、污垢、粉尘堆积	● 确认变频器柜是否断电； ● 用吸尘器清除垃圾或粉尘，以免接触部件； ● 用软布浸入中性清洁剂轻轻擦去油污。	
线缆	动力线及连接处是否变色； 绝缘层是否老化或开裂。	● 更换已经开裂的线缆； ● 更换已经损坏的连接端子。	
电磁接触器外围	动作时是否吸合不牢或发出异响； 是否有短路、被水污、膨胀、破裂的外围器件	● 更换已异常的元器件。	
风道通风口	风道、散热片是否阻塞； 风扇是否损坏；	● 清扫风道； ● 更换风扇。	
控制回路	控制元器件是否有接触不良；端子螺丝是否松动；控制线缆是否有绝缘开裂。	● 清扫控制线路和连接端子表面异物； ● 更换已破损腐蚀的控制线缆。	

8.2.2 主回路绝缘测试

● 提醒：在用兆欧表（请用直流 500V 兆欧表）测量绝缘电阻时，要将主回路线与变频器脱开。不要用绝缘电阻表测试控制回路绝缘，请参考下图。（严禁进行高压（＞ 500V）测试，出厂时已完成）。

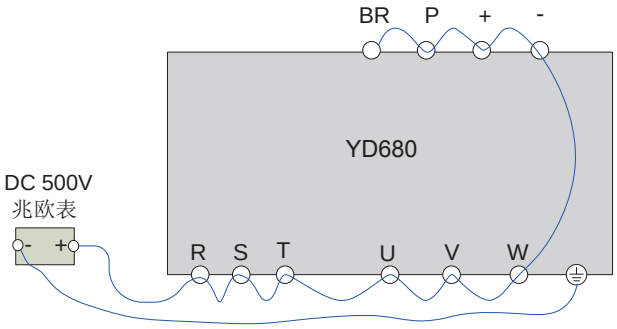


图 8-1 主回路绝缘测试示意图

要求测量结果大于 5 MΩ。

测试前需将压敏电阻螺钉卸下，断开压敏接入：

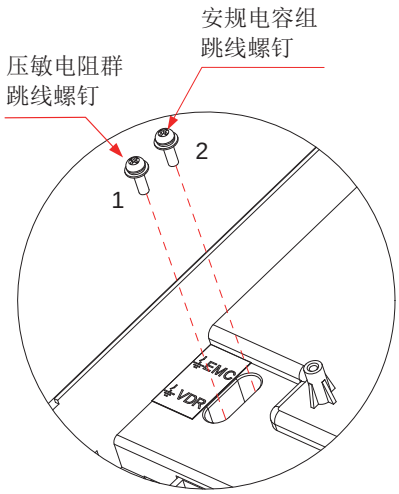


图 8-2 压敏电阻（VDR）、安规电容（EMC）对地跳线位置示意图

8.3 变频器易损件更换

8.3.1 易损件寿命

变频器易损件主要有冷却风扇和滤波用电解电容器，其寿命与使用的环境及保养状况密切相关。一般寿命时间为：

器件名称	寿命时间【注】
风扇	≥ 5 年
电解电容	≥ 5 年

【注】：寿命时间为在下列条件下使用时的时间，用户可以根据运行时间确定更换年限。

1） 环境温度：40°C
2） 负载率：80%
3） 运行率：24 小时 / 日

8.3.2 冷却风扇的使用数量

表 3-16 冷却风扇使用数量

型号	冷却风扇
F1（0.7~5.5kW） F2（7.5kW） F4~F6（18.5~55kW）	1
F2（11kW） F3（15kW） F7~F9（75~220kW）	2
F10~F11（250~450kW）	3

第九章 规格与选型

9.1 YD680 变频器技术规格与尺寸

9.1.1 电气规格

表 9-1 YD680 变频器型号与技术数据（三相 380V~480V）

项目		规格					
型号：YD680T4-□G/□PB		0P7G/1P5P	1P5G/2P2P	2P2G/3P0P	3P0G/3P7P	3P7G/5P5P	5P5G/7P5P
外形结构		F1					
输出	功率(kW)	0.75/1.5	1.5/2.2	2.2/3.0	3.0/3.7	3.7/5.5	5.5/7.5
	额定输出电流(A)	2.1/3.8	3.8/5.1	5.1/7.2	7.2/9.0	9.0/13	13/17
	输出电压(V)	三相 0V~输入电压					
	最高输出频率(Hz)	599Hz（可通过参数更改）					
	载波频率(kHz)	0.8kHz~8.0kHz（可根据负载特性，自动调整载波频率）					
	过载能力	150%额定电流60s					
输入	额定输入电流(A)	2.4/4.6	4.6/6.3	6.3/9.0	9/12	12/17	17/22
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz					
	电压允许波动范围	-15%~+10%，实际允许范围： 323V AC~528V AC					
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz					
	电源容量(kVA)	2.8/5.0	5.0/6.7	6.7/9.5	9.5/12	9.5/12	18/23
散热设计	发热功耗(kW)	0.046/0.068	0.068/0.081	0.081/0.109	0.109/0.138	0.109/0.138	0.201/0.24
	排风量(CFM)	9	9	9	13	13	24
过电压等级		OVC III					
电网类型		TN、TT、IT（Y）					
污染等级		PD2					
保护类别		Class I					
防护等级		IP20（open type，IP防护等级适用于IEC产品） Type1（enclosed type， Type1防护等级适用于UL产品）					

表3-2 电气参数（三相380V~480V）

项目		规格				
型号：YD680T4-□G/□PB		7P5G/11P	11G/15P	15G/18P5P	18P5G/22P	22G/30P
外形结构		F2		F3	F4	
输出	功率(kW)	7.5/11	11/15	15/18.5	18.5/22	22/30
	额定输出电流(A)	17/25	25/32	32/37	37/45	45/60
	输出电压(V)	三相 0V~输入电压				
	最高输出频率(Hz)	599Hz（可通过参数更改）				
	载波频率(kHz)	0.8kHz~8.0kHz（可根据负载特性，自动调整载波频率）				
	过载能力	150%额定电流60s				
输入	额定输入电流(A)	22/33	33/42	42/50	50/59	59/64
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz				
	电压允许波动范围	-15%~+10%，实际允许范围： 323V AC~528V AC				
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz				
	电源容量(kVA)	23/34	34/43	43/45	45/54	54/58
散热设计	发热功耗(kW)	0.24/0.355	0.355/0.454	0.454/0.478	0.478/0.551	0.551/0.694
	排风量(CFM)	30	40	42	51.9	57.4
过电压等级		OVC III				
电网类型		TN、TT、IT（Y）				
污染等级		PD2				
保护类别		Class I				
防护等级		IP20（open type，IP防护等级适用于IEC产品） Type1（enclosed type， Type1防护等级适用于UL产品）				

表3–3 电气参数（三相380V~480V）

项目		规格				
型号：YD680T4-□G/□P(B)(-T)		30G	30G/37P	37G/45P	45G/55P	55G/75P
体积		F5			F6	
输出	功率(kW)	30	30/37	37/45	45/55	55/75
	额定输出电流(A)	60	60/75	75/91	91/112	112/150
	输出电压(V)	三相 0V~输入电压				
	最高输出频率(Hz)	599Hz（可通过参数更改）				
	载波频率(kHz)	0.8kHz~8.0kHz（可根据负载特性，自动调整载波频率）				
	过载能力	150%额定电流60s				
输入	额定输入电流(A)	64	64/69	69/89	89/97	97/106
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz				
	电压允许波动范围	-15%~+10%，实际允许范围： 323V AC~528V AC				
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz				
	电源容量(kVA)	58	58/63	63/81	81/97	97/127
散热设计	发热功耗(kW)	0.694	0.694/0.815	0.815/1.01	1.01/1.21	1.21/1.57
	排风量(CFM)	118.5	118.5	118.5	122.2	122.2
过电压等级		OVC III				
电网类型		TN、TT、IT（Y）				
污染等级		PD2				
保护类别		Class I				
防护等级		IP20（open type，IP防护等级适用于IEC产品） Type1（enclosed type， Type1防护等级适用于UL产品）				

表3–4 电气参数（三相380V~480V）

项目		规格						
型号：YD680T4-□G/□P(B)-T		75G/90P	90G/110P	110G/132P	132G/160P	160G/200P	200G/250P	220G/280P
外形结构		F7			F8		F9	
输出	功率(kW)	75/90	90/110	110/132	132/160	160/200	200/250	220/280
	额定输出电流(A)	150/176	176/210	210/253	253/304	304/377	377/465	426/520
	输出电压(V)	三相 0V~输入电压						
	最高输出频率(Hz)	599Hz（可通过参数更改）						
	载波频率(kHz)	0.8kHz~8.0kHz（可根据负载特性，自动调整载波频率）			0.8kHz~6.0kHz（可根据负载特性，自动调整载波频率）			
	过载能力	150%额定电流60s						
输入	额定输入电流(A)	139/164	164/196	196/240	240/287	287/365	365/441	410/495
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz						
	电压允许波动范围	-15%~+10%，实际允许范围： 323V AC~528V AC						
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz						
	电源容量(kVA)	127/150	150/179	179/220	220/263	263/334	334/404	375/453
散热设计	发热功耗(kW)	1.57/1.81	1.81/2.14	2.14/2.85	2.85/3.56	3.56/4.15	4.15/5.06	4.55/5.33
	排风量(CFM)	218.6	287.2	354.2	547	627	638.4	722.5
过电压等级		OVC III						
电网类型		TN、TT、IT（Y）						
污染等级		PD2						
保护类别		Class I						
防护等级		IP20（open type，IP防护等级适用于IEC产品）						

表3–5 电气参数（三相380V~480V）

项目		规格		
型号：YD680T4-□G/□P-T		250G/315P	280G/355P	315G
外形结构		F10		
输出	功率(kW)	250/315	280/355	315
	额定输出电流(A)	465/585	520/650	585
	输出电压(V)	三相 0V~输入电压		
	最高输出频率(Hz)	599Hz（可通过参数更改）		
	载波频率(kHz)	0.8kHz~6.0kHz（可根据负载特性，自动调整载波频率）		
	过载能力	150%额定电流60s，其中MD500T450G-PLUS过载能力为：130%额定电流60s		
输入	额定输入电流(A)	441/565	495/617	565
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz		
	电压允许波动范围	-15%~+10%，实际允许范围： 323V AC~528V AC		
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz		
	电源容量(kVA)	404/517	453/565	517
散热设计	发热功耗(kW)	5.06/5.69	5.33/6.31	5.69
	排风量(CFM)	789.4	882	645
过电压等级		OVC III		
电网类型		TN、TT、IT（Y）		
污染等级		PD2		
保护类别		Class I		
防护等级		IP00（open type，IP防护等级适用于IEC产品）		

表3-6 电气参数（三相380V~480V）

项目		规格			
型号：YD680T4-□G/□P-T		315G/400P	355G/450P	400G/500P	450G
外形结构		F11			
输出	功率(kW)	315/400	355/450	400/500	450
	额定输出电流(A)	585/725	650/820	725/900	820
	输出电压(V)	三相 0V~输入电压			
	最高输出频率(Hz)	599Hz（可通过参数更改）			
	载波频率(kHz)	0.8kHz~6.0kHz（可根据负载特性，自动调整载波频率）			
	过载能力	150%额定电流60s			
输入	额定输入电流(A)	565/687	617/782	687/838	782
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz			
	电压允许波动范围	-15%~+10%，实际允许范围：323V AC~528V AC			
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz			
	电源容量(kVA)	517/629	565/716	629/952	716
散热设计	发热功耗(kW)	5.69/7.54	6.91/8.25	7.54/9.94	8.25
	排风量(CFM)	860	860	860	860
过电压等级		OVC III			
电网类型		TN、TT、IT（Y）			
污染等级		PD2			
保护类别		Class I			
防护等级		IP00（open type，IP防护等级适用于IEC产品）			

表3-7 电气参数（三相380V~480V）

项目		规格		
型号：YD680T4-□G/□P-T		500G/630P	560G	630G
外形结构		F12		
输出	功率(kW)	500/630	560	630
	额定输出电流(A)	900/1120	1020	1120
	输出电压(V)	三相 0V~输入电压		
	最高输出频率(Hz)	599Hz（可通过参数更改）		
	载波频率(kHz)	0.8kHz~8.0kHz（可根据负载特性，自动调整载波频率）		
	过载能力	150%额定电流60s		
输入	额定输入电流(A)	838/1044	953	1044
	额定电压(V)和额定频率(Hz)	三相380V AC~480V AC，50/60Hz		
	电压允许波动范围	-15%~+10%，实际允许范围： 323V AC~528V AC		
	频率允许波动范围	±5%，实际允许范围：47.5Hz~63Hz		
	电源容量(kVA)	952/1244	1071	1244
散热设计	发热功耗(kW)	9.94/11.5	10.4	11.5
	排风量(CFM)	2200	2200	2200
过电压等级		OVC III		
电网类型		TN、TT、IT（Y）		
污染等级		PD2		
保护类别		Class I		
防护等级		IP20		

表 9-2 YD680 系列变频器技术规格

项目		技术规格
基本功能	输入频率分辨率	数字设定：0.01Hz。 模拟设定：最高频率× 0.025%。
	控制方式	开环矢量控制（SVC），闭环矢量控制（FVC），V/f控制，PMVVC控制。
	启动转矩	0.25Hz/150%（SVC），0Hz/180%（FVC）。
	调速范围	1:200 （SVC），1:1000 （FVC）。
	稳速精度	±0.5%（SVC）。 ±0.02%（FVC）。
	转矩控制精度	FVC：±3%。 SVC：5Hz以上±5%。
	转矩提升	自动转矩提升；手动转矩提升0.1%~30.0%。
	V/f曲线	四种方式：直线型、多点型、完全V/f分离、不完全V/f分离。
	加减速曲线	直线或S曲线加减速方式。 四种加减速时间，加减速时间范围0.0s~6500.0s。
	直流制动	直流制动起始频率：0.00Hz~最大频率。 制动时间：0.0s~36.0s。 制动动作电流值：0.0%~100.0%。
	点动控制	点动频率范围：0.00Hz~50.00Hz。 点动加减速时间：0.0s~6500.0s。
	简易PLC、 多段速运行	通过内置PLC或控制端子实现最多16段速运行。
	内置PID	可方便实现过程控制闭环控制系统。
	自动电压调整 （AVR）	当电网电压变化时，能自动保持输出电压恒定。
	过压过流失速控制	对运行期间电流电压自动限制，防止频繁过流过压跳闸。
	快速限流功能	最大限度减小过流故障，保护变频器正常运行。
	转矩限定与控制	“挖土机”特性，对运行期间转矩自动限制，防止频繁过流跳闸；矢量控制模式可实现转矩控制。
个性化功能	瞬停不停	瞬时停电时通过负载回馈能量补偿电压的降低，维持变频器短时间内继续运行。
	虚拟IO	五组虚拟DIDO，可实现简易逻辑控制。
	定时控制	定时控制功能：设定时间范围0.0min~6500.0min。
	多线程总线支持	支持7种现场总线：Modbus、PROFIBUS DP、 CANlink、CANopen、PROFINET、EtherCAT、EtherNet/IP。
	多编码器支持	支持差分、开路集电极、UVW、旋转变压器等。
	强大的后台软件	支持变频器参数操作及虚拟示波器功能。 通过虚拟示波器可实现对变频器内部的状态监视。
	电机过热保护	模拟量输入AI3可支持电机温度传感器输入（PT100、PT1000、KTY-84-130、PTC-130）。

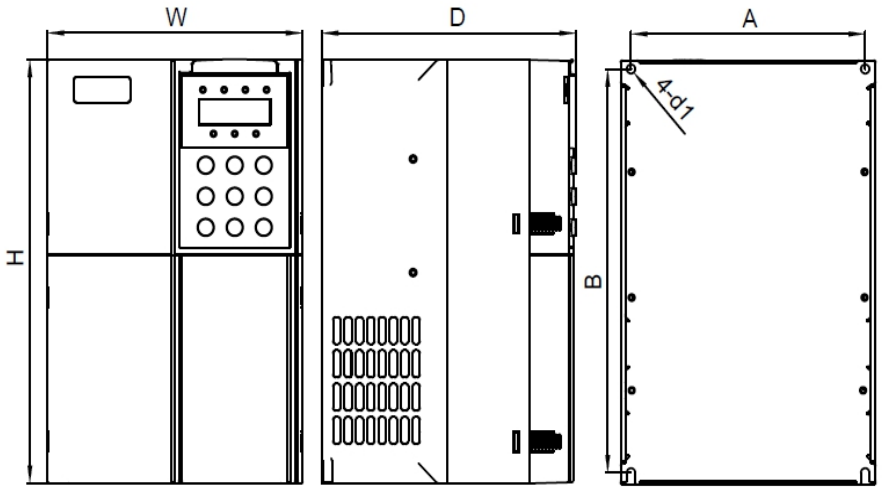
项目		技术规格
运行	运行指令	操作面板给定、控制端子给定、串行通讯口给定。可通过多种方式切换。
	频率源	10种频率源：数字设定（掉电记忆/掉电不记忆）、模拟量给定(AI1/AI2/AI3)、脉冲给定(DI5)、多段速、简易PLC、PID、通讯给定； 可通过多种方式切换。
	辅助频率指令	10种辅助频率指令。可灵活实现辅助频率微调、频率合成。
	输入端子	标准： 5 个DI端子 3 个AI端子，1个仅支持-10V ~+ 10V 电压输入，2个支持-10V ~+ 10V 电压输入或0mA~20mA 电流输入 扩展能力： 5个DI端子
	输出端子	标准： 1 个DO端子 2 个继电器输出端子 2 个AO端子，支持0mA~20mA 电流输出或0V~10V 电压输出 扩展能力： 1 个DO端子 1个继电器输出端子
显示与键盘操作	LED显示	显示参数。
	LCD显示	可选件，中/英文提示操作内容。
	参数拷贝	可通过LCD操作面板选件实现参数的快速复制。
	按键锁定和功能选择	实现按键的部分或全部锁定，定义部分按键的作用范围，以防止误操作。
保护功能	缺相保护	输入缺相保护，输出缺相保护。
	瞬间过电流保护	在额定输出电流的250%峰值以上时停机。
	过压保护	主回路直流电压在820V以上时停机。
	欠压保护	主回路直流电压在350V以下时停机。
	过热保护	逆变桥过热时会触发保护。
	过载保护	150%额定电流60s停机，其中YD680T4-450G为：130%额定电流运行60s停机。
	过流保护	超过变频器2.5倍额定电流峰值停机保护。
	制动保护	制动单元过载保护，制动电阻短路保护。
	短路保护	输出相间短路保护，输出对地短路保护。
环境	使用场所	室内，不受阳光直晒，无尘埃、腐蚀性气体、可燃性气体、油雾、水蒸汽、滴水或盐分等。
	海拔高度	1000m 以下使用无需降额，1000m 以上每升高100m 降额1%，最高使用海拔为3000m， 超过3000m 请联系厂家。 (注：F1结构变频器最高使用海拔为2000m，超过2000m 请联系厂家。)
	环境温度	-10°C ~ +50°C，环境温度在40°C~50°C时，需要降额使用，环境温度每升高1°C降额1.5%。
	湿度	存储/工作湿度≤95%RH，无凝露。
	振动	• 使用场景：根据IEC 60068–2–6测试。5Hz~8.4Hz时振幅为3.5mm，8.4Hz~200Hz时加速速度为1g，10个循环/轴向。 • 运输场景：根据IEC 60068–2–64测试。5Hz~100Hz时功率谱密度为0.01g^2/Hz，200Hz时功率谱密度为0.001g^2/Hz，Grms为1.14g。
	冲击	使用/运输场景：根据IEC 60068–2–27测试。加速度为15g，脉宽为11ms，三轴向共18次。
	存储温度	-20°C~+60°C。

9.1.2 外型与安装尺寸

◆ YD680整机尺寸

F1~F4整机尺寸

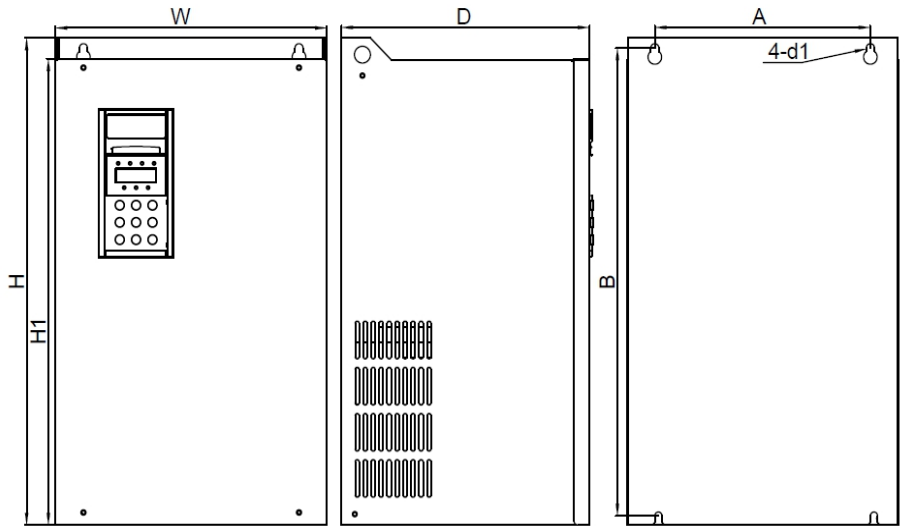
F1~F4



YD680T4-0P7G/1P5PB ~ YD680T4-22G/30PB
YD680T2-0P4GB ~ YD680T2-11GB

F5~F8整机尺寸

F5~F8



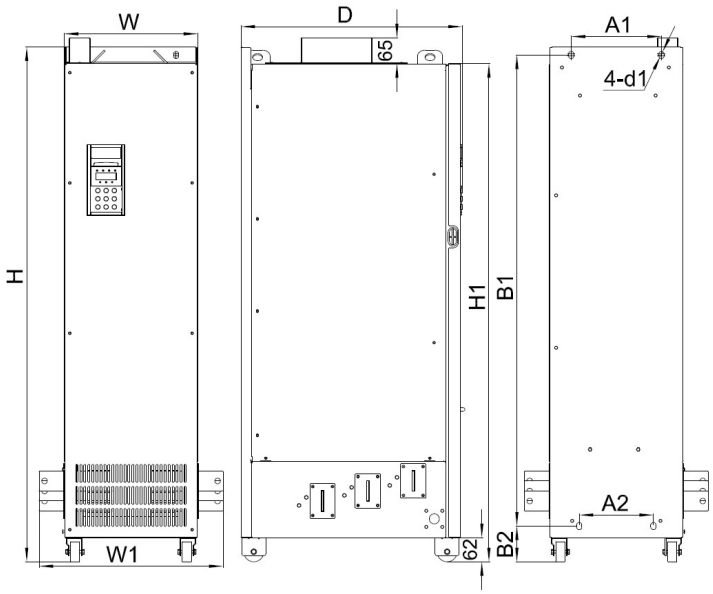
YD680T4-30G(B)(-T) ~ YD680T4-160G/200P-T
YD680T2-15G(B)-T ~ YD680T2-75G-T

表9-6 YD680T4-0P7G/1P5PB ~ YD680T4-160G/200P-T 外型及安装孔位尺寸（三相380V~480V）

框号	变频器型号	外形尺寸 mm				安装孔位 mm		安装孔径 mm
		W	H	H1	D	A	B	d1
F1	**YD680T4-0P7G/1P5PB**	130	200	/	172	119.4	189.4	φ5
	YD680T4-1P5G/2P2PB							
	YD680T4-2P2G/3P0PB							
	YD680T4-3P0G/3P7PB							
	YD580T4-3P7G/5P5PB							
	YD680T4-5P5G/7P5PB							
F2	**YD680T4-7P5G/11PB**	140	250	/	178	129	239	φ6
	YD680T4-11G/15PB							
F3	**YD680T4-15G/18P5PB**	180	280	/	180	165.4	266.7	φ6
F4	**YD680T4-18P5G/22PB**	225	360	/	225	206	341	Φ7
	YD680T4-22G/30PB							
F5	**YD680T4-30G(B)**	256	436	422	254	213	421	φ7
	YD680T4-30G/37P(B)-T							
	YD680T4-37G/45P(B)-T							
F6	**YD680T4-45G/55P(B)-T**	302	540	527	300	245	521	φ10
	YD680T4-55G/75P(B)-T							
F7	**YD680T4-75G/90P(B)-T**	340	581	556	331	270	560	φ10
	YD680T4-90G/110P(B)-T							
	YD680T4-110G/132P(B)-T							
F8	**YD680T4-132G/160P-T**	400	925	885	337	320	905	φ10
	YD680T4-160G/200P-T							

F9~F11整机尺寸

F9~F11



YD680T4-200G/250P-T ~ YD680T4-450G-T

YD680T2-90G-T ~ YD680T2-200G-T

表 9-8 YD680T4-200G/250P-T ~ YD680T4-450G-T 外型及安装孔位尺寸

YD680T4-200G/250P-T ~ YD680T4-450G-T 外形尺寸/安装孔位尺寸

框号	变频器型号	外形尺寸 mm					安装孔位 mm				安装孔径 mm
		W	W1	H	H1	D	A1	A2	B1	B2	d1
F9	**YD680T4-200G/250P-T**	303	426	1136	1091	523	240	150	1035	83	φ13
	YD680T4-220G/280P-T										
F10	**YD680T4-250G/315P-T**	333	459	1286	1245	568	225	185	1175	91	φ13
	YD680T4-280G/355P-T										
	YD680T4-315G-T										
F11	**YD680T4-315G/400P-T**	345	458	1404	1355	561	240	185	1291	91	φ16
	YD680T4-355G/450P-T										
	YD680T4-400G/500P-T										
	YD680T4-450G-T										

F12整机尺寸

F12

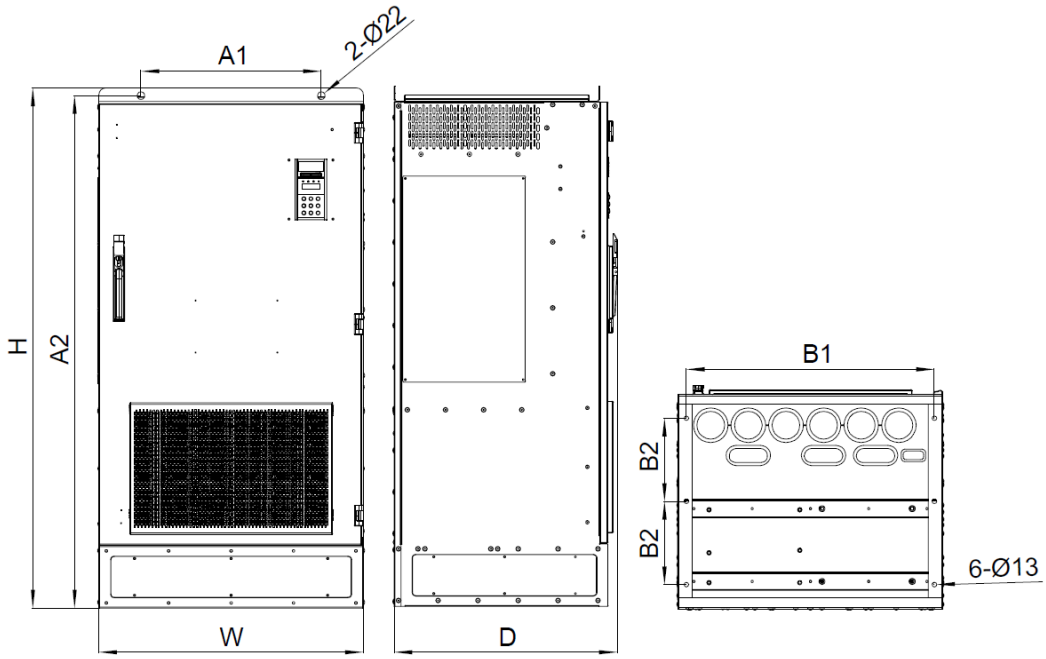


表9-10 YD680T4-500G-T ~ YD680T4-630G-T 外型及安装孔位尺寸

框号	变频器型号	外形尺寸 mm					安装孔位 mm				安装孔径 mm
		W	W1	H	H1	D	A1	A2	B1	B2	d1
F12	**YD680T4-500G/630P-T**	763	-	1500	-	644	520	1478	715	240	φ13 φ22
	YD680T4-560G-T										
	YD680T4-630G-T										

9.2 制动组件选型指导

9.2.1 常见应用场合制动频度

常见应用场合	电梯	开卷和取卷	离心机	偶然制动负载	一般场合
制动频度取值	20% ~30%	20 ~30%	50%~60%	5%	10%

9.2.2 制动组件选型表(三相 380~480V)

变频器型号	适配电机 kW	制动单元		125% 制动转矩 (10% ED, 最大 10 秒)		备 注	最小制动电阻值 Ω
		型号	数量	推荐制动电阻规格	制动电阻数量		
YD680T4-0P7G/1P5PB	0.75	内置标配		140W 800Ω	1	变频器型号后加“B”	96
YD680T4-1P5G/2P2PB	1.5			300W 380Ω	1		96
YD680T4-2P2G/3P0PB	2.2			440W 260Ω	1		64
YD680T4-3P0G/3P7PB	3.0			440W 200Ω	1		64
YD680T4-3P7G/5P5PB	3.7			740W 150Ω	1		32
YD680T4-5P5G/7P5PB	5.5			1100W 100Ω	1		32
YD680T4-7P5G/11PB	7.5			1500W 75Ω	1		32
YD680T4-11G/15PB	11			2200W 50Ω	1		20
YD680T4-15G/18P5PB	15			3000W 38Ω	1		20
YD680T4-18P5G/22PB	18.5			4000W 32Ω	1		24
YD680T4-22G/30PB	22			4500W 27Ω	1		24
YD680T4-30GB YD680T4-30G/37PB-T	30	内置选配		6000W 20Ω	1		19.2
YD680T4-37G/45PB-T	37			7000W 16Ω	1		14.8
YD680T4-45G/55PB-T	45			9000W 13Ω	1		12.8
YD680T4-55G/75PB-T	55			11000W 10.5Ω	1		9.6
YD680T4-75G/90PB-T	75			15000W 7.7Ω	1		6.8
YD680T4-90G/110PB-T	90			18000W 6.2Ω	1		6.0
YD680T4-110G/132PB-T	110			22000W 5.3Ω	1		5.0

第十章 选配件

10.1 IO 功能扩展卡

10.1.1 多功能 IO 扩展卡（YD580-IO1）

(15kW 及以上机型使用)

YD580-IO1 扩展卡是设计用于本系列变频器配套使用的多功能 I/O 扩展卡，可扩展 5 路DI，1 路 AI，1 路 DO ，1 路 AO 和 1 路继电器输出，还具有 CAN 和 RS485 通信接口，可实现现场总线控制。

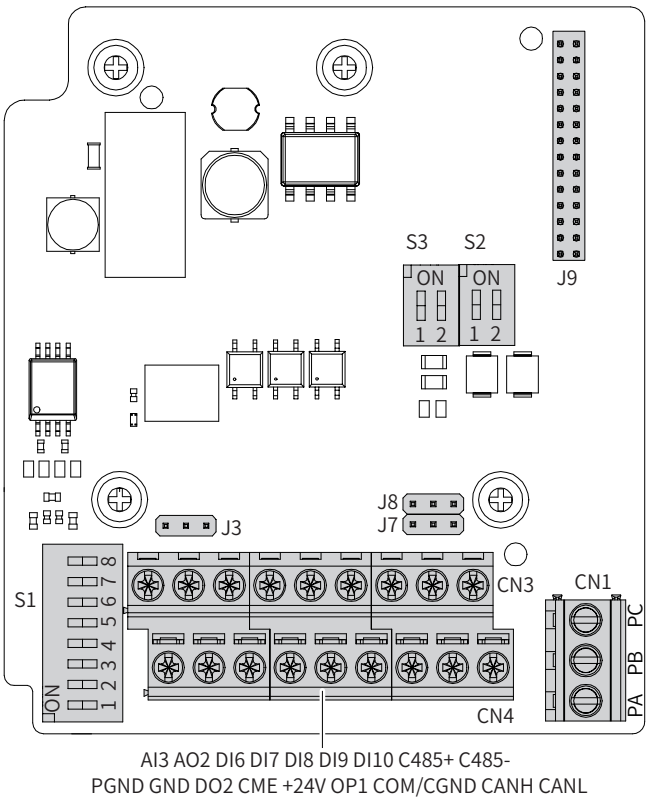


图 10-1 YD580-IO1 端子分布示意图

表 10-1 YD580-IO1 扩展卡端子功能说明

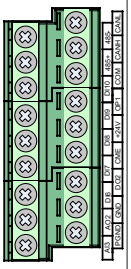
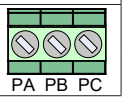
端子标识		端子名称	功能说明	端子分布
CN4	+24V/COM/CGND	外接 +24V DC 电源	1、向外提供 +24V 电源，一般用作数字输入输出端子工作电源和外接传感器电源 2、最大输出电流：200mA	
	OP1	数字输入电源端子	1、出厂时 OP1 与“+24V”已用跳线 J8 连接 2、当要用外部电源时，OP1 需与外部电源连接，且必须把 J8 取掉。	
	DO2-CME	数字输出 2	1、光耦隔离，双极性开路集电极输出 2、输出电压范围：0V ～ 24V 3、输出电流范围：0mA ～ 50mA 注意：数字输出地 CME 与数字输入地 COM/CGND 是内部隔离的，默认内部通过 J7 连接，当 DO2 想用外部电源驱动时，必须断开 J7。	
	CANH/CANL/COM/CGND	通信接口端子	CANlink 协议通信输入端子，隔离输入	
CN3	AI3-PGND	模拟量输入端子 3	1、光耦隔离输入，可接受差分电压输入和温度检测电阻输入 2、输入电压范围：DC -10V ～ +10V 3、PT100，PT1000 温度传感器 4、用拨码开关 S1 决定输入方式，不能多种功能同时使用。	
	AO2-GND	模拟输出 2	1、输出电压量的规格：0 V ～ +10V 2、输出电流量的规格：0mA ～ 20mA 3、输出电流量带阻抗规格：0Ω ～ 500Ω	
	DI6-OP1~DI10-OP1	5 路数字输入	1、光耦隔离，兼容双极性输入 2、输入阻抗：2.4kΩ 3、电平输入时电压范围：+9V ～ +30V	
	C485+/C485-/COM/CGND	通信接口端子	Modbus-RTU 协议通信的输入、输出信号端子，隔离输入	
CN1	PA- PB	常闭端子	触点驱动能力： 250V AC，3A，COS ∅ =0.4。 30V DC，1A	
	PA- PC	常开端子		

表 10-2 YD580-IO1 扩展卡跳线说明

端子标识	端子名称	功能说明	跳线 / 拨码位置
J3	AO2 输出类型设置跳线	电压型 0 V ～ +10V	
		电流型 0mA ～ 20mA	
S1	AI、PT100、PT1000 功能选择	AI3：1、2、3 拨为 ON	
		PT1000：4、5、6 拨为 ON	
		PT100：6、7、8 拨为 ON	-
S2	RS485 终端匹配电阻选择	1、2 拨为 ON 进行终端电阻匹配	
		1、2 拨为 OFF 不进行终端电阻匹配	
S3	AI3、PT100、PT1000 功能选择	1、2 拨为 ON 进行终端电阻匹配	-
		1、2 拨为 OFF 不进行终端电阻匹配	-

NOTE

◆ 变频器主从运行使用 CAN 通信、变频器与显示屏使用 RS485 通信时，第一台和最后一台变频器 IO1 扩展卡上的 CAN 及 RS485 均需匹配终端电阻（通过 S3 和 S2 进行匹配），中间变频器 IO1 扩展卡上的拨码保持出厂状态。

10.1.2 IO功能扩展卡2（YD580-IO2）

（全系列机型适用）

多功能 IO 扩展卡 (YD580-IO1) 的简化版，提供 3 路 DI。

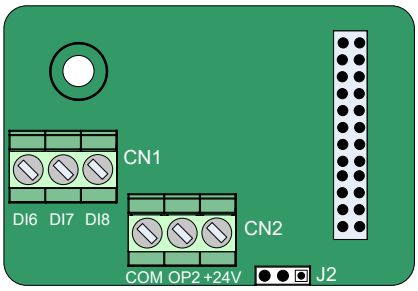


图 10-2 YD580-IO2 端子分布示意图表

10-3 YD580-IO2 扩展卡端子功能说明

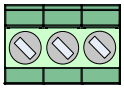
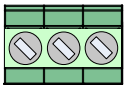
端子标识		端子名称	功能说明	端子分布
CN2	+24V/COM	外接 +24V DC 电源	1、向外提供 +24V 电源，一般用作数字输入输出端子工作电源和外接传感器电源 2、最大输出电流：200mA	
	OP2	数字输入电源端子	出厂时 OP2 无电源连接，可根据需要连接外部电源或 +24V 电源	
CN1	DI6-OP2~ DI8-OP2	3 路数字输入	1、光耦隔离，兼容双极性输入 2、输入阻抗：DI6、DI7 为 3.3kΩ，DI8 为 2.4kΩ 3、电平输入时电压范围：+9V ～ +30V 4、 DI6、DI7、DI8 为普通输入端子，输入频率 <100Hz	

表 10-4 YD580-IO2 扩展卡跳线说明

端子标识	端子名称	功能说明	跳线 / 拨码位置
J2	DI 端子源漏型接线方式设置跳线	DI 端子采用漏极接线，OP2 连接 +24V	
		DI 端子采用源极接线，OP2 连接 COM	

NOTE

◆ 跳线的设置是将扩展卡以主接线端子为底侧时的俯视图为观察视角，另外跳线在板上有丝印，请以丝印为标准

10.1.3 YD580-IO3 端子分布与功能说明

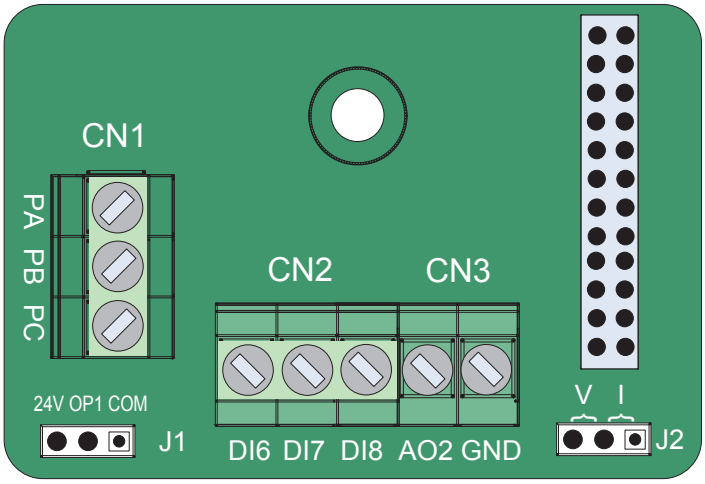


图 10-4 YD580-IO3 端子分布示意图

表 10-6 YD580-IO3 扩展卡端子功能

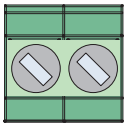
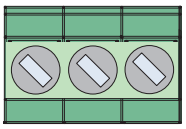
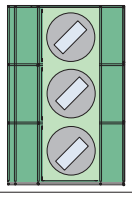
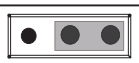
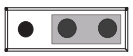
端子标识			功能说明	端子分布
CN3	AO2	模拟量输出 P5-08：参数	1、输出电压量：0V~10V （J2=V） 2、输出电流量：0mA~20mA （J2=I）	 AO2 GND
	GND	模拟量地		
CN2	DI6 ~ DI8	3 路数字输入 P4-05/06/07：参数	1、光藕隔离，兼容双极性输入，最大输入频率为 100Hz 2、输入阻抗：3.4kΩ 3、电平输入时电压范围：9~24V	 DI6 DI7 DI8
CN1	PA/PB/PC	继电器输出 P5-03：参数	触点驱动能力： 250VAC/5A、 30VDC/5A PB-PA；常闭 PC-PA；常开	 PA PB PC

表 10-7 YD580-IO3 扩展卡跳线说明

端子标识	端子名称	功能说明	跳线 / 拨码位置
J1	DI 端子源漏型接线方式设置跳线	DI 端子采用漏极接线，OP 连接 24V	
		DI 端子采用源极接线，OP 连接 COM	
J2	AO2 输出类型设置跳线	电压型 0 V~10V	
		电流型 0mA~20mA	

NOTE

- 跳线的设置是将扩展卡以主接线端子为底侧时的俯视图为观察视角，另外跳线在板上有丝印，请以丝印为标准。

10.1.4 多功能 IO 扩展卡（YD580-IO4）

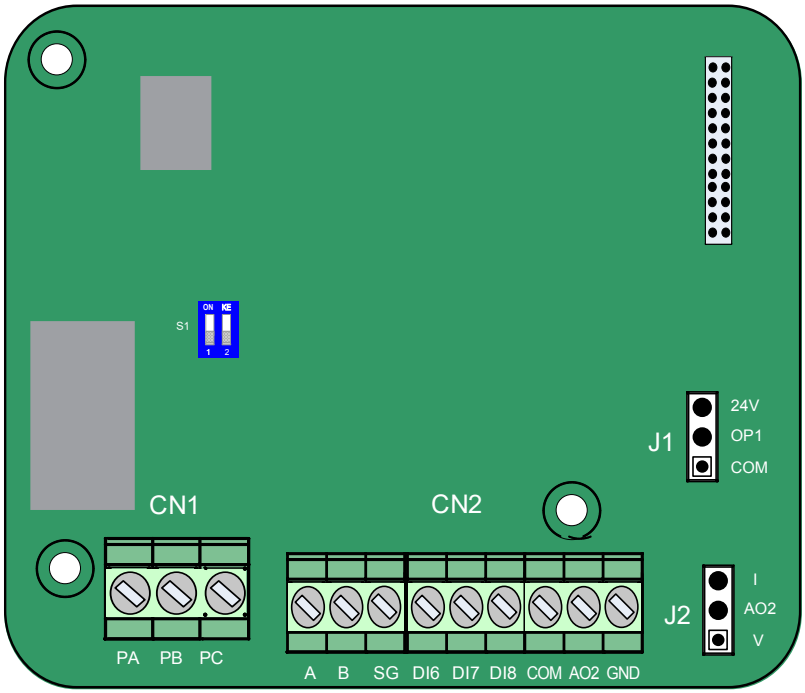


表 10-9 YD580-IO4 扩展卡端子功能说明

端子标识与功能		对应参数	功能说明	端子分布
模拟量输出	AO2~GND	P5-08	1、输出电压量：0V~10V（J2=V） 2、输出电流量：0mA~20mA（J2=I）	
继电器输出端子	PB-PA PC-PA	P5-02	触点驱动能力： 250V AC，5A，COS ∅ =0.4 30V DC，1A	
数字量输入端子	DI6~COM DI7~COM DI8~COM	P4-05 P4-06 P4-07	光耦隔离，兼容双极性输入 输入阻抗：2.4kΩ 电平输入时电压范围： +9V ～ +30V	
RS485 通信	A B SG	P0-02 P0-03 Pd-00	建议使用双绞屏蔽线。	
拨码开关	S1	RS485 通信终端电阻选择	选择 RS485 通信终端匹配电阻，出厂默认不连接	

表 10-7 YD580-IO4 扩展卡跳线说明

端子标识	端子名称	功能说明	跳线 / 拨码位置
J1	DI 端子源漏型接线方式设置跳线	DI 端子采用漏极接线，OP 连接 24V	24V OP1 COM
		DI 端子采用源极接线，OP 连接 COM	24V OP1 COM
J2	AO2 输出类型设置跳线	电压型 0 V~10V	I AO2 V
		电流型 0mA~20mA	I AO2 V

NOTE

◆ 跳线的设置是将扩展卡以主接线端子为底侧时的俯视图为观察视角，另外跳线在板上有丝印，请以丝印为标准。

10.1.5 多功能 IO 扩展卡（YD580-IO5）

（15kW 及以上机型适用）

多功能 IO 扩展卡 (YD580-IO5)，提供 3 路 DI，2 路继电器输出，1 路 RS485 通信。

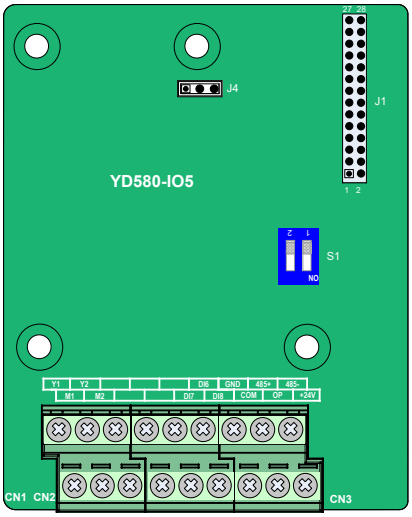
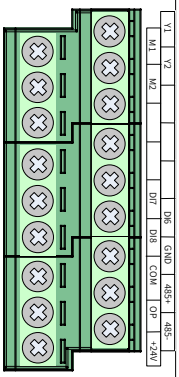


图 10-5 YD580-IO5 端子分布示意图

表 10-9 YD580-IO5 扩展卡端子功能说明

端子标识		端子名称	功能说明	端子分布
电源	+24V~COM	外接 +24V 电源	向外提供 +24V 电源，一般用作数字输入输出端子工作电源和外接传感器电源 最大输出电流：200mA	
	OP	数字输入电源端子	出厂时 OP 与“+24V”已用金属跳线连接 当要用外部电源时，OP 需与外部电源连接，且必须去除金属跳线	
继电器输出端子	Y1~M1 Y2~M2	继电器输出	触点驱动能力： 250V AC，5A，COS ∅ =0.4 30V DC，1A	
数字量输入端子	DI6~OP DI7~OP DI8~OP	数字量输入	光耦隔离，兼容双极性输入 输入阻抗：2.4kΩ 电平输入时电压范围： +9V ～ +30V	
RS485 通信	A B SG	RS485 通信端子	建议使用双绞屏蔽线。	
拨码开关	S1	RS485 通信终端电阻选择	选择 RS485 通信终端匹配电阻，出厂默认不连接	

NOTE

◆ 跳线的设置是将扩展卡以主接线端子为底侧时的俯视图为观察视角，另外跳线在板上有丝印，请以丝印为标准。

10.2 通信扩展卡

10.2.1 CANopen 扩展卡（YD580-CAN）（全系列机型通用）

CANopen 通信扩展卡是专为 CANopen 通信而专门研制，具有如下特点：

- 支持 Node Guard 协议，主站可使用此功能查询设备状态；
- 发送和接收各有 4 个 PDO 通道，发送 PDO 支持同步、异步等传输类型；
- SDO 仅支持加速传送机制，最多传输 4 个字节；
- TPDO、RPDO 及 SDO 等通信对象 COB-ID 与设备 ID 相关，在软件内部已设定，使用时不必进行修改；
- 不支持紧急对象，另 CANopen 通信的电气参数符合国际标准。

1、YD580-CAN 外观：

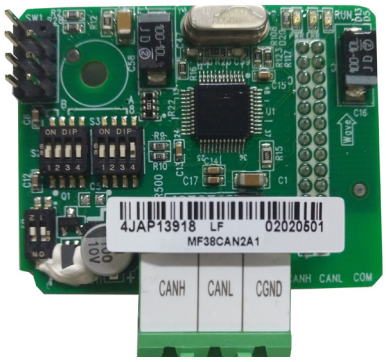


图 10-6 YD580-CAN 外型

2、接线端子功能说明：

表 10-10 接线端子功能说明

类别	端子符号	端子名称	功能说明
CAN 通信 (CN1)	CANH/CANL	通信接口端子	CANopen 通信输入，隔离输入
	COM	CAN 通信电源地	与 +24V 电源地共模电感连接
程序烧写	SW1	ARM 程序烧写接口	

3、拨码开关：

的拨码开关 S1 组成 2 位拨码开关，用于配置 CAN 总线终端电阻。
推荐在网络拓扑结构两端设置终端电阻。拨码打到“ON”表示“1”，打到下面表示“0”。

表 10-11 YD580-CAN 终端电阻

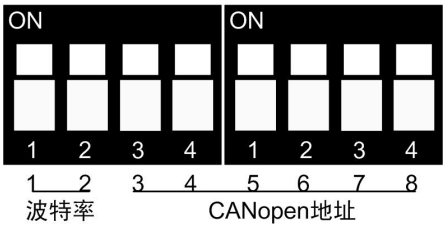
拨码号		终端电阻
1	2	
0	0	不使用终端电阻
1	1	终端电阻接入

图 10-7 YD580-CAN 拨码开关

位号	功能	说明		
1～2	CAN 总线波特率	位 1	位 2	波特率
		0	0	125kbps
		0	1	250kbps
		1	0	500kbps
		1	1	1Mbps
3～8	CANopen 网络 ID 号	6 位二进制共组成 64 个地址，范围 0~63		
		地址	开关设置	
		0	00 0000	
		7	00 0111	
		20	01 0100	

注意：在使用 CANopen 通信时，如果是末端的变频器，则应接通终端电阻。

拨码开关 S2、S3 组成 8 位拨码开关，用于设置 CAN 总线通信波特率与通信设备地址。拨码开关编号如图 10-6 所示，其中 1、2 用于设置波特率，3~8 用于设置 CANopen 地址。拨码打到“ON”表示“1”，打到下面表示“0”。



4. PDO 数据定义及功能码地址定义

1）RPDO 数据定义

<table>
<tr><th colspan="4">RPDO 定义</th></tr>
<tr><td rowspan="2">RPDO1</td><td>驱动命令</td><td>bit0: 减速停机，bit1: 自由停机
bit2: 正转运行，bit3: 反转运行</td><td>bit4: 快速停机，bit5: 转矩控制
bit6: 故障复位，bit7: 命令有效
bit8~bit15: 保留</td></tr>
<tr><td>设定目标频率</td><td colspan="2">该频率可以采用两种给定方式，通过 bd.06 设置
bd.06 最低位为 0，则采用百分比方式给定，默认为百分比，此时设定为范围为 0~10000，对应最大频率的 0.00%~100.00%，不区分正负
2、bd.06 最低位为 1，则采用实际频率给定，此时设定范围为 0Hz~ 最大频率，不区分正负</td></tr>
<tr><td rowspan="2">RPDO2</td><td>bd.11</td><td colspan="2" rowspan="9">该 10 个数据用于固定向某个功能码地址的 RAM 中写入相应的数值。
写入功能参数的地址由 bd.11~bd.20 指定。
例：bd.11 设置为 b5.00，向 RPDO1 的第三个数据中写入 500，则 b5.00 参数的数值更改为 500.
注：
YD871 中所有功能码地址编码采用统一规则，即说明书中功能码所在组数为地址的高位，所在组编号转换为 16 进制数为地址的低位，如 A0.05 的地址为 0xa005,b3.18 地址为 0xb312，U 组对应地址为 D，如 U0.18，地址为 0xd012。
YD871 的 eds 文件支持直接配置 PDO 数据，请从厂家获取最新的 eds 文件。</td></tr>
<tr><td>bd.12</td></tr>
<tr><td rowspan="3">RPDO2</td><td>bd.13</td></tr>
<tr><td>bd.14</td></tr>
<tr><td>bd.15</td></tr>
<tr><td rowspan="3">RPDO3</td><td>bd.16</td></tr>
<tr><td>bd.17</td></tr>
<tr><td>bd.18</td></tr>
<tr><td>bd.19</td></tr>
<tr><td>bd.10</td></tr>
</table>

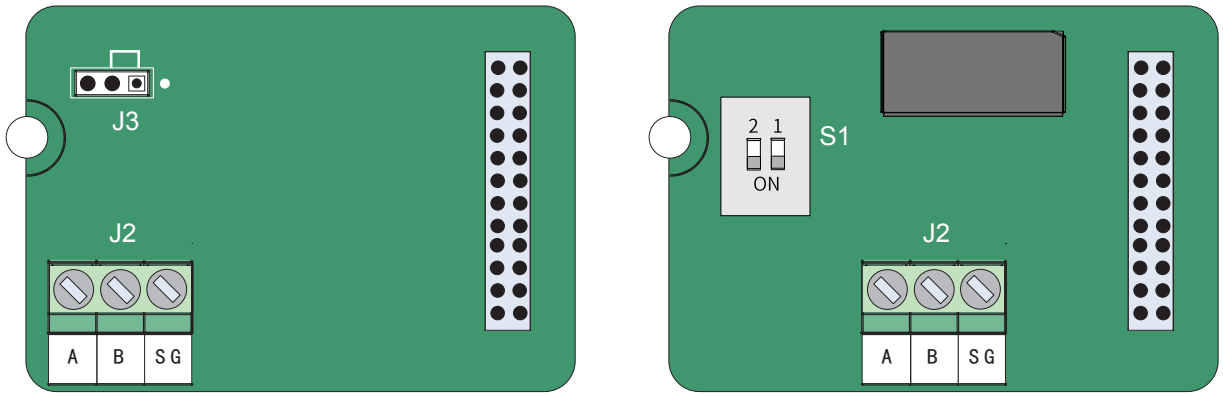
2）TPDO 数据定义

<table>
<tr><th colspan="4">RPDO 定义</th></tr>
<tr><td rowspan="2">TPDO1</td><td>驱动状态</td><td colspan="2">bit0: 变频器运行中，bit1: 变频器正转运行
bit2: 变频器反转运行，bit3: 变频器无故障
bit4: 自由停机，bit5: 与变频器无通信
bit6: 频率到达，bit7: 转矩控制有效
bit8~bit15: 保留</td></tr>
<tr><td>反馈频率</td><td colspan="2">返回当前的运行频率</td></tr>
<tr><td rowspan="2">TPDO2</td><td>bd.21</td><td colspan="2" rowspan="9">该 10 个数据用于固定获取某个功能码的数值。
功能参数的地址由 bd.11~bd.20 指定。
例：bd.21 设置为 b5.00，则 TPDO1 第三个数据的数值为 b5.00 参数的实时值。
注：
YD871 中所有功能码地址编码采用统一规则，即说明书中功能码所在组数为地址的高位，所在组编号转换为 16 进制数为地址的低位，如 A0.05 的地址为 0xa005,b3.18 地址为 0xb312，U 组对应地址为 D，如 U0.18，地址为 0xd012。
YD871 的 eds 文件支持直接配置 TPDO 数据，请从厂家获取最新的 eds 文件。</td></tr>
<tr><td>bd.22</td></tr>
<tr><td rowspan="3">TPDO2</td><td>bd.23</td></tr>
<tr><td>bd.24</td></tr>
<tr><td>bd.25</td></tr>
<tr><td rowspan="3">TPDO3</td><td>bd.26</td></tr>
<tr><td>bd.27</td></tr>
<tr><td>bd.28</td></tr>
<tr><td>bd.29</td></tr>
<tr><td>bd.30</td></tr>
</table>

10.2.2 RS485 扩展卡（YD580-RS485）

（全系列机型通用）

YD580-RS485 扩展卡是提供 RS485 通信功能而专门研制，采用隔离方案，电气参数符合国际标准，用户可根据需要选用，以实现远程串口方式控制变频器运行及参数设定等功能；



非隔离型
（YKEY066【YPCBAZ097】）

隔离型
（YKEY068【YPCBAZ101】）

图 10-9 YD580-RS485 端子分布示意图

表 10-16 YD580-RS485 扩展卡端子功能说明

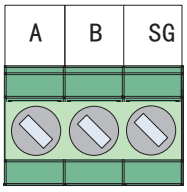
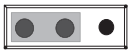
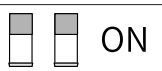
端子标识		端子名称	功能说明	端子分布
J2	A	485 通讯信号正	485 通讯输入端子，隔离输入	
	B	485 通讯信号负	485 通讯输入端子，隔离输入	
	SG	485 通讯信号参考地	电源为隔离电源	

表 10-17 YD580-RS485 扩展卡跳线说明

端子标识	端子名称	功能说明	跳线 / 拨码位置
J3	485 通讯终端电阻设置跳线	进行终端电阻匹配	
		不进行终端电阻匹配	

端子标识	端子名称	功能说明	跳线 / 拨码位置
S1	485 通讯终端电阻设置跳线	进行终端电阻匹配	
		不进行终端电阻匹配	

NOTE

- 跳线的设置是将扩展卡以主接线端子为底侧时的俯视图为观察视角，另外跳线在板上有丝印，请以丝印为标准。

10.2.3 PROFIBUS DP 扩展卡（YD580-DP）(15kW 及以上机型使用)

PROFIBUS DP 卡用于将 YD871 变频器连接至 PROFIBUS DP 总线，功能包括：配置功能、更新调节参数、控制信号发送、监视和诊断。

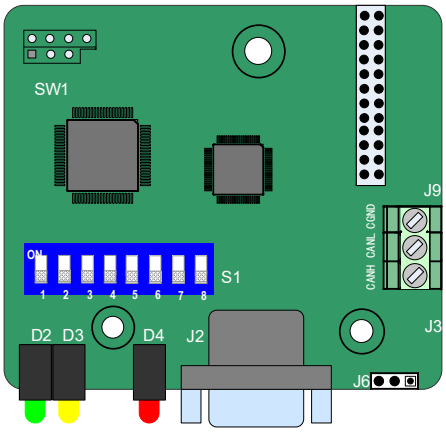


图 10-9 YD580-DP 端子分布示意图

表 10-14 YD580-DP 扩展卡端子功能说明

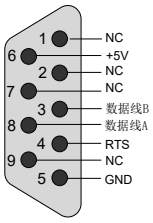
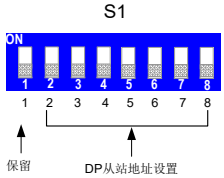
端子名称标识	引脚号	引脚定义	功能说明	端子分布
PROFIBUS 通信端子 (J2)	1、2、7、9	NC	内部悬空	
	3	数据线 B	数据线正极	
	4	RTS	请求发送信号	
	5	GND	隔离 5V 电源地	
	6	+5V	隔离 5V 电源	
	8	数据线 A	数据线负极	

表 10-15 YD580-DP 状态指示灯说明

指示灯	状态	说明
电源指示灯 (D4)	D4	灯亮：上电正常
	D4	灯灭：上电不正常，请检测安装是否正常
DP 卡与主站通信指示灯 (D3)	D3	灯亮：表示 DP 卡与 PROFIBUS 主站通信正常
	D3	闪烁：表示主站未运行或 DP 卡和 PROFIBUS 主站通信有错误
	D3	灯灭：表示 DP 卡和 PROFIBUS 主站无通信 (检查 PROFIBUS 电缆连接和站号)
DP 卡与变频器通信指示灯 (D2)	D2	灯亮：表示 DP 卡和变频器通信正常
	D2	闪烁：表示 DP 卡和变频器通信不成功 (检查波特率设置是否正确)
	D2	灯灭：表示 DP 卡和变频器通信有干扰存在或扩展卡地址不在 1~125 范围内

表 10-16 YD580-DP 扩展卡拨码开关说明

PROFIBUS DP 通信从站地址设置								从站地址	拨码开关
1	2	3	4	5	6	7	8		
DP 卡类型切换，出厂默认为“OFF：YD580-DP	0	0	0	0	0	0	0	保留	
	0	0	0	0	0	0	1	1	
	0	0	0	0	0	1	0	2	
		0	0	0	0	1	1	3	
		...						...	
	1	1	1	1	1	0	1	123	
	1	1	1	1	1	1	0	124	
	1	1	1	1	1	1	1	125	

NOTE

- 拨码位号 1 为 ON 时表示 YD580-DP，
- 改变该位号，需重新上电才生效，改变从站地址拨码，无需重新上电。

10.2.4 PROFINET 通信扩展卡 (YD580-PN) (全系列机型通用)

YD580-PN 卡是 PROFINET 现场总线适配卡，符合国际通用的 PROFINET 以太网标准。

该卡安装到变频器上，提高通信效率，便于实现变频器组网功能，使变频器成为现场总线的从站，接受现场总线主站控制。

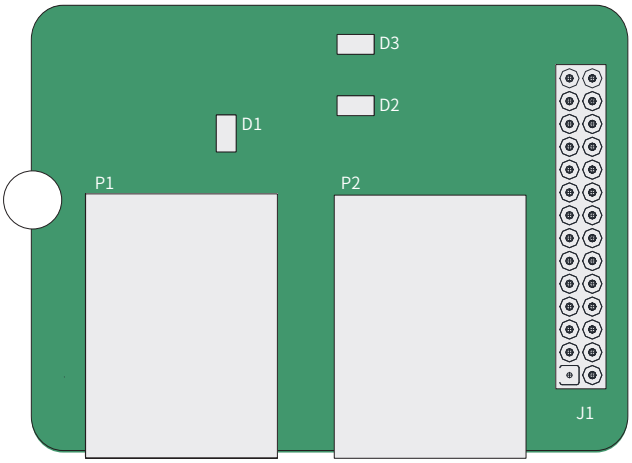


图 10-13 YD580-PN 卡端子分布示意图

表 10-22 YD580-PN 卡端子功能说明

端子标识	端子名称	功能说明
P1	Port 1	接线端子，无方向，任一个与近 PLC 端相连都可以。 485 通讯输入端子，隔离输入
P2	Port 2	
J1	排针插头(背面)	用于与变频器连接

表 10-23 YD580-PN 卡指示灯状态说明

指示灯标识	指示灯名称	状态说明
D1	电源指示灯	亮：表示上电正常； 不亮：表示上电不正常，请检测安装是否正确。
D2	变频器通讯状态	注
D3	PLC通讯状态	注

NOTE

◆ YD580-PN卡安装完成后，面朝 RJ45 口，左侧为 J2，右侧为 J3。为保证工作稳定性，推荐选用超五类屏蔽双绞线网线。

10.2.5 PZD 过程数据描述及功能码地址的定义

1） PZD 区数据定义

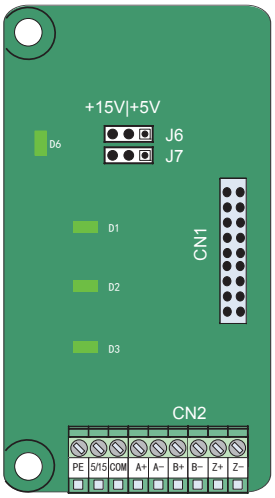
主站发送数据 PZD 描述	
PZD1	bit0: 减速停机，bit1: 自由停机 bit2: 正转运行，bit3: 反转运行 bit4: 快速停机，bit5: 转矩控制 bit6: 故障复位，bit7: 命令有效 bit8~bit15: 保留 注：PZD1 命令有效必须 bit7 命令有效置位 1。
PZD2	固定为设定变频器的目标频率（变频器频率源需设置为通信给定） 该频率可以采用两种给定方式，通过 bd.06 设置 1.bd.06 最低位为 0，则采用百分比方式给定，默认为百分比，此时设定为范围为 0~10000，对应最大频率的 0.00%~100.00%，不区分正负 2.bd.06 最低位为 1，则采用实际频率给定，此时设定范围为 0Hz~ 最大频率，不区分正负
PZD3~PZD12	PZD3 ～ PZD12，需要通过参数地址映射到 PLC 的寄存器，例如参数 B4.00 地址是 16#B400 转为 10#46080，将该地址写入 PLC 映射区。
	从站返回数据 PZD 描述
PZD1	bit0: 变频器运行中，bit1: 变频器正转运行 bit2: 变频器反转运行，bit3: 变频器无故障 bit4: 自由停机，bit5: 与变频器无通信 bit6: 频率到达，bit7: 转矩控制有效 bit8~bit15: 保留
PZD2	变频器当前运行频率 返回的为当前的实际频率，如返回 2500， 则变频器当前运行频率为 25.00Hz
PZD3~PZD12	固定返回相应地址功能码的当前值。 功能参数地址由 bd.21~bd.30 指定 例如：bd.21 设置为 B5.01，B5.01 当前值为 25.00，则 PZD3 返回当前数值 2500。 功能参数地址也可以在 PLC 从站属性“设备专用参数”中配置，一旦在从站属性中配置，bd.21~bd.30 所指定参数地址将自动变更为设备专用参数中所配置的地址。具体参照第 4 标题。

2） PKW 区数据定义

主站发送数据 PKW 描述	
PKE	高 4 位：命令代码 0：无请求 1：读取功能码参数数据 2：更改功能码参数数据 低 4 位：保留 低 8 位：功能码参数地址高位
IND	高 8 位：功能码参数地址低位 低 8 位：保留
PWE	高 16 位：保留 低 16 位：读请求时无使用；写请求时表示参数值
从站发送数据 PKW 描述	
PKE	高 4 位：响应代码 0：无请求 1：功能码参数操作正确 7：无法执行 低 8 位：功能码参数地址高位
IND	高 8 位：功能码参数地址低位 低 8 位：保留
PWE	请求成功时：参数值 请求失败时：错误代码 (与标准 Modbus 一致)： 1：非法命令 2：非法地址 3：非法数据 4：其他错误

10.3 编码器扩展卡

10.3.1 YD580-ABZ 编码器扩展卡规格



YD580-ABZ 规格	
编码器供电电源	5V/200mA，15V/100mA
最高输入频率	差分：500kHz，集电极：100kHz
编码器接口类型	支持差分、集电极、推挽
最大速率	100kHz
线规	16~26AWG
端子螺丝	一字
端子形式	斜插端子台

表 10-24 YD580-ABZ 端子功能说明

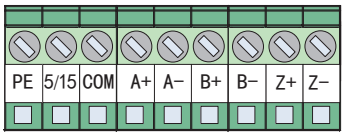
端子标识		功能说明	端子分布
CN2	A+	编码器输出 A 信号正	
	A-	编码器输出 A 信号负	
	B+	编码器输出 B 信号正	
	B-	编码器输出 B 信号负	
	Z+	编码器输出 Z 信号正	
	Z-	编码器输出 Z 信号负	
	5V/15V	编码器 5V/15V 供电电源	
	COM	编码器供电电源地	
	PE	屏蔽层接线端	
CN1	18Pin DIP 排线接口，连接变频器控制板的 J9		

表 10-20 YD580-ABZ 指示灯状态说明

指示灯名称	指示灯状态	状态说明
D1/D2/D3 编码器输入信号指示灯		常亮或闪烁：编码器有信号输入 D1：A相指示灯 D2：B相指示灯 D3：C相指示灯
		灯灭：编码器无信号输入
D6 电源指示灯		灯亮：正常
		灯灭：电源无连接
J6，J7 编码器电源选择		+15V与+5V选择(同时切换)

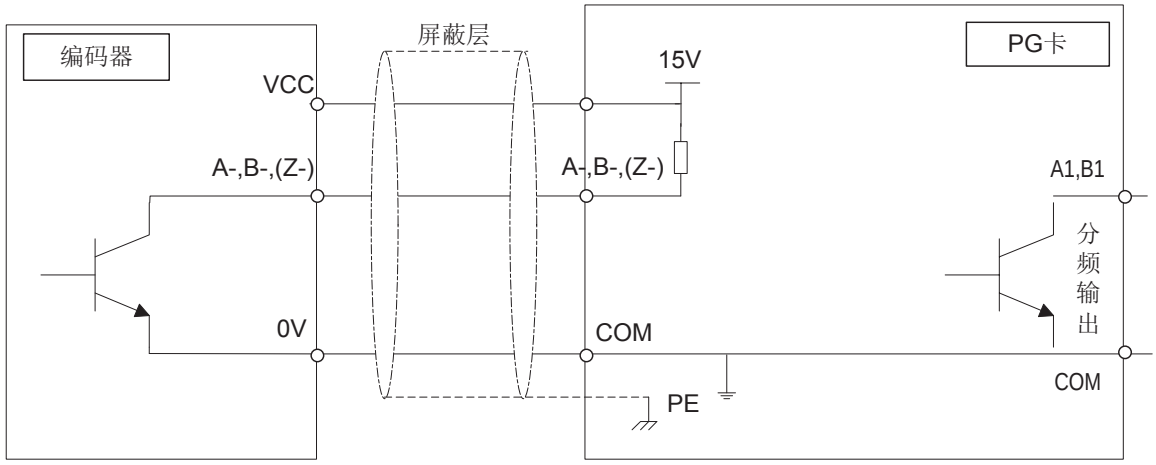


图 10-15 接口回路1

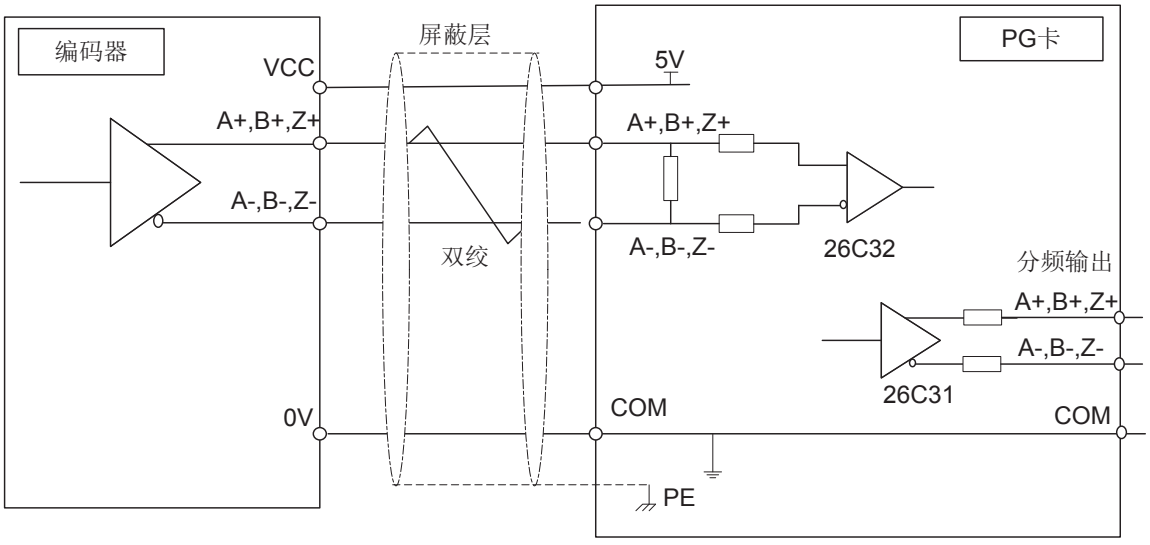


图 10-16 接口回路2

10.3.2 旋转变压器 PG 卡 (YD580-RZV)

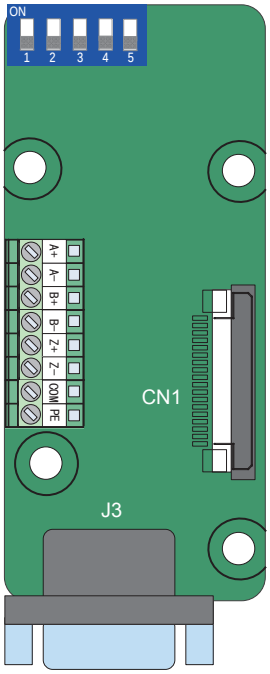


表 10-27 YD580-RZV 端子功能说明

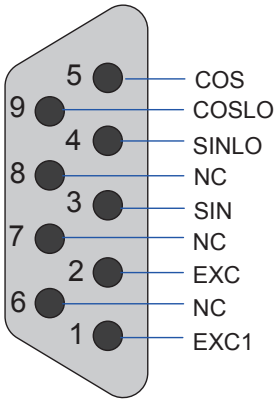
端子标识	引脚号	引脚定义	功能说明	端子分布
J3	1	EXC1	旋转变压器激励负	
	2	EXC	旋转变压器激励正	
	3	SIN	旋转变压器反馈 SIN 正	
	4	SINLO	旋转变压器反馈 SIN 负	
	5	COS	旋转变压器反馈 COS 正	
	6、7、8	NC	内部悬空	
	9	COSLO	旋转变压器反馈 COS 负	
CN1	18Pin DIP 排线接口，连接变频器控制板的 J4			

表 10-28 YD580-RZV 指示灯状态说明

故障指示灯	YD580-RZV 故障状态	故障原因及对策
D5 D6	正常	无
D5 D6	锁相环失锁	一般是所选的旋转变压器的相位滞后过大引起。
D5 D6	信号 SIN/COS 幅值超出上限	通常 D6 闪烁都是干扰引起的。将电机良好接地以及将 PG 卡上面的接地点接到变频器的 PE 端子可以有效解决。
D5 D6	信号 SIN/COS 幅值过小	一般是 DB9 接头没有接上或者接错、甚至断线。若检查发现并没有出现上述情况，需要检查旋变变压器选型与 YD58PG4 是否匹配。

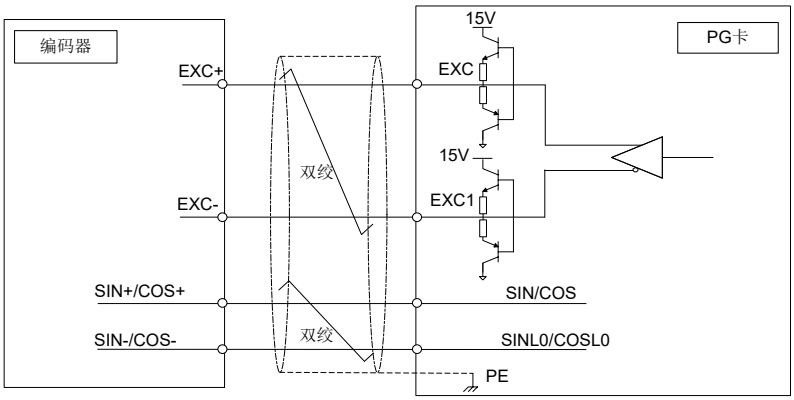


图 10-11 YD580-RZV 接口回路

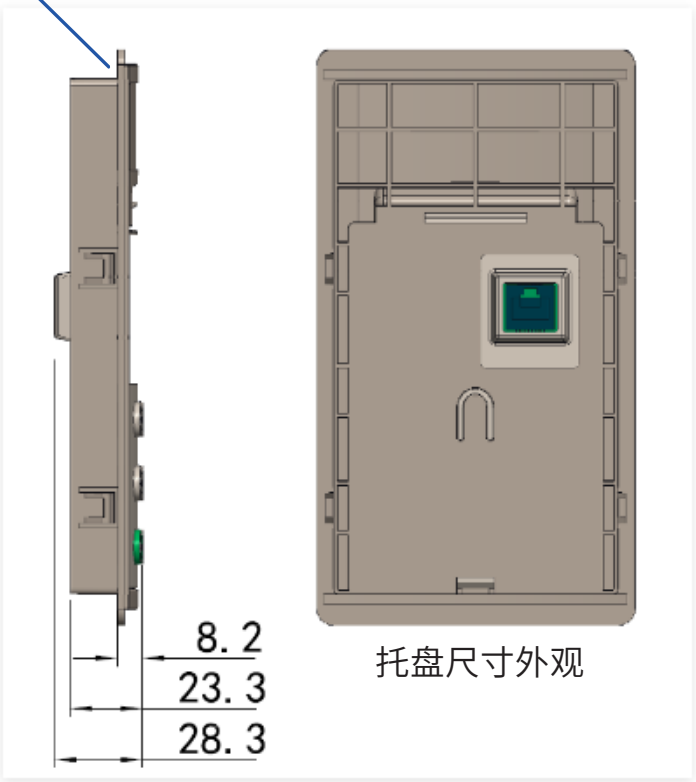
NOTE

◆ 旋转变压器的选型必须要满足 YD580-RZV 的参数要求，特别是激励的输入直流电阻必须要大于 17Ω（可用万用表测量），否则 YD580-RZV 不能正常工作；

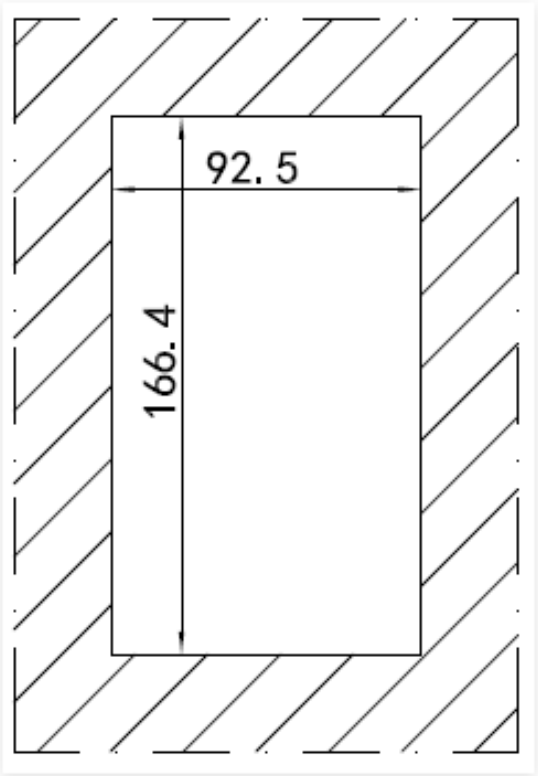
◆ 为避免选择过高的极对数的旋转变压器会使得 YD580-RZV 处于过载状态，建议不要选用极对数高于 4 对极的旋转变压器。

10.4 键盘托盘尺寸

安装固定板厚度不大于2mm



托盘尺寸外观



YD587 pallet cut-out size
unit (mm)

11 通信

11.1 参数通讯地址

11.1.1 参数简介

本系列变频器支持RS485、CANlink、CANopen共3种通讯协议，用户可编程卡和点对点通讯属于CANlink协议的衍生。上位机通过这些通讯协议可以实现对变频器的控制、监视及功能参数修改查看操作。 通讯数据可分为参数数据、非参数数据，后者包括运行命令、运行状态、运行参数、告警信息等。

参数数据

参数数据	P组（可读写）	P0、P1、P2、P3、P4、P5、P6、P7、P8、P9、PA、PB、PC、PD、PE、 PF
	A组（可读写）	A0、A1、A2、A3、A4、A5、A6、A7、A8、A9、AA、AB、AC、AD、 AE、AF
	B组（可读写）	B0、B1、B2、B6

参数数据通讯地址定义如下：

1. 当为通讯读取参数数据时

对于P0~PF、A0~AF组参数数据，其通讯地址高八位直接为功能组编号，低八位直接为参数。

在功能组中序号，举例如下：

P0-16功能参数， 其通讯地址为F010H，其中高八位的F0是将十进制功能码组号转换为十六进制，低八位的10是将十进制序号转换为十六进制。

AC-08功能参数，其通讯地址为AC08H，其中高八位的AC是将十进制功能码组号转换为十六进制，低八位的08是将十进制序号转换为十六进制。

2. 当为通讯写入参数数据时

对于P0~PF组参数数据，其通讯地址高八位，根据是否写入EEPROM（对于需要变频器掉电保存的参数，可以采取写入EEPROM的通讯地址格式，但考虑到EEPROM芯片的寿命问题，需要上位机严格限制写入频次。对于不需要变频器掉电保存的参数，则可以采取不写入EEPROM的通讯地址格式），区分为00~0F或P0~PF，低八位直接为参数在功能组中序号，举例如下：

写功能参数P0-16：

不需要写入EEPROM时，其通讯地址为0010H。

需要写入EEPROM时，其通讯地址为F010H。

对于A0~AF组参数数据，其通讯地址高八位，根据是否需要写入EEPROM（对于需要变频器掉电保存的参数，可以采取写入EEPROM的通讯地址格式，但考虑到EEPROM芯片的寿命问题，需要上位机严格限制写入频次。对于不需要变频器掉电保存的参数，则可以采取不写入EEPROM的通讯地址格式），区分为40~4F或A0~AF，低八位直接为参数在功能组中序号，举例如下：

写功能参数AC-08：

不需要写入EEPROM时，其通讯地址为4C08H。

需要写入EEPROM时，其通讯地址为AC08H。

非参数数据

非参数数据	状态数据（只读）	U 组监视参数、变频器故障描述、变频器运行状态
	控制参数（只写）	控制命令、通讯设定值、数字输出端子控制、模拟输出AO1 控制、模拟输出AO2 控制、高速脉冲（FMP） 输出控制、参数初始化

1. 状态数据

状态数据分为U 组监视参数、变频器故障描述、变频器运行状态。

- U 组监视参数

  U0~UF，其通讯地址高八位为70~7F，低八位为监视参数在组中的序号，举例如下：U0-11，其通讯地址为700BH。

- 变频器故障描述

  通讯读取变频器故障描述时，通讯地址固定为8000H，上位机通过读取该地址数据，可以获取当前变频器故障代码，故障代码描述参见F9-14 参数中定义。

- 变频器运行状态

  通讯读取变频器运行状态时，通讯地址固定为3000H，上位机通过读取该地址数据，可以获取当前变频器运行状态信息，定义如下：

变频器运行状态通讯地址	读取状态字定义
3000H	1：正转运行
	2：反转运行
	3：停机

2. 控制参数

控制参数分为：控制命令、通讯设定值、数字输出端子控制、模拟输出AO1 和AO2 控制、参数初始化。

- 控制命令

  在P0-02（命令源） 选择为2：通讯控制时，上位机通过该通讯地址，可以实现对变频器的启停等相关命令控制，控制命令定义如下：

变频器运行状态通讯地址	读取状态字定义
2000H	1：正转运行 2：反转运行 3：正转点动 4：反转点动 5：自由停机 6：减速停机 7：故障复位

- 通讯设定值

  通讯设定值主要用于变频器中频率源、转矩源、转矩上限源、V/f 分离电压源、PID 给定源、PID 反馈源等选择为通讯给定时的给定数据。其通讯地址为1000H，上位机设定该通讯地址值时，其数据范围为-10000~10000，对应相对给定值 -100.00%~100.00%。

- 数字输出端子控制

  当数字输出端子功能选择为20：通讯控制时，上位机通过该通讯地址，可以实现对变频器数字输出端子的控制，定义如下：

数字输出端子控制通讯地址	命令内容
2001H	bit0：DO1 输出控制 bit1：DO2 输出控制 bit2：RELAY1 输出控制 bit3：RELAY2 输出控制 bit4：FMR 输出控制

- 模拟量输出AO1、AO2，高速脉冲输出FMP 控制
  当模拟量输出AO1、AO2，高速脉冲输出FMP 输出功能选择为12：通讯设定时，上位机通过该通讯地址，可以实现对变频器模拟量、高速脉冲输出的控制，定义如下：

输出控制通讯地址		命令内容
AO1	2002H	0~7FFF 表示0%~100%
AO2	2003H	
FMP	2004H	

- 参数初始化
  当需要通过上位机实现对变频器的参数初始化操作时，需要使用该功能。

  如果PP-00（用户密码） 不为0，则首先需要通过通讯进行密码校验，校验通过后，在30 秒内，上位机进行参数初始化操作。

  通讯进行用户密码校验的通讯地址为1F00H，直接将正确的用户密码写入该地址，则可以完成密码校验
  通讯进行参数初始化的地址为1F01H，其数据内容定义如下：

参数初始化通讯地址	命令功能
1F01H	0：无操作 1：恢复出厂参数模式1 2：清除记录信息 4：备份用户当前参数 501：恢复用户备份参数 503：恢复出厂参数模式2

11.1.2 Modbus 通讯协议

概述

提供 RS485 通信接口，并支持 Modbus-RTU 从站通讯协议。用户可通过计算机或 PLC 实现集中控制，通过该通讯协议设定变频器运行命令，修改或读取参数，读取变频器的工作状态及故障信息等。

该串行通信协议定义了串行通信中传输的信息内容及使用格式。其中包括：主机轮询（或广播）格式；主机的编码方法，内容包括：要求动作的参数，传输数据和错误校验等。从机的响应也是采用相同的结构， 内容包括：动作确认，返回数据和错误校验等。如果从机在接收信息时发生错误，或不能完成主机要求的动作，它将组织一个故障信息作为响应反馈给主机。

应用方式

变频器接入具备 RS485 总线的“单主多从”PC/PLC 控制网络，作为通讯从机。

硬件接口

需在变频器上插入RS485 扩展卡的硬件YD580-RS485。

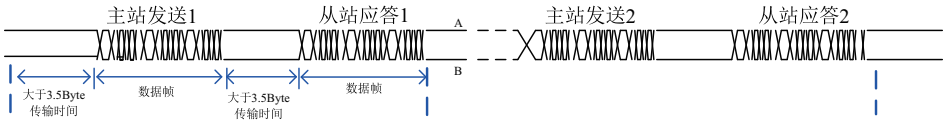
拓扑结构

单主机多从机系统。网络中每一个通讯设备都有一个唯一的从站地址，其中有一个设备作为通讯主机（常为 PC 上位机、PLC、HMI 等），主动发起通讯，对从机进行参数读或写操作，其他设备在为通讯从机，响应主机对本机的询问或通讯操作。在同一时刻只能有一个设备发送数据，而其他设备处于接收状态。

从机地址的设定范围为1~247，0 为广播通信地址。网络中的从机地址必须是唯一的。

通讯传输方式

异步串行，半双工传输方式。数据在串行异步通信过程中，是以报文的形式，一次发送一帧数据， Modbus-RTU 协议中约定，当通讯数据线上的空闲时间大于 3.5Byte 的传输时间时，表示新的一个通讯帧的起始。

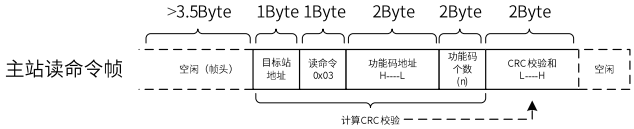


内置的通信协议是 Modbus-RTU 从机通信协议，可响应主机的“查询 / 命令”，或根 据主机的“查询 / 命令”做出相应的动作，并进行通讯数据应答。

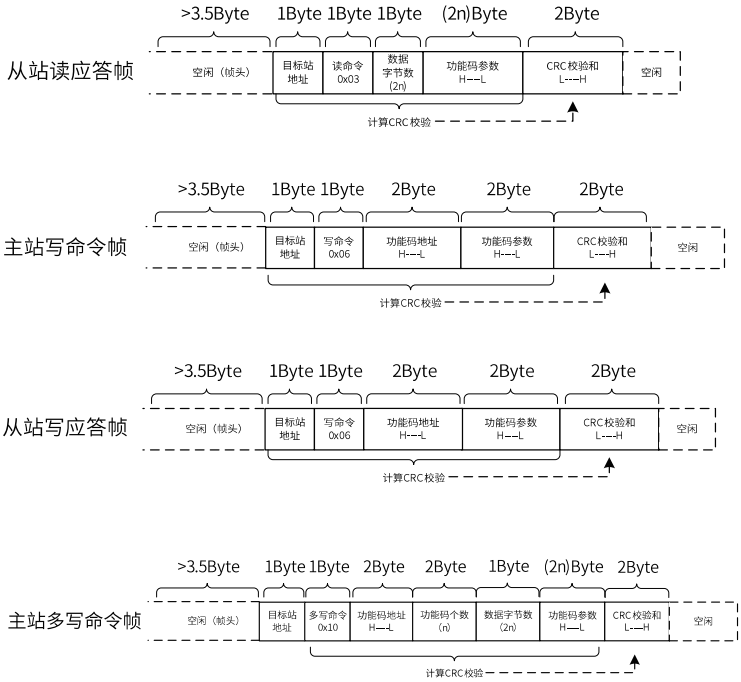
主机可以是指个人计算机（PC），工业控制设备或可编程逻辑控制器（PLC）等，主机既能对某个从机单独进行通信，也能对所有从机发布广播信息。对于主机的单独访问“查询 / 命令”，被访问从机要返回一个应答帧；对于主机发出的广播信息，从机无需反馈响应给主机。

11.1.3 通信数据帧结构

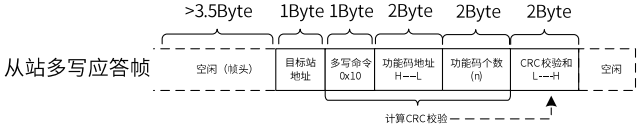
Modbus-RTU协议通信数据格式如下，变频器只支持Word型参数的读或写，对应的通信读操作命令为0x03；写操作命令为 0x06，多写操作命令为0x10，不支持字节或位的读写操作：



理论上，上位机可以一次读取连续的多个参数（即其中 n 最大可达 12 个），但要注意不能跨过本参数组的最后一个参数，否则会答复出错。



多写与多读一样，最大只能连续操作12个参数。



若从机检测到通信帧错误，或其他原因导致的读写不成功，会答复错误帧。

说明

CRC校验错误不会答复。

Modbus模式为标准的Modbus协议。

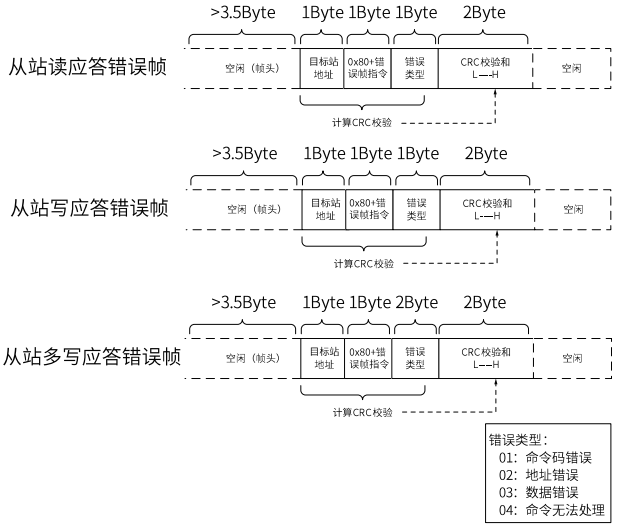


表16–1 数据帧字段说明表

数据帧字段	说明
帧头START	大于3.5个字节传输时间的空闲。
从机地址ADR	通信地址范围：1~247；0＝广播地址。
命令码CMD	03：读从机参数；06：写从机参数；10：多写从机参数。
参数地址H	变频器内部的参数地址，十六进制表示；分为参数型和非参数型（如运行状态参数、运行命令等）参数等，详见地址定义。 传送时，高字节在前，低字节在后。
参数地址L	
参数个数H	本帧读取的参数个数，若为1表示读取1个参数。传送时，高字节在前，低字节在后。 本协议一次只能改写1个参数，没有该字段。
参数个数L	
数据字节数	数据的长度，为参数个数的2倍。
数据H	应答的数据，或待写入的数据，传送时，高字节在前，低字节在后。
数据L	
CRC 低位	检测值：CRC16校验值。传送时，低字节在前，高字节在后。 计算方法详见本节CRC校验的说明。
CRC 高位	
END	3.5个字节时间。

CRC校验方式：

CRC（Cyclical Redundancy Check）使用RTU帧格式，Modbus消息包括了基于CRC方法的错误检测域。CRC域检测了整个消息的内容。CRC域是两个字节，包含16位的二进制值。它由传输设备计算后加入到消息中。接收设备重新计算收到消息的CRC，并与接收到的CRC域中的值比较，如果两个CRC值不相等，则说明传输有错误。

CRC是先存入0xFFFF，然后调用一个过程将消息中连续的8位字节与当前寄存器中的值进行处理。仅每个字节中的8bit数据对CRC有效，起始位和停止位以及奇偶校验位均无效。

CRC产生过程中，每个bit位都单独和寄存器内容相异或（XOR），结果向最低有效位方向移动，最高有效位以0填充。LSB被提取出来检测，如果LSB为1，寄存器单独和预置的值相异或，如果LSB为0，则不进行。整个过程要重复8次。在最后一位（第8位）完成后，下一个字节又单独和寄存器的当前值相异或。最终寄存器中的值，是消息中所有的字节都执行之后的CRC值。

CRC添加到消息中时，低字节先加入，然后加入高字节。 CRC简单函数如下：

```
unsigned int crc_chk_value（unsigned char *data_value, unsigned char length）
{
unsigned int crc_value=0xFFFF;
   int i;
   while（length- -）
     {
        crc_value^=*data_value++;
         for（i=0;i<8;i++）
        {
            if（crc_value&0x0001）
                {
```

```
                crc_value=（crc_value>>1）^0xa001;
            }
            else
            {
                crc_value=crc_value>>1;
            }
        }
    }
return（crc_value）;
}
```

通信参数的地址定义：

读写参数（有些参数不能更改，只供厂家使用或监视使用）。

11.1.4 参数地址标识规则

以参数组号和标号为参数地址表示规则：

高位字节： F0~FF(P组)、A0~AF(A组)、70~7F(U组)

低位字节：00~FF

例如：若要访问参数P3-12，则参数的访问地址表示为0xF30C；

PF组：既不可读取参数，也不可更改参数；U组：只可读取，不可更改参数。

有些参数在变频器处于运行状态时，不可更改；有些参数不论变频器处于何种状态，均不可更改。更改参数，还要注意参数的范围、单位及相关说明。

参数组号	通讯访问地址	通讯修改RAM中参数地址
P0~PE组	0xF000~0xFEFF	0x0000~0x0EFF
A0~AC组	0xA000~0xACFF	0x4000~0x4CFF
U0组	0x7000~0x70FF	-
B0~B6组	0xB000~0xB6FF	0x5000~0x56FF

说明

由于EEPROM频繁被存储，会减少EEPROM的使用寿命，所以，有些参数在通信的模式下，无须存储，只需更改RAM中的值。单次读写功能码的周期约为15ms，高频率且多次操作EEPROM，存在数据交互（读写）不成功的可能性。

如果为P组参数，要实现该功能，只要把该参数地址的高位F变成0就可以实现。如果为A组参数，要实现该功能，只要把该参数地址的高位A变成4就可以实现。

相应参数地址表示如下：

高位字节：00~0F(F组)、40~4F(A组)

低位字节：00~FF

例如：

参数P3-12不存储到EEPROM中，地址表示为030C；参数A0-05不存储到EEPROM中，地址表示为4005。该地址表示只能做写RAM，不能做读的动作，读时，为无效地址。

停机/运行参数部分参见下表。

参数地址	参数描述	参数地址	参数描述
1000H	*通信设定值（十进制）（只写） –10000~10000	1010H	PID设置
1001H	运行频率	1011H	PID反馈
1002H	母线电压	1012H	PLC阶段
1003H	输出电压	1013H	PULSE输入脉冲频率，单位0.01kHz
1004H	输出电流	1014H	反馈速度，单位0.1Hz
1005H	输出功率	1015H	剩余运行时间
1006H	输出转矩	1016H	AI1校正前电压
1007H	运行速度	1017H	AI2校正前电压
1008H	DI输入标志	1018H	AI3校正前电压
1009H	DO输出标志	1019H	线速度
100AH	AI1电压	101AH	当前上电时间
100BH	AI2电压	101BH	当前运行时间
100CH	AI3电压	101CH	PULSE输入脉冲频率，单位1Hz
100DH	计数值输入	101DH	当前通讯设定值（只读）
100EH	长度值输入	101EH	实际反馈速度
100FH	负载速度	101FH	主频率X显示
–	–	1020H	辅频率Y显示

说明

通信设定值是相对值的百分数，10000对应100.00%，-10000对应-100.00%对频率量纲的数据，该百分比是相对最大频率（P0-10）的百分数。对转矩量纲的数据，该百分比是P2-10、A2-48（转矩上限数字设定，分别对应第一、二电机）。

因P0-03、P0-04、P0-11、P2-11、PA-00、PA-02和A0-01等参数设置为通讯设定，均由1000H决定，但同一时间只能有一个设置为通讯设定值，如上参数如都要通过通讯设定，可采取方式如下：

以P0-03和P0-11为例：如果P0-03设置为9，由1000H来控制运行频率；则F0-11不能再设置为5，可设置为0，通过通讯修改 P0-12的值可达到一致的效果。

控制命令输入到变频器：（只写）

命令字地址	命令功能
2000H	0001：正转运行
	0002：反转运行
	0003：正转点动
	0004：反转点动
	0005：自由停机
	0006：根据P6–10设定的停机方式停机
	0007：故障复位

读取变频器状态：（只读）

状态字地址	状态字功能
3000H	0001：正转运行
	0002：反转运行
	0003：停机

参数锁定密码校验：如果返回实际密码值，即表示密码校验通过。（如果没有密码，即密码为0，校验返回0000H）

密码地址	输入密码的内容
1F00H	*****

数字输出端子控制：（只写）

命令地址	命令内容
2001H	bit0：DO1输出控制 bit1：DO2输出控制 bit2：RELAY1输出控制 bit3：RELAY2输出控制 bit4：FMR输出控制 bit5：VDO1 bit6：VDO2 bit7：VDO3 bit8：VDO4 bit9：VDO5

模拟输出AO1控制：（只写）

命令地址	命令内容
2002H	0~7FFF表示0%~100%

模拟输出AO2控制：（只写）

命令地址	命令内容
2003H	0~7FFF表示0%~100%

脉冲（PULSE）输出控制：（只写）

命令地址	命令内容
2004H	0~7FFF表示0%~100%

变频器故障描述：

变频器故障地址	变频器故障信息	
8000H	0000：无故障	0015：参数读写异常
	0001：保留	0016：变频器硬件故障
	0002：加速过电流	0017：电机对地短路故障
	0003：减速过电流	0018：保留
	0004：恒速过电流	0019：保留
	0005：加速过电压	001A：运行时间到达
	0006：减速过电压	001B: 用户自定义故障1
	0007：恒速过电压	001C: 用户自定义故障2
	0008：缓冲电阻过载故障	001D: 上电时间到达
	0009：欠压故障	001E：掉载
	000A：变频器过载	001F：运行时PID反馈丢失
	000B：电机过载	0028：快速限流超时故障
	000C：输入缺相	0029：运行时切换电机故障
	000D：输出缺相	002A: 速度偏差过大
	000E：模块过热	002B：电机超速度
	000F：外部故障	002D：电机过温
	0010：通讯异常	005A：编码器线数设定错误
	0011：接触器异常	005B：未接编码器
	0012：电流检测故障	005C：初始位置错误
	0013：电机参数辨识故障	005E：速度反馈错误
	0014：编码器/PG卡故障	

11.1.5 PD组通讯参数说明

PD-00参数用来设定上位机与变频器之间的数据传输速率。注意，上位机与变频器设定的波特率必须一致，否则，通讯无法进行。波特率越大，通讯速度越快。

参数	参数名称	默认值	设定范围
PD-00	波特率	5005	0：300bps
			1：600bps
			2：1200bps
			3：2400bps
			4：4800bps
			5：9600bps
			6：19200bps
			7：38400bps
			8：57600bps
			9：115200bps

上位机与变频器设定的数据格式必须一致，否则，通讯无法进行。

参数	参数名称	默认值	设定范围
PD-01	Modbus数据格式	0	0：无校验(8-N-2) 1：偶校验(8-E-1) 2：奇校验(8-O-1) 3：无校验(8-N-1)

当本机地址设定为0时，即为广播地址，实现上位机广播功能。本机地址具有唯一性(除广播地址外)，这是实现上位机与变频器点对点通讯的基础。

参数	参数名称	默认值	设定范围
PD-02	本机地址	1	1~247，0为广播地址

应答延时：是指变频器数据接收结束到向上位机发送数据的中间间隔时间。如果应答延时小于系统处理时间，则应答延时以系统处理时间为准，如应答延时长于系统处理时间，则系统处理完数据后，要延迟等待，直到应答延迟时间到，才向上位机发送数据。

参数	参数名称	默认值	设定范围
PD-03	应答延时	2ms	0~20ms

当参数PD-04设置为0.0s时，通讯超时时间参数无效。

当参数PD-04设置成有效值时，如果一次通讯与下一次通讯的间隔时间超出通讯超时时间，系统将报通讯故障错误(E16)。通常情况下，都将其设置成无效。如果在连续通讯的系统中，设置此参数，可以监视通讯状况。

参数	参数名称	默认值	设定范围
Pd-04	通讯超时时间	0.0s	0.0s(无效)； 0.1~60.0s

11.2 PROFINET通信

11.2.1 概述

本系列变频器支持PROFINET通信协议类型的卡有YD580-PN。

关于PROFINET通信卡的简介、技术规格、外形尺寸、接口说明请参见《*变频器扩展卡选型手册*》。

关于YD580-PN的安装与接线、通信参数、故障处理等请参见《*YD580-PN 通信扩展卡用户手册*》。

11.2.2 通信配置实例

变频器与S7-300的PROFINET通信配置实例：

前提条件

- 登录优利康电气技术官网http://www.yolico.com/product/32
  除了下载YD580-PN说明书外，并获取西门子PLC的配置文件 GSD 档。

- 安装西门子博途（TIA Portal V16）软件。
- 设备准备：一台变频器、一块DP通信扩展卡、一台S7-300 PLC、西门子PROFIBUS插头、线缆等。

接线

1. 将YD580-PN卡插入变频器的通讯扩展接口，并紧固好卡上的螺钉，其中接PE的螺钉孔位需要正确接到变频器的



技术规格

项目	技术规格
实时类	RT
最小数据更新周期	1ms
节点数	最多65535（取决于PLC性能）
波特率	100Mbps全双工
传输媒介	超五类或更好以太网线
传输距离	两节点间最大100m
拓扑	总线型、树型、星型
环网（MRP）	支持
优先启动（快速启动）	支持
非周期读写	不支持
周期数据	最多读写各12个功能码

接口说明

表1– 1 YD580-PN卡接口功能说明

端子标识	端子名称	功能说明
J2	排针插头	检查PD-00是否为9，PD-01是否为3
J3	网口	采用标准以太网RJ45型插座，无方向，用 J3 于PN卡与PN卡（PLC）连接通信
J4		
D1	电源指示灯	用于电源状态指示。 亮：表示上电正常； 不亮：表示上电不正常，请检测安装是否正确
D3	PLC通信状态指示灯	参见第11页“表1–2”
D2	变频器通信状态指示灯	

状态指示灯说明

表1–2 YD580-PN卡状态指示灯说明

指示灯		状态描述	处理方法
D1 电源指示灯	常亮	上电正常	无
	常灭	上电不正常	检测安装是否正确
D2 变频器通信状态指示灯	常亮	正常	无
	1 亮 1 灭闪烁	变频器存在故障	清除变频器故障
	2 亮 1 灭闪烁	与变频器通讯异常	设置 P0-28 为 1，确认变频器是否支持 PN 卡
	3 亮 1 灭闪烁	变频器通讯超时	确认变频器软件版本是否支持 PN 卡、变频器软件恢复出厂设置
D3 PLC 通信状态指示灯	常亮	正常	无
	常灭	通讯卡内部错误	尝试重新上下电，更换 PN 卡
	1 亮 1 灭闪烁	未找到主站	确认组态，是否为从站分配设备名称。 确认是否与相应 PLC 连接
	2 亮 1 灭闪烁	通讯错误	检查线路连接，检查网线屏蔽层是否接触完好
	3 亮 1 灭闪烁	配置错误	确认 GSD 是否正确，PLC 配置地址是否存在

安装与接线

安装

YD580-PN卡设计为内嵌入YD580系列变频器中使用，安装前请关断变频器供电电源，等待约10分钟后，变频器充电指示灯彻底熄灭才能进行安装。在YD580-PN卡插入变频器后请固定相应的螺钉，避免板间信号插座受外部信号电缆拉力而损坏，其安装示意图如第12页“图2–1”所示。

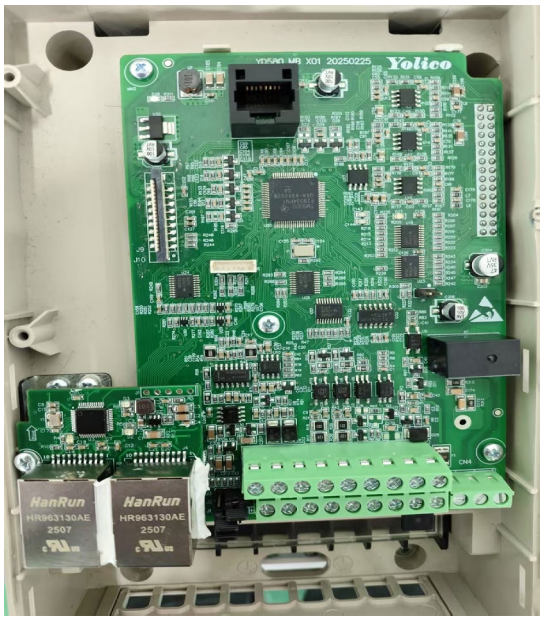


图2-1 YD580-PN卡安装示意图

接线

Profinet的连接拓扑

Profinet支持的拓扑结构包括总线型、星型、树型等，通过合理的利用交换机，可以实现多种多样的组网。

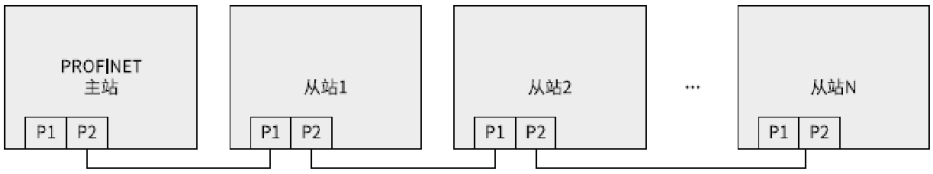


图2-3 总线型连接拓扑图

EMC布线指导

- 现场安装调试时，需要将通信信号线和动力线分不同线槽走线，严禁通信线与动力线捆在一起走线，否则很容易出现通信干扰问题。
- 电机外壳必须要接到变频器的接地端子（PE端子），而且电机外壳侧的地线必须要良好搭接，否则达不到良好接地效果。
- 建议使用屏蔽线缆，屏蔽层接到变频器接地端子（PE 端子）。
- 可以通过卡上面的状态指示灯来判断通信的连接状态，状态指示灯具体含义请参见第11页“表1–2”。

通信说明

Profinet通信协议说明

数据传送格式

YD580-PN卡根据需要选择不同长度PZD的传输格式进行传输，用户可以在组态中设置各PZD对应的功能。每种数据格式支持的功能参见下表。

master->slave		
数据类型	数据长度	支持功能
output telegram 1	PZD-2	变频器命令、频率设置；
output telegram 2	PZD-4	变频器命令、频率设置；2个功能参数周期性写入；
output telegram 3	PZD-6	变频器命令、频率设置；4个功能参数周期性写入；
output telegram 4	PZD-8	变频器命令、频率设置；6个功能参数周期性写入；
output telegram 5	PZD-10	变频器命令、频率设置；8个功能参数周期性写入；
output telegram 6	PZD-12	变频器命令、频率设置；10个功能参数周期性写入；

slave->master		
数据类型	数据长度	支持功能
input telegram 1	PZD-2	变频器状态，运行频率读取；
input telegram 2	PZD-4	变频器状态，运行频率读取；2个功能参数周期性读取；
input telegram 3	PZD-6	变频器状态，运行频率读取；4个功能参数周期性读取；
input telegram 4	PZD-8	变频器状态，运行频率读取；6个功能参数周期性读取；
input telegram 5	PZD-10	变频器状态，运行频率读取；8个功能参数周期性读取；
input telegram 6	PZD-12	变频器状态，运行频率读取；10个功能参数周期性读取；

备注：输入和输出数据类型需要匹配，例如输出选择output telegram 3，则输入需要选择input telegram 3

PZD区数据描述

通过PZD区数据，主站可实时更改和读取变频器数据，并且进行周期性的数据交互。数据的通讯地址由变频器直接配置。具体功能如下：

- 变频器控制命令、目标频率实时给定
- 变频器当前状态、运行频率实时读取
- 变频器与Profinet主站之间功能参数、监视参数数据实时交互

PZD过程数据主要完成主站与变频器之间周期性数据交互，交互数据见下表。

主站发送数据PZD区		
变频器命令	变频器目标频率	变频器功能参数实时更改
PZD1	PZD2	PZD3~PZD12
变频器响应数据PZD区		
变频器状态	变频器运行频率	变频器功能参数实时读取
PZD1	PZD2	PZD3~PZD12

主站发送数据描述

不同系列的变频器，主站发送数据描述略有差异，如下：

- YD580、YD680等系列变频器

主站发送数据PZD描述		
PZD1	变频器命令字 (命令源需设置为通讯)	
	01，正转运行 02，反转运行 03，正转点动 04，反转点动	05，自由停机 06，按停机方式P6-10停机 07，故障复位
PZD2	变频器目标频率（频率源需设置为通讯给定），给定范围为反向频率上限（负值）到正向频率上限（包含小数位，如2000对应变频器20.00Hz）。当给定的目标频率超过范围时，以上限频率运行。	
PZD3 ~PZD12	实时更改参数值（P组、A组），不写入EEPROM，PE-02~PE-11对应PZD3~PZD12 。在变频器的FE组手动设置映射无效。	

变频器响应数据描述

不同系列的变频器，其响应数据描述略有差异，如下：

- YD580、YD680系列变频器

变频器响应数据PZD描述	
PZD1	变频器运行状态信息。按bit位定义，分别如下： Bit0：0，变频器停机；1，变频器运行 Bit1：0，正转运行；1，反转运行 Bit2：0，无故障；1，变频器故障 Bit3：0，运行频率未达标；1，运行频率到达 Bit4~Bit7： 保留 Bit8~Bit15：驱动器故障代码
PZD2	变频器运行频率(单位：0.01Hz)。返回当前变频器实际运行频率，返回数据值为十六位有符号数据。
PZD3 ~PZD12	实时读取功能参数值(P组、A组)、监视参数值(U组)，PE-22~PE-31对应PZD3~PZD12。在变频器的FE组手动设置映射无效。

通信相关功能码

变频器通信卡设置

不同系列的变频器，通信配置略有差异，如下：

- YD580系列变频器通信卡设置

  变频器上电后需要设置功能码P0-28为1后，YD580-PN卡才能与变频器正常通信。

功能码	名称	设定范围	设定值	含义
P0-28	串口通信协议选择	0：Modbus协议 1：通信卡网桥协议	1	串口通信协议选择为特殊通信卡网桥

- YD680 系列变频器通信卡设置

  变频器上电后需要设置功能码PD-00=9（波特率为115200bps）、PD-01=3（无校验8-N-1）后，YD580-PN卡才能与变频器正常通信。

功能码	名称	设定范围	设定值	含义
bd.07	扩展卡选择	0：Modbus协议 1：DP 2：CANopen/PN	2	Profinet通信扩展卡

通信控制相关功能码

功能码	名称	设定范围		十进制地址
U3-16	频率设定	-327.68Hz~+327.67Hz		29456
U3-17	控制命令	0001：正转运行 0002：反转运行 0003：正转点动 0004：反转点动	0005：自由停机 0006：减速停机 0007：故障复位	29457
U3-18	DO控制	BIT0：DO1输出控制 BIT1：DO2输出控制 BIT2：RELAY1输出控制 BIT3：RELAY2输出控制 BIT4：FMR输出控制	BIT5：VDO1 BIT6：VDO2 BIT7：VDO3 BIT8：VDO4 BIT9：VDO5	29458
U3-19	AO1控制	0～7FFF表示0%～100%		29459
U3-20	AO2控制	0～7FFF表示0%～100%		29460
U3-21	FMP控制	0～7FFF表示0%～100%		29461
U3-22	保留	保留		
U3-23	转速控制	有符号数据，1rpm		29463

在使用YD580-PN卡时，写入的PZD1默认映射为U3-17，PZD2默认映射为U3-16，如果发现命令或频率无法正常写入变频器，而PZD3~PZD12能写入，且P0-02=2和P0-03=9，此时可以在变频器上查看PE-00是否为U3-17，PE-01是否为U3-16，如果不是，请手动将其改为正确值。

通讯监控相关功能码

功能码	名称	单位	十进制地址
U0-00	运行频率(Hz)	0.01Hz	28672
U0-01	设定频率(Hz)	0.01Hz	28673
U0-02	母线电压(V)	0.1V	28674
U0-03	输出电压(V)	1V	28675
U0-04	输出电流(A)	0.01A	28676
U0-05	输出功率(kW)	0.1kW	28677
U0-06	输出转矩(%)	0.10%	28678
U0-07	DI输入状态	1	28679
U0-08	DO输出状态	1	28680
U0-09	AI1电压(V)	0.01V	28681
U0-10	AI2电压(V)	0.01V	28682
U0-11	AI3电压(V)	0.01V	28683
U0-12	计数值	1	28684
U0-13	长度值	1	28685
U0-14	负载速度显示	100.00%	28686
U0-15	PID设定	1	28687
U0-16	PID反馈	1	28688
U0-17	PLC阶段	1	28689
U0-18	PULSE输入脉冲频率(Hz)	0.01kHz	28690
U0-19	反馈速度(Hz)	0.01Hz	28691
U0-20	剩余运行时间	0.1Min	28692
U0-21	AI1校正前电压	0.001V	28693
U0-22	AI2校正前电压	0.001V	28694
U0-23	AI3校正前电压	0.001V	28695
U0-24	线速度	1m/ Min	28696
U0-25	当前上电时间	1 Min	28697
U0-26	当前运行时间	0.1 Min	28698
U0-27	PULSE输入脉冲频率	1Hz	28699
U0-28	通讯设定值	0.01%	28700
U0-29	编码器反馈速度	0.01Hz	28701
U0-30	主频率X显示	0.01Hz	28702
U0-31	辅频率Y显示	0.01Hz	28703
U0-32	查看任意内存地址值	1	28704
U0-33	同步机转子位置	0.1°	28705
U0-34	电机温度值	1℃	28706
U0-35	目标转矩(%)	0.10%	28707
U0-36	旋变位置	1	28708
U0-37	功率因素角度	0.1°	28709
U0-38	ABZ位置	1	28710
U0-39	VF分离目标电压	1V	28711
U0-40	VF分离输出电压	1V	28712
U0-41	DI输入状态直观显示	1	28713

功能码	名称	单位	十进制地址
U0-42	DO输入状态直观显示	1	28714
U0-43	DI输入状态直观显示1	1	28715
U0-44	DI输入状态直观显示2	1	28716
U0-45	故障信息	1	28717
U0-58	Z信号计数器	1	28730
U0-59	设定频率(%)	0.01%	28731
U0-60	运行频率(%)	0.01%	28732
U0-61	变频器状态	1	28733
U0-62	当前故障编码	1	28734
U0-63	下垂控制后运行频率	0.01Hz	38375
U0-64	当前反电动势	0.1V	28736
U0-65	保留	-	-
U0-66	扩展卡型号	100：CANopen 200：Profibus- DP 300：CANlink 400：Profinet 500：EtherCAT	28738
U0-67	扩展卡版本号	0.01	28739
U0-68	变频器状态	1	28740
U0-69	运行频率(Hz)	0.01Hz	28741
U0-70	电机转速	1rpm	28742
U0-71	输出电流	0.1A	28743

在使用YD580-PN卡时，读取的PZD1默认映射为U0-68，PZD2默认映射为U0-69，如果发现状态或运行频率无法正常读取，而PZD3~PZD12能读取，此时可以在变频器上查看PE-20 是否为U0-68，PE-21是否为U0-69，如果不是，请手动将其改为正确值。

说明

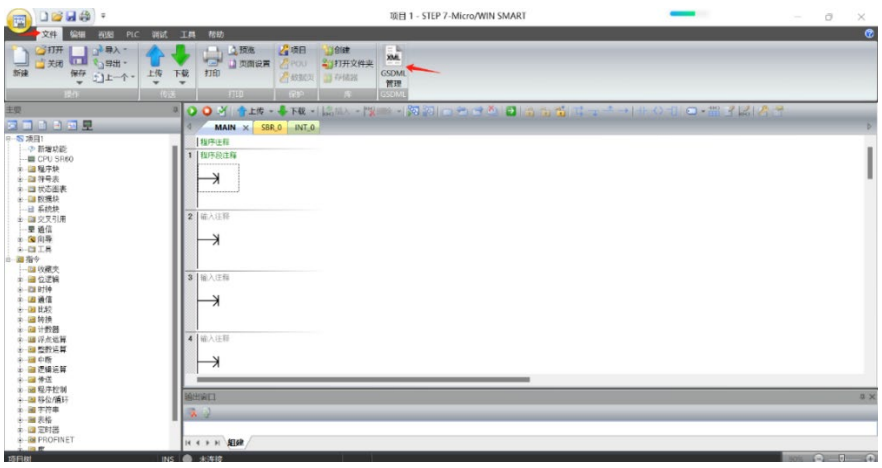
其它类型变频器的PDZ定义请参照其用户手册，此处不再赘述。

通信实例

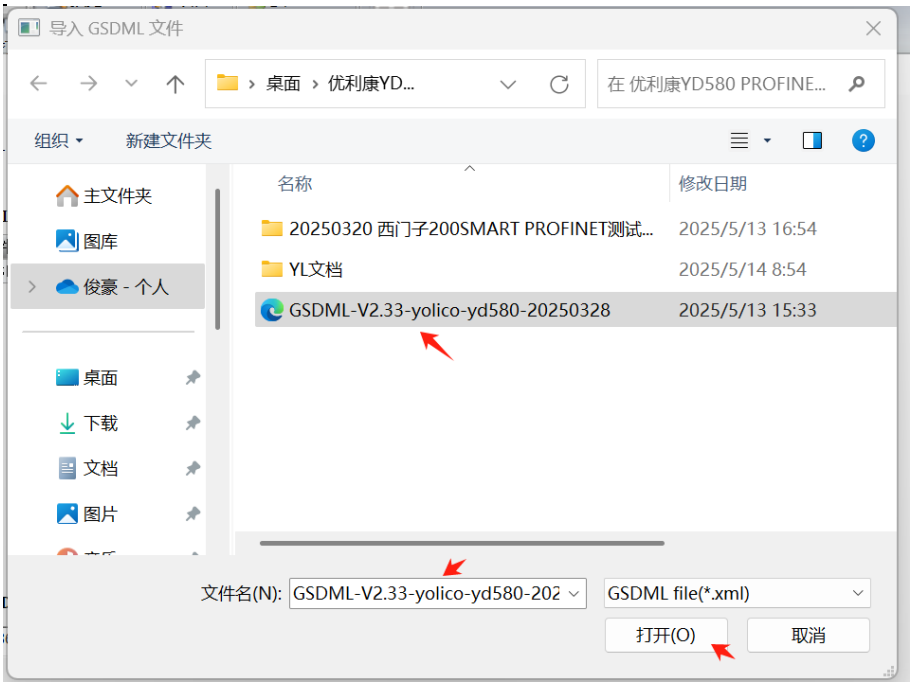
在s7-200 SMART的主站配置从站

在Profinet主站使用时一定要首先配置从站的GSDML文件，使对应从站设备添加到主站的系统中，如已存在可忽略第2步。GSDML文件可以向代理商或厂家索取。

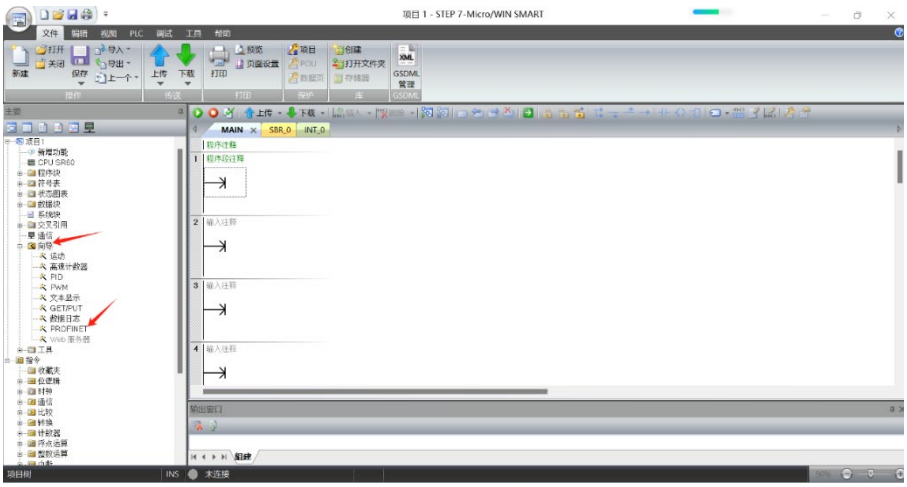
1.在文件菜单下选择GSDML管理



2,.选择电脑中保存的对应的GSD文件，打开



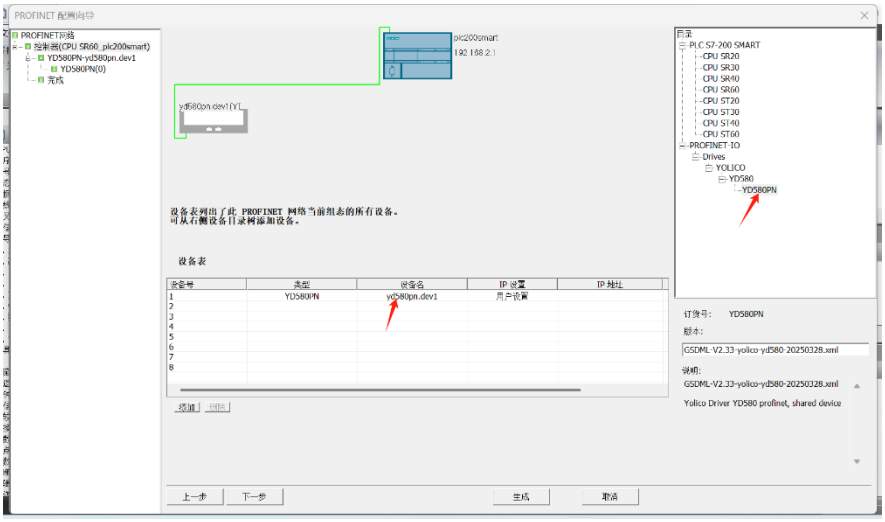
3.双击向导，双击profinet



4..点击控制器



5.把优利康YD580PN,拖入设备表



6．点击查找设备，确认设备名字和图片的设备名一致，如果不一致，点击编辑，设置成一致



11.2.3 YD580-PN卡故障处理

YD580-PN卡在与变频器使用过程中可能出现的故障参见下表。

指示灯		状态描述	处理方法
D1 电源指示灯	常亮	上电正常	无
	常灭	上电不正常	检测安装是否正确
D2 变频器通信状态指示灯	常亮	正常	无
	1 亮 1 灭闪烁	变频器存在故障	清除变频器故障
	2 亮 1 灭闪烁	与变频器通讯异常	设置 P0-28 为 1，确认变频器是否支持 PN 卡
	3 亮 1 灭闪烁	变频器通讯超时	确认变频器软件版本是否支持 PN 卡、变频器软件恢复出厂设置
D3 PLC 通信状态指示灯	常亮	正常	无
	常灭	通讯卡内部错误	尝试重新上下电，更换 PN 卡
	1 亮 1 灭闪烁	未找到主站	确认组态，是否为从站分配设备名称。 确认是否与相应 PLC 连接
	2 亮 1 灭闪烁	通讯错误	检查线路连接，检查网线屏蔽层是否接触完好
	3 亮 1 灭闪烁	配置错误	确认 GSD 是否正确，PLC 配置地址是否存在

11.3 EtherNet/IP通信

11.3.1 概述

本系列变频器支持EtherNet/IP通信协议类型的卡是YD580-EN。

11.3.2 通信配置实例

关于EtherNet/IP通信卡的简介、技术规格、外形尺寸、接口说明请参见《YD580-EN用户手册》。

附录 A　　参数一览表

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P0-00	0xF000	GP类型显示	1：G型（恒转矩负载机型） 2：P型（风机、水泵类负载机型）	1	-	停机更改	*第71页“P0-00”*
P0-01	0xF001	第1电机控制方式	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f（同步机不可用） 3：保留 4：保留 5：PMVVC（仅支持同步机）	0	-	停机更改	*第71页“P0-01”*
P0-02	0xF002	运行指令选择	0：操作面板命令通道（LED灭） 1：端子命令通道 （LED亮） 2：通信命令通道 （LED闪烁）	0	-	停机更改	*第72页“P0-02”*
P0-03	0xF003	主频率源X选择	0：数字设定（预置频率P0-08，UP/DOWN可修改，掉电不记忆） 1：数字设定（预置频率P0-08，UP/DOWN可修改，掉电记忆） 2：AI1 3：AI2 4：AI3 5：PULSE脉冲设定（DI5） 6：多段指令 7：简易PLC 8：PID 9：通信给定 10：保留	0	-	停机更改	*第72页“P0-03”*
P0-04	0xF004	辅助频率源Y选择	0：数字设定（预置频率P0-08，UP/DOWN可修改，掉电不记忆） 1：数字设定（预置频率P0-08，UP/DOWN可修改，掉电记忆） 2：AI1 3：AI2 4：AI3 5：PULSE脉冲设定（DI5） 6：多段指令 7：简易PLC 8：PID 9：通信给定 10：保留	0	-	停机更改	*第74页“P0-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P0-05	0xF005	叠加时辅助频率源Y范围选择	0：相对于最大频率 1：相对于频率源X	0	-	实时更改	*第75页“P0-05”*
P0-06	0xF006	叠加时辅助频率源Y范围	0%~150%	100	%	实时更改	*第75页“P0-06”*
P0-07	0xF007	频率源叠加选择	个位：频率指令选择 0：主频率源X 1：主辅运算结果（运算关系由十位确定） 2：主频率源X与辅助频率源Y切换 3：主频率源X与主辅运算结果切换 4：辅助频率源Y与主辅运算结果切换 十位：频率指令主辅运算关系 0：主+辅 1：主-辅 2：二者最大值 3：二者最小值 4：主 × 辅	0	-	实时更改	*第76页“P0-07”*
P0-08	0xF008	预置频率	0.00Hz~P0-10	50.00	Hz	实时更改	*第77页“P0-08”*
P0-09	0xF009	运行方向	0：与默认方向一致 1：与默认方向相反	0	-	实时更改	*第77页“P0-09”*
P0-10	0xF00A	最大频率	5.00Hz~599.00Hz	50.00	Hz	停机更改	*第77页“P0-10”*
P0-11	0xF00B	上限频率源	0：上限频率(P0-12)设定 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：多段速指令	0	-	停机更改	*第78页“P0-11”*
P0-12	0xF00C	上限频率	P0-14~P0-10	50.00	Hz	实时更改	*第78页“P0-12”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P0-13	0xF00D	上限频率偏置	0.00Hz~P0-10	0.00	Hz	实时更改	*第79页“P0-13”*
P0-14	0xF00E	下限频率	0.00Hz~P0-12	0.00	Hz	实时更改	*第79页“P0-14”*
P0-15	0xF00F	载波频率	0.8kHz~16.0kHz	6.0	kHz	实时更改	*第79页“P0-15”*
P0-16	0xF010	载波频率随温度调整	0：否 1：是	1	-	实时更改	*第79页“P0-16”*
P0-17	0xF011	加速时间1	0.0s~6500.0s	20.0	s	实时更改	*第80页“P0-17”*
P0-18	0xF012	减速时间1	0.0s~6500.0s	20.0	s	实时更改	*第80页“P0-18”*
P0-19	0xF013	加减速时间单位	0：1s 1：0.1s 2：0.01s	1	-	停机更改	*第80页“P0-19”*
P0-21	0xF015	叠加时辅助频率源偏置频率	0.00Hz~P0-10	0.00	Hz	实时更改	*第81页“P0-21”*
P0-22	0xF016	频率指令分辨率	1：0.1Hz 2：0.01Hz	2	-	停机更改	*第81页“P0-22”*
P0-23	0xF017	数字设定频率停机记忆选择	0：不记忆 1：记忆	0	-	实时更改	*第81页“P0-23”*
P0-24	0xF018	电机参数组选择	0：电机参数组1 1：电机参数组2 2：电机参数组3 3：电机参数组4	0	-	停机更改	*第82页“P0-24”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P0-25	0xF019	加减速时间基准频率	0：最大频率(P0-10) 1：设定频率 2：100Hz	0	-	停机更改	*第82页“P0-25”*
P0-26	0xF01A	运行时频率指令UP/DOWN基准	0：运行频率 1：设定频率	0	-	停机更改	*第82页“P0-26”*
P0-27	0xF01B	主频率系数	0.00%~100.00%	10.00	%	实时更改	*第82页“P0-27”*
P0-28	0xF01C	辅助频率系数	0.00%~100.00%	10.00	%	实时更改	*第83页“P0-28”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P0-29	0xF01D	命令源捆绑频率源	个位：操作面板绑定频率源选择 0：无捆绑 1：数字设定频率源 2：AI1 3：AI2 4：AI3 5：PULSE脉冲设定（DI5） 6：多段指令 7：简易PLC 8：PID 9：通信给定 十位：端子绑定频率源选择 0：无捆绑 1：数字设定频率源 2：AI1 3：AI2 4：AI3 5：PULSE脉冲设定（DI5） 6：多段指令 7：简易PLC 8：PID 9：通信给定 百位：通信绑定频率源选择 0：无捆绑 1：数字设定频率源 2：AI1 3：AI2 4：AI3 5：PULSE脉冲设定（DI5） 6：多段指令 7：简易PLC 8：PID 9：通信给定	0	-	停机更改	*第83页“P0-29”*
P1-00	0xF100	电机类型选择	0：普通异步电机 1：变频异步电机 2：永磁同步电机	0	-	停机更改	*第84页“P1-00”*
P1-01	0xF101	电机额定功率	0.1kW~1000.0kW	机型确定	kW	停机更改	*第85页“P1-01”*
P1-02	0xF102	电机额定电压	1V~2000V	机型确定	V	停机更改	*第85页“P1-02”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P1-03	0xF103	电机额定电流	0.1A~6553.5A	机型确定	A	停机更改	*第85页“P1-03”*
P1-04	0xF104	电机额定频率	0.01Hz~P0-10	机型确定	Hz	停机更改	*第86页“P1-04”*
P1-05	0xF105	电机额定转速	1rpm~65535rpm	机型确定	rpm	停机更改	*第86页“P1-05”*
P1-06	0xF106	异步/同步电机定子电阻	0.001Ω~65.535Ω(功率≤55kW) 0.0001Ω~6.5535Ω(功率>55kW)	机型确定	Ω	停机更改	*第86页“P1-06”*
P1-07	0xF107	异步电机转子电阻	0.001Ω~65.535Ω(功率≤55kW) 0.0001Ω~6.5535Ω(功率>55kW)	机型确定	Ω	停机更改	*第86页“P1-07”*
P1-08	0xF108	异步电机漏感抗	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第87页“P1-08”*
P1-09	0xF109	异步电机互感抗	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第87页“P1-09”*
P1-10	0xF10A	异步电机空载电流	0.01A~P1-03(功率≤55kW) 0.1A~P1-03(功率>55kW)	机型确定	A	停机更改	*第87页“P1-10”*
P1-11	0xF10B	异步机铁芯饱和系数1	50.0%~100.0%	86.0	%	实时更改	*第88页“P1-11”*
P1-12	0xF10C	异步机铁芯饱和系数2	100.0%~150.0%	130.0	%	实时更改	*第88页“P1-12”*
P1-13	0xF10D	异步机铁芯饱和系数3	100.0%~170.0%	140.0	%	实时更改	*第88页“P1-13”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P1-14	0xF10E	异步机铁芯饱和系数4	100.0%~180.0%	150.0	%	实时更改	*第88页“P1-14”*
P1-17	0xF111	同步电机D轴电感	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第89页“P1-17”*
P1-18	0xF112	同步电机Q轴电感	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第89页“P1-18”*
P1-19	0xF113	同步电机反电动势系数	0.0V~6553.5V	0.0	V	停机更改	*第89页“P1-19”*
P1-20	0xF114	滤波时间常数(PMVVC使用)	0.003~65.535	0.100	-	实时更改	*第90页“P1-20”*
P1-21	0xF115	振荡抑制增益(PMVVC使用)	0~65535	100	-	实时更改	*第90页“P1-21”*
P1-23	0xF117	摩擦力矩百分比	0.00%~100.00%	0.00	%	停机更改	*第90页“P1-23”*
P1-24	0xF118	电机极对数	0~65535	2	-	实时更改	*第90页“P1-24”*
P1-26	0xF11A	参数辨识运行方向(惯量辨识和同步机)	0：反转运行 1：正转运行	1	-	停机更改	*第90页“P1-26”*
P1-27	0xF11B	编码器线数	1~20000	1024	-	停机更改	*第91页“P1-27”*
P1-28	0xF11C	编码器类型	0：ABZ增量编码器 1：23位编码器 2：旋转变压器	0	-	停机更改	*第91页“P1-28”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P1-30	0xF11E	编码器接线标志	个位：AB信号的方向或旋转方向 0：正向 1：反向 十位：保留	0	-	停机更改	*第91页“P1-30”*
P1-31	0xF11F	编码器零点位置角	0.0°~359.9°	0.0	°	停机更改	*第92页“P1-31”*
P1-32	0xF120	电机齿轮比分子	1~65535	1	-	停机更改	*第92页“P1-32”*
P1-33	0xF121	电机齿轮比分母	1~65535	1	-	停机更改	*第92页“P1-33”*
P1-34	0xF122	旋变极对数	1~32	1	-	停机更改	*第92页“P1-34”*
P1-36	0xF124	PG断线检测使能	个位：AB信号的方向或旋转方向 0：正向 1：反向 十位：保留	1	-	停机更改	*第93页“P1-36”*
P1-37	0xF125	参数辨识选择	0：无操作 1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0) 2：异步机动态参数辨识(支持带负载动态参数辨识) 3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO) 4：异步机动态参数辨识2(增加惯量辨识仅支持FVC) 5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC) 11：同步机带载参数辨识(不调反电动势) 12：同步机空载动态完整参数辨识 13：同步机静态参数辨识(不参数辨识编码器安装角) 14：同步机惯量辨识(仅支持FVC)	0	-	停机更改	*第93页“P1-37”*
P2-00	0xF200	速度环比例增益1	1~200	30	-	实时更改	*第95页“P2-00”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P2-01	0xF201	速度环积分时间1	0.001s~10.000s	0.500	s	实时更改	*第95页“P2-01”*
P2-02	0xF202	切换频率1	0.00Hz~P2-05	5.00	Hz	实时更改	*第95页“P2-02”*
P2-03	0xF203	速度环比例增益2	1~200	20	-	实时更改	*第96页“P2-03”*
P2-04	0xF204	速度环积分时间2	0.001s~10.000s	1.000	s	实时更改	*第96页“P2-04”*
P2-05	0xF205	切换频率2	P2-02~P0-10	10.00	Hz	实时更改	*第96页“P2-05”*
P2-06	0xF206	矢量控制转差增益	50%~200%	100	%	实时更改	*第97页“P2-06”*
P2-07	0xF207	速度反馈滤波时间	0.000s~0.100s	0.004	s	实时更改	*第97页“P2-07”*
P2-08	0xF208	VC减速过励磁增益	0~200	64	-	实时更改	*第97页“P2-08”*
P2-09	0xF209	速度控制下转矩上限源（电动）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2)	0	-	实时更改	*第98页“P2-09”*
P2-10	0xF20A	速度控制下转矩上限设定（电动）	0.0%~200.0%	150.0	%	实时更改	*第98页“P2-10”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P2-11	0xF20B	速度控制下转矩上限源（发电）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2) 8：上限数字设定（P2-12）	0	-	实时更改	*第99页“P2-11”*
P2-12	0xF20C	速度控制下转矩上限设定（发电）	0.0%~200.0%	150.0	%	实时更改	*第100页“P2-12”*
P2-13	0xF20D	低速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第100页“P2-13”*
P2-14	0xF20E	低速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第100页“P2-14”*
P2-15	0xF20F	高速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第101页“P2-15”*
P2-16	0xF210	高速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第101页“P2-16”*
P2-17	0xF211	零速锁定速度环Kp	1~100	30	-	实时更改	*第101页“P2-17”*
P2-18	0xF212	零速锁定速度环Ti	0.001s~10.000s	0.500	s	实时更改	*第101页“P2-18”*
P2-19	0xF213	惯量补偿增益	1~200	1	-	实时更改	*第102页“P2-19”*
P2-20	0xF214	零速锁定速度环切换频率	0.00Hz~P2-02	0.05	Hz	实时更改	*第102页“P2-20”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P2-21	0xF215	最大输出电压系数	100~110	100	-	实时更改	*第102页“P2-21”*
P2-22	0xF216	输出电压滤波时间	0.000s~0.010s	0.000	s	实时更改	*第102页“P2-22”*
P2-23	0xF217	零速锁定	0：不使能 1：使能	0	-	停机更改	*第103页“P2-23”*
P2-24	0xF218	矢量过压抑制KP	0~1000	40	-	实时更改	*第103页“P2-24”*
P2-25	0xF219	加速补偿增益	0~200	0	-	实时更改	*第103页“P2-25”*
P2-26	0xF21A	加速度补偿滤波时间	0~500	10	-	实时更改	*第103页“P2-26”*
P2-27	0xF21B	矢量过压抑制使能	0：不使能 1：使能	1	-	实时更改	*第104页“P2-27”*
P2-28	0xF21C	设定转矩滤波截止频率	50Hz~1000Hz	500	Hz	停机更改	*第104页“P2-28”*
P2-29	0xF21D	同步机初始位置角检测电流	50~180	80	-	实时更改	*第104页“P2-29”*
P2-30	0xF21E	速度环参数自动计算使能	0：不使能 1：使能	0	-	停机更改	*第104页“P2-30”*
P2-31	0xF21F	期望速度环带宽(高速)	0Hz~3Hz	0	Hz	停机更改	*第105页“P2-31”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P2-32	0xF220	期望速度环带宽(低速)	1Hz~10000Hz	100	Hz	实时更改	*第105页“P2-32”*
P2-33	0xF221	期望速度环带宽(零速)	1Hz~10000Hz	100	Hz	实时更改	*第105页“P2-33”*
P2-34	0xF222	期望速度环阻尼比:(一般不更改)	0.100~65.000	1.000	-	实时更改	*第105页“P2-34”*
P2-35	0xF223	系统惯量(等效为启动时间)	0.001s~50.000s	0.100	s	停机更改	*第105页“P2-35”*
P2-36	0xF224	电机单机惯量（$kg \cdot m^2$）	0.001~50.000	0.001	-	停机更改	*第106页“P2-36”*
P2-37	0xF225	惯量辨识最大频率	20%~100%	80	%	停机更改	*第106页“P2-37”*
P2-38	0xF226	惯量辨识加速时间	1.0s~50.0s	10.0	s	停机更改	*第106页“P2-38”*
P2-39	0xF227	速度环动态优化测试带宽1	1.0Hz~200.0Hz	5.0	Hz	不可更改	*第106页“P2-39”*
P2-40	0xF228	速度环动态优化测试带宽2	1.0Hz~200.0Hz	10.0	Hz	不可更改	*第107页“P2-40”*
P2-41	0xF229	速度环动态优化测试带宽3	1.0Hz~100.0Hz	15.0	Hz	不可更改	*第107页“P2-41”*
P2-42	0xF22A	速度环动态优化测试带宽4	1.0Hz~200.0Hz	20.0	Hz	不可更改	*第107页“P2-42”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P2-43	0xF22B	惯量辨识及动态设定速度	0~100	30	-	停机更改	*第107页“P2-43”*
P2-44	0xF22C	转子时间常数校验使能	0：不使能 1：使能	0	-	不可更改	*第108页“P2-44”*
P2-45	0xF22D	转子时间常数校验转矩幅值	10%~100%	30	%	不可更改	*第108页“P2-45”*
P2-46	0xF22E	转子时间常数校验次数	1~6	3	-	不可更改	*第108页“P2-46”*
P2-47	0xF22F	惯量辨识使能	0：不使能 1：使能	0	-	停机更改	*第108页“P2-47”*
P2-48	0xF230	惯量辨识速度环带宽设置值	0.1Hz~100.0Hz	10.0	Hz	停机更改	*第109页“P2-48”*
P2-49	0xF231	反电势计算使能	0：不使能 1：使能	0	-	不可更改	*第109页“P2-49”*
P2-50	0xF232	惯量辨识模式	0：加减速模式 1：三角波模式	0	-	停机更改	*第109页“P2-50”*
P2-51	0xF233	惯量辨识加减速系数	0.1~10.0	1.0	-	停机更改	*第109页“P2-51”*
P2-52	0xF234	解耦控制使能	0：不使能 1：使能	0	-	停机更改	*第110页“P2-52”*
P2-53	0xF235	发电功率限制使能	0：不使能 1：使能	0	-	停机更改	*第110页“P2-53”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P2-54	0xF236	发电功率限制	0.0%~200.0%	机型确定	%	停机更改	*第110页“P2-54”*
P2-55	0xF237	闭环矢量磁通闭环与转矩线性度优化选择	个位：转矩模式磁通闭环使能 0：不使能 1：使能 十位：速度模式磁通闭环使能 0：不使能 1：使能 百位：速度模式转矩上限转矩线性化使能 0：不使能 1：使能 千位：转矩基值选择 0：选择电机额定电流 1：选择电机额定转矩电流	10	-	停机更改	*第110页“P2-55”*
P2-56	0xF238	变频器输出电流上限	0.0%~170.0%	150.0	%	停机更改	*第111页“P2-56”*
P3-00	0xF300	V/f曲线设定	0：直线V/f曲线 1：多点V/f曲线 2：平方V/f曲线 3：1.2次V/f曲线 4：1.4次V/f曲线 6：1.6次V/f曲线 8：1.8次V/f曲线 10：V/f完全分离模式 11：V/f半分离模式	0	-	停机更改	*第111页“P3-00”*
P3-01	0xF301	转矩提升	0.0%~30.0%	机型确定	%	实时更改	*第112页“P3-01”*
P3-02	0xF302	转矩提升截止频率	0.00Hz~P0-10	50.00	Hz	停机更改	*第113页“P3-02”*
P3-03	0xF303	多点V/f频率点1	0.00Hz~P3-05	0.00	Hz	停机更改	*第113页“P3-03”*
P3-04	0xF304	多点V/f电压点1	0.0%~100.0%	0.0	%	停机更改	*第113页“P3-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P3-05	0xF305	多点V/f频率点2	P3-03~P3-07	0.00	Hz	停机更改	*第113页“P3-05”*
P3-06	0xF306	多点V/f电压点2	0.0%~100.0%	0.0	%	停机更改	*第113页“P3-06”*
P3-07	0xF307	多点V/f频率点3	P3-05~P1-04	0.00	Hz	停机更改	*第114页“P3-07”*
P3-08	0xF308	多点V/f电压点3	0.0%~100.0%	0.0	%	停机更改	*第114页“P3-08”*
P3-09	0xF309	V/f转差补偿增益	0.0%~200.0%	0.0	%	实时更改	*第114页“P3-09”*
P3-10	0xF30A	V/f过励磁增益	0~200	64	-	实时更改	*第114页“P3-10”*
P3-11	0xF30B	V/f振荡抑制增益	0~100	机型确定	-	实时更改	*第115页“P3-11”*
P3-12	0xF30C	振荡抑制增益模式	0：无效 1：保留 2：保留 3：有效	3	-	停机更改	*第115页“P3-12”*
P3-13	0xF30D	V/f分离的电压源	0：数字设定（P3-14） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：多段指令 6：简易PLC 7：PID 8：通信给定（1000H）	0	-	实时更改	*第115页“P3-13”*
P3-14	0xF30E	V/f分离的电压数字设定	0V~P1-02	0	V	实时更改	*第116页“P3-14”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P3-15	0xF30F	V/f分离的电压加速时间	0.0s~1000.0s	0.0	s	实时更改	*第117页“P3-15”*
P3-16	0xF310	V/f分离的电压减速时间	0.0s~1000.0s	0.0	s	实时更改	*第117页“P3-16”*
P3-17	0xF311	V/f分离停机方式选择	0：频率/电压独立减至0 1：电压减为0后频率再减	0	-	停机更改	*第117页“P3-17”*
P3-18	0xF312	V/f过流失速动作电流	50%~200%	150	%	停机更改	*第117页“P3-18”*
P3-19	0xF313	V/f过流失速使能	0：不使能 1：使能	1	-	停机更改	*第118页“P3-19”*
P3-20	0xF314	V/f过流失速抑制增益	0~100	20	-	实时更改	*第118页“P3-20”*
P3-21	0xF315	V/f倍速过流失速动作电流补偿系数	50~200	50	-	停机更改	*第118页“P3-21”*
P3-22	0xF316	V/f过压失速动作电压	200.0V~2000.0V	770.0	V	停机更改	*第119页“P3-22”*
P3-23	0xF317	V/f过压失速使能	0：不使能 1：使能	1	-	停机更改	*第119页“P3-23”*
P3-24	0xF318	V/f过压失速抑制频率增益	0~100	30	-	实时更改	*第119页“P3-24”*
P3-25	0xF319	V/f过压失速抑制电压增益	0~100	30	-	实时更改	*第120页“P3-25”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P3-26	0xF31A	过压失速最大上升限制频率	0~50	5	-	停机更改	*第120页“P3-26”*
P3-27	0xF31B	转差补偿时间常数	0.1Hz~10.0Hz	0.5	Hz	实时更改	*第120页“P3-27”*
P3-28	0xF31C	V/f参数整定惯量系数	0.00~10.00	0.10	-	停机更改	*第120页“P3-28”*
P3-33	0xF321	在线转矩补偿增益	80~150	100	-	停机更改	*第121页“P3-33”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P4-00	0xF400	DI1端子功能选择	0：无功能 1：正转运行（FWD） 2：反转运行（REV） 3：三线式运行控制 4：正转点动（FJOG） 5：反转点动（RJOG） 6：端子UP 7：端子DOWN 8：自由停机 9：故障复位（RESET） 10：运行暂停 11：外部故障常开输入 12：多段指令端子1 13：多段指令端子2 14：多段指令端子3 15：多段指令端子4 16：加减速选择端子1 17：加减速选择端子2 18：频率源切换 19：UP/DOWN设定清零（端子、键盘） 20：运行命令切换端子 21：加减速禁止 22：PID暂停 23：PLC状态复位 24：摆频暂停 25：计数器输入（DI5） 26：计数器复位 27：长度计数输入（DI5） 28：长度复位 29：转矩控制禁止 30：脉冲输入 31：保留 32：立即直流制动 33：外部故障常闭输入 34：频率修改使能 35：PID作用方向取反 36：外部停机端子1 37：控制命令切换端子2 38：PID积分暂停 39：频率源X与预置频率切换 40：频率源Y与预置频率切换 续下	1	-	停机更改	*第121页“P4-00”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
同上	同上	同上	续上 41：电机选择端子1 42：零伺服使能 43：PID参数切换 44：用户自定义故障1 45：用户自定义故障2 46：速度控制/转矩控制切换 47：紧急停机 48：外部停机端子2 49：减速直流制动 50：本次运行时间清零 51：两线式/三线式切换 52：电磁封星 53：厚度叠加 54：卷径复位 55：初始卷径1 56：初始卷径2 57：预驱动 58：收放卷切换 59：卷径计算停止 60：退出张力模式 61：端子张力提升 62：厚度选择1 63：厚度选择2 90：水冷系统故障 91：低液位故障 92：计算圈数复位 93：保留 94：开闸状态反馈 95：关闸状态反馈 96：电缆卷筒收放卷切换 97：电机选择端子2	同上	同上	同上	同上
P4-01	0xF401	DI2端子功能选择	同P4-00	4	-	停机更改	*第128页“P4-01”*
P4-02	0xF402	DI3端子功能选择	同P4-00	9	-	停机更改	*第130页“P4-02”*
P4-03	0xF403	DI4端子功能选择	同P4-00	12	-	停机更改	*第132页“P4-03”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P4-04	0xF404	DI5端子功能选择	同P4-00	13	-	停机更改	第134页“P4-04”
P4-05	0xF405	DI6端子功能选择	同P4-00	0	-	停机更改	第136页“P4-05”
P4-06	0xF406	DI7端子功能选择	同P4-00	0	-	停机更改	第138页“P4-06”
P4-07	0xF407	DI8端子功能选择	同P4-00	0	-	停机更改	第140页“P4-07”
P4-08	0xF408	DI9端子功能选择	同P4-00	0	-	停机更改	第142页“P4-08”
P4-09	0xF409	DI10端子功能选择	同P4-00	0	-	停机更改	第144页“P4-09”
P4-10	0xF40A	DI滤波时间	0.000s~1.000s	0.010	s	实时更改	第146页“P4-10”
P4-11	0xF40B	端子命令方式	0：两线式1 1：两线式2 2：三线式1 3：三线式2	0	-	停机更改	第147页“P4-11”
P4-12	0xF40C	端子UP/DOWN变化率	0.001Hz/s~65.535Hz/s	1.000	Hz/s	实时更改	第147页“P4-12”
P4-13	0xF40D	AI曲线1最小输入	-10.00V~P4-15	-10.00	V	实时更改	第148页“P4-13”
P4-14	0xF40E	AI曲线1最小输入对应设定	-100.0%~100.0%	-100.0	%	实时更改	第148页“P4-14”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P4-15	0xF40F	AI曲线1最大输入	P4-13~10.00V	10.00	V	实时更改	*第148页“P4-15”*
P4-16	0xF410	AI曲线1最大输入对应设定	-100.0%~100.0%	100.0	%	实时更改	*第148页“P4-16”*
P4-17	0xF411	AI1滤波时间	0.00s~10.00s	0.10	s	实时更改	*第149页“P4-17”*
P4-18	0xF412	AI曲线2最小输入	-10.00V~P4-20	-10.00	V	实时更改	*第149页“P4-18”*
P4-19	0xF413	AI曲线2最小输入对应设定	-100.0%~100.0%	-100.0	%	实时更改	*第149页“P4-19”*
P4-20	0xF414	AI曲线2最大输入	P4-18~10.00V	10.00	V	实时更改	*第149页“P4-20”*
P4-21	0xF415	AI曲线2最大输入对应设定	-100.0%~100.0%	100.0	%	实时更改	*第150页“P4-21”*
P4-22	0xF416	AI2滤波时间	0.00s~10.00s	0.10	s	实时更改	*第150页“P4-22”*
P4-23	0xF417	AI曲线3最小输入	-10.00V~P4-25	-10.00	V	实时更改	*第150页“P4-23”*
P4-24	0xF418	AI曲线3最小输入对应设定	-100.0%~100.0%	-100.0	%	实时更改	*第151页“P4-24”*
P4-25	0xF419	AI曲线3最大输入	P4-23~10.00V	10.00	V	实时更改	*第151页“P4-25”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P4-26	0xF41A	AI曲线3最大输入对应设定	-100.0%~100.0%	100.0	%	实时更改	*第151页“P4-26”*
P4-27	0xF41B	AI3滤波时间	0.00s~10.00s	0.10	s	实时更改	*第151页“P4-27”*
P4-28	0xF41C	PULSE最小输入	0.00kHz~P4-30	0.00	kHz	实时更改	*第152页“P4-28”*
P4-29	0xF41D	PULSE最小输入对应设定	-100.0%~100.0%	0.0	%	实时更改	*第152页“P4-29”*
P4-30	0xF41E	PULSE最大输入	P4-28~100.00kHz	50.00	kHz	实时更改	*第152页“P4-30”*
P4-31	0xF41F	PULSE最大输入设定	-100.0%~100.0%	100.0	%	实时更改	*第152页“P4-31”*
P4-32	0xF420	PULSE滤波时间	0.00s~10.00s	0.10	s	实时更改	*第153页“P4-32”*
P4-33	0xF421	AI曲线选择	个位：AI1 1：曲线1（2点，见P4-13~P4-16） 2：曲线2（2点，见P4-18~P4-21） 3：曲线3（2点，见P4-23~P4-26） 4：曲线4（4点，见A6-00~A6-07） 5：曲线5（4点，见A6-08~A6-15） 十位：AI2 1：曲线1（2点，见P4-13~P4-16） 2：曲线2（2点，见P4-18~P4-21） 3：曲线3（2点，见P4-23~P4-26） 4：曲线4（4点，见A6-00~A6-07） 5：曲线5（4点，见A6-08~A6-15） 百位：AI3 1：曲线1（2点，见P4-13~P4-16） 2：曲线2（2点，见P4-18~P4-21） 3：曲线3（2点，见P4-23~P4-26） 4：曲线4（4点，见A6-00~A6-07） 5：曲线5（4点，见A6-08~A6-15）	0x321	-	实时更改	*第153页“P4-33”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P4-34	0xF422	AI低于最小输入设定选择	个位：AI1 0：对应最小输入设定 1：0.0% 十位：AI2 0：对应最小输入设定 1：0.0% 百位：AI3 0：对应最小输入设定 1：0.0%	0x0	-	实时更改	*第154页“P4-34”*
P4-35	0xF423	DI1延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第154页“P4-35”*
P4-36	0xF424	DI2延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第154页“P4-36”*
P4-37	0xF425	DI3延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第155页“P4-37”*
P4-38	0xF426	DI输入端子有效状态设定1	个位：DI1端子有效状态设定 0：高电平有效 1：低电平有效 十位：DI2端子有效状态设定 0：高电平有效 1：低电平有效 百位：DI3端子有效状态设定 0：高电平有效 1：低电平有效 千位：DI4端子有效状态设定 0：高电平有效 1：低电平有效 万位：DI5端子有效状态设定 0：高电平有效 1：低电平有效	0	-	停机更改	*第155页“P4-38”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P4-39	0xF427	DI输入端子有效状态设定2	个位：DI6端子有效状态设定 0：高电平有效 1：低电平有效 十位：DI7端子有效状态设定 0：高电平有效 1：低电平有效 百位：DI8端子有效状态设定 0：高电平有效 1：低电平有效 千位：DI9端子有效状态设定 0：高电平有效 1：低电平有效 万位：DI10端子有效状态设定 0：高电平有效 1：低电平有效	0	-	停机更改	*第156页“P4-39”*
P4-41	0xF429	DO1端子输出模式选择	0：普通DO输出 1：FMP输出	0	-	停机更改	*第156页“P4-41”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-01	0xF501	扩展卡RELAY输出功能选择	0：无输出 1：变频器运行中 2：故障输出(故障停机) 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定计数值到达 9：指定计数值到达 10：长度到达 11：PLC循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达(运行有关) 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时） 24：累计上电时间到达 25：频率水平检测FDT2输出 26：频率1到达输出 27：频率2到达输出 28：电流1达到输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达（停机也输出） 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3	0	-	实时更改	*第157页“P5-01”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-02	0xF502	控制板RELAY1功能选择（T/A1-T/ B1-T/C1）	0：无输出 1：变频器运行中 2：故障输出(故障停机) 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定计数值到达 9：指定计数值到达 10：长度到达 11：PLC循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达(运行有关) 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时） 24：累计上电时间到达 25：频率水平检测FDT2输出 26：频率1到达输出 27：频率2到达输出 28：电流1达到输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达（停机也输出） 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3	2	-	实时更改	*第161页“P5-02”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-03	0xF503	控制板RELAY2功能选择（T/A2-T/C2）	0：无输出 1：变频器运行中 2：故障输出(故障停机) 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定计数值到达 9：指定计数值到达 10：长度到达 11：PLC循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达(运行有关) 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时） 24：累计上电时间到达 25：频率水平检测FDT2输出 26：频率1到达输出 27：频率2到达输出 28：电流1达到输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达（停机也输出） 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3	0	-	实时更改	*第164页“P5-03”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-04	0xF504	DO1输出功能选择	0：无输出 1：变频器运行中 2：故障输出(故障停机) 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定计数值到达 9：指定计数值到达 10：长度到达 11：PLC循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达(运行有关) 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时） 24：累计上电时间到达 25：频率水平检测FDT2输出 26：频率1到达输出 27：频率2到达输出 28：电流1达到输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达（停机也输出） 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3	1	-	实时更改	*第166页“P5-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-05	0xF505	扩展卡DO2输出选择	0：无输出 1：变频器运行中 2：故障输出(故障停机) 3：频率水平检测FDT1输出 4：频率到达 5：零速运行中（停机时不输出） 6：电机过载预报警 7：变频器过载预报警 8：设定计数值到达 9：指定计数值到达 10：长度到达 11：PLC循环完成 12：累计运行时间到达 13：频率限定中 14：转矩限定中 15：运行准备就绪 16：AI1>AI2 17：上限频率到达 18：下限频率到达(运行有关) 19：欠压状态输出 20：通信设定 21：保留 22：保留 23：零速运行中2（停机时） 24：累计上电时间到达 25：频率水平检测FDT2输出 26：频率1到达输出 27：频率2到达输出 28：电流1达到输出 29：电流2到达输出 30：定时达到输出 31：AI1输入超限 32：变频器输出掉载 33：反向运行中 34：零电流状态 35：模块温度到达 36：输出电流超限 37：下限频率到达（停机也输出） 38：异常输出（产生故障或警告时直接输出） 39：电流过温预报警 40：本次运行时间到达 41：故障输出2 42：故障输出3	4	-	实时更改	*第168页“P5-05”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-06	0xF506	FMP输出功能选择	0：运行频率 1：设定频率 2：输出电流 3：输出转矩 4：输出功率 5：输出电压 6：脉冲输入(100.0%对应100.0kHz) 7：AI1 8：AI2 9：AI3 10：长度 11：计数值 12：通信设定 13：电机转速 14：输出电流(100.0%对应1000.0A) 15：输出电压(100.0%对应1000.0V) 16：输出转矩（带方向） 19：锥度输出 20：卷径输出 21：张力输出 22：编码器反馈频率	0	-	实时更改	*第170页“P5-06”*
P5-07	0xF507	AO1输出功能选择	0：运行频率 1：设定频率 2：输出电流 3：输出转矩 4：输出功率 5：输出电压 6：脉冲输入(100.0%对应100.0kHz) 7：AI1 8：AI2 9：AI3 10：长度 11：计数值 12：通信设定 13：电机转速 14：输出电流(100.0%对应1000.0A) 15：输出电压(100.0%对应1000.0V) 16：输出转矩（带方向） 19：锥度输出 20：卷径输出 21：张力输出 22：编码器反馈频率	0	-	实时更改	*第171页“P5-07”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-08	0xF508	AO2输出选择	0：运行频率 1：设定频率 2：输出电流 3：输出转矩 4：输出功率 5：输出电压 6：脉冲输入(100.0%对应100.0kHz) 7：AI1 8：AI2 9：AI3 10：长度 11：计数值 12：通信设定 13：电机转速 14：输出电流(100.0%对应1000.0A) 15：输出电压(100.0%对应1000.0V) 16：输出转矩（带方向） 19：锥度输出 20：卷径输出 21：张力输出 22：编码器反馈频率	1	-	实时更改	*第173页“P5-08”*
P5-09	0xF509	FMP输出最大频率	0.01kHz~100.00kHz	50.00	kHz	实时更改	*第175页“P5-09”*
P5-10	0xF50A	AO1零偏系数	-100.0%~100.0%	0.0	%	实时更改	*第175页“P5-10”*
P5-11	0xF50B	AO1增益	-10.00~10.00	1.00	-	实时更改	*第176页“P5-11”*
P5-12	0xF50C	AO2零偏系数	-100.0%~100.0%	0.0	%	实时更改	*第176页“P5-12”*
P5-13	0xF50D	AO2增益	-10.00~10.00	1.00	-	实时更改	*第176页“P5-13”*
P5-17	0xF511	扩展卡RELAY输出延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第177页“P5-17”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P5-18	0xF512	控制板RELAY1输出延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第177页“P5-18”*
P5-19	0xF513	控制板RELAY2输出延时时间	0.0s~3600.0s	0.0	s	实时更改	*第177页“P5-19”*
P5-20	0xF514	DO1输出延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第178页“P5-20”*
P5-21	0xF515	扩展卡DO2输出延迟时间	0.0s~3600.0s	0.0	s	实时更改	*第178页“P5-21”*
P5-22	0xF516	DO输出端子有效状态选择	个位：扩展卡Relay 0：正逻辑 1：反逻辑 十位：控制板Relay1 0：正逻辑 1：反逻辑 百位：控制板Relay2 0：正逻辑 1：反逻辑 千位：控制板DO1 0：正逻辑 1：反逻辑 万位：扩展卡DO2 0：正逻辑 1：反逻辑	0	-	实时更改	*第178页“P5-22”*
P6-00	0xF600	启动方式	0：直接启动 1：转速跟踪启动 2：异步机矢量预励磁启动（异步电机）	0	-	实时更改	*第179页“P6-00”*
P6-01	0xF601	转速跟踪模式	0：从停机频率开始 1：从50Hz开始 2：从最大频率开始 3：保留	0	-	停机更改	*第180页“P6-01”*
P6-02	0xF602	转速跟踪快慢	1~100	20	-	实时更改	*第180页“P6-02”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P6-03	0xF603	启动频率	0.00Hz~10.00Hz	0.00	Hz	实时更改	第180页“P6-03”
P6-04	0xF604	启动频率保持时间	0.0s~100.0s	0.0	s	停机更改	第181页“P6-04”
P6-05	0xF605	启动直流制动电流/预励磁电流	0%~150%	0	%	停机更改	第181页“P6-05”
P6-06	0xF606	启动直流制动时间/预励磁时间	0.0s~100.0s	0.0	s	停机更改	第181页“P6-06”
P6-07	0xF607	加减速方式	0：直线加减速 1：S曲线加减速	0	-	停机更改	第182页“P6-07”
P6-08	0xF608	S曲线开始段时间比例	0.0%~70.0%	30.0	%	停机更改	第182页“P6-08”
P6-09	0xF609	S曲线结束段时间比例	0.0%~70.0%	30.0	%	停机更改	第182页“P6-09”
P6-10	0xF60A	停机方式	0：减速停机 1：自由停机	0	-	实时更改	第182页“P6-10”
P6-11	0xF60B	停机直流制动起始频率	0.00Hz~P0-10	0.00	Hz	实时更改	第183页“P6-11”
P6-12	0xF60C	停机直流制动等待时间	0.0s~100.0s	0.0	s	实时更改	第183页“P6-12”
P6-13	0xF60D	停机直流制动电流	0%~150%	0	%	实时更改	第183页“P6-13”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P6-14	0xF60E	停机直流制动时间	0.0s~100.0s	0.0	s	实时更改	*第184页“P6-14”*
P6-15	0xF60F	制动使用率	0%~100%	100	%	停机更改	*第184页“P6-15”*
P6-16	0xF610	转速跟踪闭环电流KP	0~1000	500	-	实时更改	*第184页“P6-16”*
P6-17	0xF611	转矩跟踪闭环电流KI	0~1000	800	-	实时更改	*第184页“P6-17”*
P6-18	0xF612	转速跟踪电流大小	30~200	100	-	实时更改	*第185页“P6-18”*
P6-21	0xF615	去磁时间	0.00s~10.00s	1.00	s	实时更改	*第185页“P6-21”*
P6-22	0xF616	启动预转矩设定	0.0%~200.0%	0.0	%	实时更改	*第185页“P6-22”*
P6-26	0xF61A	电磁封星电流	0%~200%	100	%	实时更改	*第185页“P6-26”*
P6-27	0xF61B	启动电磁封星时间	0.0s~100.0s	0.0	s	停机更改	*第186页“P6-27”*
P6-28	0xF61C	停机电磁封星时间	0.0s~100.0s	0.0	s	停机更改	*第186页“P6-28”*
P6-29	0xF61D	电磁封星电压裕量	20.0V~100.0V	20.0	V	停机更改	*第186页“P6-29”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P6-30	0xF61E	同步机转速追踪试探电流	5.0~50.0	10.0	-	停机更改	*第186页“P6-30”*
P6-31	0xF61F	同步机转速追踪最低跟踪频率	0.0~100.0	0.0	-	停机更改	*第187页“P6-31”*
P6-32	0xF620	同步机转速跟踪角度补偿	0~360	0	-	停机更改	*第187页“P6-32”*
P6-33	0xF621	同步机转速跟踪比例	0.1~10.0	1.0	-	停机更改	*第187页“P6-33”*
P6-34	0xF622	同步机转速追踪积分	0.1~10.0	1.0	-	停机更改	*第187页“P6-34”*
P6-35	0xF623	直流制动最大电流限制	80%~135%	80	%	停机更改	*第187页“P6-35”*
P6-36	0xF624	速度环前馈	-200.0%~200.0%	0.0	%	实时更改	*第188页“P6-36”*
P7-01	0xF701	MF.K键功能选择	0：MF.K键无效 1：操作面板命令通道与远程命令通道（端子命令通道或通信命令通道）切换 2：正反转切换 3：正转点动 4：反转点动	0	-	停机更改	*第188页“P7-01”*
P7-02	0xF702	STOP/RESET键功能	0：只在键盘操作方式下,STOP/RESET键停机功能有效 1：在任何操作方式下,STOP/RESET键停机功能有效	0	-	实时更改	*第189页“P7-02”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P7-03	0xF703	LED运行显示参数1	bit0：运行频率（Hz） bit1：设定频率（Hz） bit2：母线电压（V） bit3：输出电压（V） bit4：输出电流（A） bit5：输出功率（kW） bit6：输出转矩（%） bit7：DI输入状态 bit8：DO输出状态 bit9：AI1电压（V） bit10：AI2电压（V） bit11：AI3电压（V） bit12：计数值 bit13：长度值 bit14：负载速度显示 bit15：PID设定	0x1F	-	实时更改	*第189页“P7-03”*
P7-04	0xF704	LED运行显示参数2	bit0：PID反馈 bit1：PLC阶段 bit2：PULSE输入脉冲频率（kHz） bit3：运行频率2（Hz） bit4：剩余运行时间 bit5：AI1校正前电压（V） bit6：AI2校正前电压（V） bit7：AI3校正前电压（V） bit8：线速度 bit9：当前上电时间（h） bit10：当前运行时间（min） bit11：PULSE输入脉冲频率（Hz） bit12：通信设定值 bit13：实际反馈速度（Hz） bit14：主频率X显示（Hz） bit15：辅频率Y显示（Hz）	0x0	-	实时更改	*第190页“P7-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P7-05	0xF705	LED停机显示参数	bit0：设定频率（Hz） bit1：母线电压（V） bit2：DI输入状态 bit3：DO输出状态 bit4：AI1电压（V） bit5：AI2电压（V） bit6：AI3电压（V） bit7：计数值 bit8：长度值 bit9：PLC阶段 bit10：负载速度显示 bit11：PID设定 bit12：PULSE输入脉冲频率（kHz） bit13：保留 bit14：保留 bit15：保留	0x33	-	实时更改	*第190页“P7-05”*
P7-06	0xF706	负载速度显示系数	0.0000~6.5000	1.0000	-	实时更改	*第191页“P7-06”*
P7-07	0xF707	逆变器模块散热器温度	-20°C~120°C	0	°C	不可更改	*第191页“P7-07”*
P7-08	0xF708	产品号	0~999	0	-	不可更改	*第192页“P7-08”*
P7-09	0xF709	累计运行时间	0h~65535h	0	h	不可更改	*第192页“P7-09”*
P7-10	0xF70A	性能软件版本号	0.00~0.00	0.00	-	不可更改	*第192页“P7-10”*
P7-11	0xF70B	功能软件版本号	0.00~0.00	0.00	-	不可更改	*第192页“P7-11”*
P7-12	0xF70C	负载速度显示小数点位数	0：0位小数位 1：1位小数位 2：2位小数位 3：3位小数位	1	-	实时更改	*第193页“P7-12”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P7-13	0xF70D	累计上电时间	0h~65535h	0	h	不可更改	*第193页“P7-13”*
P7-14	0xF70E	累计耗电量	0kWh~65535kWh	0	kWh	不可更改	*第193页“P7-14”*
P7-15	0xF70F	性能临时版本号	0.00~0.00	0.00	-	不可更改	*第194页“P7-15”*
P7-16	0xF710	功能临时版本号	0.00~0.00	0.00	-	不可更改	*第194页“P7-16”*
P8-00	0xF800	点动运行频率	0.00Hz~P0-10	2.00	Hz	实时更改	*第194页“P8-00”*
P8-01	0xF801	点动加速时间	0.0s~6500.0s	20.0	s	实时更改	*第194页“P8-01”*
P8-02	0xF802	点动减速时间	0.0s~6500.0s	20.0	s	实时更改	*第195页“P8-02”*
P8-03	0xF803	加速时间2	0.0s~6500.0s	20.0	s	实时更改	*第195页“P8-03”*
P8-04	0xF804	减速时间2	0.0s~6500.0s	20.0	s	实时更改	*第195页“P8-04”*
P8-05	0xF805	加速时间3	0.0s~6500.0s	20.0	s	实时更改	*第195页“P8-05”*
P8-06	0xF806	减速时间3	0.0s~6500.0s	20.0	s	实时更改	*第196页“P8-06”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P8-07	0xF807	加速时间4	0.0s~6500.0s	20.0	s	实时更改	*第196页“P8-07”*
P8-08	0xF808	减速时间4	0.0s~6500.0s	20.0	s	实时更改	*第196页“P8-08”*
P8-09	0xF809	跳跃频率1	0.00Hz~P0-10	0.00	Hz	实时更改	*第196页“P8-09”*
P8-10	0xF80A	跳跃频率2	0.00Hz~P0-10	0.00	Hz	实时更改	*第197页“P8-10”*
P8-11	0xF80B	跳跃频率幅度	0.00Hz~5.00Hz	0.00	Hz	实时更改	*第197页“P8-11”*
P8-12	0xF80C	正反转死区时间	0.0s~3000.0s	0.0	s	实时更改	*第197页“P8-12”*
P8-13	0xF80D	反向频率禁止	0：允许反转 1：禁止反转	0	-	实时更改	*第197页“P8-13”*
P8-14	0xF80E	频率低于下限频率运行模式	0：以下限频率运行 1：停机 2：零速运行 3：自由停机	0	-	实时更改	*第198页“P8-14”*
P8-15	0xF80F	机械抱闸频率	0.00Hz~10.00Hz	0.00	Hz	实时更改	*第198页“P8-15”*
P8-16	0xF810	设定累计上电到达时间	0h~65000h	0	h	实时更改	*第198页“P8-16”*
P8-17	0xF811	设定累计运行到达时间	0h~65000h	0	h	实时更改	*第199页“P8-17”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P8-18	0xF812	启动和故障复归保护选择	0：不保护 1：保护	0	-	实时更改	*第199页“P8-18”*
P8-19	0xF813	频率检测值1	0.00Hz~P0-10	50.00	Hz	实时更改	*第199页“P8-19”*
P8-20	0xF814	频率检测滞率1	0.0%~100.0%	5.0	%	实时更改	*第199页“P8-20”*
P8-21	0xF815	频率到达检出幅度	0.0%~100.0%	0.0	%	实时更改	*第200页“P8-21”*
P8-22	0xF816	加减速过程中跳跃频率是否有效	0：无效 1：有效	0	-	实时更改	*第200页“P8-22”*
P8-25	0xF819	加速时间1/加速时间2切换频率点	0.00Hz~P0-10	0.00	Hz	实时更改	*第200页“P8-25”*
P8-26	0xF81A	减速时间1/减速时间2切换频率点	0.00Hz~P0-10	0.00	Hz	实时更改	*第201页“P8-26”*
P8-27	0xF81B	点动优先	0：无效 1：有效	0	-	实时更改	*第201页“P8-27”*
P8-28	0xF81C	频率检测值2	0.00Hz~P0-10	50.00	Hz	实时更改	*第201页“P8-28”*
P8-29	0xF81D	频率检测滞后率 2	0.0%~100.0%	5.0	%	实时更改	*第202页“P8-29”*
P8-30	0xF81E	任意到达频率检测值1	0.00Hz~P0-10	50.00	Hz	实时更改	*第202页“P8-30”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P8-31	0xF81F	任意到达频率检出幅度1	0.0%~100.0%	0.0	%	实时更改	*第202页“P8-31”*
P8-32	0xF820	任意到达频率检测值2	0.00Hz~P0-10	50.00	Hz	实时更改	*第202页“P8-32”*
P8-33	0xF821	任意到达频率检出幅度2	0.0%~100.0%	0.0	%	实时更改	*第203页“P8-33”*
P8-34	0xF822	零电流检测水平	0.0%~300.0%	5.0	%	实时更改	*第203页“P8-34”*
P8-35	0xF823	零电流检测延迟时间	0.01s~600.00s	0.10	s	实时更改	*第203页“P8-35”*
P8-36	0xF824	输出电流超限值	0.0%~300.0%	200.0	%	实时更改	*第203页“P8-36”*
P8-37	0xF825	软件过流检测延迟时间	0.00s~600.00s	0.00	s	实时更改	*第204页“P8-37”*
P8-38	0xF826	任意到达电流1	0.0%~300.0%	100.0	%	实时更改	*第204页“P8-38”*
P8-39	0xF827	任意到达电流1幅度	0.0%~300.0%	0.0	%	实时更改	*第204页“P8-39”*
P8-40	0xF828	任意到达电流2	0.0%~300.0%	100.0	%	实时更改	*第204页“P8-40”*
P8-41	0xF829	任意到达电流2幅度	0.0%~300.0%	0.0	%	实时更改	*第205页“P8-41”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P8-42	0xF82A	定时功能选择	0：无效 1：有效	0	-	停机更改	*第205页“P8-42”*
P8-43	0xF82B	定时运行时间选择	0：定时运行时间(P8-44)设定 1：AI1 2：AI2 3：AI3	0	-	停机更改	*第205页“P8-43”*
P8-44	0xF82C	定时运行时间	0.0min~6500.0min	0.0	min	停机更改	*第206页“P8-44”*
P8-45	0xF82D	AI1输入电压保护值下限	0.00V~P8-46	3.10	V	实时更改	*第206页“P8-45”*
P8-46	0xF82E	AI1输入电压保护值上限	P8-45~11.00V	6.80	V	实时更改	*第206页“P8-46”*
P8-47	0xF82F	模块温度到达	0°C~100°C	75	°C	实时更改	*第206页“P8-47”*
P8-48	0xF830	散热风扇控制	0：运行时风扇运转 1：风扇一直运转	0	-	实时更改	*第207页“P8-48”*
P8-49	0xF831	唤醒频率	P8-51~P0-10	0.00	Hz	实时更改	*第207页“P8-49”*
P8-50	0xF832	唤醒延迟时间	0.0s~6500.0s	0.0	s	实时更改	*第207页“P8-50”*
P8-51	0xF833	休眠频率	0.00Hz~P8-49	0.00	Hz	实时更改	*第208页“P8-51”*
P8-52	0xF834	休眠延迟时间	0.0s~6500.0s	0.0	s	实时更改	*第208页“P8-52”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P8-53	0xF835	本次运行到达时间	0.0min~6500.0min	0.0	min	实时更改	*第208页“P8-53”*
P8-55	0xF837	紧急停机减速时间	0.0s~6500.0s	机型确定	s	实时更改	*第208页“P8-55”*
P8-57	0xF839	累计耗电量清零	0：累计耗电量清零无效 1：累计耗电量清零有效	0	-	停机更改	*第209页“P8-57”*
P8-58	0xF83A	输出功率校正系数	0.0%~200.0%	100.0	%	停机更改	*第209页“P8-58”*
P9-00	0xF900	变频器过载抑制使能	0：禁止 1：允许	0	-	实时更改	*第209页“P9-00”*
P9-01	0xF901	电机过载保护增益	0.20~10.00	1.00	-	实时更改	*第210页“P9-01”*
P9-02	0xF902	电机过载预警系数	50%~100%	80	%	实时更改	*第210页“P9-02”*
P9-04	0xF904	过压点设置	350.0V~820.0V	820.0	V	实时更改	*第210页“P9-04”*
P9-06	0xF906	启动前输出缺相检测选择	0：无效 1：有效	0	-	实时更改	*第210页“P9-06”*
P9-07	0xF907	软件对地短路检测选择	0：不检测 1：上电前检测 2：运行前检测 3：上电前、运行前检测	1	-	停机更改	*第211页“P9-07”*
P9-08	0xF908	制动单元动作起始电压	200.0V~2000.0V	760.0	V	实时更改	*第211页“P9-08”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-09	0xF909	故障自动复位次数	0~20	0	-	实时更改	*第211页“P9-09”*
P9-10	0xF90A	故障自动复位期间故障DO动作选择	0：不动作 1：动作	0	-	实时更改	*第212页“P9-10”*
P9-11	0xF90B	故障自动复位间隔时间	0.1s~100.0s	1.0	s	实时更改	*第212页“P9-11”*
P9-12	0xF90C	输入缺相/接触器吸合保护选择	个位：输入缺相保护选择 0：禁止输入缺相故障 1：软件与硬件同时检测到输入缺相报故障 2：软件检测输入缺相故障 3：硬件检测输入缺相故障 十位：接触器吸合/风扇故障保护选择 0：禁止缓冲电阻接触器/风扇故障 1：使能缓冲电阻接触器/风扇故障	11	-	实时更改	*第212页“P9-12”*
P9-13	0xF90D	故障复位重启间隔时间	0.0s~600.0s	10.0	s	实时更改	*第213页“P9-13”*
P9-14	0xF90E	第一次故障类型	0~99	0	-	不可更改	*第213页“P9-14”*
P9-15	0xF90F	第二次故障类型	0~99	0	-	不可更改	*第213页“P9-15”*
P9-16	0xF910	第三次(最近一次)故障类型	0~99	0	-	不可更改	*第214页“P9-16”*
P9-17	0xF911	第三次(最近一次)故障时频率	0Hz~65535Hz	0	Hz	不可更改	*第214页“P9-17”*
P9-18	0xF912	第三次(最近一次)故障时电流	0.0A~6553.5A	0.0	A	不可更改	*第214页“P9-18”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-19	0xF913	第三次(最近一次)故障时母线电压	0.0V~6553.5V	0.0	V	不可更改	*第214页“P9-19”*
P9-20	0xF914	第三次(最近一次)故障时输入端子状态	0~65535	0	-	不可更改	*第215页“P9-20”*
P9-21	0xF915	第三次(最近一次)故障时输出端子状态	0~65535	0	-	不可更改	*第215页“P9-21”*
P9-22	0xF916	第三次(最近一次)故障时变频器状态	0~65535	0	-	不可更改	*第215页“P9-22”*
P9-23	0xF917	第三次(最近一次)故障时上电时间	0~65535	0	-	不可更改	*第215页“P9-23”*
P9-24	0xF918	第三次(最近一次)故障时运行时间	0.0~6553.5	0.0	-	不可更改	*第215页“P9-24”*
P9-25	0xF919	第三次(最近一次)故障时IGBT温度	-20°C~120°C	0	°C	不可更改	*第216页“P9-25”*
P9-26	0xF91A	第三次(最近一次)故障子码	0~65535	0	-	不可更改	*第216页“P9-26”*
P9-27	0xF91B	第二次故障时频率	0Hz~65535Hz	0	Hz	不可更改	*第216页“P9-27”*
P9-28	0xF91C	第二次故障时电流	0.0A~6553.5A	0.0	A	不可更改	*第216页“P9-28”*
P9-29	0xF91D	第二次故障时母线电压	0.0V~6553.5V	0.0	V	不可更改	*第217页“P9-29”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-30	0xF91E	第二次故障时输入端子状态	0~65535	0	-	不可更改	*第217页“P9-30”*
P9-31	0xF91F	第二次故障时输出端子状态	0~65535	0	-	不可更改	*第217页“P9-31”*
P9-32	0xF920	第二次故障时变频器状态	0~65535	0	-	不可更改	*第217页“P9-32”*
P9-33	0xF921	第二次故障时上电时间	0~65535	0	-	不可更改	*第218页“P9-33”*
P9-34	0xF922	第二次故障时运行时间	0.0~6553.5	0.0	-	不可更改	*第218页“P9-34”*
P9-35	0xF923	第二次故障时IGBT温度	-20°C~120°C	0	°C	不可更改	*第218页“P9-35”*
P9-36	0xF924	第二次故障时故障子码	0~65535	0	-	不可更改	*第218页“P9-36”*
P9-37	0xF925	第一次故障时频率	0Hz~65535Hz	0	Hz	不可更改	*第219页“P9-37”*
P9-38	0xF926	第一次故障时电流	0.0A~6553.5A	0.0	A	不可更改	*第219页“P9-38”*
P9-39	0xF927	第一次故障时母线电压	0.0V~6553.5V	0.0	V	不可更改	*第219页“P9-39”*
P9-40	0xF928	第一次故障时输入端子状态	0~65535	0	-	不可更改	*第219页“P9-40”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-41	0xF929	第一次故障时输出端子状态	0~65535	0	-	不可更改	*第220页“P9-41”*
P9-42	0xF92A	第一次故障时变频器状态	0~65535	0	-	不可更改	*第220页“P9-42”*
P9-43	0xF92B	第一次故障时上电时间	0~65535	0	-	不可更改	*第220页“P9-43”*
P9-44	0xF92C	第一次故障时运行时间	0.0~6553.5	0.0	-	不可更改	*第220页“P9-44”*
P9-45	0xF92D	第一次故障时IGBT温度	-20°C~120°C	0	°C	不可更改	*第220页“P9-45”*
P9-46	0xF92E	第一次故障时故障子码	0~65535	0	-	不可更改	*第221页“P9-46”*
P9-47	0xF92F	故障保护动作选择0	个位：E02、E03、E04 0：自由停机 2：故障重启 十位：E05、E06、E07 0：自由停机 2：故障重启 百位：E08 0：自由停机 千位：E09 0：自由停机 2：故障重启 万位：E10 0：自由停机 2：故障重启	0	-	停机更改	*第221页“P9-47”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-48	0xF930	故障保护动作选择1	个位：E11 0：自由停机 1：减速停机 2：故障重启 4：警告 5：取消 十位：E12 0：自由停机 1：减速停机 2：故障重启 4：警告 5：取消 百位：E13 0：自由停机 1：减速停机 2：故障重启 4：警告 5：取消 千位：E14 0：自由停机 万位：E15 0：自由停机 1：减速停机 3：电磁封星 4：警告 5：取消	0	-	停机更改	*第222页“P9-48”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-49	0xF931	故障保护动作选择2	个位：E16 0：自由停机 1：减速停机 4：警告 5：取消 十位：E17 0：自由停机 1：减速停机 4：警告 5：取消 百位：E18 0：自由停机 千位：E19 0：自由停机 3：电磁封星 4：警告 5：取消 万位：E20 0：自由停机 3：电磁封星 4：警告 5：取消	0	-	停机更改	*第223页“P9-49”*
P9-50	0xF932	故障保护动作选择3	个位：保留 0：自由停机 十位：E63 0：自由停机 1：减速停机 4：警告 5：取消 百位：E23 0：自由停机 5：取消 千位：E24 0：自由停机 5：取消 万位：E25 0：自由停机 1：减速停机 4：警告 5：取消	5040	-	停机更改	*第224页“P9-50”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-51	0xF933	故障保护动作选择4	个位：E26 0：自由停机 1：减速停机 4：警告 5：取消 十位：E27 0：自由停机 1：减速停机 3：电磁封星 4：警告 5：取消 百位：E28 0：自由停机 1：减速停机 3：电磁封星 4：警告 5：取消 千位：E29 0：自由停机 1：减速停机 4：警告 5：取消 万位：E30 0：自由停机 1：减速停机 4：警告 5：取消	51111	-	停机更改	*第225页“P9-51”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-52	0xF934	故障保护动作选择5	个位：E31 0：自由停机 1：减速停机 4：警告 5：取消 十位：E40 0：自由停机 2：故障重启 百位：E41 0：自由停机 1：减速停机 4：警告 5：取消 千位：E42 0：自由停机 1：减速停机 2：故障重启 3：电磁封星 4：警告 5：取消 万位：E43 0：自由停机 1：减速停机 3：电磁封星 4：警告 5：取消	101	-	停机更改	*第227页“P9-52”*
P9-53	0xF935	故障保护动作选择6	个位：E45 0：自由停机 1：减速停机 4：警告 5：取消 十位：E60 0：自由停机 1：减速停机 4：警告 5：取消 百位：E61 0：自由停机 1：减速停机 4：警告 5：取消 千位：E62 0：自由停机 5：取消 万位：保留 5：取消	0	-	停机更改	*第228页“P9-53”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-54	0xF936	故障时继续运行频率选择	0：以当前的运行频率运行 1：以设定频率运行 2：以上限频率运行 3：以下限频率运行 4：以异常时备用频率运行	1	-	实时更改	*第229页“P9-54”*
P9-55	0xF937	异常备用频率设定	0.0%~100.0%	100.0	%	实时更改	*第229页“P9-55”*
P9-56	0xF938	电机温度传感器类型	0：AI3 1：PT100 2：PT1000 3：KTY84-130 4：PTC130	0	-	实时更改	*第229页“P9-56”*
P9-57	0xF939	电机过热保护阈值	0°C~200°C	110	°C	实时更改	*第230页“P9-57”*
P9-58	0xF93A	电机过热预报警阈值	0°C~200°C	90	°C	实时更改	*第230页“P9-58”*
P9-59	0xF93B	瞬停不停动作选择	0：无效 1：母线电压恒定控制 2：减速停机 3：晃电抑制	0	-	停机更改	*第230页“P9-59”*
P9-60	0xF93C	瞬停不停暂停判断电压	80%~100%	85	%	实时更改	*第231页“P9-60”*
P9-61	0xF93D	瞬停不停电压恢复判断时间	0.0s~100.0s	0.5	s	实时更改	*第231页“P9-61”*
P9-62	0xF93E	瞬停不停动作判断电压	60%~100%	80	%	实时更改	*第231页“P9-62”*
P9-63	0xF93F	FVC飞车保护时间	0~10000	0	-	停机更改	*第232页“P9-63”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
P9-64	0xF940	掉载检测水平	0.0%~100.0%	10.0	%	实时更改	*第232页“P9-64”*
P9-65	0xF941	掉载检测时间	0.0s~60.0s	1.0	s	实时更改	*第232页“P9-65”*
P9-66	0xF942	晃电抑制时间	0.0s~600.0s	0.0	s	不可更改	*第232页“P9-66”*
P9-67	0xF943	过速度检测值	0.0%~50.0%	5.0	%	实时更改	*第233页“P9-67”*
P9-68	0xF944	过速度检测时间	0.0s~60.0s	1.0	s	实时更改	*第233页“P9-68”*
P9-69	0xF945	速度偏差过大检测值	0.0%~50.0%	20.0	%	实时更改	*第233页“P9-69”*
P9-70	0xF946	速度偏差过大检测时间	0.0s~60.0s	5.0	s	实时更改	*第234页“P9-70”*
P9-71	0xF947	瞬停不停增益Kp	0~100	40	-	实时更改	*第234页“P9-71”*
P9-72	0xF948	瞬停不停积分系数Ki	0~100	30	-	实时更改	*第234页“P9-72”*
P9-73	0xF949	瞬停不停动作减速时间	0.0s~300.0s	20.0	s	实时更改	*第235页“P9-73”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PA-00	0xFA00	PID给定源	0：PID数值给定（PA-01） 1：AI1 2：AI2 3：AI3 4：PULSE设定（DI5） 5：通信给定（1000H） 6：多段指令给定	0	-	实时更改	*第235页“PA-00”*
PA-01	0xFA01	PID数值给定	0.0%~100.0%	50.0	%	实时更改	*第236页“PA-01”*
PA-02	0xFA02	PID反馈源	0：AI1 1：AI2 2：AI3 3：AI1-AI2 4：PULSE设定（DI5） 5：通信给定 6：AI1+AI2 7：MAX(|AI1|, |AI2|) 8：MIN(|AI1|, |AI2|)	0	-	实时更改	*第236页“PA-02”*
PA-03	0xFA03	PID作用方向	0：正作用 1：反作用	0	-	实时更改	*第236页“PA-03”*
PA-04	0xFA04	PID给定反馈量程	0~65535	1000	-	实时更改	*第237页“PA-04”*
PA-05	0xFA05	比例增益Kp1	0.0~1000.0	20.0	-	实时更改	*第237页“PA-05”*
PA-06	0xFA06	积分时间Ti1	0.01s~100.00s	2.00	s	实时更改	*第237页“PA-06”*
PA-07	0xFA07	微分时间Td1	0.000s~10.000s	0.000	s	实时更改	*第238页“PA-07”*
PA-08	0xFA08	PID反转截止频率	0.00Hz~P0-10	2.00	Hz	实时更改	*第238页“PA-08”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PA-09	0xFA09	PID偏差极限	0.0%~100.0%	0.0	%	实时更改	*第238页“PA-09”*
PA-10	0xFA0A	PID微分限幅	0.00%~100.00%	0.10	%	实时更改	*第238页“PA-10”*
PA-11	0xFA0B	PID给定变化时间	0.00s~650.00s	0.00	s	实时更改	*第239页“PA-11”*
PA-12	0xFA0C	PID反馈滤波时间	0.00s~60.00s	0.00	s	实时更改	*第239页“PA-12”*
PA-13	0xFA0D	PID偏差增益	0.0%~100.0%	100.0	%	实时更改	*第239页“PA-13”*
PA-14	0xFA0E	PID优化参数	0~100	0	-	实时更改	*第239页“PA-14”*
PA-15	0xFA0F	比例增益Kp2	0.0~1000.0	20.0	-	实时更改	*第240页“PA-15”*
PA-16	0xFA10	积分时间Ti2	0.01s~100.00s	2.00	s	实时更改	*第240页“PA-16”*
PA-17	0xFA11	微分时间Td2	0.000s~10.000s	0.000	s	实时更改	*第240页“PA-17”*
PA-18	0xFA12	PID参数切换条件	0：不切换 1：DI端子 2：根据偏差自动切换 3：根据运行频率切换 6：根据卷径自动调节 7：根据最大卷径的百分比自动调节	0	-	实时更改	*第240页“PA-18”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PA-19	0xFA13	PID参数切换偏差1	0.0%~PA-20	20.0	%	实时更改	*第241页“PA-19”*
PA-20	0xFA14	PID参数切换偏差2	PA-19~100.0%	80.0	%	实时更改	*第242页“PA-20”*
PA-21	0xFA15	PID初值	0.0%~100.0%	0.0	%	实时更改	*第242页“PA-21”*
PA-22	0xFA16	PID初值保持时间	0.00s~650.00s	0.00	s	实时更改	*第242页“PA-22”*
PA-23	0xFA17	两次输出偏差正向最大值	0.00%~100.00%	1.00	%	实时更改	*第242页“PA-23”*
PA-24	0xFA18	两次输出偏差反向最大值	0.00%~100.00%	1.00	%	实时更改	*第243页“PA-24”*
PA-25	0xFA19	PID积分属性	0：无效 1：有效	0	-	实时更改	*第243页“PA-25”*
PA-26	0xFA1A	PID反馈丢失检测值	0.0%~100.0%	0.0	%	实时更改	*第243页“PA-26”*
PA-27	0xFA1B	PID反馈丢失检测时间	0.0s~20.0s	0.0	s	实时更改	*第243页“PA-27”*
PA-28	0xFA1C	PID停机运算	0：停机不运算 1：停机运算	0	-	实时更改	*第244页“PA-28”*
PA-29	0xFA1D	PID饱和积分处理方式选择	0：默认方式 1：积分分离	0	-	实时更改	*第244页“PA-29”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PB-00	0xFB00	摆频设定方式	0：相对于中心频率 1：相对于最大频率	0	-	实时更改	*第244页“PB-00”*
PB-01	0xFB01	摆频幅度	0.0%~100.0%	0.0	%	实时更改	*第245页“PB-01”*
PB-02	0xFB02	突跳频率幅度	0.0%~50.0%	0.0	%	实时更改	*第245页“PB-02”*
PB-03	0xFB03	摆频周期	0.1s~3000.0s	10.0	s	实时更改	*第245页“PB-03”*
PB-04	0xFB04	摆频的三角波上升时间系数	0.1%~100.0%	50.0	%	实时更改	*第245页“PB-04”*
PB-05	0xFB05	设定长度	0m~65535m	1000	m	实时更改	*第245页“PB-05”*
PB-06	0xFB06	实际长度	0m~65535m	0	m	实时更改	*第246页“PB-06”*
PB-07	0xFB07	每米脉冲数	0.1~6553.5	100.0	-	实时更改	*第246页“PB-07”*
PB-08	0xFB08	设定计数值	1~65535	1000	-	实时更改	*第246页“PB-08”*
PB-09	0xFB09	指定计数值	1~65535	1000	-	实时更改	*第246页“PB-09”*
PB-10	0xFB0A	旋转圈数复位方式	0：上升沿触发 1：电平触发	0	-	实时更改	*第247页“PB-10”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PB-11	0xFB0B	旋转圈数复位信号	0：不复位 1：复位	0	-	实时更改	*第247页“PB-11”*
PB-12	0xFB0C	运行圈数是否掉电保存	0：掉电不保存 1：掉电保存	0	-	实时更改	*第247页“PB-12”*
PB-13	0xFB0D	旋转圈数归零	0~65535	0	-	实时更改	*第248页“PB-13”*
PB-14	0xFB0E	传动比分子	1~65535	1	-	实时更改	*第248页“PB-14”*
PB-15	0xFB0F	传动比分母	1~65535	1	-	实时更改	*第248页“PB-15”*
PB-16	0xFB10	实际运行圈数	0~65535	0	-	不可更改	*第248页“PB-16”*
PB-17	0xFB11	运行圈数	0~65535	0	-	不可更改	*第249页“PB-17”*
PB-18	0xFB12	运行圈数精度	0：计圈单位为1圈 1：计圈单位为0.1圈	0	-	实时更改	*第249页“PB-18”*
PB-19	0xFB13	计圈方向	0：正向计圈 1：反向计圈	0	-	实时更改	*第249页“PB-19”*
PC-00	0xFC00	多段指令1	-100.0%~100.0%	0.0	%	实时更改	*第249页“PC-00”*
PC-01	0xFC01	多段指令2	-100.0%~100.0%	0.0	%	实时更改	*第250页“PC-01”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PC-02	0xFC02	多段指令3	-100.0%~100.0%	0.0	%	实时更改	*第250页“PC-02”*
PC-03	0xFC03	多段指令4	-100.0%~100.0%	0.0	%	实时更改	*第250页“PC-03”*
PC-04	0xFC04	多段指令5	-100.0%~100.0%	0.0	%	实时更改	*第250页“PC-04”*
PC-05	0xFC05	多段指令6	-100.0%~100.0%	0.0	%	实时更改	*第251页“PC-05”*
PC-06	0xFC06	多段指令7	-100.0%~100.0%	0.0	%	实时更改	*第251页“PC-06”*
PC-07	0xFC07	多段指令8	-100.0%~100.0%	0.0	%	实时更改	*第251页“PC-07”*
PC-08	0xFC08	多段指令9	-100.0%~100.0%	0.0	%	实时更改	*第251页“PC-08”*
PC-09	0xFC09	多段指令10	-100.0%~100.0%	0.0	%	实时更改	*第252页“PC-09”*
PC-10	0xFC0A	多段指令11	-100.0%~100.0%	0.0	%	实时更改	*第252页“PC-10”*
PC-11	0xFC0B	多段指令12	-100.0%~100.0%	0.0	%	实时更改	*第252页“PC-11”*
PC-12	0xFC0C	多段指令13	-100.0%~100.0%	0.0	%	实时更改	*第252页“PC-12”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PC-13	0xFC0D	多段指令14	-100.0%~100.0%	0.0	%	实时更改	*第253页“PC-13”*
PC-14	0xFC0E	多段指令15	-100.0%~100.0%	0.0	%	实时更改	*第253页“PC-14”*
PC-15	0xFC0F	多段指令16	-100.0%~100.0%	0.0	%	实时更改	*第253页“PC-15”*
PC-16	0xFC10	简易PLC运行方式	0：单次运行结束停机 1：单次运行结束保持终值 2：一直循环	0	-	实时更改	*第253页“PC-16”*
PC-17	0xFC11	简易PLC掉电记忆选择	个位：掉电记忆选择 0：掉电不记忆 1：掉电记忆 十位：停机记忆选择 0：停机不记忆 1：停机记忆	0	-	实时更改	*第254页“PC-17”*
PC-18	0xFC12	PLC第0段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第254页“PC-18”*
PC-19	0xFC13	PLC第0段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第255页“PC-19”*
PC-20	0xFC14	PLC第1段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第255页“PC-20”*
PC-21	0xFC15	PLC第1段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第255页“PC-21”*
PC-22	0xFC16	PLC第2段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第255页“PC-22”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PC-23	0xFC17	PLC第2段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第256页“PC-23”*
PC-24	0xFC18	PLC第3段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第256页“PC-24”*
PC-25	0xFC19	PLC第3段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第256页“PC-25”*
PC-26	0xFC1A	PLC第4段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第257页“PC-26”*
PC-27	0xFC1B	PLC第4段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第257页“PC-27”*
PC-28	0xFC1C	PLC第5段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第257页“PC-28”*
PC-29	0xFC1D	PLC第5段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第258页“PC-29”*
PC-30	0xFC1E	PLC第6段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第258页“PC-30”*
PC-31	0xFC1F	PLC第6段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第258页“PC-31”*
PC-32	0xFC20	PLC第7段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第259页“PC-32”*
PC-33	0xFC21	PLC第7段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第259页“PC-33”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PC-34	0xFC22	PLC第8段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第259页“PC-34”*
PC-35	0xFC23	PLC第8段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第259页“PC-35”*
PC-36	0xFC24	PLC第9段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第260页“PC-36”*
PC-37	0xFC25	PLC第9段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第260页“PC-37”*
PC-38	0xFC26	PLC第10段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第260页“PC-38”*
PC-39	0xFC27	PLC第10段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第261页“PC-39”*
PC-40	0xFC28	PLC第11段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第261页“PC-40”*
PC-41	0xFC29	PLC第11段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第261页“PC-41”*
PC-42	0xFC2A	PLC第12段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第262页“PC-42”*
PC-43	0xFC2B	PLC第12段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第262页“PC-43”*
PC-44	0xFC2C	PLC第13段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第262页“PC-44”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PC-45	0xFC2D	PLC第13段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第262页“PC-45”*
PC-46	0xFC2E	PLC第14段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第263页“PC-46”*
PC-47	0xFC2F	PLC第14段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第263页“PC-47”*
PC-48	0xFC30	PLC第15段运行时间	0.0s(h)~6553.5s(h)	0.0	s(h)	实时更改	*第263页“PC-48”*
PC-49	0xFC31	PLC第15段加减速时间选择	0：第1组加减速时间（P0-17、P0-18） 1：第2组加减速时间（P8-03、P8-04） 2：第3组加减速时间（P8-05、P8-06） 3：第4组加减速时间（P8-07、P8-08）	0	-	实时更改	*第264页“PC-49”*
PC-50	0xFC32	PLC运行时间单位	0：s（秒） 1：h（小时）	0	-	实时更改	*第264页“PC-50”*
PC-51	0xFC33	多段指令0给定方式	0：多段指令0（PC-00）给定 1：AI1 2：AI2 3：AI3 4：PULSE脉冲（DI5） 5：PID 6：预置频率P0-08给定（UP/DOWN可修改）	0	-	实时更改	*第264页“PC-51”*
PD-00	0xFD00	波特率	0：300bps 1：600bps 2：1200bps 3：2400bps 4：4800bps 5：9600bps 6：19200bps 7：38400bps 8：57600bps 9：115200bps	5005	-	实时更改	*第265页“PD-00”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PD-01	0xFD01	Modbus数据格式	0：无校验(8-N-2) 1：偶校验(8-E-1) 2：奇校验(8-O-1) 3：无校验(8-N-1)	0	-	实时更改	*第265页“PD-01”*
PD-02	0xFD02	本机地址	1~247	1	-	实时更改	*第266页“PD-02”*
PD-03	0xFD03	应答延迟	0ms~20ms	2	ms	实时更改	*第266页“PD-03”*
PD-04	0xFD04	通信超时时间	0.0s~60.0s	0.0	s	实时更改	*第266页“PD-04”*
PD-06	0xFD06	通信故障复位使能	0：不使能 1：使能	1	-	停机更改	*第267页“PD-06”*
PD-07	0xFD07	烧录/后台连接波特率	0：300bps 1：600bps 2：1200bps 3：2400bps 4：4800bps 5：9600bps 6：19200bps 7：38400bps 8：57600bps 9：115200bps	0	-	实时更改	*第267页“PD-07”*
PD-09	0xFD09	CANopen/CANlink通信状态	个位：CANopen 0：停止 1：初始化 2：预运行 8：运行 十位：CANlink 0：停止 1：初始化 2：预运行 8：运行 百位：保留	2	-	不可更改	*第267页“PD-09”*
PD-10	0xFD0A	CANopen/CANlink切换	1：CANopen 2：CANlink	1	-	停机更改	*第268页“PD-10”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PD-12	0xFD0C	CAN波特率	0：20kbps 1：50kbps 2：100kbps 3：125kbps 4：250kbps 5：500kbps 6：1Mbps	5	-	停机更改	*第268页“PD-12”*
PD-13	0xFD0D	CAN站号	1~127	1	-	停机更改	*第269页“PD-13”*
PD-14	0xFD0E	单位时间接受的CAN帧数目	0~65535	0	-	不可更改	*第269页“PD-14”*
PD-15	0xFD0F	节点接受错误计数器的最大值	0~65535	0	-	不可更改	*第269页“PD-15”*
PD-16	0xFD10	节点发送错误计数器的最大值	0~65535	0	-	不可更改	*第270页“PD-16”*
PD-17	0xFD11	单位时间内总线脱离的次数	0~65535	0	-	不可更改	*第270页“PD-17”*
PD-19	0xFD13	CAN通信掉线系数	1~15	3	-	停机更改	*第270页“PD-19”*
PD-24	0xFD18	up/down功能超时断线时间	0.5s~10s	1	s	实时更改	*第270页“PD-24”*
PD-37	0xFD25	DHCP使能	0：不使能 1：使能	0	-	停机更改	*第271页“PD-37”*
PD-38	0xFD26	IP地址最高字节	0~255	0	-	停机更改	*第271页“PD-38”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PD-39	0xFD27	IP地址次高字节	0~255	0	-	停机更改	*第271页“PD-39”*
PD-40	0xFD28	IP地址第三字节	0~255	0	-	停机更改	*第271页“PD-40”*
PD-41	0xFD29	IP地址最低字节	0~255	0	-	停机更改	*第272页“PD-41”*
PD-42	0xFD2A	子网掩码最高字节	0~255	0	-	停机更改	*第272页“PD-42”*
PD-43	0xFD2B	子网掩码次高字节	0~255	0	-	停机更改	*第272页“PD-43”*
PD-44	0xFD2C	子网掩码第三字节	0~255	0	-	停机更改	*第272页“PD-44”*
PD-45	0xFD2D	子网掩码最低字节	0~255	0	-	停机更改	*第273页“PD-45”*
PD-46	0xFD2E	网关最高字节	0~255	0	-	停机更改	*第273页“PD-46”*
PD-47	0xFD2F	网关次高字节	0~255	0	-	停机更改	*第273页“PD-47”*
PD-48	0xFD30	网关第三字节	0~255	0	-	停机更改	*第273页“PD-48”*
PD-49	0xFD31	网关最低字节	0~255	0	-	停机更改	*第273页“PD-49”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PD-58	0xFD3A	EtherNet/IP扩展卡错误码	0~255	0	-	不可更改	*第274页“PD-58”*
PD-61	0xFD3D	MAC地址高字节	0x0~0xFFFF	0x0	-	停机更改	*第274页“PD-61”*
PD-62	0xFD3E	MAC地址中间字节	0x0~0xFFFF	0x0	-	停机更改	*第274页“PD-62”*
PD-63	0xFD3F	MAC地址低字节	0x0~0xFFFF	0x0	-	停机更改	*第274页“PD-63”*
PD-94	0xFD5E	Modbus软件版本	0~65535	0	-	不可更改	*第275页“PD-94”*
PD-95	0xFD5F	CANlink软件版本	0~65535	0	-	不可更改	*第275页“PD-95”*
PD-96	0xFD60	CANopen软件版本	0~65535	0	-	不可更改	*第275页“PD-96”*
PE-00	0xFE00	用户功能码0	0~65535	7017	-	实时更改	*第275页“PE-00”*
PE-01	0xFE01	用户功能码1	0~65535	7016	-	实时更改	*第276页“PE-01”*
PE-02	0xFE02	用户功能码2	0~65535	0	-	实时更改	*第276页“PE-02”*
PE-03	0xFE03	用户功能码3	0~65535	0	-	实时更改	*第276页“PE-03”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PE-04	0xFE04	用户功能码4	0~65535	0	-	实时更改	*第276页“PE-04”*
PE-05	0xFE05	用户功能码5	0~65535	0	-	实时更改	*第277页“PE-05”*
PE-06	0xFE06	用户功能码6	0~65535	0	-	实时更改	*第277页“PE-06”*
PE-07	0xFE07	用户功能码7	0~65535	0	-	实时更改	*第277页“PE-07”*
PE-08	0xFE08	用户功能码8	0~65535	0	-	实时更改	*第277页“PE-08”*
PE-09	0xFE09	用户功能码9	0~65535	0	-	实时更改	*第278页“PE-09”*
PE-10	0xFE0A	用户功能码10	0~65535	0	-	实时更改	*第278页“PE-10”*
PE-11	0xFE0B	用户功能码11	0~65535	0	-	实时更改	*第278页“PE-11”*
PE-12	0xFE0C	用户功能码12	0~65535	0	-	实时更改	*第278页“PE-12”*
PE-13	0xFE0D	用户功能码13	0~65535	0	-	实时更改	*第279页“PE-13”*
FE-14	0xFE0E	用户功能码14	0~65535	0	-	实时更改	*第279页“FE-14”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PE-15	0xFE0F	用户功能码15	0~65535	0	-	实时更改	*第279页“PE-15”*
PE-16	0xFE10	用户功能码16	0~65535	0	-	实时更改	*第279页“PE-16”*
PE-17	0xFE11	用户功能码17	0~65535	0	-	实时更改	*第280页“PE-17”*
PE-18	0xFE12	用户功能码18	0~65535	0	-	实时更改	*第280页“PE-18”*
PE-19	0xFE13	用户功能码19	0~65535	0	-	实时更改	*第280页“PE-19”*
PE-20	0xFE14	用户功能码20	0~65535	6768	-	实时更改	*第280页“PE-20”*
PE-21	0xFE15	用户功能码21	0~65535	6769	-	实时更改	*第280页“PE-21”*
PE-22	0xFE16	用户功能码22	0~65535	0	-	实时更改	*第281页“PE-22”*
PE-23	0xFE17	用户功能码23	0~65535	0	-	实时更改	*第281页“PE-23”*
PE-24	0xFE18	用户功能码24	0~65535	0	-	实时更改	*第281页“PE-24”*
PE-25	0xFE19	用户功能码25	0~65535	0	-	实时更改	*第281页“PE-25”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PE-26	0xFE1A	用户功能码26	0~65535	0	-	实时更改	*第282页“PE-26”*
PE-27	0xFE1B	用户功能码27	0~65535	0	-	实时更改	*第282页“PE-27”*
PE-28	0xFE1C	用户功能码28	0~65535	0	-	实时更改	*第282页“PE-28”*
PE-29	0xFE1D	用户功能码29	0~65535	0	-	实时更改	*第282页“PE-29”*
PE-30	0xFE1E	用户功能码30	0~65535	0	-	实时更改	*第283页“PE-30”*
PE-31	0xFE1F	用户功能码31	0~65535	0	-	实时更改	*第283页“PE-31”*
PP-00	0x1F00	用户密码	0~65535	0	-	实时更改	*第283页“PP-00”*
PP-01	0x1F01	参数初始化	0：无操作 1：恢复出厂参数模式1 2：清除记录信息 4：备份用户当前参数 501：恢复用户备份参数 503：恢复出厂参数模式2	1	-	停机更改	*第283页“PP-01”*
PP-02	0x1F02	功能参数显示选择	个位：U组显示选择 0：隐藏 1：显示 十位：A组显示选择 0：隐藏 1：显示 百位：B组显示选择 0：隐藏 1：显示 千位：C组显示选择 0：隐藏 1：显示	1111	-	实时更改	*第284页“PP-02”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
PP-03	0x1F03	个性参数方式显示选择	个位：用户定制参数组显示选择 0：不显示 1：显示 十位：用户变更参数组选择 0：不显示 1：显示	11	-	实时更改	*第285页“PP-03”*
PP-04	0x1F04	功能码修改属性	0：可修改 1：不可修改	0	-	实时更改	*第285页“PP-04”*
A0-00	0xA000	速度/转矩控制方式	0：速度控制 1：转矩控制	0	-	停机更改	*第286页“A0-00”*
A0-01	0xA001	转矩设定源选择	0：驱动转矩上限数字设定（A0-03） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定（1000H） 6：MIN(AI1,AI2) 7：MAX(AI1,AI2)	0	-	停机更改	*第286页“A0-01”*
A0-03	0xA003	转矩数字设定	-200.0%~200.0%	100.0	%	实时更改	*第286页“A0-03”*
A0-04	0xA004	转矩滤波时间	0.000s~5.000s	0.000	s	实时更改	*第287页“A0-04”*
A0-05	0xA005	速度极限数字设定	-120.0%~120.0%	0.0	%	实时更改	*第287页“A0-05”*
A0-06	0xA006	视窗模式调频系数	0.0~50.0	0.0	-	实时更改	*第287页“A0-06”*
A0-07	0xA007	转矩加速时间	0.00s~650.00s	1.00	s	实时更改	*第287页“A0-07”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A0-08	0xA008	转矩减速时间	0.00s~650.00s	1.00	s	实时更改	*第288页“A0-08”*
A0-09	0xA009	速度极限设定源选择	0：A0-05设定 1：频率源设定	0	-	实时更改	*第288页“A0-09”*
A0-10	0xA00A	速度极限偏置/视窗频率	0.00Hz~P0-10	5.00	Hz	实时更改	*第288页“A0-10”*
A0-11	0xA00B	速度极限偏置有效	0：双向偏置有效 1：单向偏置有效 2：视窗模式	1	-	停机更改	*第288页“A0-11”*
A0-12	0xA00C	频率加速时间	0.0s~6500.0s	1.0	s	实时更改	*第289页“A0-12”*
A0-13	0xA00D	频率减速时间	0.0s~6500.0s	1.0	s	实时更改	*第289页“A0-13”*
A0-14	0xA00E	转矩模式切换	0：不切换 1：停机切换为速度模式 2：停机目标转矩为0	1	-	停机更改	*第289页“A0-14”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A1-00	0xA100	虚拟VDI1端子功能选择	0：无功能 1：正转运行（FWD） 2：反转运行（REV） 3：三线式运行控制 4：正转点动（FJOG） 5：反转点动（RJOG） 6：端子UP 7：端子DOWN 8：自由停机 9：故障复位（RESET） 10：运行暂停 11：外部故障常开输入 12：多段指令端子1 13：多段指令端子2 14：多段指令端子3 15：多段指令端子4 16：加减速选择端子1 17：加减速选择端子2 18：频率源切换 19：UP/DOWN设定清零（端子、键盘） 20：运行命令切换端子 21：加减速禁止 22：PID暂停 23：PLC状态复位 24：摆频暂停 25：计数器输入（DI5） 26：计数器复位 27：长度计数输入（DI5） 28：长度复位 29：转矩控制禁止 30：脉冲输入 31：保留 32：立即直流制动 33：外部故障常闭输入 34：频率修改使能 35：PID作用方向取反 36：外部停机端子1 37：控制命令切换端子2 38：PID积分暂停 39：频率源X与预置频率切换 40：频率源Y与预置频率切换 续下	0	-	停机更改	*第290页“A1-00”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
同上	同上	同上	续上 41：电机选择端子1 42：零伺服使能 43：PID参数切换 44：用户自定义故障1 45：用户自定义故障2 46：速度控制/转矩控制切换 47：紧急停机 48：外部停机端子2 49：减速直流制动 50：本次运行时间清零 51：两线式/三线式切换 52：电磁封星 53：厚度叠加 54：卷径复位 55：初始卷径1 56：初始卷径2 57：预驱动 58：收放卷切换 59：卷径计算停止 60：退出张力模式 61：端子张力提升 62：厚度选择1 63：厚度选择2 90：水冷系统故障 91：低液位故障 92：计算圈数复位 93：保留 94：开闸状态反馈 95：关闸状态反馈 96：电缆卷筒收放卷切换 97：电机选择端子2	同上	同上	同上	同上
A1-01	0xA101	虚拟VDI2端子功能选择	同A1-01	0	-	停机更改	*第297页“A1-01”*
A1-02	0xA102	虚拟VDI3端子功能选择	同A1-01	0	-	停机更改	*第299页“A1-02”*
A1-03	0xA103	虚拟VDI4端子功能选择	同A1-01	0	-	停机更改	*第301页“A1-03”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A1-04	0xA104	虚拟VDI5端子功能选择	同A1-01	0	-	停机更改	*第303页“A1-04”*
A1-05	0xA105	VDI端子状态设置模式	个位：VDI1 0：功能码设定(A1-06) 1：DO状态 2：DI状态 十位：VDI2 0：功能码设定(A1-06) 1：DO状态 2：DI状态 百位：VDI3 0：功能码设定(A1-06) 1：DO状态 2：DI状态 千位：VDI4 0：功能码设定(A1-06) 1：DO状态 2：DI状态 万位：VDI5 0：功能码设定(A1-06) 1：DO状态 2：DI状态	0	-	停机更改	*第305页“A1-05”*
A1-06	0xA106	虚拟VDI端子状态设置	个位：VDI1 0：无效 1：有效 十位：VDI2 0：无效 1：有效 百位：VDI3 0：无效 1：有效 千位：VDI4 0：无效 1：有效 万位：VDI5 0：无效 1：有效	0	-	实时更改	*第306页“A1-06”*
A1-07	0xA107	AI1端子功能选择（当作DI）	同P4-00	0	-	停机更改	*第307页“A1-07”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A1-08	0xA108	AI2端子功能选择（当作DI）	同P4-00	0	-	停机更改	*第309页“A1-08”*
A1-09	0xA109	AI3端子功能选择（当作DI）	同F4-00	0	-	停机更改	*第311页“A1-09”*
A1-10	0xA10A	AI作为DI有效状态选择	个位：AI1 0：高电平有效 1：低电平有效 十位：AI2 0：高电平有效 1：低电平有效 百位：AI3 0：高电平有效 1：低电平有效	0	-	停机更改	*第313页“A1-10”*
A2-00	0xA200	电机类型选择	0：普通异步电机 1：变频异步电机 2：同步机	0	-	停机更改	*第314页“A2-00”*
A2-01	0xA201	电机额定功率	0.1kW~1000.0kW	机型确定	kW	停机更改	*第314页“A2-01”*
A2-02	0xA202	电机额定电压	1V~2000V	机型确定	V	停机更改	*第315页“A2-02”*
A2-03	0xA203	电机额定电流	0.01A~655.35A(功率≤55kW) 0.1A~6553.5A(功率>55kW)	机型确定	A	停机更改	*第315页“A2-03”*
A2-04	0xA204	电机额定频率	0.01Hz~P0-10	机型确定	Hz	停机更改	*第315页“A2-04”*
A2-05	0xA205	电机额定转速	1rpm~65535rpm	机型确定	rpm	停机更改	*第315页“A2-05”*
A2-06	0xA206	异步/同步电机定子电阻	0.001Ω~65.535Ω(功率≤55kW) 0.0001Ω~6.5535Ω(功率>55kW)	机型确定	Ω	停机更改	*第316页“A2-06”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-07	0xA207	异步电机转子电阻	0.001Ω~65.535Ω(功率≤55kW) 0.0001Ω~6.5535Ω(功率>55kW)	机型确定	Ω	停机更改	*第316页“A2-07”*
A2-08	0xA208	异步电机漏感抗	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第316页“A2-08”*
A2-09	0xA209	异步电机互感抗	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第317页“A2-09”*
A2-10	0xA20A	异步电机空载电流	0.01A~P1-03(功率≤55kW) 0.1A~P1-03(功率>55kW)	机型确定	A	停机更改	*第317页“A2-10”*
A2-11	0xA20B	异步机铁芯饱和系数1	50.0%~100.0%	86.0	%	实时更改	*第317页“A2-11”*
A2-12	0xA20C	异步机铁芯饱和系数2	100.0%~150.0%	130.0	%	实时更改	*第318页“A2-12”*
A2-13	0xA20D	异步机铁芯饱和系数3	100.0%~170.0%	140.0	%	实时更改	*第318页“A2-13”*
A2-14	0xA20E	异步机铁芯饱和系数4	100.0%~180.0%	150.0	%	实时更改	*第318页“A2-14”*
A2-17	0xA211	同步电机D轴电感	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第318页“A2-17”*
A2-18	0xA212	同步电机Q轴电感	0.01mH~655.35mH(功率≤55kW) 0.001mH~65.535mH(功率>55kW)	机型确定	mH	停机更改	*第319页“A2-18”*
A2-19	0xA213	同步电机反电动势系数	0.0V~6553.5V	0.0	V	停机更改	*第319页“A2-19”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-20	0xA214	滤波时间常数(PMVVC使用)	0.003~65.535	0.100	-	实时更改	*第319页“A2-20”*
A2-21	0xA215	振荡抑制增益(PMVVC使用)	0~65535	100	-	实时更改	*第319页“A2-21”*
A2-23	0xA217	摩擦力矩百分比	0.00%~100.00%	0.00	%	停机更改	*第320页“A2-23”*
A2-24	0xA218	电机极对数	0~65535	2	-	实时更改	*第320页“A2-24”*
A2-26	0xA21A	参数辨识运行方向(惯量辨识和同步机)	0：反转运行 1：正转运行	1	-	停机更改	*第320页“A2-26”*
A2-27	0xA21B	编码器线数	1~20000	1024	-	停机更改	*第320页“A2-27”*
A2-28	0xA21C	编码器类型	0：ABZ增量编码器 1：23位编码器 2：旋转变压器	0	-	停机更改	*第321页“A2-28”*
A2-29	0xA21D	PG信号滤波	0：非自适应滤波 1：自适应滤波 2：固定互锁 3：自动互锁	1	-	停机更改	*第321页“A2-29”*
A2-30	0xA21E	编码器接线标志	个位：AB信号的方向或旋转方向 0：正向 1：反向 十位：保留	0	-	停机更改	*第321页“A2-30”*
A2-31	0xA21F	编码器零点位置角	0.0°~359.9°	0.0	°	停机更改	*第322页“A2-31”*
A2-32	0xA220	电机齿轮比分子	1~65535	1	-	停机更改	*第322页“A2-32”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-33	0xA221	电机齿轮比分母	1~65535	1	-	停机更改	第322页“A2-33”
A2-34	0xA222	旋变极对数	1~32	1	-	停机更改	第322页“A2-34”
A2-36	0xA224	PG断线检测使能	个位：PG断线检测 0：不使能 1：使能 十位：保留	1	-	停机更改	第323页“A2-36”
A2-37	0xA225	参数辨识选择	0：无操作 1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0) 2：异步机动态参数辨识(支持带负载动态参数辨识) 3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO) 4：异步机动态参数辨识2(增加惯量辨识仅支持FVC) 5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC) 11：同步机带载参数辨识(不调反电动势) 12：同步机空载动态完整参数辨识 13：同步机静态参数辨识(不参数辨识编码器安装角) 14：同步机惯量辨识(仅支持FVC)	0	-	停机更改	第323页“A2-37”
A2-38	0xA226	低速速度环Kp	1~200	30	-	实时更改	第325页“A2-38”
A2-39	0xA227	低速速度环Ti	0.001s~10.000s	0.500	s	实时更改	第325页“A2-39”
A2-40	0xA228	切换频率1	0.00Hz~P2-05	5.00	Hz	实时更改	第325页“A2-40”
A2-41	0xA229	高速速度环Kp	1~200	20	-	实时更改	第326页“A2-41”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-42	0xA22A	高速速度环Ti	0.001s~10.000s	1.000	s	实时更改	*第326页“A2-42”*
A2-43	0xA22B	切换频率2	P2-02~P0-10	10.00	Hz	实时更改	*第326页“A2-43”*
A2-44	0xA22C	VC转差补偿调整	50%~200%	100	%	实时更改	*第327页“A2-44”*
A2-45	0xA22D	速度反馈滤波时间	0.000s~0.100s	0.004	s	实时更改	*第327页“A2-45”*
A2-46	0xA22E	VC减速过励磁增益	0~200	64	-	实时更改	*第327页“A2-46”*
A2-47	0xA22F	速度控制下转矩上限源（电动）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2)	0	-	实时更改	*第328页“A2-47”*
A2-48	0xA230	速度控制下转矩上限设定（电动）	0.0%~200.0%	150.0	%	实时更改	*第328页“A2-48”*
A2-49	0xA231	速度控制下转矩上限源（发电）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2) 8：上限数字设定（P2-12）	0	-	实时更改	*第329页“A2-49”*
A2-50	0xA232	速度控制下转矩上限设定（发电）	0.0%~200.0%	150.0	%	实时更改	*第330页“A2-50”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-51	0xA233	低速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第330页“A2-51”*
A2-52	0xA234	低速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第330页“A2-52”*
A2-53	0xA235	高速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第330页“A2-53”*
A2-54	0xA236	高速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第331页“A2-54”*
A2-55	0xA237	零速锁定速度环Kp	1~100	30	-	实时更改	*第331页“A2-55”*
A2-56	0xA238	零速锁定速度环Ti	0.001s~10.000s	0.500	s	实时更改	*第331页“A2-56”*
A2-57	0xA239	惯量补偿增益	1~200	1	-	实时更改	*第331页“A2-57”*
A2-58	0xA23A	零速锁定速度环切换频率	0.00Hz~P2-02	0.05	Hz	实时更改	*第332页“A2-58”*
A2-59	0xA23B	最大输出电压系数	100~110	100	-	实时更改	*第332页“A2-59”*
A2-60	0xA23C	输出电压滤波时间	0.000s~0.010s	0.000	s	实时更改	*第332页“A2-60”*
A2-61	0xA23D	零速锁定	0：不使能 1：使能	0	-	停机更改	*第332页“A2-61”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-62	0xA23E	矢量过压抑制KP	0~1000	40	-	实时更改	*第333页“A2-62”*
A2-63	0xA23F	加速补偿增益	0~200	0	-	实时更改	*第333页“A2-63”*
A2-64	0xA240	加速度补偿滤波时间	0~500	10	-	实时更改	*第333页“A2-64”*
A2-65	0xA241	矢量过压抑制使能	0：不使能 1：使能	1	-	实时更改	*第333页“A2-65”*
A2-66	0xA242	设定转矩滤波截止频率	50Hz~1000Hz	500	Hz	停机更改	*第334页“A2-66”*
A2-67	0xA243	同步机初始位置角检测电流	50~180	80	-	实时更改	*第334页“A2-67”*
A2-68	0xA244	速度环参数自动计算使能	0：不使能 1：使能	0	-	停机更改	*第334页“A2-68”*
A2-69	0xA245	期望速度环带宽(高速)	0Hz~3Hz	0	Hz	停机更改	*第334页“A2-69”*
A2-70	0xA246	期望速度环带宽(低速)	1Hz~10000Hz	100	Hz	实时更改	*第335页“A2-70”*
A2-71	0xA247	期望速度环带宽(零速)	1Hz~10000Hz	100	Hz	实时更改	*第335页“A2-71”*
A2-72	0xA248	期望速度环阻尼比:(一般不更改)	0.100~65.000	1.000	-	实时更改	*第335页“A2-72”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-73	0xA249	系统惯量(等效为启动时间)	0.001s~50.000s	0.100	s	停机更改	*第335页“A2-73”*
A2-74	0xA24A	电机单机惯量（$kg \cdot m^2$）	0.001~50.000	0.001	-	停机更改	*第336页“A2-74”*
A2-75	0xA24B	惯量辨识最大频率	20%~100%	80	%	停机更改	*第336页“A2-75”*
A2-76	0xA24C	惯量辨识加速时间	1.0s~50.0s	10.0	s	停机更改	*第336页“A2-76”*
A2-77	0xA24D	速度环动态优化测试带宽1	1.0Hz~200.0Hz	5.0	Hz	不可更改	*第336页“A2-77”*
A2-78	0xA24E	速度环动态优化测试带宽2	1.0Hz~200.0Hz	10.0	Hz	不可更改	*第337页“A2-78”*
A2-79	0xA24F	速度环动态优化测试带宽3	1.0Hz~100.0Hz	15.0	Hz	不可更改	*第337页“A2-79”*
A2-80	0xA250	速度环动态优化测试带宽4	1.0Hz~200.0Hz	20.0	Hz	不可更改	*第337页“A2-80”*
A2-81	0xA251	惯量辨识及动态设定速度	0~100	30	-	停机更改	*第337页“A2-81”*
A2-82	0xA252	转子时间常数校验使能	0：不使能 1：使能	0	-	不可更改	*第338页“A2-82”*
A2-83	0xA253	转子时间常数校验转矩幅值	10%~100%	30	%	不可更改	*第338页“A2-83”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-84	0xA254	转子时间常数校验次数	1~6	3	-	不可更改	*第338页“A2-84”*
A2-85	0xA255	惯量辨识使能	0：不使能 1：使能	0	-	停机更改	*第338页“A2-85”*
A2-86	0xA256	惯量辨识速度环带宽设置值	0.1Hz~100.0Hz	10.0	Hz	停机更改	*第339页“A2-86”*
A2-87	0xA257	反电势计算使能	0：不使能 1：使能	0	-	不可更改	*第339页“A2-87”*
A2-88	0xA258	惯量辨识模式	0：加减速模式 1：三角波模式	0	-	停机更改	*第339页“A2-88”*
A2-89	0xA259	惯量辨识加减速系数	0.1~10.0	1.0	-	停机更改	*第339页“A2-89”*
A2-90	0xA25A	解耦控制使能	0：不使能 1：使能	0	-	停机更改	*第340页“A2-90”*
A2-91	0xA25B	发电功率限制使能	0：不使能 1：使能	0	-	停机更改	*第340页“A2-91”*
A2-92	0xA25C	发电功率限制	0.0%~200.0%	20.0	%	停机更改	*第340页“A2-92”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A2-93	0xA25D	闭环矢量磁通闭环与转矩线性度优化选择	个位：转矩模式磁通闭环使能 0：不使能 1：使能 十位：速度模式磁通闭环使能 0：不使能 1：使能 百位：速度模式转矩上限转矩线性化使能 0：不使能 1：使能 千位：转矩基值选择 0：选择电机额定电流 1：选择电机额定转矩电流	10	-	停机更改	*第340页“A2-93”*
A2-94	0xA25E	变频器输出电流上限	0.0%~170.0%	150.0	%	停机更改	*第341页“A2-94”*
A2-95	0xA25F	第2电机控制方式	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f控制 3：保留 4：保留 5：同步机速度开环控制（PMVVC）	0	-	停机更改	*第341页“A2-95”*
A2-96	0xA260	第2电机加减速时间选择	0：加速时间1 1：加速时间2 2：加速时间3 3：加速时间4	0	-	停机更改	*第342页“A2-96”*
A2-97	0xA261	第2电机转矩提升	0.0%~30.0%	0.0	%	实时更改	*第342页“A2-97”*
A2-98	0xA262	第2电机振荡抑制增益模式	0：无效 1：保留 2：保留 3：有效	3	-	停机更改	*第342页“A2-98”*
A2-99	0xA263	第2电机振荡抑制增益	0~100	0	-	实时更改	*第343页“A2-99”*
A3-00	0xA300	电机类型选择	0：普通异步电机 1：变频异步电机 2：同步机	0	-	停机更改	*第343页“A3-00”*
A3-01	0xA301	电机额定功率	0.1kW~1000.0kW	1.5	kW	停机更改	*第343页“A3-01”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-02	0xA302	电机额定电压	1V~2000V	380	V	停机更改	*第344页“A3-02”*
A3-03	0xA303	电机额定电流	0.1A~6553.5A	9.0	A	停机更改	*第344页“A3-03”*
A3-04	0xA304	电机额定频率	0.01Hz~P0-10	50.00	Hz	停机更改	*第344页“A3-04”*
A3-05	0xA305	电机额定转速	1rpm~65535rpm	1460	rpm	停机更改	*第344页“A3-05”*
A3-06	0xA306	异步/同步电机定子电阻	0.001Ω~65.535Ω	1.204	Ω	停机更改	*第345页“A3-06”*
A3-07	0xA307	异步电机转子电阻	0.001Ω~65.535Ω	0.908	Ω	停机更改	*第345页“A3-07”*
A3-08	0xA308	异步电机漏感抗	0.01mH~655.35mH	5.28	mH	停机更改	*第345页“A3-08”*
A3-09	0xA309	异步电机互感抗	0.1mH~6553.5mH	156.8	mH	停机更改	*第346页“A3-09”*
A3-10	0xA30A	异步电机空载电流	0.1A~A3-03	4.2	A	停机更改	*第346页“A3-10”*
A3-11	0xA30B	异步机铁芯饱和系数1	50.0%~100.0%	86.0	%	实时更改	*第346页“A3-11”*
A3-12	0xA30C	异步机铁芯饱和系数2	100.0%~150.0%	130.0	%	实时更改	*第346页“A3-12”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-13	0xA30D	异步机铁芯饱和系数3	100.0%~170.0%	140.0	%	实时更改	*第347页“A3-13”*
A3-14	0xA30E	异步机铁芯饱和系数4	100.0%~180.0%	150.0	%	实时更改	*第347页“A3-14”*
A3-17	0xA311	同步电机D轴电感	0.01mH~655.35mH	15.86	mH	停机更改	*第347页“A3-17”*
A3-18	0xA312	同步电机Q轴电感	0.01mH~655.35mH	15.86	mH	停机更改	*第347页“A3-18”*
A3-19	0xA313	同步电机反电动势系数	0.0V~6553.5V	0.0	V	停机更改	*第348页“A3-19”*
A3-20	0xA314	滤波时间常数(PMVVC使用)	0.003~65.535	0.100	-	实时更改	*第348页“A3-20”*
A3-21	0xA315	振荡抑制增益(PMVVC使用)	0~65535	100	-	实时更改	*第348页“A3-21”*
A3-23	0xA317	摩擦力矩百分比	0.00%~100.00%	0.00	%	停机更改	*第348页“A3-23”*
A3-24	0xA318	电机极对数	0~65535	2	-	实时更改	*第349页“A3-24”*
A3-26	0xA31A	参数辨识运行方向(惯量辨识和同步机)	0：反转运行 1：正转运行	1	-	停机更改	*第349页“A3-26”*
A3-27	0xA31B	编码器线数	1~20000	1024	-	停机更改	*第349页“A3-27”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-28	0xA31C	编码器类型	0：ABZ增量编码器 1：23位编码器 2：旋转变压器	0	-	停机更改	*第349页“A3-28”*
A3-29	0xA31D	PG信号滤波	0：非自适应滤波 1：自适应滤波 2：固定互锁 3：自动互锁	1	-	停机更改	*第350页“A3-29”*
A3-30	0xA31E	编码器接线标志	个位：AB信号的方向或旋转方向 0：正向 1：反向 十位：保留	0	-	停机更改	*第350页“A3-30”*
A3-31	0xA31F	编码器零点位置角	0.0°~359.9°	0.0	°	停机更改	*第350页“A3-31”*
A3-32	0xA320	电机齿轮比分子	1~65535	1	-	停机更改	*第351页“A3-32”*
A3-33	0xA321	电机齿轮比分母	1~65535	1	-	停机更改	*第351页“A3-33”*
A3-34	0xA322	旋变极对数	1~32	1	-	停机更改	*第351页“A3-34”*
A3-36	0xA324	PG断线检测使能	个位：PG断线检测 0：不使能 1：使能 十位：保留	1	-	停机更改	*第351页“A3-36”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-37	0xA325	参数辨识选择	0：无操作 1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0) 2：异步机动态参数辨识(支持带负载动态参数辨识) 3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO) 4：异步机动态参数辨识2(增加惯量辨识仅支持FVC) 5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC) 11：同步机带载参数辨识(不调反电动势) 12：同步机空载动态完整参数辨识 13：同步机静态参数辨识(不参数辨识编码器安装角) 14：同步机惯量辨识(仅支持FVC)	0	-	停机更改	*第352页“A3-37”*
A3-38	0xA326	低速速度环Kp	1~200	30	-	实时更改	*第353页“A3-38”*
A3-39	0xA327	低速速度环Ti	0.001s~10.000s	0.500	s	实时更改	*第354页“A3-39”*
A3-40	0xA328	切换频率1	0.00Hz~P2-05	5.00	Hz	实时更改	*第354页“A3-40”*
A3-41	0xA329	高速速度环Kp	1~200	20	-	实时更改	*第354页“A3-41”*
A3-42	0xA32A	高速速度环Ti	0.001s~10.000s	1.000	s	实时更改	*第355页“A3-42”*
A3-43	0xA32B	切换频率2	P2-02~P0-10	10.00	Hz	实时更改	*第355页“A3-43”*
A3-44	0xA32C	VC转差补偿调整	50%~200%	100	%	实时更改	*第355页“A3-44”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-45	0xA32D	速度反馈滤波时间	0.000s~0.100s	0.004	s	实时更改	*第355页“A3-45”*
A3-46	0xA32E	VC减速过励磁增益	0~200	64	-	实时更改	*第356页“A3-46”*
A3-47	0xA32F	速度控制下转矩上限源（电动）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2)	0	-	实时更改	*第356页“A3-47”*
A3-48	0xA330	速度控制下转矩上限设定（电动）	0.0%~200.0%	150.0	%	实时更改	*第357页“A3-48”*
A3-49	0xA331	速度控制下转矩上限源（发电）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2) 8：上限数字设定（P2-12）	0	-	实时更改	*第357页“A3-49”*
A3-50	0xA332	速度控制下转矩上限设定（发电）	0.0%~200.0%	150.0	%	实时更改	*第358页“A3-50”*
A3-51	0xA333	低速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第359页“A3-51”*
A3-52	0xA334	低速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第359页“A3-52”*
A3-53	0xA335	高速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第359页“A3-53”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-54	0xA336	高速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第359页“A3-54”*
A3-55	0xA337	零速锁定速度环Kp	1~100	30	-	实时更改	*第360页“A3-55”*
A3-56	0xA338	零速锁定速度环Ti	0.001s~10.000s	0.500	s	实时更改	*第360页“A3-56”*
A3-57	0xA339	惯量补偿增益	1~200	1	-	实时更改	*第360页“A3-57”*
A3-58	0xA33A	零速锁定速度环切换频率	0.00Hz~P2-02	0.05	Hz	实时更改	*第360页“A3-58”*
A3-59	0xA33B	最大输出电压系数	100~110	100	-	实时更改	*第361页“A3-59”*
A3-60	0xA33C	输出电压滤波时间	0.000s~0.010s	0.000	s	实时更改	*第361页“A3-60”*
A3-61	0xA33D	零速锁定	0：不使能 1：使能	0	-	停机更改	*第361页“A3-61”*
A3-62	0xA33E	矢量过压抑制KP	0~1000	40	-	实时更改	*第361页“A3-62”*
A3-63	0xA33F	加速补偿增益	0~200	0	-	实时更改	*第362页“A3-63”*
A3-64	0xA340	加速度补偿滤波时间	0~500	10	-	实时更改	*第362页“A3-64”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-65	0xA341	矢量过压抑制使能	0：不使能 1：使能	1	-	实时更改	*第362页“A3-65”*
A3-66	0xA342	设定转矩滤波截止频率	50Hz~1000Hz	500	Hz	停机更改	*第362页“A3-66”*
A3-67	0xA343	同步机初始位置角检测电流	50~180	80	-	实时更改	*第363页“A3-67”*
A3-68	0xA344	速度环参数自动计算使能	0：不使能 1：使能	0	-	停机更改	*第363页“A3-68”*
A3-69	0xA345	期望速度环带宽(高速)	0Hz~3Hz	0	Hz	停机更改	*第363页“A3-69”*
A3-70	0xA346	期望速度环带宽(低速)	1Hz~10000Hz	100	Hz	实时更改	*第363页“A3-70”*
A3-71	0xA347	期望速度环带宽(零速)	1Hz~10000Hz	100	Hz	实时更改	*第364页“A3-71”*
A3-72	0xA348	期望速度环阻尼比:(一般不更改)	0.100~65.000	1.000	-	实时更改	*第364页“A3-72”*
A3-73	0xA349	系统惯量(等效为启动时间)	0.001s~50.000s	0.100	s	停机更改	*第364页“A3-73”*
A3-74	0xA34A	电机单机惯量（$kg \cdot m^2$）	0.001~50.000	0.001	-	停机更改	*第364页“A3-74”*
A3-75	0xA34B	惯量辨识最大频率	20%~100%	80	%	停机更改	*第365页“A3-75”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-76	0xA34C	惯量辨识加速时间	1.0s~50.0s	10.0	s	停机更改	*第365页“A3-76”*
A3-77	0xA34D	速度环动态优化测试带宽1	1.0Hz~200.0Hz	5.0	Hz	不可更改	*第365页“A3-77”*
A3-78	0xA34E	速度环动态优化测试带宽2	1.0Hz~200.0Hz	10.0	Hz	不可更改	*第365页“A3-78”*
A3-79	0xA34F	速度环动态优化测试带宽3	1.0Hz~100.0Hz	15.0	Hz	不可更改	*第365页“A3-79”*
A3-80	0xA350	速度环动态优化测试带宽4	1.0Hz~200.0Hz	20.0	Hz	不可更改	*第366页“A3-80”*
A3-81	0xA351	惯量辨识及动态设定速度	0~100	30	-	停机更改	*第366页“A3-81”*
A3-82	0xA352	转子时间常数校验使能	0：不使能 1：使能	0	-	不可更改	*第366页“A3-82”*
A3-83	0xA353	转子时间常数校验转矩幅值	10%~100%	30	%	不可更改	*第366页“A3-83”*
A3-84	0xA354	转子时间常数校验次数	1~6	3	-	不可更改	*第367页“A3-84”*
A3-85	0xA355	惯量辨识使能	0：不使能 1：使能	0	-	停机更改	*第367页“A3-85”*
A3-86	0xA356	惯量辨识速度环带宽设置值	0.1Hz~100.0Hz	10.0	Hz	停机更改	*第367页“A3-86”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-87	0xA357	反电势计算使能	0：不使能 1：使能	0	-	不可更改	*第367页“A3-87”*
A3-88	0xA358	惯量辨识模式	0：加减速模式 1：三角波模式	0	-	停机更改	*第368页“A3-88”*
A3-89	0xA359	惯量辨识加减速系数	0.1~10.0	1.0	-	停机更改	*第368页“A3-89”*
A3-90	0xA35A	解耦控制使能	0：不使能 1：使能	0	-	停机更改	*第368页“A3-90”*
A3-91	0xA35B	发电功率限制使能	0：不使能 1：使能	0	-	停机更改	*第368页“A3-91”*
A3-92	0xA35C	发电功率限制	0.0%~200.0%	20.0	%	停机更改	*第369页“A3-92”*
A3-93	0xA35D	闭环矢量磁通闭环与转矩线性度优化选择	个位：转矩模式磁通闭环使能 0：不使能 1：使能 十位：速度模式磁通闭环使能 0：不使能 1：使能 百位：速度模式转矩上限转矩线性化使能 0：不使能 1：使能 千位：转矩基值选择 0：选择电机额定电流 1：选择电机额定转矩电流	10	-	停机更改	*第369页“A3-93”*
A3-94	0xA35E	变频器输出电流上限	0.0%~170.0%	150.0	%	停机更改	*第369页“A3-94”*
A3-95	0xA35F	第3电机控制方式	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f控制 3：保留 4：保留 5：同步机速度开环控制（PMVVC）	0	-	停机更改	*第370页“A3-95”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A3-96	0xA360	第3电机加减速时间选择	0：加速时间1 1：加速时间2 2：加速时间3 3：加速时间4	0	-	停机更改	*第370页“A3-96”*
A3-97	0xA361	第3电机转矩提升	0.0%~30.0%	0.0	%	实时更改	*第371页“A3-97”*
A3-98	0xA362	第3电机振荡抑制增益模式	0：无效 1：保留 2：保留 3：有效	3	-	停机更改	*第371页“A3-98”*
A3-99	0xA363	第3电机振荡抑制增益	0~100	0	-	实时更改	*第371页“A3-99”*
A4-00	0xA400	电机类型选择	0：普通异步电机 1：变频异步电机 2：同步机	0	-	停机更改	*第372页“A4-00”*
A4-01	0xA401	电机额定功率	0.1kW~1000.0kW	1.5	kW	停机更改	*第372页“A4-01”*
A4-02	0xA402	电机额定电压	1V~2000V	380	V	停机更改	*第372页“A4-02”*
A4-03	0xA403	电机额定电流	0.1A~6553.5A	9.0	A	停机更改	*第373页“A4-03”*
A4-04	0xA404	电机额定频率	0.01Hz~F0-10	50.00	Hz	停机更改	*第373页“A4-04”*
A4-05	0xA405	电机额定转速	1rpm~65535rpm	1460	rpm	停机更改	*第373页“A4-05”*
A4-06	0xA406	异步/同步电机定子电阻	0.001Ω~65.535Ω	1.204	Ω	停机更改	*第373页“A4-06”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-07	0xA407	异步电机转子电阻	0.001Ω~65.535Ω	0.908	Ω	停机更改	*第374页“A4-07”*
A4-08	0xA408	异步电机漏感抗	0.01mH~655.35mH	5.28	mH	停机更改	*第374页“A4-08”*
A4-09	0xA409	异步电机互感抗	0.1mH~6553.5mH	156.8	mH	停机更改	*第374页“A4-09”*
A4-10	0xA40A	异步电机空载电流	0.1A~A4-03	4.2	A	停机更改	*第375页“A4-10”*
A4-11	0xA40B	异步机铁芯饱和系数1	50.0%~100.0%	86.0	%	实时更改	*第375页“A4-11”*
A4-12	0xA40C	异步机铁芯饱和系数2	100.0%~150.0%	130.0	%	实时更改	*第375页“A4-12”*
A4-13	0xA40D	异步机铁芯饱和系数3	100.0%~170.0%	140.0	%	实时更改	*第375页“A4-13”*
A4-14	0xA40E	异步机铁芯饱和系数4	100.0%~180.0%	150.0	%	实时更改	*第376页“A4-14”*
A4-17	0xA411	同步电机D轴电感	0.01mH~655.35mH	15.86	mH	停机更改	*第376页“A4-17”*
A4-18	0xA412	同步电机Q轴电感	0.01mH~655.35mH	15.86	mH	停机更改	*第376页“A4-18”*
A4-19	0xA413	同步电机反电动势系数	0.0V~6553.5V	0.0	V	停机更改	*第376页“A4-19”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-20	0xA414	滤波时间常数(PMVVC使用)	0.003~65.535	0.100	-	实时更改	*第376页“A4-20”*
A4-21	0xA415	振荡抑制增益(PMVVC使用)	0~65535	100	-	实时更改	*第377页“A4-21”*
A4-23	0xA417	摩擦力矩百分比	0.00%~100.00%	0.00	%	停机更改	*第377页“A4-23”*
A4-24	0xA418	电机极对数	0~65535	2	-	实时更改	*第377页“A4-24”*
A4-26	0xA41A	参数辨识运行方向(惯量辨识和同步机)	0：反转运行 1：正转运行	1	-	停机更改	*第377页“A4-26”*
A4-27	0xA41B	编码器线数	1~20000	1024	-	停机更改	*第378页“A4-27”*
A4-28	0xA41C	编码器类型	0：ABZ增量编码器 1：23位编码器 2：旋转变压器	0	-	停机更改	*第378页“A4-28”*
A4-29	0xA41D	PG信号滤波	0：非自适应滤波 1：自适应滤波 2：固定互锁 3：自动互锁	1	-	停机更改	*第378页“A4-29”*
A4-30	0xA41E	编码器接线标志	个位：AB信号的方向或旋转方向 0：正向 1：反向 十位：保留	0	-	停机更改	*第379页“A4-30”*
A4-31	0xA41F	编码器零点位置角	0.0°~359.9°	0.0	°	停机更改	*第379页“A4-31”*
A4-32	0xA420	电机齿轮比分子	1~65535	1	-	停机更改	*第379页“A4-32”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-33	0xA421	电机齿轮比分母	1~65535	1	-	停机更改	*第379页“A4-33”*
A4-34	0xA422	旋变极对数	1~32	1	-	停机更改	*第380页“A4-34”*
A4-36	0xA424	PG断线检测使能	个位：PG断线检测 0：不使能 1：使能 十位：保留	1	-	停机更改	*第380页“A4-36”*
A4-37	0xA425	参数辨识选择	0：无操作 1：异步机静态部分参数辨识(参数辨识参数Rs、Rr、L0) 2：异步机动态参数辨识(支持带负载动态参数辨识) 3：异步机静态完整参数辨识(参数辨识参数Rs、Rr、L0、Lm、IO) 4：异步机动态参数辨识2(增加惯量辨识仅支持FVC) 5：异步机动态参数辨识3(增加互感曲线辨识要求空载或者轻载或者纯惯量负载 支持V/f、SVC、FVC) 11：同步机带载参数辨识(不调反电动势) 12：同步机空载动态完整参数辨识 13：同步机静态参数辨识(不参数辨识编码器安装角) 14：同步机惯量辨识(仅支持FVC)	0	-	停机更改	*第380页“A4-37”*
A4-38	0xA426	低速速度环Kp	1~200	30	-	实时更改	*第382页“A4-38”*
A4-39	0xA427	低速速度环Ti	0.001s~10.000s	0.500	s	实时更改	*第382页“A4-39”*
A4-40	0xA428	切换频率1	0.00Hz~P2-05	5.00	Hz	实时更改	*第383页“A4-40”*
A4-41	0xA429	高速速度环Kp	1~200	20	-	实时更改	*第383页“A4-41”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-42	0xA42A	高速速度环Ti	0.001s~10.000s	1.000	s	实时更改	第383页“A4-42”
A4-43	0xA42B	切换频率2	P2-02~P0-10	10.00	Hz	实时更改	第384页“A4-43”
A4-44	0xA42C	VC转差补偿调整	50%~200%	100	%	实时更改	第384页“A4-44”
A4-45	0xA42D	速度反馈滤波时间	0.000s~0.100s	0.004	s	实时更改	第384页“A4-45”
A4-46	0xA42E	VC减速过励磁增益	0~200	64	-	实时更改	第385页“A4-46”
A4-47	0xA42F	速度控制下转矩上限源（电动）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2)	0	-	实时更改	第385页“A4-47”
A4-48	0xA430	速度控制下转矩上限设定（电动）	0.0%~200.0%	150.0	%	实时更改	第386页“A4-48”
A4-49	0xA431	速度控制下转矩上限源（发电）	0：上限数字设定（P2-10） 1：AI1 2：AI2 3：AI3 4：PULSE脉冲设定（DI5） 5：通信给定 6：MIN(AI1,AI2) 7：MAX(AI1,AI2) 8：上限数字设定（P2-12）	0	-	实时更改	第386页“A4-49”
A4-50	0xA432	速度控制下转矩上限设定（发电）	0.0%~200.0%	150.0	%	实时更改	第387页“A4-50”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-51	0xA433	低速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第387页“A4-51”*
A4-52	0xA434	低速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第388页“A4-52”*
A4-53	0xA435	高速电流环Kp调整	0.1~10.0	1.0	-	实时更改	*第388页“A4-53”*
A4-54	0xA436	高速电流环Ki调整	0.1~10.0	1.0	-	实时更改	*第388页“A4-54”*
A4-55	0xA437	零速锁定速度环Kp	1~100	30	-	实时更改	*第388页“A4-55”*
A4-56	0xA438	零速锁定速度环Ti	0.001s~10.000s	0.500	s	实时更改	*第389页“A4-56”*
A4-57	0xA439	惯量补偿增益	1~200	1	-	实时更改	*第389页“A4-57”*
A4-58	0xA43A	零速锁定速度环切换频率	0.00Hz~P2-02	0.05	Hz	实时更改	*第389页“A4-58”*
A4-59	0xA43B	最大输出电压系数	100~110	100	-	实时更改	*第389页“A4-59”*
A4-60	0xA43C	输出电压滤波时间	0.000s~0.010s	0.000	s	实时更改	*第390页“A4-60”*
A4-61	0xA43D	零速锁定	0：不使能 1：使能	0	-	停机更改	*第390页“A4-61”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-62	0xA43E	矢量过压抑制KP	0~1000	40	-	实时更改	*第390页“A4-62”*
A4-63	0xA43F	加速补偿增益	0~200	0	-	实时更改	*第390页“A4-63”*
A4-64	0xA440	加速度补偿滤波时间	0~500	10	-	实时更改	*第391页“A4-64”*
A4-65	0xA441	矢量过压抑制使能	0：不使能 1：使能	1	-	实时更改	*第391页“A4-65”*
A4-66	0xA442	设定转矩滤波截止频率	50Hz~1000Hz	500	Hz	停机更改	*第391页“A4-66”*
A4-67	0xA443	同步机初始位置角检测电流	50~180	80	-	实时更改	*第391页“A4-67”*
A4-68	0xA444	速度环参数自动计算使能	0：不使能 1：使能	0	-	停机更改	*第392页“A4-68”*
A4-69	0xA445	期望速度环带宽(高速)	0Hz~3Hz	0	Hz	停机更改	*第392页“A4-69”*
A4-70	0xA446	期望速度环带宽(低速)	1Hz~10000Hz	100	Hz	实时更改	*第392页“A4-70”*
A4-71	0xA447	期望速度环带宽(零速)	1Hz~10000Hz	100	Hz	实时更改	*第392页“A4-71”*
A4-72	0xA448	期望速度环阻尼比:(一般不更改)	0.100~65.000	1.000	-	实时更改	*第393页“A4-72”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-73	0xA449	系统惯量(等效为启动时间)	0.001s~50.000s	0.100	s	停机更改	*第393页“A4-73”*
A4-74	0xA44A	电机单机惯量（$kg \cdot m^2$）	0.001~50.000	0.001	-	停机更改	*第393页“A4-74”*
A4-75	0xA44B	惯量辨识最大频率	20%~100%	80	%	停机更改	*第393页“A4-75”*
A4-76	0xA44C	惯量辨识加速时间	1.0s~50.0s	10.0	s	停机更改	*第393页“A4-76”*
A4-77	0xA44D	速度环动态优化测试带宽1	1.0Hz~200.0Hz	5.0	Hz	不可更改	*第394页“A4-77”*
A4-78	0xA44E	速度环动态优化测试带宽2	1.0Hz~200.0Hz	10.0	Hz	不可更改	*第394页“A4-78”*
A4-79	0xA44F	速度环动态优化测试带宽3	1.0Hz~100.0Hz	15.0	Hz	不可更改	*第394页“A4-79”*
A4-80	0xA450	速度环动态优化测试带宽4	1.0Hz~200.0Hz	20.0	Hz	不可更改	*第394页“A4-80”*
A4-81	0xA451	惯量辨识及动态设定速度	0~100	30	-	停机更改	*第395页“A4-81”*
A4-82	0xA452	转子时间常数校验使能	0：不使能 1：使能	0	-	不可更改	*第395页“A4-82”*
A4-83	0xA453	转子时间常数校验转矩幅值	10%~100%	30	%	不可更改	*第395页“A4-83”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-84	0xA454	转子时间常数校验次数	1~6	3	-	不可更改	*第395页“A4-84”*
A4-85	0xA455	惯量辨识使能	0：不使能 1：使能	0	-	停机更改	*第396页“A4-85”*
A4-86	0xA456	惯量辨识速度环带宽设置值	0.1Hz~100.0Hz	10.0	Hz	停机更改	*第396页“A4-86”*
A4-87	0xA457	反电势计算使能	0：不使能 1：使能	0	-	不可更改	*第396页“A4-87”*
A4-88	0xA458	惯量辨识模式	0：加减速模式 1：三角波模式	0	-	停机更改	*第396页“A4-88”*
A4-89	0xA459	惯量辨识加减速系数	0.1~10.0	1.0	-	停机更改	*第397页“A4-89”*
A4-90	0xA45A	解耦控制使能	0：不使能 1：使能	0	-	停机更改	*第397页“A4-90”*
A4-91	0xA45B	发电功率限制使能	0：不使能 1：使能	0	-	停机更改	*第397页“A4-91”*
A4-92	0xA45C	发电功率限制	0.0%~200.0%	20.0	%	停机更改	*第397页“A4-92”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A4-93	0xA45D	闭环矢量磁通闭环与转矩线性度优化选择	个位：转矩模式磁通闭环使能 0：不使能 1：使能 十位：速度模式磁通闭环使能 0：不使能 1：使能 百位：速度模式转矩上限转矩线性化使能 0：不使能 1：使能 千位：转矩基值选择 0：选择电机额定电流 1：选择电机额定转矩电流	10	-	停机更改	*第398页“A4-93”*
A4-94	0xA45E	变频器输出电流上限	0.0%~170.0%	150.0	%	停机更改	*第398页“A4-94”*
A4-95	0xA45F	第4电机控制方式	0：无速度传感器矢量控制（SVC） 1：有速度传感器矢量控制（FVC） 2：V/f控制 3：保留 4：保留 5：同步机速度开环控制（PMVVC）	0	-	停机更改	*第398页“A4-95”*
A4-96	0xA460	第4电机加减速时间选择	0：加速时间1 1：加速时间2 2：加速时间3 3：加速时间4	0	-	停机更改	*第399页“A4-96”*
A4-97	0xA461	第4电机转矩提升	0.0%~30.0%	0.0	%	实时更改	*第399页“A4-97”*
A4-98	0xA462	第4电机振荡抑制增益模式	0：无效 1：保留 2：保留 3：有效	3	-	停机更改	*第400页“A4-98”*
A4-99	0xA463	第4电机振荡抑制增益	0~100	0	-	实时更改	*第400页“A4-99”*
A5-00	0xA500	DPWM切换上限频率	0.00Hz~P0-10	12.00	Hz	实时更改	*第400页“A5-00”*
A5-01	0xA501	PWM调制方式	0：异步调制 1：同步调制 2：同步调制模式2 3：同步调制模式3	0	-	实时更改	*第401页“A5-01”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A5-02	0xA502	死区补偿模式选择	0：不补偿 1：补偿模式1 2：补偿模式2	2	-	停机更改	*第401页“A5-02”*
A5-03	0xA503	随机PWM深度	0~10	0	-	实时更改	*第401页“A5-03”*
A5-04	0xA504	快速限流使能	0：不使能 1：使能	0	-	实时更改	*第402页“A5-04”*
A5-05	0xA505	采样延时时间	1~13	5	-	实时更改	*第402页“A5-05”*
A5-06	0xA506	欠压点设置	150.0V~700.0V	350.0	V	实时更改	*第402页“A5-06”*
A5-13	0xA50D	功能部分设定母线电压	100~20000	5310	-	不可更改	*第403页“A5-13”*
A5-14	0xA50E	温度校正使能	0：不使能 1：使能	0	-	停机更改	*第403页“A5-14”*
A5-16	0xA510	显示参数地址1	0~100	0	-	不可更改	*第403页“A5-16”*
A5-17	0xA511	显示参数地址2	0~100	1	-	不可更改	*第403页“A5-17”*
A5-18	0xA512	显示参数地址3	0~100	2	-	不可更改	*第404页“A5-18”*
A5-19	0xA513	显示参数地址4	0~100	3	-	不可更改	*第404页“A5-19”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A5-21	0xA515	低速载频设置	0.0~16.0	0.0	-	实时更改	*第404页“A5-21”*
A5-22	0xA516	死区补偿辨识使能	0：不使能 1：使能	0	-	停机更改	*第404页“A5-22”*
A6-00	0xA600	曲线4最小输入	-10.00V~A6-02	0.00	V	实时更改	*第405页“A6-00”*
A6-01	0xA601	曲线4最小输入对应设定	-100.0%~100.0%	0.0	%	实时更改	*第405页“A6-01”*
A6-02	0xA602	曲线4拐点1输入	A6-00~A6-04	3.00	V	实时更改	*第405页“A6-02”*
A6-03	0xA603	曲线4拐点1输入对应设定	-100.0%~100.0%	30.0	%	实时更改	*第405页“A6-03”*
A6-04	0xA604	曲线4拐点2输入	A6-02~A6-06	6.00	V	实时更改	*第406页“A6-04”*
A6-05	0xA605	曲线4拐点2输入对应设定	-100.0%~100.0%	60.0	%	实时更改	*第406页“A6-05”*
A6-06	0xA606	曲线4最大输入	A6-04~10.00V	10.00	V	实时更改	*第406页“A6-06”*
A6-07	0xA607	曲线4最大输入对应设定	-100.0%~100.0%	100.0	%	实时更改	*第406页“A6-07”*
A6-08	0xA608	曲线5最小输入	-10.00V~A6-10	-10.00	V	实时更改	*第407页“A6-08”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A6-09	0xA609	曲线5最小输入对应设定	-100.0%~100.0%	-100.0	%	实时更改	*第407页“A6-09”*
A6-10	0xA60A	曲线5拐点1输入	A6-08~A6-12	-3.00	V	实时更改	*第407页“A6-10”*
A6-11	0xA60B	曲线5拐点1输入对应设定	-100.0%~100.0%	-30.0	%	实时更改	*第407页“A6-11”*
A6-12	0xA60C	曲线5拐点2输入	A6-10~A6-14	3.00	V	实时更改	*第408页“A6-12”*
A6-13	0xA60D	曲线5拐点2输入对应设定	-100.0%~100.0%	30.0	%	实时更改	*第408页“A6-13”*
A6-14	0xA60E	曲线5最大输入	A6-12~10.00V	10.00	V	实时更改	*第408页“A6-14”*
A6-15	0xA60F	曲线5最大输入对应设定	-100.0%~100.0%	100.0	%	实时更改	*第408页“A6-15”*
A6-16	0xA610	AI1增益	-10.00~10.00	1.00	-	实时更改	*第409页“A6-16”*
A6-17	0xA611	AI1偏移	-100.0%~100.0%	0.0	%	实时更改	*第409页“A6-17”*
A6-18	0xA612	AI2增益	-10.00~10.00	1.00	-	实时更改	*第409页“A6-18”*
A6-19	0xA613	AI2偏移	-100.0%~100.0%	0.0	%	实时更改	*第409页“A6-19”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A6-20	0xA614	AI3增益	-10.00~10.00	1.00	-	实时更改	*第409页“A6-20”*
A6-21	0xA615	AI3偏移	-100.0%~100.0%	0.0	%	实时更改	*第410页“A6-21”*
A6-22	0xA616	AI断线检测阈值	0.0%~100.0%	0.0	%	实时更改	*第410页“A6-22”*
A6-23	0xA617	AI断线检测时间	0.0s~6553.5s	0.0	s	实时更改	*第410页“A6-23”*
A6-24	0xA618	AI1设定跳跃点	-100.0%~100.0%	0.0	%	实时更改	*第410页“A6-24”*
A6-25	0xA619	AI1设定跳跃幅度	0.0%~100.0%	0.1	%	实时更改	*第411页“A6-25”*
A6-26	0xA61A	AI2设定跳跃点	-100.0%~100.0%	0.0	%	实时更改	*第411页“A6-26”*
A6-27	0xA61B	AI2设定跳跃幅度	0.0%~100.0%	0.1	%	实时更改	*第411页“A6-27”*
A6-28	0xA61C	AI3设定跳跃点	-100.0%~100.0%	0.0	%	实时更改	*第411页“A6-28”*
A6-29	0xA61D	AI3设定跳跃幅度	0.0%~100.0%	0.1	%	实时更改	*第412页“A6-29”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A6-30	0xA61E	模拟量断线检测使能	个位：AI1断线检测使能 0：不使能 1：使能 十位：AI2断线检测使能 0：不使能 1：使能 百位：AI3断线检测使能 0：不使能 1：使能	0	-	实时更改	*第412页“A6-30”*
A8-00	0xA800	本机地址	0~124	1	-	停机更改	*第412页“A8-00”*
A8-01	0xA801	波特率	6 (1M)	6	-	停机更改	*第413页“A8-01”*
A8-02	0xA802	通信超时时间	0.0~10.0	1.0	-	实时更改	*第413页“A8-02”*
A8-10	0xA80A	速度同步选择	0：无效 1：主机 2：从机 3：中间点	0	-	停机更改	*第413页“A8-10”*
A8-11	0xA80B	同步方式选择	0：速度同步	0	-	不可更改	*第414页“A8-11”*
A8-12	0xA80C	跟随主机站号（从机有效）	1~124	1	-	停机更改	*第414页“A8-12”*
A8-14	0xA80E	从机配置参数	0：不跟随主机启停命令 1：跟随主机启停命令	1	-	停机更改	*第414页“A8-14”*
A8-15	0xA80F	加速时间（位置有效）	0.0~100.0	0.0	-	实时更改	*第414页“A8-15”*
A8-16	0xA810	减速时间（位置有效）	0.0~100.0	0.0	-	实时更改	*第415页“A8-16”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A8-17	0xA811	电子齿轮比分子	1~65535	1	-	停机更改	*第415页“A8-17”*
A8-18	0xA812	电子齿轮比分母	1~65535	1	-	停机更改	*第415页“A8-18”*
A8-36	0xA824	通信超时补偿方式	0：自动补偿 1：根据波特率计算 2：功能码设定(A8-37)	0	-	停机更改	*第415页“A8-36”*
A8-37	0xA825	通信延时时间数字设定	0μs~20000μs	156	μs	停机更改	*第416页“A8-37”*
A8-42	0xA82A	主机发送频率源选择（主机有效）	0：反馈频率 1：运行频率 2：自动切换	0	-	停机更改	*第416页“A8-42”*
A8-50	0xA832	负荷分配主从机选择	0：无效 1：主机 2：从机	0	-	停机更改	*第416页“A8-50”*
A8-52	0xA834	跟随主机站号（从机有效）	1~127	1	-	停机更改	*第416页“A8-52”*
A8-54	0xA836	从机配置参数（负荷分配）	0：不跟随主机启停命令 1：跟随主机启停命令	1	-	停机更改	*第417页“A8-54”*
A8-55	0xA837	转矩加速时间	0.00s~600.00s	0.00	s	实时更改	*第417页“A8-55”*
A8-56	0xA838	转矩减速时间	0.00s~600.00s	0.00	s	实时更改	*第417页“A8-56”*
A8-57	0xA839	频率增益	-10.00~10.00	1.00	-	停机更改	*第417页“A8-57”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A8-58	0xA83A	频率偏置	-100.00%~100.00%	0.00	%	停机更改	*第418页“A8-58”*
A8-59	0xA83B	转矩增益	-10.00~10.00	1.00	-	停机更改	*第418页“A8-59”*
A8-60	0xA83C	转矩偏置	-100.00%~100.00%	0.00	%	停机更改	*第418页“A8-60”*
A8-61	0xA83D	主机发送频率源选择（主机有效）	0：反馈频率 1：运行频率 2：自动切换	0	-	实时更改	*第418页“A8-61”*
A8-62	0xA83E	主机发送频率切换点（主机有效）	0.00Hz~600.00Hz	5.00	Hz	实时更改	*第419页“A8-62”*
A8-63	0xA83F	负荷分配从机转矩下限	0.0%~50.0%	5.0	%	停机更改	*第419页“A8-63”*
A8-70	0xA846	下垂控制主从机选择	0：无效 1：主机 2：从机 3：自下垂	0	-	停机更改	*第419页“A8-70”*
A8-71	0xA847	下垂控制方式选择	2：主从机下垂（主从机有效）	2	-	停机更改	*第419页“A8-71”*
A8-72	0xA848	跟随主机站号（从机有效）	1~124	1	-	停机更改	*第420页“A8-72”*
A8-74	0xA84A	从机配置参数（下垂控制）	0：不跟随主机启停命令 1：跟随主机启停命令	1	-	停机更改	*第420页“A8-74”*
A8-77	0xA84D	下垂率	0.00%~100.00%	5.00	%	实时更改	*第420页“A8-77”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A8-82	0xA852	下垂控制转矩电流滤波时间	1~5000	10	-	实时更改	*第420页“A8-82”*
A8-83	0xA853	下垂控制下垂频率滤波时间	0.00~2.00	0.00	-	实时更改	*第421页“A8-83”*
A9-00	0xA900	异步机在线辨识转子时间常数	0：不辨识 1：辨识	0	-	实时更改	*第421页“A9-00”*
A9-01	0xA901	异步机FVC辨识转子电阻增益	0~100	5	-	实时更改	*第421页“A9-01”*
A9-02	0xA902	异步机FVC辨识转子电阻起始频率	2Hz~100Hz	7	Hz	实时更改	*第421页“A9-02”*
A9-03	0xA903	异步机FVC观测磁场系数	30~150	40	-	实时更改	*第422页“A9-03”*
A9-04	0xA904	异步机弱磁区最大转矩限制系数	30~150	80	-	实时更改	*第422页“A9-04”*
A9-05	0xA905	异步机SVC速度滤波时间	5ms~32ms	15	ms	实时更改	*第422页“A9-05”*
A9-06	0xA906	SVC优化选择	0：无特殊处理 1：根据负载变化限制最小同步频率 2：低速运行时输出固定大小电流 3：低速运行时输出固定大小电流 4：小转矩优化	0	-	实时更改	*第422页“A9-06”*
A9-07	0xA907	异步机SVC磁场调节带宽	0.0~8.0	2.0	-	实时更改	*第423页“A9-07”*
A9-08	0xA908	SVC参数1	30~170	100	-	实时更改	*第423页“A9-08”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A9-09	0xA909	SVC参数2	0.1Hz~1.0Hz	0.3	Hz	停机更改	*第423页“A9-09”*
A9-10	0xA90A	SVC参数3	80~100	95	-	停机更改	*第423页“A9-10”*
A9-11	0xA90B	SVC参数4	10~3000	200	-	停机更改	*第424页“A9-11”*
A9-12	0xA90C	SVC转速跟踪禁止反转	0：无效 1：使能	0	-	停机更改	*第424页“A9-12”*
A9-13	0xA90D	异步机快速识别定子电阻系数1	0~65535	10	-	停机更改	*第424页“A9-13”*
A9-14	0xA90E	异步机快速识别定子电阻系数2	0~65535	10	-	停机更改	*第424页“A9-14”*
A9-17	0xA911	同步机实时角度	0.0~359.9	0.0	-	不可更改	*第425页“A9-17”*
A9-18	0xA912	同步机初始位置角检测	0：每次运行都检测 1：不检测 2：上电第一次运行检测	0	-	实时更改	*第425页“A9-18”*
A9-20	0xA914	弱磁方式选择	0：自动弱磁 1：同步机调整法弱磁 2：同步机混合方式弱磁 3：不弱磁	1	-	停机更改	*第425页“A9-20”*
A9-21	0xA915	同步机弱磁增益	0~50	5	-	实时更改	*第426页“A9-21”*
A9-22	0xA916	同步机输出电压上限裕量	0%~50%	5	%	实时更改	*第426页“A9-22”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A9-23	0xA917	同步机最大出力调整增益	20%~300%	100	%	实时更改	*第426页“A9-23”*
A9-24	0xA918	同步机计算励磁电流调整增益	40%~200%	100	%	实时更改	*第426页“A9-24”*
A9-25	0xA919	同步机SVC速度估算积分增益	5%~1000%	30	%	实时更改	*第426页“A9-25”*
A9-26	0xA91A	同步机SVC速度估算比例增益	5%~300%	20	%	实时更改	*第427页“A9-26”*
A9-27	0xA91B	同步机SVC估计速度滤波	10~2000	100	-	实时更改	*第427页“A9-27”*
A9-28	0xA91C	同步机SVC最低载波频率	0.8~P0-15	2.0	-	实时更改	*第427页“A9-28”*
A9-29	0xA91D	同步机SVC低速励磁电流	0%~80%	30	%	实时更改	*第427页“A9-29”*
A9-30	0xA91E	低速闭环电流(VVC使用)	0%~65535%	0	%	实时更改	*第428页“A9-30”*
A9-31	0xA91F	振荡抑制阻尼系数(VVC使用)	0%~65535%	0	%	实时更改	*第428页“A9-31”*
A9-32	0xA920	同步机控制保留参数8	0~65535	0	-	实时更改	*第428页“A9-32”*
A9-33	0xA921	同步机控制保留参数9	0~5	0	-	停机更改	*第428页“A9-33”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A9-34	0xA922	同步机控制保留参数10	0%~65535%	0	%	实时更改	*第429页“A9-34”*
A9-35	0xA923	性能第一次故障子码	0~65535	0	-	不可更改	*第429页“A9-35”*
A9-36	0xA924	性能第二次故障子码	0~65535	0	-	不可更改	*第429页“A9-36”*
A9-37	0xA925	性能第三次故障子码	0~65535	0	-	不可更改	*第429页“A9-37”*
A9-40	0xA928	低速是否开启闭电流(VVC使用)	0：不使能 1：使能	0	-	停机更改	*第430页“A9-40”*
A9-41	0xA929	低速闭环电流(VVC使用)	30%~200%	50	%	停机更改	*第430页“A9-41”*
A9-42	0xA92A	振荡抑制阻尼系数(VVC使用)	0%~500%	100	%	实时更改	*第430页“A9-42”*
A9-43	0xA92B	初始位置补偿角(VVC使用)	0~5	0	-	停机更改	*第430页“A9-43”*
A9-44	0xA92C	同步机初始位置补偿角度	0.0~360.0	0.0	-	实时更改	*第431页“A9-44”*
A9-45	0xA92D	同步机低速处理使能	0：不使能 1：使能	0	-	停机更改	*第431页“A9-45”*
A9-46	0xA92E	同步机低速处理切换频率	0.01~P0-10	5.00	-	停机更改	*第431页“A9-46”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A9-47	0xA92F	同步机低速处理电流	10~200	100	-	停机更改	*第431页“A9-47”*
A9-48	0xA930	同步机低速处理反馈抑制系数	0~300	32	-	停机更改	*第432页“A9-48”*
A9-49	0xA931	同步机节能控制使能	0：不使能 1：使能	0	-	停机更改	*第432页“A9-49”*
A9-50	0xA932	最大弱磁电流限制余量	200~1000	1000	-	停机更改	*第432页“A9-50”*
A9-51	0xA933	异步机参数辨识高级设置	个位：转子电阻与漏感辨识直流偏置选择 0：标准偏置 1：大偏置 十位：新的转子电阻与漏感辨识算法 0：不使能 1：使能 百位：新的互感静态辨识算法 0：不使能 1：使能 千位：定子电阻辨识算法选择 0：电流开环 1：电流闭环	111	-	停机更改	*第432页“A9-51”*
A9-52	0xA934	U0-06反馈转矩选择	0：电动转矩为正，发电转矩为负 1：速度正方向的转矩方向为正，相反为负	1	-	实时更改	*第433页“A9-52”*
A9-54	0xA936	管压降	0~10000	700	-	停机更改	*第433页“A9-54”*
A9-55	0xA937	死区时间0	0~10000	352	-	停机更改	*第433页“A9-55”*
A9-56	0xA938	死区时间1	0~10000	1052	-	停机更改	*第434页“A9-56”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A9-57	0xA939	死区时间2	0~10000	1270	-	停机更改	*第434页“A9-57”*
A9-58	0xA93A	死区时间3	0~10000	1358	-	停机更改	*第434页“A9-58”*
A9-59	0xA93B	死区时间4	0~10000	1404	-	停机更改	*第434页“A9-59”*
A9-60	0xA93C	死区时间5	0~10000	1449	-	停机更改	*第435页“A9-60”*
A9-61	0xA93D	死区时间6	0~10000	1661	-	停机更改	*第435页“A9-61”*
A9-62	0xA93E	死区时间7	0~10000	1689	-	停机更改	*第435页“A9-62”*
A9-63	0xA93F	死区补偿量电流0	0~10000	94	-	停机更改	*第435页“A9-63”*
A9-64	0xA940	死区补偿量电流1	0~10000	376	-	停机更改	*第436页“A9-64”*
A9-65	0xA941	死区补偿量电流2	0~10000	658	-	停机更改	*第436页“A9-65”*
A9-66	0xA942	死区补偿量电流3	0~10000	940	-	停机更改	*第436页“A9-66”*
A9-67	0xA943	死区补偿量电流4	0~10000	1222	-	停机更改	*第436页“A9-67”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
A9-68	0xA944	死区补偿量电流5	0~10000	1504	-	停机更改	*第436页“A9-68”*
A9-69	0xA945	死区补偿量电流6	0~10000	3478	-	停机更改	*第437页“A9-69”*
A9-70	0xA946	死区补偿量电流7	0~10000	5452	-	停机更改	*第437页“A9-70”*
A9-71	0xA947	弹性振荡抑制使能	0：关闭 1：目标频率自适应 2：给定频率	0	-	停机更改	*第437页“A9-71”*
A9-72	0xA948	弹性振荡抑制滤波时间	20ms~1000ms	300	ms	实时更改	*第437页“A9-72”*
A9-73	0xA949	弹性振荡抑制增益	10~1000	100	-	实时更改	*第438页“A9-73”*
AC-00	0xAC00	AI1实测电压1	-10.000V~10.000V	2.000	V	实时更改	*第438页“AC-00”*
AC-01	0xAC01	AI1显示电压1	-10.000V~10.000V	2.000	V	实时更改	*第438页“AC-01”*
AC-02	0xAC02	AI1实测电压2	-10.000V~10.000V	8.000	V	实时更改	*第439页“AC-02”*
AC-03	0xAC03	AI1显示电压2	-10.000V~10.000V	8.000	V	实时更改	*第439页“AC-03”*
AC-04	0xAC04	AI2实测电压1	-10.000V~10.000V	2.000	V	实时更改	*第439页“AC-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AC-05	0xAC05	AI2显示电压1	-10.000V~10.000V	2.000	V	实时更改	*第440页“AC-05”*
AC-06	0xAC06	AI2实测电压2	-10.000V~10.000V	8.000	V	实时更改	*第440页“AC-06”*
AC-07	0xAC07	AI2显示电压2	-10.000V~10.000V	8.000	V	实时更改	*第440页“AC-07”*
AC-08	0xAC08	AI3实测电压1	-10.000V~10.000V	2.000	V	实时更改	*第440页“AC-08”*
AC-09	0xAC09	AI3显示电压1	-10.000V~10.000V	2.000	V	实时更改	*第441页“AC-09”*
AC-10	0xAC0A	AI3实测电压2	-10.000V~10.000V	8.000	V	实时更改	*第441页“AC-10”*
AC-11	0xAC0B	AI3显示电压2	-10.000V~10.000V	8.000	V	实时更改	*第441页“AC-11”*
AC-12	0xAC0C	AO1实测电压1	-10.000V~10.000V	2.000	V	实时更改	*第442页“AC-12”*
AC-13	0xAC0D	AO1目标电压1	-10.000V~10.000V	2.000	V	实时更改	*第442页“AC-13”*
AC-14	0xAC0E	AO1实测电压2	-10.000V~10.000V	8.000	V	实时更改	*第442页“AC-14”*
AC-15	0xAC0F	AO1目标电压2	-10.000V~10.000V	8.000	V	实时更改	*第442页“AC-15”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AC-16	0xAC10	AO2实测电压1	-10.000V~10.000V	2.000	V	实时更改	*第443页“AC-16”*
AC-17	0xAC11	AO2目标电压1	-10.000V~10.000V	2.000	V	实时更改	*第443页“AC-17”*
AC-18	0xAC12	AO2实测电压2	-10.000V~10.000V	8.000	V	实时更改	*第443页“AC-18”*
AC-19	0xAC13	AO2目标电压2	-10.000V~10.000V	8.000	V	实时更改	*第443页“AC-19”*
AC-20	0xAC14	PT100实测电压1	0.000V~3.300V	0.440	V	实时更改	*第444页“AC-20”*
AC-21	0xAC15	PT100显示电压1	0.000V~3.300V	0.440	V	实时更改	*第444页“AC-21”*
AC-22	0xAC16	PT100实测电压2	0.000V~3.300V	2.160	V	实时更改	*第444页“AC-22”*
AC-23	0xAC17	PT100显示电压2	0.000V~3.300V	2.160	V	实时更改	*第445页“AC-23”*
AC-24	0xAC18	PT1000实测电压1	0.000V~3.300V	1.136	V	实时更改	*第445页“AC-24”*
AC-25	0xAC19	PT1000显示电压1	0.000V~3.300V	1.136	V	实时更改	*第445页“AC-25”*
AC-26	0xAC1A	PT1000实测电压2	0.000V~3.300V	2.122	V	实时更改	*第445页“AC-26”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AC-27	0xAC1B	PT1000显示电压2	0.000V~3.300V	2.122	V	实时更改	第446页“AC-27”
AC-28	0xAC1C	AO1实测电流1	0.000mA~20.000mA	4.000	mA	实时更改	第446页“AC-28”
AC-29	0xAC1D	AO1目标电流1	0.000mA~20.000mA	4.000	mA	实时更改	第446页“AC-29”
AC-30	0xAC1E	AO1实测电流2	0.000mA~20.000mA	16.000	mA	实时更改	第446页“AC-30”
AC-31	0xAC1F	AO1目标电流2	0.000mA~20.000mA	16.000	mA	实时更改	第447页“AC-31”
AF-00	0xAF00	RPDO1-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	第447页“AF-00”
AF-01	0xAF01	RPDO1-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	第447页“AF-01”
AF-02	0xAF02	RPDO1-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	第448页“AF-02”
AF-03	0xAF03	RPDO1-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	第448页“AF-03”
AF-04	0xAF04	RPDO1-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	第448页“AF-04”
AF-05	0xAF05	RPDO1-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	第448页“AF-05”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AF-06	0xAF06	RPDO1-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第448页“AF-06”*
AF-07	0xAF07	RPDO1-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第449页“AF-07”*
AF-08	0xAF08	RPDO2-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第449页“AF-08”*
AF-09	0xAF09	RPDO2-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第449页“AF-09”*
AF-10	0xAF0A	RPDO2-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第449页“AF-10”*
AF-11	0xAF0B	RPDO2-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第450页“AF-11”*
AF-12	0xAF0C	RPDO2-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第450页“AF-12”*
AF-13	0xAF0D	RPDO2-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第450页“AF-13”*
AF-14	0xAF0E	RPDO2-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第450页“AF-14”*
AF-15	0xAF0F	RPDO2-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第451页“AF-15”*
AF-16	0xAF10	RPDO3-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第451页“AF-16”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AF-17	0xAF11	RPDO3-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第451页“AF-17”*
AF-18	0xAF12	RPDO3-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第451页“AF-18”*
AF-19	0xAF13	RPDO3-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第451页“AF-19”*
AF-20	0xAF14	RPDO3-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第452页“AF-20”*
AF-21	0xAF15	RPDO3-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第452页“AF-21”*
AF-22	0xAF16	RPDO3-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第452页“AF-22”*
AF-23	0xAF17	RPDO3-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第452页“AF-23”*
AF-24	0xAF18	RPDO4-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第453页“AF-24”*
AF-25	0xAF19	RPDO4-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第453页“AF-25”*
AF-26	0xAF1A	RPDO4-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第453页“AF-26”*
AF-27	0xAF1B	RPDO4-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第453页“AF-27”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AF-28	0xAF1C	RPDO4-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第454页“AF-28”*
AF-29	0xAF1D	RPDO4-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第454页“AF-29”*
AF-30	0xAF1E	RPDO4-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第454页“AF-30”*
AF-31	0xAF1F	RPDO4-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第454页“AF-31”*
AF-32	0xAF20	TPDO1-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第454页“AF-32”*
AF-33	0xAF21	TPDO1-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第455页“AF-33”*
AF-34	0xAF22	TPDO1-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第455页“AF-34”*
AF-35	0xAF23	TPDO1-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第455页“AF-35”*
AF-36	0xAF24	TPDO1-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第455页“AF-36”*
AF-37	0xAF25	TPDO1-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第456页“AF-37”*
AF-38	0xAF26	TPDO1-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第456页“AF-38”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AF-39	0xAF27	TPDO1-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第456页“AF-39”*
AF-40	0xAF28	TPDO2-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第456页“AF-40”*
AF-41	0xAF29	TPDO2-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第457页“AF-41”*
AF-42	0xAF2A	TPDO2-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第457页“AF-42”*
AF-43	0xAF2B	TPDO2-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第457页“AF-43”*
AF-44	0xAF2C	TPDO2-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第457页“AF-44”*
AF-45	0xAF2D	TPDO2-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第457页“AF-45”*
AF-46	0xAF2E	TPDO2-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第458页“AF-46”*
AF-47	0xAF2F	TPDO2-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第458页“AF-47”*
AF-48	0xAF30	TPDO3-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第458页“AF-48”*
AF-49	0xAF31	TPDO3-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第458页“AF-49”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AF-50	0xAF32	TPDO3-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第459页“AF-50”*
AF-51	0xAF33	TPDO3-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第459页“AF-51”*
AF-52	0xAF34	TPDO3-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第459页“AF-52”*
AF-53	0xAF35	TPDO3-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第459页“AF-53”*
AF-54	0xAF36	TPDO3-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第460页“AF-54”*
AF-55	0xAF37	TPDO3-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第460页“AF-55”*
AF-56	0xAF38	TPDO4-SubIndex0-H	0x0~0xFFFF	0x0	-	实时更改	*第460页“AF-56”*
AF-57	0xAF39	TPDO4-SubIndex0-L	0x0~0xFFFF	0x0	-	实时更改	*第460页“AF-57”*
AF-58	0xAF3A	TPDO4-SubIndex1-H	0x0~0xFFFF	0x0	-	实时更改	*第460页“AF-58”*
AF-59	0xAF3B	TPDO4-SubIndex1-L	0x0~0xFFFF	0x0	-	实时更改	*第461页“AF-59”*
AF-60	0xAF3C	TPDO4-SubIndex2-H	0x0~0xFFFF	0x0	-	实时更改	*第461页“AF-60”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
AF-61	0xAF3D	TPDO4-SubIndex2-L	0x0~0xFFFF	0x0	-	实时更改	*第461页“AF-61”*
AF-62	0xAF3E	TPDO4-SubIndex3-H	0x0~0xFFFF	0x0	-	实时更改	*第461页“AF-62”*
AF-63	0xAF3F	TPDO4-SubIndex3-L	0x0~0xFFFF	0x0	-	实时更改	*第462页“AF-63”*
AF-66	0xAF42	RPDO有效个数	0x0~0xFFFF	0x0	-	不可更改	*第462页“AF-66”*
AF-67	0xAF43	TPDO有效个数	0x0~0xFFFF	0x0	-	不可更改	*第462页“AF-67”*
B0-00	0xB000	张力控制模式	0：无效 1：开环转矩控制模式 2：闭环速度控制模式 3：闭环转矩控制模式 4：恒线速度控制模式	0	-	停机更改	*第462页“B0-00”*
B0-01	0xB001	卷曲模式	0：收卷 1：放卷	0	-	实时更改	*第463页“B0-01”*
B0-02	0xB002	放卷反向收紧选择	0.0m/min~500.0m/min	0.0	m/min	实时更改	*第463页“B0-02”*
B0-03	0xB003	机械传动比	0.01~300.00	1.00	-	实时更改	*第464页“B0-03”*
B0-04	0xB004	线速度输入源	0：无输入 1：AI1 2：AI2 3：AI3 4：PULSE输入（DI5） 5：通信设定（1000H） 6：通信设定（731AH）	0	-	停机更改	*第464页“B0-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B0-05	0xB005	最大线速度	0.0m/min~6500.0m/min	1000.0	m/min	实时更改	*第464页“B0-05”*
B0-06	0xB006	卷径计算最低线速度	0.0m/min~6500.0m/min	20.0	m/min	实时更改	*第465页“B0-06”*
B0-07	0xB007	卷径计算方法选择	0：通过线速度计算 1：通过厚度累计计算 2：AI1输入 3：AI2输入 4：AI3输入 5：PULSE输入（DI5） 6：通信给定 7：B0-14设定	0	-	停机更改	*第465页“B0-07”*
B0-08	0xB008	最大卷径	0.1mm~6000.0mm	500.0	mm	实时更改	*第466页“B0-08”*
B0-09	0xB009	空卷卷径	0.1mm~6000.0mm	100.0	mm	实时更改	*第466页“B0-09”*
B0-10	0xB00A	初始卷径源	0：B0-11~B0-13设定 1：AI1设定 2：AI2设定 3：AI3设定 4：通信给定(1000H)	0	-	停机更改	*第466页“B0-10”*
B0-11	0xB00B	初始卷径1	0.1mm~6000.0mm	100.0	mm	实时更改	*第467页“B0-11”*
B0-12	0xB00C	初始卷径2	0.1mm~6000.0mm	100.0	mm	实时更改	*第467页“B0-12”*
B0-13	0xB00D	初始卷径3	0.1mm~6000.0mm	100.0	mm	实时更改	*第467页“B0-13”*
B0-14	0xB00E	当前卷径值	0.1mm~6000.0mm	100.0	mm	实时更改	*第467页“B0-14”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B0-15	0xB00F	卷径滤波时间	0.00s~10.00s	5.00	s	实时更改	*第468页“B0-15”*
B0-16	0xB010	卷径变化率	0.0~1000.0	0.0	-	实时更改	*第468页“B0-16”*
B0-17	0xB011	卷径变化方向限制	0：功能关闭 1：收卷禁止递减、放卷禁止递增	0	-	实时更改	*第468页“B0-17”*
B0-18	0xB012	运行中卷径复位允许	0~1	0	-	实时更改	*第469页“B0-18”*
B0-19	0xB013	预驱动速度增益	-100.0%~200.0%	0.0	%	实时更改	*第469页“B0-19”*
B0-20	0xB014	预驱动转矩限幅源	0：根据P2-09设定 1：根据张力控制转矩设定	1	-	停机更改	*第469页“B0-20”*
B0-21	0xB015	预驱动转矩修正	-100.0%~100.0%	0.0	%	实时更改	*第470页“B0-21”*
B0-23	0xB017	预驱动加速时间	0.0s~6000.0s	20.0	s	实时更改	*第470页“B0-23”*
B0-24	0xB018	预驱动减速时间	0.0s~6000.0s	20.0	s	实时更改	*第470页“B0-24”*
B0-25	0xB019	预驱动卷径计算允许	0~1	0	-	实时更改	*第470页“B0-25”*
B0-26	0xB01A	张力频率限幅	0.0%~100.0%	50.0	%	实时更改	*第471页“B0-26”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B0-27	0xB01B	张力频率限幅偏置	0.00Hz~100.00Hz	5.00	Hz	实时更改	*第471页“B0-27”*
B0-28	0xB01C	张力频率限幅使能	0：不使能 1：使能	0	-	实时更改	*第471页“B0-28”*
B0-29	0xB01D	每圈脉冲数	1~60000	1	-	实时更改	*第472页“B0-29”*
B0-30	0xB01E	每层圈数	1~10000	1	-	实时更改	*第472页“B0-30”*
B0-31	0xB01F	材料厚度设定源	0：数字设定 1：AI1设定 2：AI2设定 3：AI3设定	0	-	停机更改	*第472页“B0-31”*
B0-32	0xB020	材料厚度0	0.01mm~100.00mm	0.01	mm	实时更改	*第473页“B0-32”*
B0-33	0xB021	材料厚度1	0.01mm~100.00mm	0.01	mm	实时更改	*第473页“B0-33”*
B0-34	0xB022	材料厚度2	0.01mm~100.00mm	0.01	mm	实时更改	*第473页“B0-34”*
B0-35	0xB023	材料厚度3	0.01mm~100.00mm	0.01	mm	实时更改	*第473页“B0-35”*
B0-36	0xB024	最大厚度	0.01mm~100.00mm	1.00	mm	实时更改	*第474页“B0-36”*
B0-37	0xB025	停机免卷径复位	0：不使能 1：使能	0	-	实时更改	*第474页“B0-37”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B0-38	0xB026	闭环张力转矩模式选择	0：转矩由纯PID运算 1：转矩由主+PID运算	0	-	停机更改	*第474页“B0-38”*
B0-40	0xB028	最小预驱动转矩限制	0.0%~100.0%	0.0	%	实时更改	*第474页“B0-40”*
B0-41	0xB029	恒线速度源选择	0：AI1 1：AI2 2：AI3 3：PULSE脉冲设定（DI5） 4：通信设定（1000H） 5：通信设定（731AH）	0	-	停机更改	*第475页“B0-41”*
B1-00	0xB100	张力设定源	0：B0-01设定 1：AI1设定 2：AI2设定 3：AI3设定 4：PULSE脉冲设定（DI5） 5：通信设定（1000H）	0	-	停机更改	*第475页“B1-00”*
B1-01	0xB101	张力数字设定	0N~65000N	50	N	实时更改	*第476页“B1-01”*
B1-02	0xB102	最大张力	0N~65000N	500	N	实时更改	*第476页“B1-02”*
B1-03	0xB103	零速阈值	0.0%~20.0%	0.0	%	实时更改	*第476页“B1-03”*
B1-04	0xB104	零速张力提升	0.0%~100.0%	0.0	%	实时更改	*第477页“B1-04”*
B1-05	0xB105	转矩模式频率加速时间	0.0s~6500.0s	0.0	s	实时更改	*第477页“B1-05”*
B1-06	0xB106	转矩模式频率减速时间	0.0s~6500.0s	0.0	s	实时更改	*第477页“B1-06”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B1-07	0xB107	摩擦力补偿	0.0%~50.0%	0.0	%	实时更改	*第477页“B1-07”*
B1-08	0xB108	机械惯量补偿系数	0~65535	0	-	实时更改	*第478页“B1-08”*
B1-09	0xB109	加速惯量补偿修正量	0.0%~200.0%	100.0	%	实时更改	*第478页“B1-09”*
B1-10	0xB10A	减速惯量补偿修正量	0.0%~200.0%	100.0	%	实时更改	*第478页“B1-10”*
B1-11	0xB10B	材料密度	0~65535	0	-	实时更改	*第479页“B1-11”*
B1-12	0xB10C	材料宽度	0mm~65535mm	0	mm	实时更改	*第479页“B1-12”*
B1-13	0xB10D	惯量补偿退出延时	0ms~1000ms	0	ms	实时更改	*第479页“B1-13”*
B1-14	0xB10E	零速补偿过度频率	0.00Hz~20.00Hz	2.00	Hz	实时更改	*第479页“B1-14”*
B1-15	0xB10F	开环转矩反向允许	0：禁止转矩反向 1：允许转矩反向	0	-	实时更改	*第480页“B1-15”*
B1-16	0xB110	张力闭环转矩限幅	0.0%~200.0%	100.0	%	实时更改	*第480页“B1-16”*
B1-17	0xB111	摩擦力补偿修正系数	-50.0~50.0	0.0	-	实时更改	*第480页“B1-17”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B1-18	0xB112	摩擦力补偿曲线	0：频率 1：线速度 2：多段摩擦力补偿曲线1 3：多段摩擦力补偿曲线2	0	-	停机更改	*第480页“B1-18”*
B1-19	0xB113	多段摩擦力补偿转矩1	0.0~50.0	0.0	-	实时更改	*第481页“B1-19”*
B1-20	0xB114	多段摩擦力补偿转矩2	0.0~50.0	0.0	-	实时更改	*第481页“B1-20”*
B1-21	0xB115	多段摩擦力补偿转矩3	0.0~50.0	0.0	-	实时更改	*第481页“B1-21”*
B1-22	0xB116	多段摩擦力补偿转矩4	0.0~50.0	0.0	-	实时更改	*第482页“B1-22”*
B1-23	0xB117	多段摩擦力补偿转矩5	0.0~50.0	0.0	-	实时更改	*第482页“B1-23”*
B1-24	0xB118	多段摩擦力补偿转矩6	0.0~50.0	0.0	-	实时更改	*第482页“B1-24”*
B1-25	0xB119	多段摩擦力补偿拐点1	0.00Hz~P0-10	0.00	Hz	实时更改	*第482页“B1-25”*
B1-26	0xB11A	多段摩擦力补偿拐点2	0.00Hz~P0-10	0.00	Hz	实时更改	*第483页“B1-26”*
B1-27	0xB11B	多段摩擦力补偿拐点3	0.00Hz~P0-10	0.00	Hz	实时更改	*第483页“B1-27”*
B1-28	0xB11C	多段摩擦力补偿拐点4	0.00Hz~P0-10	0.00	Hz	实时更改	*第483页“B1-28”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B1-29	0xB11D	多段摩擦力补偿拐点5	0.00Hz~P0-10	0.00	Hz	实时更改	*第484页“B1-29”*
B1-30	0xB11E	多段摩擦力补偿拐点6	0.00Hz~P0-10	0.00	Hz	实时更改	*第484页“B1-30”*
B1-31	0xB11F	张力建立使能	0：关闭 1：开启	0	-	停机更改	*第484页“B1-31”*
B1-32	0xB120	张力建立死区	0.0%~100.0%	2.0	%	实时更改	*第484页“B1-32”*
B1-33	0xB121	张力建立频率	0.00Hz~P0-10	0.10	Hz	实时更改	*第485页“B1-33”*
B1-34	0xB122	端子转矩提升比例	0.0%~500.0%	50.0	%	实时更改	*第485页“B1-34”*
B1-35	0xB123	端子转矩提升撤销时间	0.0s~50.0s	0.0	s	实时更改	*第485页“B1-35”*
B1-37	0xB125	初始卷径自学习使能	0：关闭 1：开启	0	-	停机更改	*第485页“B1-37”*
B1-38	0xB126	摆杆长度	1mm~65535mm	300	mm	停机更改	*第486页“B1-38”*
B1-39	0xB127	摆杆角度	0.1°~360.0°	40.0	°	停机更改	*第486页“B1-39”*
B2-00	0xB200	锥度曲线	0：曲线锥度 1：多段直线锥度	0	-	停机更改	*第486页“B2-00”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B2-01	0xB201	张力锥度源选择	0：B2-02设定 1：AI1设定 2：AI2设定 3：AI3设定 4：通信设定（1000H）	0	-	停机更改	*第487页“B2-01”*
B2-02	0xB202	锥度数字设定	0.0%~100.0%	0.0	%	实时更改	*第487页“B2-02”*
B2-03	0xB203	锥度补偿修正量	0mm~10000mm	0	mm	实时更改	*第487页“B2-03”*
B2-05	0xB205	对外锥度AO输出设定源	0：B2-06设定 1：AI1设定 2：AI2设定 3：AI3设定 4：通信设定（1000H）	0	-	停机更改	*第488页“B2-05”*
B2-06	0xB206	对外锥度设定	0.0%~100.0%	100.0	%	实时更改	*第488页“B2-06”*
B2-08	0xB208	最小卷径锥度值	0.0%~100.0%	100.0	%	实时更改	*第488页“B2-08”*
B2-09	0xB209	直线锥度切换点1	B0-09~B0-08	150.0	mm	实时更改	*第488页“B2-09”*
B2-10	0xB20A	切换点1锥度值	0.0%~100.0%	100.0	%	实时更改	*第489页“B2-10”*
B2-11	0xB20B	直线锥度切换点2	B2-09~B0-08	200.0	mm	实时更改	*第489页“B2-11”*
B2-12	0xB20C	切换点2锥度值	0.0%~100.0%	90.0	%	实时更改	*第489页“B2-12”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B2-13	0xB20D	直线锥度切换点3	B2-11~B0-08	250.0	mm	实时更改	*第489页“B2-13”*
B2-14	0xB20E	切换点3锥度值	0.0%~100.0%	80.0	%	实时更改	*第490页“B2-14”*
B2-15	0xB20F	直线锥度切换点4	B2-13~B0-08	300.0	mm	实时更改	*第490页“B2-15”*
B2-16	0xB210	切换点4锥度值	0.0%~100.0%	70.0	%	实时更改	*第490页“B2-16”*
B2-17	0xB211	直线锥度切换点5	B2-15~B0-08	400.0	mm	实时更改	*第490页“B2-17”*
B2-18	0xB212	切换点5锥度值	0.0%~100.0%	50.0	%	实时更改	*第491页“B2-18”*
B2-19	0xB213	最大卷径锥度值	0.0~100.0	30.0	-	实时更改	*第491页“B2-19”*
B6-00	0xB600	源地址1	0x0~0xFFFF	0xE012	-	实时更改	*第491页“B6-00”*
B6-01	0xB601	映射地址1	0x0~0xFFFF	0x500E	-	实时更改	*第491页“B6-01”*
B6-02	0xB602	写增益1	0.00~100.00	10.00	-	实时更改	*第492页“B6-02”*
B6-03	0xB603	读增益1	0.00~100.00	0.10	-	实时更改	*第492页“B6-03”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-04	0xB604	源地址2	0x0~0xFFFF	0x0	-	实时更改	*第492页“B6-04”*
B6-05	0xB605	映射地址2	0x0~0xFFFF	0x0	-	实时更改	*第492页“B6-05”*
B6-06	0xB606	写增益2	0.00~100.00	0.00	-	实时更改	*第493页“B6-06”*
B6-07	0xB607	读增益2	0.00~100.00	0.00	-	实时更改	*第493页“B6-07”*
B6-08	0xB608	源地址3	0x0~0xFFFF	0x0	-	实时更改	*第493页“B6-08”*
B6-09	0xB609	映射地址3	0x0~0xFFFF	0x0	-	实时更改	*第494页“B6-09”*
B6-10	0xB60A	写增益3	0.00~100.00	0.00	-	实时更改	*第494页“B6-10”*
B6-11	0xB60B	读增益3	0.00~100.00	0.00	-	实时更改	*第494页“B6-11”*
B6-12	0xB60C	源地址4	0x0~0xFFFF	0x0	-	实时更改	*第494页“B6-12”*
B6-13	0xB60D	映射地址4	0x0~0xFFFF	0x0	-	实时更改	*第495页“B6-13”*
B6-14	0xB60E	写增益4	0.00~100.00	0.00	-	实时更改	*第495页“B6-14”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-15	0xB60F	读增益4	0.00~100.00	0.00	-	实时更改	*第495页“B6-15”*
B6-16	0xB610	源地址5	0x0~0xFFFF	0x0	-	实时更改	*第495页“B6-16”*
B6-17	0xB611	映射地址5	0x0~0xFFFF	0x0	-	实时更改	*第496页“B6-17”*
B6-18	0xB612	写增益5	0.00~100.00	0.00	-	实时更改	*第496页“B6-18”*
B6-19	0xB613	读增益5	0.00~100.00	0.00	-	实时更改	*第496页“B6-19”*
B6-20	0xB614	源地址6	0x0~0xFFFF	0x0	-	实时更改	*第496页“B6-20”*
B6-21	0xB615	映射地址6	0x0~0xFFFF	0x0	-	实时更改	*第497页“B6-21”*
B6-22	0xB616	写增益6	0.00~100.00	0.00	-	实时更改	*第497页“B6-22”*
B6-23	0xB617	读增益6	0.00~100.00	0.00	-	实时更改	*第497页“B6-23”*
B6-24	0xB618	源地址7	0x0~0xFFFF	0x0	-	实时更改	*第497页“B6-24”*
B6-25	0xB619	映射地址7	0x0~0xFFFF	0x0	-	实时更改	*第498页“B6-25”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-26	0xB61A	写增益7	0.00~100.00	0.00	-	实时更改	*第498页“B6-26”*
B6-27	0xB61B	读增益7	0.00~100.00	0.00	-	实时更改	*第498页“B6-27”*
B6-28	0xB61C	源地址8	0x0~0xFFFF	0x0	-	实时更改	*第498页“B6-28”*
B6-29	0xB61D	映射地址8	0x0~0xFFFF	0x0	-	实时更改	*第499页“B6-29”*
B6-30	0xB61E	写增益8	0.00~100.00	0.00	-	实时更改	*第499页“B6-30”*
B6-31	0xB61F	读增益8	0.00~100.00	0.00	-	实时更改	*第499页“B6-31”*
B6-32	0xB620	源地址9	0x0~0xFFFF	0x0	-	实时更改	*第499页“B6-32”*
B6-33	0xB621	映射地址9	0x0~0xFFFF	0x0	-	实时更改	*第500页“B6-33”*
B6-34	0xB622	写增益9	0.00~100.00	0.00	-	实时更改	*第500页“B6-34”*
B6-35	0xB623	读增益9	0.00~100.00	0.00	-	实时更改	*第500页“B6-35”*
B6-36	0xB624	源地址10	0x0~0xFFFF	0x0	-	实时更改	*第500页“B6-36”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-37	0xB625	映射地址10	0x0~0xFFFF	0x0	-	实时更改	*第501页“B6-37”*
B6-38	0xB626	写增益10	0.00~100.00	0.00	-	实时更改	*第501页“B6-38”*
B6-39	0xB627	读增益10	0.00~100.00	0.00	-	实时更改	*第501页“B6-39”*
B6-40	0xB628	源地址11	0x0~0xFFFF	0x0	-	实时更改	*第501页“B6-40”*
B6-41	0xB629	映射地址11	0x0~0xFFFF	0x0	-	实时更改	*第502页“B6-41”*
B6-42	0xB62A	写增益11	0.00~100.00	0.00	-	实时更改	*第502页“B6-42”*
B6-43	0xB62B	读增益11	0.00~100.00	0.00	-	实时更改	*第502页“B6-43”*
B6-44	0xB62C	源地址12	0x0~0xFFFF	0x0	-	实时更改	*第502页“B6-44”*
B6-45	0xB62D	映射地址12	0x0~0xFFFF	0x0	-	实时更改	*第503页“B6-45”*
B6-46	0xB62E	写增益12	0.00~100.00	0.00	-	实时更改	*第503页“B6-46”*
B6-47	0xB62F	读增益12	0.00~100.00	0.00	-	实时更改	*第503页“B6-47”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-48	0xB630	源地址13	0x0~0xFFFF	0x0	-	实时更改	*第503页“B6-48”*
B6-49	0xB631	映射地址13	0x0~0xFFFF	0x0	-	实时更改	*第504页“B6-49”*
B6-50	0xB632	写增益13	0.00~100.00	0.00	-	实时更改	*第504页“B6-50”*
B6-51	0xB633	读增益13	0.00~100.00	0.00	-	实时更改	*第504页“B6-51”*
B6-52	0xB634	源地址14	0x0~0xFFFF	0x0	-	实时更改	*第504页“B6-52”*
B6-53	0xB635	映射地址14	0x0~0xFFFF	0x0	-	实时更改	*第505页“B6-53”*
B6-54	0xB636	写增益14	0.00~100.00	0.00	-	实时更改	*第505页“B6-54”*
B6-55	0xB637	读增益14	0.00~100.00	0.00	-	实时更改	*第505页“B6-55”*
B6-56	0xB638	源地址15	0x0~0xFFFF	0x0	-	实时更改	*第505页“B6-56”*
B6-57	0xB639	映射地址15	0x0~0xFFFF	0x0	-	实时更改	*第506页“B6-57”*
B6-58	0xB63A	写增益15	0.00~100.00	0.00	-	实时更改	*第506页“B6-58”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-59	0xB63B	读增益15	0.00~100.00	0.00	-	实时更改	*第506页“B6-59”*
B6-60	0xB63C	源地址16	0x0~0xFFFF	0x0	-	实时更改	*第506页“B6-60”*
B6-61	0xB63D	映射地址16	0x0~0xFFFF	0x0	-	实时更改	*第507页“B6-61”*
B6-62	0xB63E	写增益16	0.00~100.00	0.00	-	实时更改	*第507页“B6-62”*
B6-63	0xB63F	读增益16	0.00~100.00	0.00	-	实时更改	*第507页“B6-63”*
B6-64	0xB640	源地址17	0x0~0xFFFF	0x0	-	实时更改	*第507页“B6-64”*
B6-65	0xB641	映射地址17	0x0~0xFFFF	0x0	-	实时更改	*第508页“B6-65”*
B6-66	0xB642	写增益17	0.00~100.00	0.00	-	实时更改	*第508页“B6-66”*
B6-67	0xB643	读增益17	0.00~100.00	0.00	-	实时更改	*第508页“B6-67”*
B6-68	0xB644	源地址18	0x0~0xFFFF	0x0	-	实时更改	*第508页“B6-68”*
B6-69	0xB645	映射地址18	0x0~0xFFFF	0x0	-	实时更改	*第509页“B6-69”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-70	0xB646	写增益18	0.00~100.00	0.00	-	实时更改	*第509页“B6-70”*
B6-71	0xB647	读增益18	0.00~100.00	0.00	-	实时更改	*第509页“B6-71”*
B6-72	0xB648	源地址19	0x0~0xFFFF	0x0	-	实时更改	*第509页“B6-72”*
B6-73	0xB649	映射地址19	0x0~0xFFFF	0x0	-	实时更改	*第510页“B6-73”*
B6-74	0xB64A	写增益19	0.00~100.00	0.00	-	实时更改	*第510页“B6-74”*
B6-75	0xB64B	读增益19	0.00~100.00	0.00	-	实时更改	*第510页“B6-75”*
B6-76	0xB64C	源地址20	0x0~0xFFFF	0x0	-	实时更改	*第510页“B6-76”*
B6-77	0xB64D	映射地址20	0x0~0xFFFF	0x0	-	实时更改	*第511页“B6-77”*
B6-78	0xB64E	写增益20	0.00~100.00	0.00	-	实时更改	*第511页“B6-78”*
B6-79	0xB64F	读增益20	0.00~100.00	0.00	-	实时更改	*第511页“B6-79”*
B6-80	0xB650	源地址21	0x0~0xFFFF	0x0	-	实时更改	*第511页“B6-80”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-81	0xB651	映射地址21	0x0~0xFFFF	0x0	-	实时更改	*第512页“B6-81”*
B6-82	0xB652	写增益21	0.00~100.00	0.00	-	实时更改	*第512页“B6-82”*
B6-83	0xB653	读增益21	0.00~100.00	0.00	-	实时更改	*第512页“B6-83”*
B6-84	0xB654	源地址22	0x0~0xFFFF	0x0	-	实时更改	*第512页“B6-84”*
B6-85	0xB655	映射地址22	0x0~0xFFFF	0x0	-	实时更改	*第513页“B6-85”*
B6-86	0xB656	写增益22	0.00~100.00	0.00	-	实时更改	*第513页“B6-86”*
B6-87	0xB657	读增益22	0.00~100.00	0.00	-	实时更改	*第513页“B6-87”*
B6-88	0xB658	源地址23	0x0~0xFFFF	0x0	-	实时更改	*第513页“B6-88”*
B6-89	0xB659	映射地址23	0x0~0xFFFF	0x0	-	实时更改	*第514页“B6-89”*
B6-90	0xB65A	写增益23	0.00~100.00	0.00	-	实时更改	*第514页“B6-90”*
B6-91	0xB65B	读增益23	0.00~100.00	0.00	-	实时更改	*第514页“B6-91”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B6-92	0xB65C	源地址24	0x0~0xFFFF	0x0	-	实时更改	*第514页“B6-92”*
B6-93	0xB65D	映射地址24	0x0~0xFFFF	0x0	-	实时更改	*第515页“B6-93”*
B6-94	0xB65E	写增益24	0.00~100.00	0.00	-	实时更改	*第515页“B6-94”*
B6-95	0xB65F	读增益24	0.00~100.00	0.00	-	实时更改	*第515页“B6-95”*
B6-96	0xB660	源地址25	0x0~0xFFFF	0x0	-	实时更改	*第515页“B6-96”*
B6-97	0xB661	映射地址25	0x0~0xFFFF	0x0	-	实时更改	*第516页“B6-97”*
B6-98	0xB662	写增益25	0.00~100.00	0.00	-	实时更改	*第516页“B6-98”*
B6-99	0xB663	读增益25	0.00~100.00	0.00	-	实时更改	*第516页“B6-99”*
B7-01	0xB701	开闸频率（正）	0.00~20.00	2.00	-	实时更改	*第516页“B7-01”*
B7-02	0xB702	开闸频率（反）	0.00~20.00	2.00	-	实时更改	*第517页“B7-02”*
B7-03	0xB703	开闸转矩（正）	0.0~200.0	30.0	-	实时更改	*第517页“B7-03”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B7-04	0xB704	开闸转矩（反）	0.0~200.0	30.0	-	实时更改	*第517页“B7-04”*
B7-05	0xB705	开闸时间	0.00~5.00	0.50	-	实时更改	*第517页“B7-05”*
B7-06	0xB706	关闸频率（正）	0.00~20.00	2.00	-	实时更改	*第518页“B7-06”*
B7-07	0xB707	关闸频率（反）	0.00~20.00	2.00	-	实时更改	*第518页“B7-07”*
B7-08	0xB708	关闸延迟时间	0.00~5.00	0.00	-	实时更改	*第518页“B7-08”*
B7-09	0xB709	关闸时间	0.00~5.00	0.50	-	实时更改	*第518页“B7-09”*
B7-10	0xB70A	停机励磁时间	0.00~5.00	0.00	-	实时更改	*第519页“B7-10”*
B7-11	0xB70B	再启动等待时间	0.00~5.00	0.00	-	实时更改	*第519页“B7-11”*
B7-12	0xB70C	启动方向	0：与运行方向一致 1：始终为正	0	-	实时更改	*第519页“B7-12”*
B7-13	0xB70D	预转矩来源	0：自动 1：预转矩记忆 2：关闭	2	-	实时更改	*第519页“B7-13”*
B7-14	0xB70E	预转矩设定值（正转）	0.0%~2000.0%	0.0	%	实时更改	*第520页“B7-14”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
B7-15	0xB70F	预转矩设定值（反转）	0.0%~2000.0%	0.0	%	实时更改	*第520页“B7-15”*
B7-16	0xB710	电流加减速时间	0.00s~5.00s	0.50	s	实时更改	*第520页“B7-16”*
B7-17	0xB711	指令反向使能	0~1	0	-	实时更改	*第520页“B7-17”*
B7-18	0xB712	开闸超时判断时间	0.00s~5.00s	0.50	s	实时更改	*第520页“B7-18”*
B7-19	0xB713	制动器失效保护使能	0~1	0	-	实时更改	*第521页“B7-19”*
B7-20	0xB714	制动器失效保护角度	0~360	60	-	实时更改	*第521页“B7-20”*
B7-21	0xB715	频率异常检测周期	0.00s~100.00s	50.00	s	实时更改	*第521页“B7-21”*
B7-22	0xB716	频率跟随误差	0%~30%	20	%	实时更改	*第521页“B7-22”*
B7-23	0xB717	频率跟随检测周期	0.00s~100.00s	50.00	s	实时更改	*第522页“B7-23”*
B7-24	0xB718	转矩到达限幅检测时间	0.00s~500.00s	0.00	s	实时更改	*第522页“B7-24”*
C0-00	0xC000	管压降	0~10000	700	-	停机更改	*第522页“C0-00”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
C0-01	0xC001	死区时间0	0~10000	352	-	停机更改	*第522页“C0-01”*
C0-02	0xC002	死区时间1	0~10000	1052	-	停机更改	*第523页“C0-02”*
C0-03	0xC003	死区时间2	0~10000	1270	-	停机更改	*第523页“C0-03”*
C0-04	0xC004	死区时间3	0~10000	1358	-	停机更改	*第523页“C0-04”*
C0-05	0xC005	死区时间4	0~10000	1404	-	停机更改	*第523页“C0-05”*
C0-06	0xC006	死区时间5	0~10000	1449	-	停机更改	*第524页“C0-06”*
C0-07	0xC007	死区时间6	0~10000	1661	-	停机更改	*第524页“C0-07”*
C0-08	0xC008	死区时间7	0~10000	1689	-	停机更改	*第524页“C0-08”*
C0-09	0xC009	死区补偿量电流0	0~10000	94	-	停机更改	*第524页“C0-09”*
C0-10	0xC00A	死区补偿量电流1	0~10000	376	-	停机更改	*第525页“C0-10”*
C0-11	0xC00B	死区补偿量电流2	0~10000	658	-	停机更改	*第525页“C0-11”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
C0-12	0xC00C	死区补偿量电流3	0~10000	940	-	停机更改	*第525页“C0-12”*
C0-13	0xC00D	死区补偿量电流4	0~10000	1222	-	停机更改	*第525页“C0-13”*
C0-14	0xC00E	死区补偿量电流5	0~10000	1504	-	停机更改	*第526页“C0-14”*
C0-15	0xC00F	死区补偿量电流6	0~10000	3478	-	停机更改	*第526页“C0-15”*
C0-16	0xC010	死区补偿量电流7	0~10000	5452	-	停机更改	*第526页“C0-16”*
C1-00	0xC100	管压降	0~10000	700	-	停机更改	*第526页“C1-00”*
C1-01	0xC101	死区时间0	0~10000	352	-	停机更改	*第527页“C1-01”*
C1-02	0xC102	死区时间1	0~10000	1052	-	停机更改	*第527页“C1-02”*
C1-03	0xC103	死区时间2	0~10000	1270	-	停机更改	*第527页“C1-03”*
C1-04	0xC104	死区时间3	0~10000	1358	-	停机更改	*第527页“C1-04”*
C1-05	0xC105	死区时间4	0~10000	1404	-	停机更改	*第527页“C1-05”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
C1-06	0xC106	死区时间5	0~10000	1449	-	停机更改	*第528页“C1-06”*
C1-07	0xC107	死区时间6	0~10000	1661	-	停机更改	*第528页“C1-07”*
C1-08	0xC108	死区时间7	0~10000	1689	-	停机更改	*第528页“C1-08”*
C1-09	0xC109	死区补偿量电流0	0~10000	94	-	停机更改	*第528页“C1-09”*
C1-10	0xC10A	死区补偿量电流1	0~10000	376	-	停机更改	*第529页“C1-10”*
C1-11	0xC10B	死区补偿量电流2	0~10000	658	-	停机更改	*第529页“C1-11”*
C1-12	0xC10C	死区补偿量电流3	0~10000	940	-	停机更改	*第529页“C1-12”*
C1-13	0xC10D	死区补偿量电流4	0~10000	1222	-	停机更改	*第529页“C1-13”*
C1-14	0xC10E	死区补偿量电流5	0~10000	1504	-	停机更改	*第530页“C1-14”*
C1-15	0xC10F	死区补偿量电流6	0~10000	3478	-	停机更改	*第530页“C1-15”*
C1-16	0xC110	死区补偿量电流7	0~10000	5452	-	停机更改	*第530页“C1-16”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
C2-00	0xC200	管压降	0~10000	700	-	停机更改	*第530页“C2-00”*
C2-01	0xC201	死区时间0	0~10000	352	-	停机更改	*第531页“C2-01”*
C2-02	0xC202	死区时间1	0~10000	1052	-	停机更改	*第531页“C2-02”*
C2-03	0xC203	死区时间2	0~10000	1270	-	停机更改	*第531页“C2-03”*
C2-04	0xC204	死区时间3	0~10000	1358	-	停机更改	*第531页“C2-04”*
C2-05	0xC205	死区时间4	0~10000	1404	-	停机更改	*第532页“C2-05”*
C2-06	0xC206	死区时间5	0~10000	1449	-	停机更改	*第532页“C2-06”*
C2-07	0xC207	死区时间6	0~10000	1661	-	停机更改	*第532页“C2-07”*
C2-08	0xC208	死区时间7	0~10000	1689	-	停机更改	*第532页“C2-08”*
C2-09	0xC209	死区补偿量电流0	0~10000	94	-	停机更改	*第533页“C2-09”*
C2-10	0xC20A	死区补偿量电流1	0~10000	376	-	停机更改	*第533页“C2-10”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
C2-11	0xC20B	死区补偿量电流2	0~10000	658	-	停机更改	*第533页“C2-11”*
C2-12	0xC20C	死区补偿量电流3	0~10000	940	-	停机更改	*第533页“C2-12”*
C2-13	0xC20D	死区补偿量电流4	0~10000	1222	-	停机更改	*第533页“C2-13”*
C2-14	0xC20E	死区补偿量电流5	0~10000	1504	-	停机更改	*第534页“C2-14”*
C2-15	0xC20F	死区补偿量电流6	0~10000	3478	-	停机更改	*第534页“C2-15”*
C2-16	0xC210	死区补偿量电流7	0~10000	5452	-	停机更改	*第534页“C2-16”*
U0-00	0x7000	运行频率	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第535页“U0-00”*
U0-01	0x7001	设定频率	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第535页“U0-01”*
U0-02	0x7002	母线电压	0.0V~0.0V	0.0	V	不可更改	*第535页“U0-02”*
U0-03	0x7003	输出电压	0V~0V	0	V	不可更改	*第535页“U0-03”*
U0-04	0x7004	输出电流	0.0A~0.0A	0.0	A	不可更改	*第536页“U0-04”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-05	0x7005	输出功率	0.0kW~0.0kW	0.0	kW	不可更改	*第536页“U0-05”*
U0-06	0x7006	输出转矩	0.0%~0.0%	0.0	%	不可更改	*第536页“U0-06”*
U0-07	0x7007	DI输入状态	0~0	0	-	不可更改	*第536页“U0-07”*
U0-08	0x7008	DO输出状态	0~0	0	-	不可更改	*第537页“U0-08”*
U0-09	0x7009	AI1电压	0.00V~0.00V	0.00	V	不可更改	*第538页“U0-09”*
U0-10	0x700A	AI2电压	0.00V~0.00V	0.00	V	不可更改	*第538页“U0-10”*
U0-11	0x700B	AI3电压	0.00V~0.00V	0.00	V	不可更改	*第538页“U0-11”*
U0-12	0x700C	计数值	0~0	0	-	不可更改	*第538页“U0-12”*
U0-13	0x700D	长度值	0~0	0	-	不可更改	*第538页“U0-13”*
U0-14	0x700E	负载速度显示	0rpm~65535rpm	0	rpm	不可更改	*第539页“U0-14”*
U0-15	0x700F	PID设定	0.0%~0.0%	0.0	%	不可更改	*第539页“U0-15”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-16	0x7010	PID反馈	0.0%~0.0%	0.0	%	不可更改	*第539页“U0-16”*
U0-17	0x7011	PLC阶段	0~0	0	-	不可更改	*第540页“U0-17”*
U0-18	0x7012	PULSE输入脉冲频率	0.00kHz~0.00kHz	0.00	kHz	不可更改	*第540页“U0-18”*
U0-19	0x7013	反馈速度	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第540页“U0-19”*
U0-20	0x7014	剩余运行时间	0.0min~0.0min	0.0	min	不可更改	*第540页“U0-20”*
U0-21	0x7015	AI1校正前电压	0.000V~0.000V	0.000	V	不可更改	*第541页“U0-21”*
U0-22	0x7016	AI2校正前电压	0.000V~0.000V	0.000	V	不可更改	*第541页“U0-22”*
U0-23	0x7017	AI3校正前电压	0.000V~0.000V	0.000	V	不可更改	*第541页“U0-23”*
U0-24	0x7018	线速度	0m/min~0m/min	0	m/min	不可更改	*第541页“U0-24”*
U0-25	0x7019	当前上电时间	0min~0min	0	min	不可更改	*第542页“U0-25”*
U0-26	0x701A	当前运行时间	0.0min~0.0min	0.0	min	不可更改	*第542页“U0-26”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-27	0x701B	PULSE输入脉冲频率	0Hz~0Hz	0	Hz	不可更改	*第542页“U0-27”*
U0-28	0x701C	通信设定值	0.00%~0.00%	0.00	%	不可更改	*第542页“U0-28”*
U0-29	0x701D	编码器反馈速度	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第543页“U0-29”*
U0-30	0x701E	主频率X显示	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第543页“U0-30”*
U0-31	0x701F	辅频率Y显示	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第543页“U0-31”*
U0-32	0x7020	查看任意内存地址值	0~0	0	-	不可更改	*第543页“U0-32”*
U0-33	0x7021	同步机转子位置	0.0°~0.0°	0.0	°	不可更改	*第544页“U0-33”*
U0-34	0x7022	电机温度	0°C~0°C	0	°C	不可更改	*第544页“U0-34”*
U0-35	0x7023	目标转矩	0.0%~0.0%	0.0	%	不可更改	*第544页“U0-35”*
U0-36	0x7024	旋变位置	0~0	0	-	不可更改	*第544页“U0-36”*
U0-37	0x7025	功率因数角	0.0°~0.0°	0.0	°	不可更改	*第545页“U0-37”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-38	0x7026	ABZ位置	0~0	0	-	不可更改	第545页“U0-38”
U0-39	0x7027	V/f分离目标电压	0V~0V	0	V	不可更改	第545页“U0-39”
U0-40	0x7028	V/f分离输出电压	0V~0V	0	V	不可更改	第545页“U0-40”
U0-41	0x7029	DI输入状态直观显示	0~0	0	-	不可更改	第546页“U0-41”
U0-42	0x702A	DO输出状态直观显示	0~0	0	-	不可更改	第546页“U0-42”
U0-43	0x702B	DI功能状态直观显示	0~0	0	-	不可更改	第546页“U0-43”
U0-44	0x702C	DO功能状态直观显示	0~0	0	-	不可更改	第546页“U0-44”
U0-45	0x702D	故障子码	0~0	0	-	不可更改	第547页“U0-45”
U0-46	0x702E	逆变模块温度	0°C~0°C	0	°C	不可更改	第547页“U0-46”
U0-47	0x702F	PTC通道校正前电压	0.000V~0.000V	0.000	V	不可更改	第547页“U0-47”
U0-48	0x7030	PTC通道校正后电压	0.000V~0.000V	0.000	V	不可更改	第547页“U0-48”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-49	0x7031	零伺服偏差脉冲数	0~0	0	-	不可更改	*第548页“U0-49”*
U0-50	0x7032	卷径	0mm~0mm	0	mm	不可更改	*第548页“U0-50”*
U0-51	0x7033	张力(锥度后)	0N~0N	0	N	不可更改	*第548页“U0-51”*
U0-52	0x7034	累计耗电量(kWh)	0kWh~0kWh	0	kWh	不可更改	*第556页“U0-52”*
U0-53	0x7035	累计耗电量(MWh)	0MWh~0MWh	0	MWh	不可更改	*第557页“U0-53”*
U0-54	0x7036	累计耗电量(GWh)	0GWh~0GWh	0	GWh	不可更改	*第557页“U0-54”*
U0-58	0x703A	Z信号计数器	0~0	0	-	不可更改	*第548页“U0-58”*
U0-59	0x703B	设定频率(%)	0~0	0	-	不可更改	*第549页“U0-59”*
U0-60	0x703C	运行频率(%)	0~0	0	-	不可更改	*第549页“U0-60”*
U0-61	0x703D	变频器状态	0~0	0	-	不可更改	*第549页“U0-61”*
U0-62	0x703E	当前故障编码	0~0	0	-	不可更改	*第549页“U0-62”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-63	0x703F	运行频率(下垂后)	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第550页“U0-63”*
U0-64	0x7040	反电动势	0.0V~0.0V	0.0	V	不可更改	*第550页“U0-64”*
U0-65	0x7041	启动辨识定子电阻	0~0	0	-	不可更改	*第550页“U0-65”*
U0-66	0x7042	通信扩展卡型号	0~0	0	-	不可更改	*第550页“U0-66”*
U0-67	0x7043	通信扩展卡版本号	0~0	0	-	不可更改	*第551页“U0-67”*
U0-68	0x7044	DP卡变频器状态	0~0	0	-	不可更改	*第551页“U0-68”*
U0-69	0x7045	传送DP卡的速度/0.01Hz	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第551页“U0-69”*
U0-70	0x7046	传送DP卡转速/rpm	0rpm~0rpm	0	rpm	不可更改	*第552页“U0-70”*
U0-71	0x7047	通信卡专用电流显示	0.0A~0.0A	0.0	A	不可更改	*第552页“U0-71”*
U0-72	0x7048	通信卡出错状态	0~0	0	-	不可更改	*第552页“U0-72”*
U0-73	0x7049	滤波前目标转矩	0.0%~0.0%	0.0	%	不可更改	*第552页“U0-73”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-74	0x704A	滤波后目标转矩	0.0%~0.0%	0.0	%	不可更改	第553页“U0-74”
U0-75	0x704B	加减速后设定转矩	0.0%~0.0%	0.0	%	不可更改	第553页“U0-75”
U0-76	0x704C	电动转矩上限	0.0%~0.0%	0.0	%	不可更改	第553页“U0-76”
U0-77	0x704D	发电转矩上限	0.0%~0.0%	0.0	%	不可更改	第553页“U0-77”
U0-80	0x7050	EtherCAT从站站点正名	0~0	0	-	不可更改	第554页“U0-80”
U0-81	0x7051	EtherCAT从站站点别名	0~0	0	-	不可更改	第554页“U0-81”
U0-82	0x7052	EtherCAT ESM传输错误码	0~0	0	-	不可更改	第554页“U0-82”
U0-83	0x7053	EtherCAT XML文件版本号	0.00~0.00	0.00	-	不可更改	第554页“U0-83”
U0-84	0x7054	EtherCAT 同步丢失次数	0~0	0	-	不可更改	第555页“U0-84”
U0-85	0x7055	单位时间内EtherCAT端口0无效帧及错误最大值	0~0	0	-	不可更改	第555页“U0-85”
U0-86	0x7056	单位时间内EtherCAT端口1无效帧及错误最大值	0~0	0	-	不可更改	第555页“U0-86”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U0-87	0x7057	单位时间内EtherCAT转发错误最大值	0~0	0	-	不可更改	*第555页“U0-87”*
U0-88	0x7058	单位时间内EtherCAT数据帧处理单元错误计数最大值	0~0	0	-	不可更改	*第556页“U0-88”*
U0-89	0x7059	单位时间内EtherCAT端口连接丢失最大值	0~0	0	-	不可更改	*第556页“U0-89”*
U0-96	0x7060	异步机矢量在线观测空载电流	0.0A~0.0A	0.0	A	不可更改	*第556页“U0-96”*
U0-97	0x7061	异步机矢量在线观测互感抗	0.0mH~0.0mH	0.0	mH	不可更改	*第556页“U0-97”*
U1-00	0x7100	线速度	0.0m/min~0.0m/min	0.0	m/min	不可更改	*第557页“U1-00”*
U1-01	0x7101	当前卷径值	0.0mm~0.0mm	0.0	mm	不可更改	*第558页“U1-01”*
U1-02	0x7102	线速度同步频率	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第558页“U1-02”*
U1-03	0x7103	频率PID输出	0.00Hz~0.00Hz	0.00	Hz	不可更改	*第558页“U1-03”*
U1-04	0x7104	当前设定张力	0N~0N	0	N	不可更改	*第558页“U1-04”*
U1-05	0x7105	锥度后设定张力	0N~0N	0	N	不可更改	*第558页“U1-05”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U1-06	0x7106	张力控制设定转矩	0.0%~0.0%	0.0	%	不可更改	*第559页“U1-06”*
U1-07	0x7107	转矩PID输出	0.0%~0.0%	0.0	%	不可更改	*第559页“U1-07”*
U1-08	0x7108	张力控制模式	0~0	0	-	不可更改	*第559页“U1-08”*
U1-09	0x7109	张力PID给定	0.0%~0.0%	0.0	%	不可更改	*第559页“U1-09”*
U1-10	0x710A	张力PID反馈	0.0%~0.0%	0.0	%	不可更改	*第560页“U1-10”*
U1-11	0x710B	张力PID比例增益	0~0	0	-	不可更改	*第560页“U1-11”*
U1-12	0x710C	张力PID积分时间Ti	0s~0s	0	s	不可更改	*第560页“U1-12”*
U1-13	0x710D	张力PID微分时间Td	0s~0s	0	s	不可更改	*第560页“U1-13”*
U1-14	0x710E	张力时间	0s~0s	0	s	不可更改	*第561页“U1-14”*
U1-15	0x710F	卷曲模式	0~0	0	-	不可更改	*第561页“U1-15”*
U1-18	0x7112	电缆卷筒垂直应用计算转矩上限	0.0%~0.0%	0.0	%	不可更改	*第561页“U1-18”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U1-19	0x7113	电缆卷筒垂直应用计算转矩下限	0.0%~0.0%	0.0	%	不可更改	*第561页“U1-19”*
U1-20	0x7114	电缆卷筒垂直应用实际转矩上限	0.0%~0.0%	0.0	%	不可更改	*第562页“U1-20”*
U1-21	0x7115	电缆卷筒垂直应用实际转矩下限	0.0%~0.0%	0.0	%	不可更改	*第562页“U1-21”*
U2-00	0x7200	位置偏差	-32768~32767	0	-	不可更改	*第562页“U2-00”*
U2-01	0x7201	从机有效设定频率	-327.68Hz~327.67Hz	0.00	Hz	不可更改	*第562页“U2-01”*
U2-02	0x7202	从机频率修正值	0.00Hz~655.35Hz	0.00	Hz	不可更改	*第563页“U2-02”*
U2-03	0x7203	从机位置同步状态	0~65535	0	-	不可更改	*第563页“U2-03”*
U2-04	0x7204	从机位置补偿量	0~65535	0	-	不可更改	*第563页“U2-04”*
U2-05	0x7205	从机接收主机发送时间间隔	0~65535	0	-	不可更改	*第563页“U2-05”*
U2-06	0x7206	从机接收时间间隔	0~65535	0	-	不可更改	*第564页“U2-06”*
U2-07	0x7207	从机接受主机脉冲增量	0~65535	0	-	不可更改	*第564页“U2-07”*

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U2-08	0x7208	从机脉冲增量	-32768~32767	0	-	不可更改	第564页“U2-08”
U2-09	0x7209	从机时间补偿量	-32768~32767	0	-	不可更改	第564页“U2-09”
U2-10	0x720A	加速度滤波后	0~65535	0	-	不可更改	第565页“U2-10”
U2-11	0x720B	从机接受主机频率	-32768~32767	0	-	不可更改	第565页“U2-11”
U2-12	0x720C	主机发送频率	-32768~32767	0	-	不可更改	第565页“U2-12”
U2-13	0x720D	主机发送位置增量	-32768~32767	0	-	不可更改	第565页“U2-13”
U2-14	0x720E	主机发送时间间隔	-32768~32767	0	-	不可更改	第565页“U2-14”
U2-15	0x720F	从机接收运行命令字	-32768~32767	0	-	不可更改	第566页“U2-15”
U2-16	0x7210	当前拍位置	-32768~32767	0	-	不可更改	第566页“U2-16”
U2-17	0x7211	主机位置	-32768~32767	0	-	不可更改	第566页“U2-17”
U2-23	0x7217	设定同步模式	-32768~32767	0	-	不可更改	第566页“U2-23”

参数	通讯地址	参数名称	设定值	默认值	单位	更改方式	页码
U2-24	0x7218	实际同步模式	-32768~32767	0	-	不可更改	*第567页“U2-24”*
U2-25	0x7219	方向改变标志	-32768~32767	0	-	不可更改	*第567页“U2-25”*
U2-27	0x721B	电子齿轮比后频率	0~65535	0	-	不可更改	*第567页“U2-27”*
U2-28	0x721C	电子齿轮比后滤波后频率	0~65535	0	-	不可更改	*第567页“U2-28”*

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