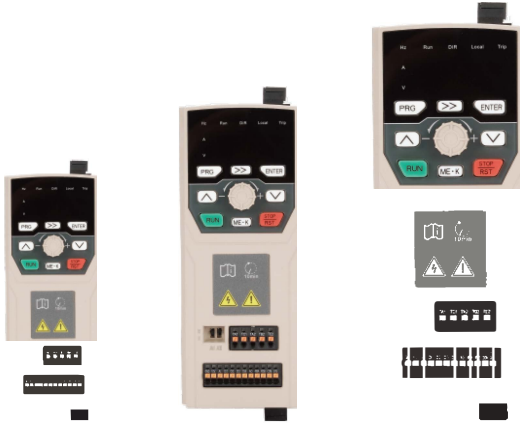
DERKO®
POWER THE ENGINE

AF19 Frequency Inverter

Operation Manual



Zhejiang Chuanken Electric Co.,Ltd.

PREFACE

Data Introduction

SCK180 is a general-purpose high-performance current vector frequency converter, mainly used for controlling and regulating three-phase ACT he speed and torque of asynchronous motors and three-phase AC permanent magnet motors can be used in textile, papermaking, wire drawing, machine tools drivers for packaging, food, fans, water pumps, and various automated production equipment.

Warranty Statement

Under normal use, if the product malfunctions or is damaged, the manufacturer provides warranty services during the warranty period (please refer to the purchase order for the product warranty period).

Beyond the warranty period, repair fees will be charged.

During the warranty period, repair fees will be charged for product damage caused by the following situations.

- Product damage caused by not operating this product according to the instructions in the manual.
- Product damage caused by fire, flood, and abnormal voltage.
- Product damage caused by using this product for abnormal functions.
- Product damage caused by exceeding the specified usage range of the product.
- Secondary damage to products caused by force majeure factors such as natural disasters, earthquakes, and lightning strikes.
- The service fees shall be calculated according to the manufacturer's unified standards. If there is a contract, the principle of contract priority shall apply.
- Please refer to the "Product Warranty Card" for detailed warranty instructions

CATALOGUE

Chapter 1 Safety Precautions

1.1 Content Of This Chapter

Before carrying out transportation, installation, operation, and maintenance, please read the user manual carefully and follow all the instructions in the manual full precautions. If ignored, it may cause personal injury or equipment damage, and even death.

We will not be held responsible for any injuries or equipment damage caused by your company or your company's customers not following the safety precautions in the user manual.

1.2 Warning Signs

Warning is used to warn of situations that may cause serious personal injury or equipment damage, and provide recommendations to avoid danger. The following warning signs are used in this manual:

Logo	Name	Instructions	Abbreviation
 Danger	Danger	Failure to comply with relevant requirements may result in serious personal injury or even death.	
 Warning	Warning	Failure to comply with relevant requirements may result in personal injury or equipment damage.	
 Prohibit	Electrostatic Sensitivity	Failure to comply with relevant requirements may result in damage to the PCBA board	
 High Temperature	Pay Attention To High Temperature	The base of the frequency converter generates high temperature, touch is prohibited	
Attention	Attention	Steps taken to ensure proper operation	Attention

1.3 Safety Guidance

◇ Only trained and qualified personnel are allowed to carry out relevant operations.

◇ It is prohibited to perform wiring, inspection, and replacement of components while the power is connected. Before wiring and inspection, it

is necessary to confirm that all input power sources have been disconnected and wait for no less than the time indicated on the frequency converter or to confirm that the DC bus voltage is below 36V. The waiting schedule is as follows:

Type		At least wait time
380V	0D7G~110G/132P	5 Minutes
380V	132G/160P~315G/355P	15 Minutes
380V	Above 355G/400P	25 Minutes

1.4 Safety Guidance

◇ Unauthorized modification of the frequency converter is strictly prohibited, as it may cause fire, electric shock, or other injuries.

◇ When the machine is running, the radiator base may generate high temperatures. Do not touch it to avoid burns.

◇ The electronic components inside the frequency converter are electrostatic sensitive devices, and anti-static measures must be taken during related operations.

1.4.1 Handling And Installation

◇ Do not install the frequency converter on flammable materials and avoid close contact or adhesion of the frequency converter to flammable materials.
◇ Please connect the brake optional components (brake resistor, brake unit or feedback unit) according to the wiring diagram.
◇ If the frequency converter is damaged or lacks components, it is prohibited to operate.
◇ Do not touch the frequency converter with damp objects or body parts, otherwise there is a risk of electric shock

1.4.2 Debugging And Running

◇ Before carrying out the terminal wiring operation of the frequency converter, all power sources connected to the frequency converter must be cut off, and the waiting time after the power is cut off should not be less than the time indicated on the frequency converter.
◇ When the frequency converter is running, there is high voltage inside. It is forbidden to perform any operation on the frequency converter except for keyboard settings

◇ When using the power-off start function, the frequency converter may start on its own, and it is forbidden to approach the frequency converter and motor.
◇ This device cannot be used as an “emergency stop device.”
◇ This device cannot be used as an emergency brake for motors and must be equipped with a mechanical brake device

1.4.3 Maintenance, upkeep, and component replacement

◇ The maintenance, inspection, or component replacement of the frequency converter must be carried out by trained and qualified professionals.
◇ Before carrying out the terminal wiring operation of the frequency converter, all power sources connected to the frequency converter must be cut off, and the waiting time after the power is cut off should not be less than the time indicated on the frequency converter.
◇ During maintenance, upkeep, and component replacement, measures must be taken to prevent conductive objects such as screws and cables from entering the interior of the frequency converter.

Attention

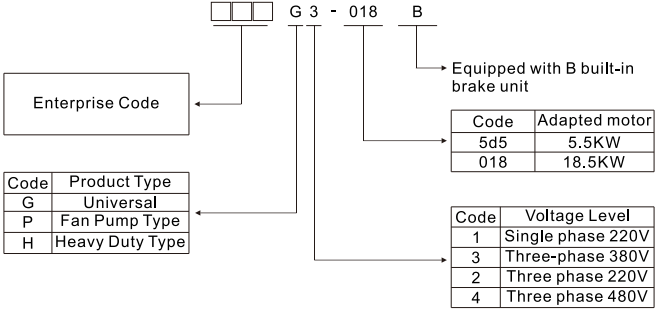
1. Please tighten the screws with the appropriate torque.
2. During maintenance, upkeep, and replacement of components, it is necessary to avoid contact or attachment of flammable materials to the frequency converter and components.
3. Insulation and voltage withstand tests cannot be conducted on the frequency converter, and a megohmmeter cannot be used to test the control circuit of the frequency converter.
4. During the maintenance, upkeep, and replacement of components, anti-static measures must be taken for the frequency converter and internal components.

1.4.4 Disposal after invalidation

◇ The components inside the frequency converter contain heavy metals, and after scrapping, the frequency converter must be treated as industrial waste. Measures must be taken to prevent conductive objects such as screws and cables from entering the interior of the frequency converter.

Chapter 2 Product Overview

2.1 Product Model Description



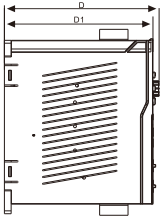
2.2 Electrical Parameters

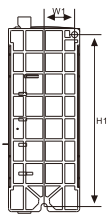
Single-phase Power Supply 220V 50/60Hz				
Type	Power Capacity Kva	Input Current	Output Current	Adapted Motor
G1-0D75	2.2	8.2	3.8	0.75kW
G1-1D5	3.7	14	5.1	1.5kW
G1-2D2	6	20	9	2.2kW
G1-004	7.6	33	13	4kW
G1-5D5	14.7	64	25	5.5kW
G1-7D5	18.9	82	32	7.5kW
G1-011	27	105	45	11kW
G1-015	28.1	114	60	15kW
G1-018	40	138	75	18.5kW
G1-022	57	178	90	22kW
G1-030	69	212	110	30kW
G1-037	85	278	152	37kW
G1-045	114	328	176	45kW
G1-055	134	392	210	55kW
G1-075	263	574	304	75kW

Three Phase Power Supply 380V 50/60Hz				
Type	Power Capacity Kva	Input Current	Output Current	Adapted Motor
G3-0D75	2.8	2.4	2.1	0.75kW
G3-1D5	5	4.6	3.8	1.5kW
G3-2D2	6.7	6.3	5.1	2.2kW
G3-004	12	11.4	9	4kW
G3-5D5	17.5	16.7	13	5.5kW
G3-7D5	22.8	21.9	17	7.5kW
G3-011	33.4	32.2	25	11kW
G3-015	42.8	41.3	32	15kW
G3-018	45	49.5	37	18.5kW
G3-022	54	59	45	22kW
G3-030	52	57	60	30kW
G3-037	63	69	75	37kW
G3-045	81	89	91	45kW
G3-055	97	106	112	55kW
G3-075	127	139	150	75kW
G3-090	150	164	176	90kW
G3-110	179	196	210	110kW
G3-132	220	240	253	132kW
G3-160	263	287	304	160kW
G3-200	334	365	377	200kW
G3-220	375	410	426	220kW
G3-250	404	441	465	250kW
G3-280	453	495	520	280kW
G3-315	517	565	585	315kW
G3-350	565	617	650	350kW
G3-400	629	687	725	400kW
G3-450	716	782	820	450kW

Chapter 3 Installation Guide

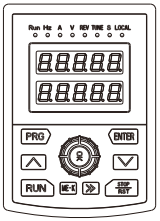
3.1 Product installation hole size diagram

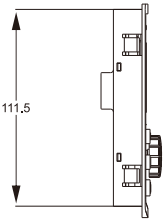


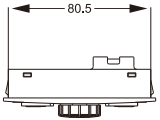


Specification Model	180 series appearance and installation dimensions (mm)						
	W	W1	H	H1	D	D1	Φ
G3-0D75	70	50.5	188	175	150	144	5.5
G3-1D5							
G3-2D2							
G3-004							

3.1.1 Appearance and installation hole size of external keyboard (keyboard holder)







111.5 * 80.5 is the size of the keyboard opening

3.2 Standard Wiring Diagram

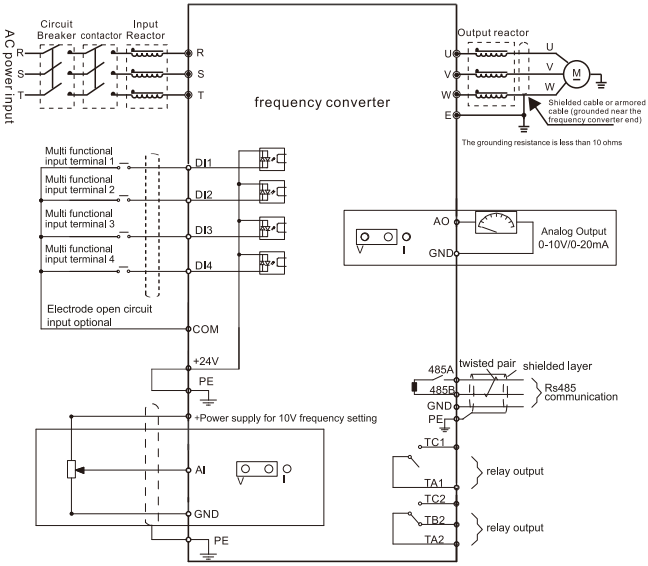
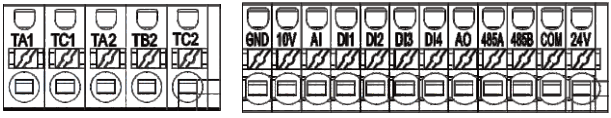


Figure 3.2 Standard Wiring Diagram

Note: If the frequency converter requires external braking resistors, braking units, and DC reactors, please consult our company for details.

3.3 Schematic diagram of control terminals



3.4 Terminal details of frequency converter

Control Circuit Terminal

485A	RS485 communication terminal+
485B	RS485 communication terminal-
10V	Built in+10V power output
AI	Analog input channel, voltage and current can be selected from 0-10V/0-20 MA, switched by AI dip switch U/I
AO	Analog output channel, voltage and current can be selected from 0-10V/0-20 MA, switched by AO dip switch U/I
GND	+Reference zero potential of 10V
DI1、DI2、DI3、DI4	Switching input terminal
COM	24V common terminal
24V	Built in 24V power output
TA1	T1 relay output, TA1 common terminal, TC1 normally open
TC1	
TA2	T2 relay output, TA2 common terminal, TB1 normally closed,TC1 normally open
TB2	
TC2	
U/I	AI/AO voltage and current switching

Main Circuit Terminal

RST/L1、L2	RST is a three-phase AC input terminal, while L1 and L2 are single-phase input terminals
UVW	Three Phase Ac Output Terminal
PE	Grounding Terminal

Panel Button Function

PRG	First Level Menu Entry/return Key
ENTER	Confirm Button
∧	Increment Key, Increment Of Data Or Function Code
∨	Decrease Key, The Decrease Of Data Or Function Code
》	Shift Key
RUN	Run Key
STOP/RST	Stop/reset Button
ME·K	Multiple Use Key

Chapter 4 Parameter List

PU-00 is set to a non-zero value, which means a user password has been set. In the function parameter mode and user change parameter mode, the parameter menu must be entered after entering the correct password. To cancel the password, PU-00 needs to be set to 0.

The user password for the frequency converter is only used to lock the panel operation. After setting the password, when reading and writing parameters through the keyboard, password verification is required every time the user exits the operation and needs to re-enter; During communication operations, read and write operations can be performed directly without using a password (except for PU and PF groups).

The parameter menu in user customized parameter mode is not password protected. Group P and Group A are basic functional parameters, while Group U is a monitoring functional parameter. The symbol explanations in the parameter table are as follows:

- Cannot be changed
- Shutdown Change
- Real time changes

P0 BASIC FUNCTION GROUP

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P0-00	0×F000	GP Type Display	1: G-type (constant torque load model) 2: P-type (fan, pump type load models)	1	–	Read-only
P0-01	0×F001	The first motor control method	0: Speed sensorless vector control (SVC) 1: Vector Control with Speed Sensor (FVC) 2: V/F control 3: Reserved 4: Reserved 5: Synchronous Machine Speed Open Loop Control (PMVVC)	0	–	Shutdown Change
P0-02	0×F002	Command Source Selection	0: Digital tube keyboard/LCD keyboard/ backend software command channel 1: Terminal Command Channel 2: Communication Command Channel	0	–	Shutdown Change
P0-03	0×F003	Main Frequency Source X Selection	0: Digital setting (preset frequency P0-08, UP/DOWN can be modified, no memory in case of power failure) 1: Digital setting (preset frequency P0-08, UP/DOWN adjustable, power-off memory) 2：AI1 3：AI2 4: Keyboard potentiometer (AI3) 5: PULSE pulse setting (DI5) 6: Multi segment instruction 7: Simple PLC 8：PID 9: Communication given 10: Reserved	0	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P0-04	0×F004	Auxiliary frequency source Y selection	0: Digital setting (preset frequency P0-08, UP/DOWN can be modified, no memory in case of power failure) 1: Digital setting (preset frequency P0-08, UP/DOWN adjustable, power-off memory) 2：AI1 3：AI2 4: Keyboard potentiometer (AI3) 5: PULSE pulse setting (DI5) 6: Multi segment instruction 7: Simple PLC 8：PID 9: Communication given 10: Reserved	0	–	Shutdown Change
P0-05	0×F005	Selection of auxiliary frequency source Y range during superposition	0: Relative to maximum frequency 1: Relative to frequency source X	0	–	Real Time Changes
P0-06	0×F006	Auxiliary frequency source Y range during superposition	0%~150%	100	%	Real Time Changes
P0-07	0×F007	Frequency source superposition selection	Position: Frequency command selection 0: Main frequency source X 1: Main and auxiliary operation results (operation relationship determined by ten digits) 2: Switching between main frequency source X and auxiliary frequency source Y 3: Switching between main frequency source X and main/auxiliary operation results 4: Switching between auxiliary frequency source Y and main/auxiliary operation results Ten digit: frequency instruction main auxiliary operation relationship 0: Primary+Secondary 1: Main auxiliary 2: The maximum value of both 3: The minimum value of the two 4: Main x auxiliary	0	–	Real Time Changes
P0-08	0×F008	Preset Frequency	0.00Hz~P0-10	50.00	Hz	Real Time Changes
P0-09	0×F009	Running direction	0: Consistent with default direction 1: Opposite to the default direction	0	–	Real Time Changes
P0-10	0×F00A	Maximum frequency	50.00Hz~600.00Hz	50.00	Hz	Shutdown Change
P0-11	0×F00B	Upper limit frequency source	0: Upper limit frequency (P0-12) setting 1：AI1 2：AI2 3: Keyboard potentiometer (AI3) 4: PULSE pulse setting (DI5) 5: Communication given 6: Multi-stage instruction	0	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P0-12	0×F00C	Upper Limit Frequency	P0-14~P0-10	50.00	Hz	Real Time Changes
P0-13	0×F00D	Upper Frequency Offset	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P0-14	0×F00E	Lower Limit Frequency	0.00Hz~P0-12	0.00	Hz	Real Time Changes
P0-15	0×F00F	Carrier Frequency	0.8kHz~16.0kHz	6.0	kHz	Real Time Changes
P0-16	0×F010	Carrier Frequency Adjusts With Temperature	0: No 1: Yes, it is	1	-	Real Time Changes
P0-17	0×F011	Acceleration time 1	0.0s~6500.0s	20.0	s	Real Time Changes
P0-18	0×F012	Deceleration time 1	0.0s~6500.0s	20.0	s	Real Time Changes
P0-19	0×F013	Acceleration and deceleration time unit	0: 1 second 1: 0.1 seconds 2: 0.01 seconds	1		Shutdown Change
P0-20	0×F014	Reserve (auxiliary frequency source bias selection)			-	Read-only
P0-21	0×F015	Auxiliary frequency source bias frequency during superposition	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P0-22	0×F016	Frequency command resolution	1：0.1Hz 2：0.01Hz	2	-	Shutdown Change
P0-23	0×F017	Digital setting frequency shutdown memory selection	0: No memory 1: Memory	0	-	Real Time Changes
P0-24	0×F018	Reserved (motor parameter group selection)	0: Motor parameter group 1 1: Motor parameter group 2 2: Motor parameter group 3 3: Motor parameter group 4	0	-	Read-only
P0-25	0×F019	Acceleration and deceleration time reference frequency	0: Maximum frequency (P0-10) 1: Set frequency 2: 100Hz	0	-	Real Time Changes
P0-26	0×F01A	Run time frequency instruction UP/DOWN reference	0: Operating frequency 1: Set frequency	0	-	Real Time Changes
P0-27	0×F01B	Main frequency coefficient	0.00%~100.00%	10.00	%	Real Time Changes
P0-28	0×F01C	Auxiliary frequency coefficient	0.00%~100.00%	10.00	%	Real Time Changes

P1 First Motor Parameters When The Parameters Of This Group Are Restored To Their Factory Values, They Will Not Be Restored						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P1-00	0×F100	Motor type selection	0: Ordinary asynchronous motor 1: Variable frequency asynchronous motor 2: Synchronous machine	0	-	Shutdown Change
P1-01	0×F101	Motor rated power	0.1kW~1000.0kW	1.5	kW	Shutdown Change
P1-02	0×F102	Rated voltage of motor	1V~2000V	380	V	Shutdown Change
P1-03	0×F103	Rated current of motor	0.1A~6553.5A	9.0	A	Shutdown Change
P1-04	0×F104	Rated frequency of motor	0.01Hz~P0-10	50.00	Hz	Shutdown Change
P1-05	0×F105	Motor speed	1rpm~65535rpm	1460	rpm	Shutdown Change
P1-06	0×F106	Stator resistance of asynchronous/ synchronous motor	0.001Ω~65.535Ω	1.204	Ω	Shutdown Change
P1-07	0×F107	Asynchronous motor rotor resistance	0.001Ω~65.535Ω	0.908	Ω	Shutdown Change
P1-08	0×F108	Leakage inductance of asynchronous motor	0.01mH~655.35mH	5.28	mH	Shutdown Change
P1-09	0×F109	Asynchronous motor mutual inductance	0.1mH~6553.5mH	156.8	mH	Shutdown Change
P1-10	0×F10A	Asynchronous motor no-load current	0.1A~P1-03	4.2	A	Shutdown Change
P1-11	0×F10B	Asynchronous machine iron core saturation coefficient 1	50.0%~100.0%	86.0	%	Shutdown Change
P1-12	0×F10C	Asynchronous machine iron core saturation coefficient 2	100.0%~150.0%	130.0	%	Real Time Changes
P1-13	0×F10D	Asynchronous machine iron core saturation coefficient 3	100.0%~170.0%	140.0	%	Real Time Changes
P1-14	0×F10E	Asynchronous machine iron core saturation coefficient 4	100.0%~180.0%	150.0	%	Real Time Changes
P1-17	0×F111	Synchronous motor D-axis inductance	0.01mH~655.35mH	15.86	mH	Shutdown Change
P1-18	0×F112	Synchronous motor Q-axis inductance	0.01mH~655.35mH	15.86	mH	Shutdown Change
P1-19	0×F113	Synchronous motor back electromotive force coefficient	0.0V~6553.5V	0.0	V	Shutdown Change
P1-20	0×F114	Filter time constant (used by PMVVC)	0.003~65.535	0.100	-	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P1-21	0×F115	Vibration suppression gain (used by PMVVC)	0~65535	100	-	Real Time Changes
P1-23	0×F117	Friction torque percentage	0.00%~100.00%	0.00	%	Shutdown Change
P1-24	0×F118	Number of motor poles	0~65535	2	-	Real Time Changes
P1-25	0×F119	Retain				
P1-26	0×F11A	Tuning the operating direction (inertia identification and synchronous machine)	0: Reverse operation 1: Forward running	1	-	Shutdown Change
P1-27	0×F11B	Number of encoder lines	1~20000	1024	-	Shutdown Change
P1-28	0×F11C	Speed fbk sel	0: ABZ incremental encoder 1: 23 bit encoder 2: Rotating Transformer	0	-	Shutdown Change
P1-29	0×F11D	PG signal filtering	0: Non adaptive filtering 1: Adaptive filtering 2: Fixed interlock 3: Automatic interlock	1	-	Shutdown Change
P1-30	0×F11E	Encoder wiring label	Position: Direction or rotation direction of AB signal 0: Positive 1: Reverse direction Ten: Reserved	0	-	Shutdown Change
P1-31	0×F11F	Encoder zero position angle	0.0°~359.9°	0.0	-	Shutdown Change
P1-32	0×F120	Motor gear ratio molecule	1~65535	1	°	Shutdown Change
P1-33	0×F121	Motor gear ratio denominator	1~65535	1	-	Shutdown Change
P1-34	0×F122	Twisted polar logarithm	1~32	1	-	Shutdown Change
P1-36	0×F124	PG disconnection detection enabled	Position: Direction or rotation direction of AB signal 0: Positive 1: Reverse direction Ten: Reserved	1	-	Shutdown Change
P1-37	0×F125	Tuning selection	0: No manipulation 1: Static tuning of asynchronous machine (tuning parameters Rs, Rr, L0) 2: Asynchronous machine dynamic tuning (supports dynamic tuning with load) 3: Asynchronous machine static complete tuning (tuning parameters Rs, Rr, L0, Lm, IO) 4: Asynchronous machine dynamic tuning 2 (adding inertia identification only supports FVC) 5: Asynchronous machine dynamic tuning 3 (adding mutual inductance curve identification requirements for no-load, light load, or pure inertia load support V/F, SVC, FVC) 11: Synchronous machine load tuning(without adjusting the back electromotive force)	0	-	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
			12: Synchronous machine no-load dynamic complete tuning 13: Static tuning of synchronous machine (without tuning the installation angle of encoder) 14: Inertia identification of synchronous machine (only supports FVC)			
P2 FIRST MOTOR VECTOR						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P2-00	0×F200	Low speed loop KP	1~200	30	–	Real Time Changes
P2-01	0×F201	Low speed ring TI	0.001s~10.000s	0.500	s	Real Time Changes
P2-02	0×F202	Switching frequency 1	0.00Hz~P2-05	5.00	Hz	Real Time Changes
P2-03	0×F203	High speed loop KP	1~200	20	–	Real Time Changes
P2-04	0×F204	High speed ring TI	0.001s~10.000s	1.000	s	Real Time Changes
P2-05	0×F205	Switching frequency 2	P2-02~P0-10	10.00	Hz	Real Time Changes
P2-06	0×F206	VC slip compensation adjustment	50%~200%	100	%	Real Time Changes
P2-07	0×F207	Speed feedback filtering time	0.000s~0.100s	0.004	s	Real Time Changes
P2-08	0×F208	VC deceleration over excitation gain	0~200	64		Real Time Changes
P2-09	0×F209	Torque upper limit source under speed control (electric)	0: Upper limit number setting (P2-10) 1: AI1 2: AI2 3: Keyboard potentiometer (AI3) 4: PULSE pulse setting (DI5) 5: Communication given 6: MIN（AI1, AI2） 7: MAX（AI1, AI2）	0	–	Real Time Changes
P2-10	0×F20A	Torque upper limit setting under speed control (electric)	0.0%~200.0%	150.0	%	Real Time Changes
P2-11	0×F20B	Torque upper limit source under speed control (power generation)	0: Upper limit number setting (P2-10) 1: AI1 2: AI2 3: Keyboard potentiometer (AI3) 4: PULSE pulse setting (DI5) 5: Communication given 6: MIN（AI1, AI2） 7: MAX（AI1, AI2） 8: Upper limit number setting (P2-12)	0	–	Real Time Changes
P2-12	0×F20C	Torque upper limit setting under speed control (power generation)	0.0%~200.0%	150.0	%	Real Time Changes
P2-13	0×F20D	Low speed current loop Kp adjustment	0.1~100.0	1.0	–	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P2-14	0×F20E	Adjustment of low-speed current loop Ki	0.1~100.0	1.0	–	Real Time Changes
P2-15	0×F20F	High speed current loop Kp adjustment	0.1~100.0	1.0	–	Real Time Changes
P2-16	0×F210	High speed current loop Ki adjustment	0.1~100.0	1.0	–	Real Time Changes
P2-17	0×F211	Zero speed locking speed loop Kp	1~100	30	–	Real Time Changes
P2-18	0×F212	Zero speed locking speed ring Ti	0.01s~10.00s	0.500	s	Real Time Changes
P2-19	0×F213	Inertia compensation gain	1~200	1	–	Real Time Changes
P2-20	0×F214	Zero speed locking speed loop switching frequency	0.00Hz~P2-02	0.05	Hz	Real Time Changes
P2-21	0×F215	Maximum output voltage coefficient	100~110	100	–	Real Time Changes
P2-22	0×F216	Output voltage filtering time	0.000s~0.010s	0.000	s	Real Time Changes
P2-23	0×F217	Zero speed lock	0: Do not enable 1: Enable	0	–	Shutdown Change
P2-24	0×F218	Vector over voltage suppression KP	0~1000	40	–	Real Time Changes
P2-25	0×F219	Acceleration compensation gain	0~200	0	–	Real Time Changes
P2-26	0×F21A	Acceleration compensation filtering time	0~500	10	–	Real Time Changes
P2-27	0×F21B	Vector overvoltage suppression enable	0: Do not enable 1: Enable	1	–	Real Time Changes
P2-28	0×F21C	Set the cut-off frequency for torque filtering	50Hz~1000Hz	500	Hz	Real Time Changes
P2-29	0×F21D	Synchronous machine initial position angle detection current	50~180	80	–	Real Time Changes
P2-30	0×F21E	Enable automatic calculation of speed loop parameters	0: Do not enable 1: Enable	0	–	Shutdown Change
P2-31	0×F21F	Expected speed loop bandwidth (high speed)	1.0Hz~200.0Hz	10.0	Hz	Real Time Changes
P2-32	0×F220	Expected speed loop bandwidth (low speed)	1.0Hz~200.0Hz	100	Hz	Real Time Changes
P2-33	0×F221	Expected speed loop bandwidth (zero speed)	1.0Hz~200.0Hz	100	Hz	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P2-34	0×F222	Expected speed loop damping ratio: (generally not changed)	0.100~65.000	1.000	-	Real Time Changes
P2-35	0×F223	System inertia (equivalent to start-up time)	0.001s~50.000s	0	s	Shutdown Change
P2-36	0×F224	Motor single machine inertia (kg. m2)	0.001~50.000	0	-	Shutdown Change
P2-37	0×F225	Enable dynamic optimization testing of speed loop	0: Do not enable 1: Enable	0		Read-only
P2-38	0×F226	Speed loop dynamic optimization test amplitude	10%~100%	50	%	Read-only
P2-39	0×F227	Speed loop dynamic optimization test bandwidth 1	1.0Hz~200.0Hz	5.0	Hz	Read-only
P2-40	0×F228	Speed loop dynamic optimization test bandwidth 2	1.0Hz~200.0Hz	10.0	Hz	Read-only
P2-41	0×F229	Speed loop dynamic optimization test bandwidth 3	1.0Hz~100.0Hz	15.0	Hz	Read-only
P2-42	0×F22A	Speed loop dynamic optimization test bandwidth 4	1.0Hz~200.0Hz	20.0	Hz	Read-only
P2-43	0×F22B	Inertia identification and dynamic speed setting	0~100	30	-	Shutdown Change
P2-44	0×F22C	Enable verification of rotor time constant	0: Do not enable 1: Enable	0	-	Read-only
P2-45	0×F22D	Rotor time constant verification torque amplitude	10%~100%	30	%	Read-only
P2-46	0×F22E	Verification frequency of rotor time constant	1~6	3	-	Read-only
P2-47	0×F22F	Inertia identification enablement	0: Do not enable 1: Enable	0	-	Shutdown Change
P2-48	0×F230	Inertia identification speed loop bandwidth setting value	0.1Hz~100.0Hz	10.0	Hz	Shutdown Change
P2-49	0×F231	Reverse electromotive force calculation enable	0: Do not enable 1: Enable	1	-	Read-only
P2-50	0×F232	Inertia identification mode	0: Acceleration and deceleration mode 1: Triangular wave mode	0	-	Shutdown Change
P2-51	0×F233	Inertia identification acceleration and deceleration coefficient	0.1~10.0	1.0	-	Shutdown Change
P2-52	0×F234	Decoupling control enables	0: Do not enable 1: Enable	0	-	Shutdown Change
P2-53	0×F235	Enable power generation limitation	0: Do not enable 1: Enable	0	-	Shutdown Change
P2-54	0×F236	Power generation limit	0.0%~200.0%	20.0	%	Shutdown Change

P3 VF CONTROL PARAMETERS						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P3-00	0×F300	V/F curve setting	0: Straight line V/F curve 1: Multi point V/F curve 2: Square V/F curve 3: 1.2th V/F curve 4: 1.4th V/F curve 6: 1.6th V/F curve 8: 1.8th V/F curve 10: V/F complete separation mode 11: V/F semi separation mode	0	-	Shutdown Change
P3-01	0×F301	Torque boost	0.0%~30.0%	Determine based on the rated power of the motor	%	Real Time Changes
P3-02	0×F302	Torque increase cut-off frequency	0.00Hz~P0-10	50.00	Hz	Shutdown Change
P3-03	0×F303	Multi point V/F frequency point 1	0.00Hz~P3-05	0.00	Hz	Shutdown Change
P3-04	0×F304	Multi point V/F voltage point 1	0.0%~100.0%	0.0	%	Shutdown Change
P3-05	0×F305	Multi point V/F frequency point 2	P3-03~P3-07	0.00	Hz	Shutdown Change
P3-06	0×F306	Multi point V/F voltage point 2	0.0%~100.0%	0.0	%	Shutdown Change
P3-07	0×F307	Multi point V/F frequency point 3	P3-05~P1-04	0.00	Hz	Shutdown Change
P3-08	0×F308	Multi point V/F voltage point 3	0.0%~100.0%	0.0	%	Shutdown Change
P3-09	0×F309	V/F slip compensation gain	0.0%~200.0%	0.0	%	Real Time Changes
P3-10	0×F30A	V/F overexcitation gain	0~200	64	-	Real Time Changes
P3-11	0×F30B	V/F oscillation suppression gain	0~100	Determine based on the rated power of the motor	-	Real Time Changes
P3-12	0×F30C	Vibration suppression gain mode	0: Invalid 1: Reserved 2: Reserved 3: Effective	3	-	Shutdown Change
P3-13	0×F30D	Voltage source separated by V/F	0: Numerical setting (P3-14) 1：AI1 2：AI2 3：AI3 4: PULSE pulse setting (DI5) 5: Multi segment instruction 6: Simple PLC 7：PID 8: Communication Given (1000H)	0	-	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P3-14	0×F30E	Voltage digital setting for V/F separation	0V~P1-02	0	V	Real Time Changes
P3-15	0×F30F	Voltage acceleration time for V/F separation	0.0s~1000.0s	0.0	s	Real Time Changes
P3-16	0×F310	Voltage deceleration time for V/F separation	0.0s~1000.0s	0.0	s	Real Time Changes
P3-17	0×F311	Selection of V/F separation shutdown mode	0: Frequency / voltage independently reduced to 0 1: After reducing the voltage to 0, the frequency decreases again	0	-	Shutdown Change
P3-18	0×F312	V/F overcurrent stall action current	50%~200%	150	%	Shutdown Change
P3-19	0×F313	V/F over current stall enable	0: Do not enable 1: Enable	1	-	Shutdown Change
P3-20	0×F314	V/F over current stall suppression gain	0~100	20	-	Real Time Changes
P3-21	0×F315	V/F speed over current stall action current compensation coefficient	50~200	50	-	Shutdown Change
P3-22	0×F316	V/F over voltage stall action voltage	200.0V~2000.0V	770.0	V	Shutdown Change
P3-23	0×F317	V/F over voltage stall enable	0: Do not enable 1: Enable	1	-	Shutdown Change
P3-24	0×F318	V/F over voltage stall suppression frequency gain	0~100	30	-	Real Time Changes
P3-25	0×F319	V/F over voltage stall suppression voltage gain	0~100	30	-	Real Time Changes
P3-26	0×F31A	Maximum rise limit frequency for over voltage stall	0~50	5	-	Shutdown Change
P3-27	0×F31B	Deviation compensation time constant	0.1Hz~10.0Hz	0.5	Hz	Real Time Changes
P3-28	0×F31C	Automatic frequency up enable	0: Do not enable 1: Enable	0	-	Shutdown Change
P3-29	0×F31D	Minimum electric torque current	10~100	50	-	Shutdown Change
P3-30	0×F31E	Maximum power generation torque current	10~100	20	-	Shutdown Change
P3-31	0×F31F	Automatic frequency up KP	0~100	50	-	Real Time Changes
P3-32	0×F320	Automatic frequency up conversion KI	0~100	50	-	Real Time Changes
P3-33	0×F321	Online torque compensation gain	80~150	100	-	Shutdown Change

P4 INPUT						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P4-00	0×F400	Di1 terminal function selection	0: No functionality 1: Forward running (FWD) 2: Reverse Run (REV) 3: Three line operation control 4: Forward turning jog (FJOG) 5: Reverse Jogging (RJOG) 6: Terminal UP 7: Terminal Down 8: Free Parking 9: Fault reset (RESET) 10: Pause operation 11: External fault normally open input 12: Multi segment instruction terminal 1 13: Multi segment instruction terminal 2 14: Multi segment instruction terminal 3 15: Multi segment instruction terminal 4	1	–	Shutdown Change
P4-01	0×F401	DI2 terminal function selection	16: Acceleration and deceleration selection terminal 1 17: Acceleration and deceleration selection terminal 2 18: Frequency source switching 19: UP/DOWN reset (terminals, keyboard) 20: Run command to switch terminals 21: Acceleration and deceleration are prohibited 22: PID pause 23: PLC status reset 24: Swing frequency pause 25: Counter input (DI5) 26: Counter reset 27: Length count input (DI5) (currently reserved) 28: Length reset 29: Torque control prohibited 30: Pulse input 31: Reserved	4	–	Shutdown Change
P4-02	0×F402	DI3 terminal function selection	32: Immediate DC braking 33: External fault normally closed input 34: Frequency modification enable 35: PID action direction is reversed 36: External parking terminal 1 37: Control command switching terminal 2 38: PID points suspended 39: Switching between frequency source X and preset frequency 40: Switching between frequency source Y and preset frequency 41: Motor selection terminal 1 42: Zero servo enable 43: PID parameter switching 44: User defined fault 1 45: User defined fault 2 46: Switching between speed control and torque control	9	–	Shutdown Change

P4 INPUT						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
			47: Emergency stop 48: External parking terminal 2			
P4-03	0×F403	DI4 terminal function selection	49: Deceleration DC braking 50: This run time is reset to zero 51: Two wire/three wire switching 52: Reserved 53: Process IO1 54: Process IO2 55: Process IO3 56: Process IO4 57: Process IO5 58: Process IO6 59: Process IO7 60: Process IO8 61: Reserved	12	-	Shutdown Change
P4-04	0×F404	DI5 terminal function selection	Same as P4-00	13	-	Shutdown Change
P4-05	0×F405	DI6 terminal function selection	Same as P4-00	0	-	Shutdown Change
P4-06	0×F406	DI7 terminal function selection	Same as P4-00	0	-	Shutdown Change
P4-07	0×F407	DI8 terminal function selection	Same as P4-00	0	-	Shutdown Change
P4-08	0×F408	DI9 terminal function selection	Same as P4-00	0	-	Shutdown Change
P4-09	0×F409	DI10 terminal function selection	Same as P4-00	0	-	Shutdown Change
P4-10	0×F40A	DI filtering time	0.000s~1.000s	0.010	s	Real Time Changes
P4-11	0×F40B	Terminal command method	0: Two line type 1 1: Two line type 2 2: Three line type 1 3: Three line type 2	0	-	Shutdown Change
P4-12	0×F40C	Terminal UP/DOWN change rate	0.001Hz/s~65.535Hz/s	1.000	Hz/s	Real Time Changes
P4-13	0×F40D	AI curve 1 minimum input	0.00V~P4-15	0.02	V	Real Time Changes
P4-14	0×F40E	AI curve 1 minimum input corresponding setting	0.0%~100.0%	0.0	%	Real Time Changes
P4-15	0×F40F	AI curve 1 maximum input	P4-13~10.00V	10.00	V	Real Time Changes
P4-16	0×F410	AI curve 1 maximum input corresponding setting	0.0%~100.0%	100.0	%	Real Time Changes
P4-17	0×F411	Ai1 filtering time	0.00s~10.00s	0.10	s	Real Time Changes
P4-18	0×F412	AI curve 2 minimum input	0.00V~P4-20	0.02	V	Real Time Changes
P4-19	0×F413	AI curve 2 minimum input corresponding setting	0.0%~100.0%	0.0	%	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P4-20	0×F414	AI curve 2 maximum input	P4-18~10.00V	10.00	V	Real Time Changes
P4-21	0×F415	AI curve 2 maximum input corresponding setting	0.0%~100.0%	100.0	%	Real Time Changes
P4-22	0×F416	AI2 filtering time	0.00s~10.00s	0.10	s	Real Time Changes
P4-23	0×F417	AI Curve 3 Minimum Input	0.00V~P4-25	0.02	V	Real Time Changes
P4-24	0×F418	AI curve 3 minimum input corresponding setting	0.0%~100.0%	0.0	%	Real Time Changes
P4-25	0×F419	AI curve 3 maximum input	P4-23~10.00V	10.00	V	Real Time Changes
P4-26	0×F41A	AI curve 3 maximum input corresponding setting	0.0%~100.0%	100.0	%	Real Time Changes
P4-27	0×F41B	AI3 filtering time	0.00s~10.00s	0.10	s	Real Time Changes
P4-28	0×F41C	PULSE minimum input	0.00kHz~P4-30	0.00	kHz	Real Time Changes
P4-29	0×F41D	PULSE minimum input corresponding setting	-100.0%~100.0%	0.0	%	Real Time Changes
P4-30	0×F41E	Maximum input of PULSE	P4-28~100.00kHz	50.00	kHz	Real Time Changes
P4-31	0×F41F	Maximum input setting for PULSE	-100.0%~100.0%	100.0	%	Real Time Changes
P4-32	0×F420	PULSE filtering time	0.00s~10.00s	0.10	s	Real Time Changes
P4-33	0×F421	AI curve selection	Position: AI1 1: Curve 1 (2 points, see P4-13~P4-16) 2: Curve 2 (2 points, see P4-18~P4-21) 3: Curve 3 (2 points, see P4-23~P4-26) 4: Curve 4 (4 points, see A6-00~A6-07) 5: Curve 5 (4 points, see A6-08~A6-15) Ten: AI2 1: Curve 1 (2 points, see P4-13~P4-16) 2: Curve 2 (2 points, see P4-18~P4-21) 3: Curve 3 (2 points, see P4-23~P4-26) 4: Curve 4 (4 points, see A6-00~A6-07) 5: Curve 5 (4 points, see A6-08~A6-15) Hundred: AI3 1: Curve 1 (2 points, see P4-13~P4-16) 2: Curve 2 (2 points, see P4-18~P4-21) 3: Curve 3 (2 points, see P4-23~P4-26) 4: Curve 4 (4 points, see A6-00~A6-07) 5: Curve 5 (4 points, see A6-08~A6-15)	801	-	Real Time Changes
P4-34	0×F422	AI below minimum input setting selection	Position: AI1 0: Corresponding minimum input setting 1：0.0% Ten: AI2 0: Corresponding minimum input setting 1：0.0% Hundred: AI3 0: Corresponding minimum input setting 1：0.0%	0	-	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P4-35	0×F423	DI1 delay time	0.0s~3600.0s	0.0	s	Real Time Changes
P4-36	0×F424	DI2 delay time	0.0s~3600.0s	0.0	s	Real Time Changes
P4-37	0×F425	DI3 delay time	0.0s~3600.0s	0.0	s	Real Time Changes
P4-38	0×F426	DI input terminal valid status setting 1	Position: DI1 terminal valid status setting 0: High level effective 1: Low level effective Ten digit: DI2 terminal valid status setting 0: High level effective 1: Low level effective Hundred digit: DI3 terminal effective status setting 0: High level effective 1: Low level effective Thousand bit: DI4 terminal effective status setting 0: High level effective 1: Low level effective Ten thousand positions: DI5 terminal effective status setting 0: High level effective 1: Low level effective	0	-	Real Time Changes
P4-39	0×F427	DI input terminal valid status setting 2	Position: DI6 terminal valid status setting 0: High level effective 1: Low level effective Ten digit: DI7 terminal valid status setting 0: High level effective 1: Low level effective Hundred digit: DI8 terminal effective status setting 0: High level effective 1: Low level effective Thousand bit: DI9 terminal effective status setting 0: High level effective 1: Low level effective Ten thousand positions: DI10 terminal effective status setting 0: High level effective 1: Low level effective	0	-	Real Time Changes

P5 OUTPUT						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P5-00	0×F500	Multi functional terminal output selection	0: Pulse output 1: Level output			
P5-01	0×F501	Multi functional FMR output selection	0: No output 1: Inverter in operation 2: Fault output (fault shutdown) 3: Frequency level detection FDT1 output 4: Frequency arrival 5: Zero speed operation (no output during shutdown) 6: Motor overload warning 7: Inverter overload warning 8: Set the count pulse value to arrive 9: The specified count pulse value has arrived 10: Length reached 11: PLC cycle completed 12: Accumulated running time reached 13: Under frequency limitation 14: Torque limitation	0	–	Real Time Changes
P5-02	0×F502	Function selection of RELAY1 control board (T/A1-TC1)	15: Ready for operation 16：AI1>AI2 17: The upper limit frequency has been reached 18: The lower limit frequency has been reached (related to operation) 19: Under voltage state output 20: Communication settings 21: Reserved 22: Reserved 23: Zero speed operation 2 (when stopped) 24: Accumulated power on time reached 25: Frequency level detection FDT2 output 26: Frequency 1 reaches output 27: Frequency 2 reaches output 28: Current 1 reaches output 29: Current 2 reaches output	2	–	Real Time Changes
P5-03	0×F503	Function selection of RELAY2 control board (T/A2-T/B2-TC2)	30: Timed to reach output 31: AI1 input exceeds the limit 32: Inverter output load drop 33: Running in reverse 34: Zero current state 35: The module temperature has reached 36: Output current exceeds the limit 37: The lower limit frequency has been reached (output even when stopped) 38: Abnormal output (output directly when a fault or warning occurs) 39: Current over temperature warning 40: The current running time has arrived 41: Fault output 2 42: Fault output 3 43: Zero servo successful 44: Process Do1	0	–	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P5-04	0×F504	Do1 output function selection	45: Process DO2 46: Process DO3 47: Process DO4 48: Process DO5 49: Process DO6 50: Process DO7 51: Process DO8	1	–	Real Time Changes
P5-05	0×F505	Expansion card Do2 output selection	Same as P5-01	4	–	Real Time Changes
P5-06	0×F506	FMP output function selection	0: Operating frequency 1: Set frequency 2: Output current 3: Output torque 4: Output power 5: Output voltage 6: PULSE input (100% corresponds to 100.0kHz) 7: AI1 8: AI2 9: AI3 (keyboard potentiometer) 10: Length 11: Record numerical values 12: Communication settings 13: Motor speed 14: Output current (100.0% corresponds to 1000.0A) 15: Output voltage (100.0% corresponds to 1000.0V) 16: Output torque (with direction) 17: Actual output torque (with positive and negative)	0	–	Real Time Changes
P5-07	0×F507	Ao1 output function selection	同P5-06	0	–	Real Time Changes
P5-08	0×F508	Ao2 output selection	同P5-06	1	–	Real Time Changes
P5-09	0×F509	FMP output maximum frequency	0.01kHz~100.00kHz	50.00	kHz	Real Time Changes
P5-10	0×F50A	AO1 zero bias coefficient	-100.0%~100.0%	0.0	%	Real Time Changes
P5-11	0×F50B	AO1 gain	-10.00~10.00	1.00	–	Real Time Changes
P5-12	0×F50C	AO2 zero bias coefficient	-100.0%~100.0%	0.0	%	Real Time Changes
P5-13	0×F50D	AO2 gain	-10.00~10.00	1.00	–	Real Time Changes
P5-14	0×F50E	HDO output filtering time	0~10.00	0.0		
P5-15	0×F50F	AO1output filtering time	0~10.00	0.0		
P5-16	0×F510	AO2 output filtering time	0~10.00	0.0		

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P5-17	0×F511	Delay time for RELAY output of expansion card	0.0s~3600.0s	0.0	s	Real Time Changes
P5-18	0×F512	RELAY1 output delay time of control board	0.0s~3600.0s	0.0	s	Real Time Changes
P5-19	0×F513	RELAY2 output delay time of control board	0.0s~3600.0s	0.0	s	Real Time Changes
P5-20	0×F514	DO1 output delay time	0.0s~3600.0s	0.0	s	Real Time Changes
P5-21	0×F515	Expansion card DO2 output delay time	0.0s~3600.0s	0.0	s	Real Time Changes
P5-22	0×F516	Effective state selection of DO output terminal	Position: Expansion Card Relay 0: Positive Logic 1: Anti logic Ten digits: Control board Relay1 0: Positive Logic 1: Anti logic Hundred positions: Control board Relay2 0: Positive Logic 1: Anti logic Thousand positions: Control board DO1 0: Positive Logic 1: Anti logic 10000 bits: Expansion card DO2 0: Positive Logic 1: Anti logic	0	-	Real Time Changes

P6 START STOP

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P6-00	0×F600	Startup method	0: Directly start 1: Speed tracking start 2: Asynchronous motor vector pre excitation start (asynchronous motor)	0	-	Real Time Changes
P6-01	0×F601	Speed tracking mode	0: Starting from the shutdown frequency 1: Starting from 50Hz 2: Starting from the maximum frequency	0	-	Shutdown Change
P6-02	0×F602	Speed tracking speed	1~100	20	-	Real Time Changes
P6-03	0×F603	starting frequency	0.00Hz~10.00Hz	0.00	Hz	Real Time Changes
P6-04	0×F604	Start frequency holding time	0.0s~100.0s	0.0	s	Shutdown Change
P6-05	0×F605	Start DC braking current/pre excitation current	0%~100%	0	%	Shutdown Change
P6-06	0×F606	Start DC braking time/pre excitation time	0.0s~100.0s	0.0	s	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P6-07	0×F607	Acceleration and deceleration methods	0: Linear acceleration and deceleration 1: S-curve acceleration and deceleration	0	–	Shutdown Change
P6-08	0×F608	Proportion of time at the beginning of the S-curve	0.0%~100.0%	30.0	%	Shutdown Change
P6-09	0×F609	Proportion of time at the end of the S-curve	0.0%~100.0%	30.0	%	Shutdown Change
P6-10	0×F60A	shutdown method	0: Slow down and stop 1: Free Parking	0	–	Real Time Changes
P6-11	0×F60B	Starting frequency of shutdown DC braking	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P6-12	0×F60C	Shutdown DC braking waiting time	0.0s~100.0s	0.0	s	Real Time Changes
P6-13	0×F60D	Shutdown DC brake current	0%~100%	0	%	Real Time Changes
P6-14	0×F60E	Shutdown DC braking time	0.0s~100.0s	0.0	s	Real Time Changes
P6-15	0×F60F	Brake utilization rate	0%~100%	100	%	Shutdown Change
P6-16	0×F610	Retain	0~1000	500	–	Real Time Changes
P6-17	0×F611	Speed tracking closed-loop current KP	0~1000	800	–	Real Time Changes
P6-18	0×F612	Retain	30~200	100	–	Real Time Changes
P6-19	0×F613	Torque tracking closed-loop current KI				
P6-20	0×F614	Speed tracking current magnitude				
P6-21	0×F615	Retain	0.00s~10.00s	1.00	s	Real Time Changes
P6-22	0×F616	Demagnetization time	0.0%~200.0%	0.0	%	Real Time Changes
P6-23	0×F617	Start pre torque setting				

P7 KEYBOARD AND DISPLAY

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P7-00	0×F700	Digital tube testing	0: Cancel testing 1: All digital tubes are on (except for the running light) 2: The running light is on			
P7-01	0×F701	MF. K key function selection	0: MF. K key is invalid 1: Switching between operation panel command channel and remote command channel (terminal command channel or communication command channel) 2: Forward and reverse switching 3: Forward turning jog4: Reverse jog	0	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P7-02	0×F702	STOP/RESET button function	0: The STOP/RESET button shutdown function is only valid in keyboard operation mode 1: The STOP/RESET button shutdown function is effective in any operating mode	0	-	Real Time Changes
P7-03	0×F703	LED operation display parameter 1	Bit00: Operating frequency (Hz) Bit01: Set frequency (Hz) Bit02: Bus voltage (V) Bit03: Output voltage (V) Bit04: Output current (A) Bit05: Output power (kW) Bit06: Output torque (%) Bit07: DI input status Bit08: DO output 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 setting	31	-	Real Time Changes
P7-04	0×F704	LED operation display parameter 2	Bit00: PID feedback Bit01: PLC stage Bit02: PULSE input pulse frequency (kHz) Bit03: Operating frequency 2 (Hz) Bit04: Remaining running time Bit05: AI1 pre calibration voltage (V) Bit06: AI2 voltage before calibration (V) Bit07: Voltage before AI3 calibration (V) Bit08: Linear speed Bit09: Current power on time (h) Bit10: Current running time (min) Bit11: Pulse input frequency (Hz) Bit12: Communication setting value Bit13: Encoder feedback speed (Hz) Bit14: Roll diameter (mm) Bit15: Tension after taper (N)	0	-	Real Time Changes
P7-05	0×F705	LED shutdown display parameters	Bit00: Set frequency (Hz) Bit01: Bus voltage (V) Bit02: DI input status Bit03: DO output status 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 setting Bit12: PULSE input pulse frequency (kHz) Bit13: Roll diameter (mm) Bit14: Tension (N)	51	-	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P7-06	0×F706	Load speed display coefficient	0.0001~6.5000	1.0000	-	Real Time Changes
P7-07	0×F707	Inverter module radiator temperature	-20℃~120℃	0	℃	Cannot be changed
P7-08	0×F708	Product Number	0~999	0	-	Cannot be changed
P7-09	0×F709	Accumulated running time	0h~65535h	0	h	Cannot be changed
P7-10	0×F70A	Performance software version number	0.00~0.00	0.00	-	Cannot be changed
P7-11	0×F70B	Functional software version number	0.00~0.00	0.00	-	Cannot be changed
P7-12	0×F70C	Number of decimal places displayed for load speed	0:0 decimal places 1: One decimal place 2: Two decimal places 3: 3 decimal places	1	-	Real Time Changes
P7-13	0×F70D	Accumulated power on time	0h~65535h	0	h	Cannot be changed
P7-14	0×F70E	Accumulated power consumption	0kWh~65535kWh	0	kWh	Cannot be changed
P7-15	0×F70F	Temporary version number for performance	0.00~0.00	0.00	-	Cannot be changed
P7-16	0×F710	Temporary version number of the function	0.00~0.00	0.00	-	Cannot be changed

P8 AUXILIARY

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P8-00	0×F800	Jogging operating frequency	0.00Hz~P0-10	2.00	Hz	Real Time Changes
P8-01	0×F801	Jogging acceleration time	0.0s~6500.0s	20.0	s	Real Time Changes
P8-02	0×F802	Jogging deceleration time	0.0s~6500.0s	20.0	s	Real Time Changes
P8-03	0×F803	Acceleration time 2	0.0s~6500.0s	20.0	s	Real Time Changes
P8-04	0×F804	Deceleration time 2	0.0s~6500.0s	20.0	s	Real Time Changes
P8-05	0×F805	Acceleration time 3	0.0s~6500.0s	20.0	s	Real Time Changes
P8-06	0×F806	Deceleration time 3	0.0s~6500.0s	20.0	s	Real Time Changes
P8-07	0×F807	Acceleration time 4	0.0s~6500.0s	20.0	s	Real Time Changes
P8-08	0×F808	Deceleration time 4	0.0s~6500.0s	20.0	s	Real Time Changes
P8-09	0×F809	Jump frequency 1	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P8-10	0×F80A	Jump frequency 2	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P8-11	0×F80B	Jump frequency amplitude	0.00Hz~5.00Hz	0.00	Hz	Real Time Changes
P8-12	0×F80C	Dead time of forward and reverse rotation	0.0s~3000.0s	0.0	s	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P8-13	0×F80D	Reverse control enable	0: Allow reversal 1: Do not reverse	0	-	Real Time Changes
P8-14	0×F80E	Set the operating mode with a frequency lower than the lower limit frequency	0: Running at the lower limit frequency 1: Shutdown in P6-10 mode 2: Zero speed operation	0	-	Real Time Changes
P8-15	0×F80F	Retain	0.00Hz~10.00Hz	0.00		Read-only
P8-16	0×F810	Set the cumulative power on arrival time	0h~65000h	0	h	Real Time Changes
P8-17	0×F811	Set the cumulative running arrival time	0h~65000h	0	h	Real Time Changes
P8-18	0×F812	Activate protection selection	0: Not protected 1: Protection	0	-	Real Time Changes
P8-19	0×F813	Frequency detection value (FDT1)	0.00Hz~P0-10	50.00	Hz	Real Time Changes
P8-20	0×F814	Frequency detection lag value (FDT1)	0.0%~100.0%	5.0	%	Real Time Changes
P8-21	0×F815	Frequency reaches the detected amplitude	0.0%~100.0%	0.0	%	Real Time Changes
P8-22	0×F816	Is the jumping frequency effective during acceleration and deceleration	0: Invalid 1: Effective	0	-	Real Time Changes
P8-23	0×F817	retain				Read-only
P8-24	0×F818	Retain				Read-only
P8-25	0×F819	Acceleration time 1/2 Switching frequency point	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P8-26	0×F81A	Deceleration time 1/2 Switching frequency point	0.00Hz~P0-10	0.00	Hz	Real Time Changes
P8-27	0×F81B	Terminal jog priority	0: Invalid 1: Effective	0	-	Real Time Changes
P8-28	0×F81C	Frequency detection value (FDT2)	0.00Hz~P0-10	50.00	Hz	Real Time Changes
P8-29	0×F81D	Frequency detection lag value (FDT2)	0.0%~100.0%	5.0	%	Real Time Changes
P8-30	0×F81E	Random arrival frequency detection value 1	0.00Hz~P0-10	50.00	Hz	Real Time Changes
P8-31	0×F81F	Detection amplitude 1 at any frequency of arrival	0.0%~100.0%	0.0	%	Real Time Changes
P8-32	0×F820	Random arrival frequency detection value 2	0.00Hz~P0-10	50.00	Hz	Real Time Changes
P8-33	0×F821	Detection amplitude of 2 at any arrival frequency	0.0%~100.0%	0.0	%	Real Time Changes
P8-34	0×F822	Zero current detection level	0.0%~300.0%	5.0	%	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P8-35	0×F823	Zero current detection delay time	0.01s~600.00s	0.10	s	Real Time Changes
P8-36	0×F824	Output current exceeds the limit value	0.0%~300.0%	200.0	%	Real Time Changes
P8-37	0×F825	Software over current detection delay time	0.00s~600.00s	0.00	s	Real Time Changes
P8-38	0×F826	Any current reaching 1	0.0%~300.0%	100.0	%	Real Time Changes
P8-39	0×F827	Any current reaching a width of 1	0.0%~300.0%	0.0	%	Real Time Changes
P8-40	0×F828	Any current reaching 2	0.0%~300.0%	100.0	%	Real Time Changes
P8-41	0×F829	Any current reaching a width of 2	0.0%~300.0%	0.0	%	Real Time Changes
P8-42	0×F82A	Timer function selection	0: Invalid 1: Effective	0	-	Shutdown Change
P8-43	0×F82B	Timed running time selection	0: Timer running time (P8-44) setting 1: AI1 2: AI2	0	-	Shutdown Change
P8-44	0×F82C	Timed running time	0.0min~6500.0min	0.0	min	Shutdown Change
P8-45	0×F82D	Lower limit of AI1 input voltage protection value	0.00V~P8-46	3.10	V	Real Time Changes
P8-46	0×F82E	AI1 input voltage protection upper limit	F8-45~11.00V	6.80	V	Real Time Changes
P8-47	0×F82F	The module temperature has reached	0℃~100℃	75	℃	Real Time Changes
P8-48	0×F830	Cooling fan control	0: Fan running during operation 1: The fan keeps running	0	-	Real Time Changes
P8-49	0×F831	Wake up frequency	P8-51~P0-10	0.00	Hz	Real Time Changes
P8-50	0×F832	Wake up delay time	0.0s~6500.0s	0.0	s	Real Time Changes
P8-51	0×F833	Sleep frequency	0.00Hz~P8-49	0.00	Hz	Real Time Changes
P8-52	0×F834	Sleep delay time	0.0s~6500.0s	0.0	s	Real Time Changes
P8-53	0×F835	Arrival time of this run	0.0min~6500.0min	0.0	min	Real Time Changes
P8-54	0×F836	STO enabled (currently not supported by default, reserved)	0: Invalid 1: Effective			Shutdown Change
P8-55	0×F837	Emergency stop deceleration time	0.0s~6500.0s	0.0	s	Real Time Changes
P8-56	0×F838	The trial operation entrance of the panel is reserved and currently has no function				Read-only

P9 FAULT AND PROTECTION						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P9-00	0×F900	Inverter overload suppression enable	0: Prohibited 1: Allow	0	–	Real Time Changes
P9-01	0×F901	Motor overload protection gain	0.20~10.00	1.00	–	Real Time Changes
P9-02	0×F902	Motor overload warning coefficient	50%~100%	80	%	Real Time Changes
P9-03	0×F903	Retain				Read-only
P9-04	0×F904	Over voltage point setting	350.0V~820.0V	820.0	V	Real Time Changes
P9-05	0×F905	Retain				Read-only
P9-06	0×F906	Output phase loss detection selection before startup	0: Invalid 1: Effective	0	–	Real Time Changes
P9-07	0×F907	Selection of software for ground short circuit detection	0: Not detected 1: Pre power on inspection 2: Pre operational testing 3: Pre power on and pre operation testing	1	–	Shutdown Change
P9-08	0×F908	Starting voltage of braking unit action	200.0V~2000.0V	760.0	V	Real Time Changes
P9-09	0×F909	Number of automatic fault resets	0~20	0	–	Real Time Changes
P9-10	0×F90A	Fault DO action selection during automatic fault reset	0: No action 1: Action	0	–	Real Time Changes
P9-11	0×F90B	Automatic fault reset interval time	0.1s~100.0s	1.0	s	Real Time Changes
P9-12	0×F90C	Input phase loss/ contact or engagement protection selection	0: Input phase loss protection selection 0: Prohibit input phase loss fault 1: Both software and hardware detected input phase loss and reported a fault 2: Software detects input phase loss fault 3: Hardware detection input phase loss fault 0: Contact or suction/fan fault protection selection 0: Prohibit buffer resistor contact or fault 1: Enable buffer resistor contact or fault	11	–	Real Time Changes
P9-13	0×F90D	Fault reset and restart interval time	0.0s~600.0s	10.0	s	Real Time Changes
P9-14	0×F90E	First fault type	0~99	0	–	Cannot be changed
P9-15	0×F90F	Second fault type	0~99	0	–	Cannot be changed
P9-16	0×F910	Third (most recent) fault type	0~99	0	–	Cannot be changed
P9-17	0×F911	Frequency during the third (most recent) malfunction	0Hz~65535Hz	0	Hz	Cannot be changed
P9-18	0×F912	Current during the third (most recent) malfunction	0.0A~6553.5A	0.0	A	Cannot be changed
P9-19	0×F913	Bus voltage during the third (most recent) fault	0.0V~6553.5V	0.0	V	Cannot be changed

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P9-20	0×F914	The input terminal status during the third (most recent) malfunction	0~65535	0	-	Cannot be changed
P9-21	0×F915	Output terminal status during the third (most recent) malfunction	0~65535	0	-	Cannot be changed
P9-22	0×F916	The status of the frequency converter during the third (most recent) malfunction	0~65535	0	-	Cannot be changed
P9-23	0×F917	Power on time during the third (most recent) malfunction	0~65535	0	-	Cannot be changed
P9-24	0×F918	Running time during the third (most recent) malfunction	0.0~6553.5	0.0	-	Cannot be changed
P9-25	0×F919	IGBT temperature during the third (most recent) malfunction	-20℃~120℃	0	℃	Cannot be changed
P9-26	0×F91A	Third (most recent) fault sub code	0~65535	0	-	Cannot be changed
P9-27	0×F91B	Frequency during the second malfunction	0Hz~65535Hz	0	Hz	Cannot be changed
P9-28	0×F91C	Current during the second fault	0.0A~6553.5A	0.0	A	Cannot be changed
P9-29	0×F91D	Bus voltage during the second fault	0.0V~6553.5V	0.0	V	Cannot be changed
P9-30	0×F91E	Input terminal status during the second malfunction	0~65535	0	-	Cannot be changed
P9-31	0×F91F	Output terminal status during the second fault	0~65535	0	-	Cannot be changed
P9-32	0×F920	Driver status during the second malfunction	0~65535	0	-	Cannot be changed
P9-33	0×F921	Power on time during the second malfunction	0~65535	0	-	Cannot be changed
P9-34	0×F922	Running time during the second malfunction	0.0~6553.5	0.0	-	Cannot be changed
P9-35	0×F923	IGBT temperature during the second fault	-20℃~120℃	0	℃	Cannot be changed
P9-36	0×F924	Fault sub code during the second fault	0~65535	0	-	Cannot be changed
P9-37	0×F925	Frequency during the first malfunction	0Hz~65535Hz	0	Hz	Cannot be changed
P9-38	0×F926	Current during the first malfunction	0.0A~6553.5A	0.0	A	Cannot be changed
P9-39	0×F927	Bus voltage during the first malfunction	0.0V~6553.5V	0.0	V	Cannot be changed

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P9-40	0×F928	Input terminal status during the first malfunction	0~65535	0	–	Cannot be changed
P9-41	0×F929	Output terminal status during the first malfunction	0~65535	0	–	Cannot be changed
P9-42	0×F92A	Driver status during the first malfunction	0~65535	0	–	Cannot be changed
P9-43	0×F92B	Power on time during the first malfunction	0~65535	0	–	Cannot be changed
P9-44	0×F92C	Running time during the first malfunction	0.0~6553.5	0.0	–	Cannot be changed
P9-45	0×F92D	IGBT temperature during the first malfunction	-20℃~120℃	0	℃	Cannot be changed
P9-46	0×F92E	The fault sub code during the first malfunction	0~65535	0	–	Cannot be changed
P9-47	0×F92F	Fault protection action selection 0	Position: E02, E03, E04 overcurrent 0: Free Parking 2: Fault restart Tenth digit: E05, E06, E07 overvoltage 0: Free Parking 2: Fault restart Hundred digit: E08 buffer resistor fault 0: Free Parking Thousand bit: E09 undervoltage fault 0: Free Parking 2: Fault restart 10000 bits: E10 driver overload 0: Free Parking 2: Fault restart	0	–	Shutdown Change
P9-48	0×F930	Fault protection action selection 1	Position: E11 motor overload 0: Free Parking 1: Slow down and stop 2: Fault restart 4: Warning 5: Cancel Ten digits: E12 input phase missing 0: Free Parking 1: Slow down and stop 2: Fault restart 4: Warning 5: Cancel Hundred bit: E13 output phase loss 0: Free Parking 1: Slow down and stop 2: Fault restart 4: Warning 5: Cancel Thousand bit: E14 driver overheating 0: Free Parking Ten thousand positions: E15 external device failure 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel	10050	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P9-49	0×F931	Fault protection action selection 2	Position: E16 communication timeout 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Tenth digit: E17 contactor fault 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Hundred digit: E18 current detection circuit fault 0: Free Parking Thousand digit: E19 tuning fault 0: Free Parking 4: Warning 5: Cancel Ten thousand bits: E20 encoder disconnected 0: Free Parking 4: Warning 5: Cancel	50	-	Shutdown Change
P9-50	0×F932	Fault protection action selection 3	Position: Reserved 0: Free Parking Ten: Reserved 0: Free Parking Hundred digit: E23 short circuit to ground 0: Free Parking 5: Cancel Thousand bit: E24 phase to phase short circuit 0: Free Parking 5: Cancel Ten thousand positions: E25 rectifier fault 5: Cancel	55000	-	Shutdown Change
P9-51	0×F933	Fault protection action selection 4	Individual position: E26 cumulative running time reached 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Tenth digit: E27 user-defined fault 1 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Hundred digit: E28 user-defined fault 2 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Thousand digit: E29 cumulative power on time reached 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel 10000 bits: E30 output drops load 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel	51111	-	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P9-52	0×F934	Fault protection action selection 5	Position: E31 PID feedback lost 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Tenth digit: E40 wave by wave current limiting fault 0: Free Parking 2: Fault restart Hundred digit: E41 inverter and sorting communication timeout 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Thousand bit: E42 speed deviation is too large 0: Free Parking 1: Slow down and stop 2: Fault restart 4: Warning 5: Cancel Ten thousand positions: E43 motor over speed fault 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel	101	-	Shutdown Change
P9-53	0×F935	Fault protection action selection 6	Position: E45 motor overheating 0: Free Parking 1: Slow down and stop 4: Warning 5: Cancel Tenth digit: E51 phase sequence abnormality 0: Free Parking 5: Cancel Hundred positions: E61 brake pipe overload 5: Cancel Thousand position: E62 brake pipe straight through 5: Cancel Ten thousand: E80 fan malfunction 5: Cancel	55500	-	Shutdown Change
P9-54	0×F936	Continue operating frequency selection in case of malfunction	0: Run at the current operating frequency 1: Run at the set frequency 2: Operate at the upper limit frequency 3: Operate at the lower limit frequency 4: Operate at the backup frequency in case of abnormalities	1	-	Real Time Changes
P9-55	0×F937	Abnormal backup frequency setting	0.0%~100.0%	100.0	%	Real Time Changes
P9-56	0×F938	Reserved (motor temperature sensor type)	0: AI1 as AI input 1: AI1 as input for PT100 2: AI1 as input for PT1000 3: AI1 as input for KTY-84-130 4: AI1 as input for PTC130	0	-	Real Time Changes
P9-57	0×F939	Motor overheat protection threshold	0℃~200℃	110	℃	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
P9-58	0×F93A	Motor overheating warning threshold	0℃~200℃	90	℃	Real Time Changes
P9-59	0×F93B	Instant non-stop action selection	0: Invalid 1: Bus voltage constant control 2: Slow down and stop the machine	0	-	Shutdown Change
P9-60	0×F93C	Instantly stop and continuously pause to determine voltage	80%~100%	85	%	Real Time Changes
P9-61	0×F93D	Instant non-stop voltage recovery judgment time	0.0s~100.0s	0.5	s	Real Time Changes
P9-62	0×F93E	Instantaneous non-stop action to determine voltage	60%~100%	80	%	Real Time Changes
P9-63	0×F93F	Retain			-	Read-only
P9-64	0×F940	Load drop detection level	0.0%~100.0%	10.0	%	Real Time Changes
P9-65	0×F941	Load drop detection time	0.0s~60.0s	1.0	s	Real Time Changes
P9-66	0×F942	Retain				Read-only
P9-67	0×F943	Speed detection value	0.0%~50.0%	5.0	%	Real Time Changes
P9-68	0×F944	Speed detection time	0.0~60.0	1.0	-	Real Time Changes
P9-69	0×F945	Detection value for excessive speed deviation	0.0%~50.0%	20.0	%	Real Time Changes
P9-70	0×F946	Detection time for excessive speed deviation	0.0s~60.0s	5.0	s	Real Time Changes
P9-71	0×F947	Instant non-stop gain	0~100	40	-	Real Time Changes
P9-72	0×F948	Instant non-stop points	0~100	30	-	Real Time Changes
P9-73	0×F949	Instant stop non-stop action deceleration time	0.0s~300.0s	20.0	s	Real Time Changes

PA PID FUNCTION

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PA-00	0×FA00	PID given source	0: PID value given (PA-01) 1：AI1 2：AI2 3：AI3 4: PULSE setting (DI5) 5: Communication Given (1000H) 6: Multi segment instruction given	0	-	Real Time Changes
PA-01	0×FA01	PID value given	0.0%~100.0%	50.0	%	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PA-02	0×FA02	PID feedback source	0：AI1 1：AI2 2：AI3 3：AI1-AI2 4: PULSE setting (DI5) 5: Communication given 6：AI1+AI2 7：MAX（|AI1|，|AI2|） 8：MIN（|AI1|，|AI2|）	0	-	Real Time Changes
PA-03	0×FA03	PID action direction	0: Positive effect 1: Reaction effect	0	-	Real Time Changes
PA-04	0×FA04	PID given feedback range	0~65535	1000	-	Real Time Changes
PA-05	0×FA05	Proportional gain KP1	0.0~1000.0	20.0	-	Real Time Changes
PA-06	0×FA06	Integral time TI1	0.01s~100.00s	2.00	s	Real Time Changes
PA-07	0×FA07	Differential time Td1	0.000s~10.000s	0.000	s	Real Time Changes
PA-08	0×FA08	PID inversion cut-off frequency	0.00Hz~P0-10	0.00	Hz	Real Time Changes
PA-09	0×FA09	PID deviation limit	0.0%~100.0%	0.0	%	Real Time Changes
PA-10	0×FA0A	PID differential limiting	0.00%~100.00%	0.10	%	Real Time Changes
PA-11	0×FA0B	PID given change time	0.00s~650.00s	0.00	s	Real Time Changes
PA-12	0×FA0C	PID feedback filtering time	0.00s~60.00s	0.00	s	Real Time Changes
PA-13	0×FA0D	PID deviation gain	0.0%~100.0%	100.0	%	Real Time Changes
PA-14	0×FA0E	The PID optimization parameters have not yet been implemented and retained	0~65535	0	-	Real Time Changes
PA-15	0×FA0F	Proportional gain KP2	0.0~1000.0	20.0	-	Real Time Changes
PA-16	0×FA10	Integral time TI2	0.01s~100.00s	2.00	s	Real Time Changes
PA-17	0×FA11	Differential time TD2	0.000s~10.000s	0.000	s	Real Time Changes
PA-18	0×FA12	PID parameter switching conditions	0: Do not switch 1: DI terminal 2: Automatically switch based on deviation 3: Switch based on operating frequency 6: Automatically adjust according to the roll diameter 7: Automatically adjust based on the percentage of maximum roll diameter	0	-	Real Time Changes
PA-19	0×FA13	PID parameter switching deviation 1	0.0%~PA-20	20.0	%	Real Time Changes
PA-20	0×FA14	PID parameter switching deviation 2	PA-19~100.0%	80.0	%	Real Time Changes
PA-21	0×FA15	PID initial value	0.0%~100.0%	0.0	%	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PA-22	0×FA16	PID initial value retention time	0.00s~650.00s	0.00	s	Real Time Changes
PA-23	0×FA17	Maximum positive deviation between two outputs	0.00%~100.00%	1.00	%	Real Time Changes
PA-24	0×FA18	Maximum reverse deviation of two outputs	0.00%~100.00%	1.00	%	Real Time Changes
PA-25	0×FA19	PID integral attribute	0: Invalid 1: Effective	0	-	Real Time Changes
PA-26	0×FA1A	PID feedback loss detection value	0.0%~100.0%	0.0	%	Real Time Changes
PA-27	0×FA1B	PID feedback loss detection time	0.0s~20.0s	0.0	s	Real Time Changes

PB SWING FREQUENCY, FIXED LENGTH, AND COUNTING

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PB-00	0×FB00	Swing frequency setting method	0: Relative to the center frequency 1: Relative to the maximum frequency	0	-	Real Time Changes
PB-01	0×FB01	Swing frequency amplitude	0.0%~100.0%	0.0	%	Real Time Changes
PB-02	0×FB02	Jumping frequency amplitude	0.0%~50.0%	0.0	%	Real Time Changes
PB-03	0×FB03	Oscillation frequency cycle	0.1s~3000.0s	10.0	s	Real Time Changes
PB-04	0×FB04	Rise time of triangular wave in oscillation frequency	0.1%~100.0%	50.0	%	Real Time Changes
PB-05	0×FB05	Set Length	0m~65535m	1000	m	Real Time Changes
PB-06	0×FB06	Actual Length	0m~65535m	0	m	Real Time Changes
PB-07	0×FB07	Pulse count per meter	0.1~6553.5	100.0	-	Real Time Changes
PB-08	0×FB08	Set the count value	1~65535	1000	-	Real Time Changes
PB-09	0×FB09	Specify the count value	1~65535	1000	-	Real Time Changes

PC MULTI-STAGE INSTRUCTIONS, SIMPLE PLC

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PC-00	0×FC00	Multi segment instruction 0	-100.0%~100.0%	0.0	%	Real Time Changes
PC-01	0×FC01	Multi segment instruction 1	-100.0%~100.0%	0.0	%	Real Time Changes
PC-02	0×FC02	Multi segment instruction 2	-100.0%~100.0%	0.0	%	Real Time Changes
PC-03	0×FC03	Multi segment instruction 3	-100.0%~100.0%	0.0	%	Real Time Changes
PC-04	0×FC04	Multi segment instruction 4	-100.0%~100.0%	0.0	%	Real Time Changes

PC MULTI-STAGE INSTRUCTIONS, SIMPLE PLC						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PC-05	0×FC05	Multi segment instruction 5	-100.0%~100.0%	0.0	%	Real Time Changes
PC-06	0×FC06	Multi segment instruction 6	-100.0%~100.0%	0.0	%	Real Time Changes
PC-07	0×FC07	Multi segment instruction 7	-100.0%~100.0%	0.0	%	Real Time Changes
PC-08	0×FC08	Multi segment instruction 8	-100.0%~100.0%	0.0	%	Real Time Changes
PC-09	0×FC09	Multi segment instruction 9	-100.0%~100.0%	0.0	%	Real Time Changes
PC-10	0×FC0A	Multi segment instruction 10	-100.0%~100.0%	0.0	%	Real Time Changes
PC-11	0×FC0B	Multi segment instruction 11	-100.0%~100.0%	0.0	%	Real Time Changes
PC-12	0×FC0C	Multi segment instruction 12	-100.0%~100.0%	0.0	%	Real Time Changes
PC-13	0×FC0D	Multi segment instruction 13	-100.0%~100.0%	0.0	%	Real Time Changes
PC-14	0×FC0E	Multi segment instruction 14	-100.0%~100.0%	0.0	%	Real Time Changes
PC-15	0×FC0F	Multi segment instruction 15	-100.0%~100.0%	0.0	%	Real Time Changes
PC-16	0×FC10	Simple PLC operation mode	0: Shutdown at the end of a single run 1: Maintain the final value at the end of a single run 2: Continuously looping	0	–	Real Time Changes
PC-17	0×FC11	Simple PLC power down memory selection	Position: Power down memory selection 0: No memory after power failure 1: Power off memory Ten digit: Shutdown Memory Selection 0: Shutdown without memory 1: Shutdown memory	0	–	Real Time Changes
PC-18	0×FC12	PLC Stage 0 Running Time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-19	0×FC13	Selection of acceleration and deceleration time for PLC segment 0	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-20	0×FC14	PLC first stage running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-21	0×FC15	Selection of acceleration and deceleration time for the first stage of PLC	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-22	0×FC16	PLC second stage running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PC-23	0×FC17	PLC second stage acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-24	0×FC18	PLC third stage running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-25	0×FC19	PLC third stage acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-26	0×FC1A	PLC fourth stage running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-27	0×FC1B	PLC fourth stage acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-28	0×FC1C	PLC 5th running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-29	0×FC1D	PLC 5th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-30	0×FC1E	PLC 6th operating time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-31	0×FC1F	Selection of Acceleration and Deceleration Time for PLC Stage 6	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-32	0×FC20	PLC 7th running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-33	0×FC21	PLC 7th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PC-34	0×FC22	PLC 8th segment running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-35	0×FC23	PLC 8th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-36	0×FC24	PLC 9th running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-37	0×FC25	PLC 9th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-38	0×FC26	PLC 10th running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-39	0×FC27	Selection of acceleration and deceleration time for the 10th stage of PLC	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-40	0×FC28	PLC 11th segment running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-41	0×FC29	PLC 11th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-42	0×FC2A	PLC 12th segment running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-43	0×FC2B	PLC 12th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-44	0×FC2C	PLC 13th running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-45	0×FC2D	PLC 13th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PC-46	0×FC2E	PLC 14th segment running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-47	0×FC2F	PLC 14th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-48	0×FC30	PLC 15th running time	0.0s (h) ~6553.5s (h)	0.0	s(h)	Real Time Changes
PC-49	0×FC31	PLC 15th segment acceleration and deceleration time selection	0: Acceleration and deceleration time of Group 1 (P0-17, P0-18) 1: Acceleration and deceleration time of Group 2 (P8-03, P8-04) 2: Third group acceleration and deceleration time (P8-05, P8-06) 3: The fourth group's acceleration and deceleration time (P8-07, P8-08)	0	–	Real Time Changes
PC-50	0×FC32	PLC operating time unit	0: S (seconds) 1: H (hours)	0	–	Real Time Changes
PC-51	0×FC33	Multi segment instruction 0 given method	0: Multi segment instruction 0 (PC-00) given 1: AI1 2: AI2 3: Keyboard potentiometer (AI3) 4: PULSE pulse (DI5) 5: PID 6: Preset frequency P0-08 given (UP/DOWN can be modified)	0	–	Real Time Changes

PC MULTI-STAGE INSTRUCTIONS, SIMPLE PLC

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PD-00	0×FD00	Baud rate	0：300bps 1：600bps 2：1200bps 3：2400bps 4：4800bps 5：9600bps 6：19200bps 7：38400bps 8：57600bps 9：115200bps	5	–	Real Time Changes
PD-01	0×FD01	Modbus Data Format	0: No verification (8-N-2) 1: Even verification (8-E-1) 2: Odd verification (8-O-1) 3: No verification (8-N-1)	0	–	Real Time Changes
PD-02	0×FD02	Localhost	1~247	1	–	Real Time Changes
PD-03	0×FD03	Response Delay	0ms~20ms	2	ms	Real Time Changes
PD-04	0×FD04	Modbus communication timeout	0.0s~60.0s	0.0	s	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PD-06	0×FD06	Communication fault reset enable	0: Do not enable 1: Enable	1	–	Shutdown Change
PD-09	0×FD09	CANopen/CANlink communication status	Position: CANopen 0: Stop 1: Initialization 2: Pre run 8: Run Ten digits: CANlink 0: Stop 1: Initialization 2: Pre run 8: Run Hundred digits: reserved	2	–	Cannot be changed
PD-10	0×FD0A	CANopen/CANlink switching	1：CANopen 2：CANlink	1	–	Shutdown Change
PD-11	0×FD0B	Is can open 402 valid				
PD-12	0×FD0C	CAN baud rate	0：20kbps 1：50kbps 2：100kbps 3：125kbps 4：250kbps 5：500kbps 6：1Mbps	5	–	Shutdown Change
PD-13	0×FD0D	CAN station number	1~127	1	–	Shutdown Change
PD-14	0×FD0E	Number of CAN frames received per unit time	0~65535	0	–	Cannot be changed
PD-15	0×FD0F	Node accepts maximum value of error counter	0~65535	0	–	Cannot be changed
PD-16	0×FD10	Maximum value of node sending error counter	0~65535	0	–	Cannot be changed
PD-17	0×FD11	The number of bus disconnections per unit time	0~65535	0	–	Cannot be changed
PD-18	0×FD12	Rectification unit number				
PD-19	0×FD13	CAN communication disconnection coefficient	1~15	3	–	Shutdown Change
PD-21	0×FD15	DP communication disconnection coefficient				Shutdown Change
PD-37	0×FD25	DHCP enabled	0: Do not enable 1: Enable	0	–	Shutdown Change
PD-38	0×FD26	The highest byte of the IP address	0~255	0	–	Shutdown Change
PD-39	0×FD27	IP address second highest byte	0~255	0	–	Shutdown Change
PD-40	0×FD28	Third byte of IP address	0~255	0	–	Shutdown Change
PD-41	0×FD29	Minimum byte of IP address	0~255	0	–	Shutdown Change
PD-42	0×FD2A	The highest byte of subnet mask	0~255	0	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PD-43	0×FD2B	Subnet mask second highest byte	0~255	0	–	Shutdown Change
PD-44	0×FD2C	Third byte of subnet mask	0~255	0	–	Shutdown Change
PD-45	0×FD2D	Minimum byte of subnet mask	0~255	0	–	Shutdown Change
PD-46	0×FD2E	Gateway maximum byte	0~255	0	–	Shutdown Change
PD-47	0×FD2F	Gateway second highest byte	0~255	0	–	Shutdown Change
PD-48	0×FD30	Gateway third byte	0~255	0	–	Shutdown Change
PD-49	0×FD31	Gateway minimum byte	0~255	0	–	Shutdown Change
PD-58	0×FD3A	Internet IP expansion card error code	0~255	0	–	Cannot be changed
PD-61	0×FD3D	MAC address high byte	0~65535	0	–	Shutdown Change
PD-62	0×FD3E	Middle byte of MAC address	0~65535	0	–	Shutdown Change
PD-63	0×FD3F	MAC address low byte	0~65535	0	–	Shutdown Change
PD-94	0×FD5E	MDOBU software version	0~65535	0	–	Cannot be changed
PD-95	0×FD5F	CANlink software version	0~65535	0	–	Cannot be changed
PD-96	0×FD60	CANopen software version	0~65535	0	–	Cannot be changed
PD-97	0×FD61	DP software version				
PD-98	0×FD62	DP2CANOPEN software version				
PD-99	0×FD63	MODBUS2CANOPEN software version				

PE USER CUSTOMIZATION

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PE-00	0×FE00	User Function Code 0	0~65535	7017	–	Real Time Changes
PE-01	0×FE01	User Function Code 1	0~65535	7016	–	Real Time Changes
PE-02	0×FE02	User Function Code 2	0~65535	0	–	Real Time Changes
PE-03	0×FE03	User Function Code 3	0~65535	0	–	Real Time Changes
PE-04	0×FE04	User Function Code 4	0~65535	0	–	Real Time Changes
PE-05	0×FE05	User Function Code 5	0~65535	0	–	Real Time Changes
PE-06	0×FE06	User Function Code 6	0~65535	0	–	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PE-07	0×FE07	User Function Code 7	0~65535	0	–	Real Time Changes
PE-08	0×FE08	User Function Code 8	0~65535	0	–	Real Time Changes
PE-09	0×FE09	User Function Code 9	0~255	0	–	Shutdown Change
PE-10	0×FE0A	User Function Code 10	0~255	0	–	Shutdown Change
PE-11	0×FE0B	User Function Code 11	0~255	0	–	Shutdown Change
PE-12	0×FE0C	User Function Code 12	0~255	0	–	Shutdown Change
PE-13	0×FE0D	User Function Code 13	0~255	0	–	Shutdown Change
PE-14	0×FE0E	User Function Code 14	0~255	0	–	Shutdown Change
PE-15	0×FE0F	User Function Code 15	0~255	0	–	Shutdown Change
PE-16	0×FE10	User Function Code 16	0~255	0	–	Cannot be changed
PE-17	0×FE11	User Function Code 17	0~65535	0	–	Shutdown Change
PE-18	0×FE12	User Function Code 18	0~65535	0	–	Shutdown Change
PE-19	0×FE13	User Function Code 19	0~65535	0	–	Shutdown Change
PE-20	0×FE14	User Function Code 20	0~65535	6768	–	Cannot be changed
PE-21	0×FE15	User Function Code 21	0~65535	6769	–	Cannot be changed
PE-22	0×FE16	User Function Code 22	0~65535	0	–	Cannot be changed
PE-23	0×FE17	User Function Code 23	0~65535	0	–	Cannot be changed
PE-24	0×FE18	User Function Code 24	0~65535	0	–	Cannot be changed
PE-25	0×FE19	User Function Code 25	0~65535	0	–	Cannot be changed
PE-26	0×FE1A	User Function Code 26	0~65535	0	–	Cannot be changed
PE-27	0×FE1B	User Function Code 27	0~65535	0	–	Cannot be changed
PE-28	0×FE1C	User Function Code 28	0~65535	0	–	Cannot be changed
PE-29	0×FE1D	User Function Code 29	0~65535	0	–	Cannot be changed
PE-30	0×FE1E	User Function Code 30	0~65535	0	–	Cannot be changed
PE-31	0×FE1F	User Function Code 31	0~65535	0	–	Cannot be changed

PU USER PARAMETERS						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
PU-00	0×1F00	User Password	User Password			
PU-01	0×1F01	Parameter Initialization	0: No operation 1: Restore factory parameter mode 1 2: Clear record information 4: Backup the current parameters of the user 501: Restore user backup parameters 503: Factory parameter recovery mode 2	1	–	Shutdown Change
PU-02	0×1F02	Function parameter display selection	Position: U group display selection 0: Hide 1: Display Ten digits: Group A display selection 0: Hide 1: Display Hundred digit: B group display selection 0: Hide 1: Display Thousand digit: C group display selection 0: Hide 1: Display	1111	–	Real Time Changes
PU-03	0×1F03	Personalized parameter display selection	Individual position: User customized parameter group display selection 0: Not displayed 1: Display Ten: User Change Parameter Group Selection 0: Not displayed 1: Display	11	–	Real Time Changes
PU-04	0×1F04	Function code modification attribute	0: modifiable 1: Cannot be modified	0	–	Real Time Changes
A0 TORQUE CONTROL AND LIMITATION						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A0-00	0×A000	Speed/torque control mode	0: Speed control 1: Torque control	0	–	Shutdown Change
A0-01	0×A001	Selection of torque setting source	0: Digital setting of upper limit of driving torque (A0-03) 1：AI1 2：AI2 3：AI3 4: PULSE pulse setting (DI5) 5: Communication given (communication address is H1000) 6：MIN（AI1，AI2） 7：MAX（AI1，AI2）	0	–	Shutdown Change
A0-03	0×A003	Torque digital setting	-200.0%~200.0%	100.0	%	Real Time Changes
A0-04	0×A004	Torque filtering time	0.000s~5.000s	0.000	s	Real Time Changes
A0-05	0×A005	Speed limit number setting	-120.0%~120.0%	0.0	%	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A0-06	0×A006	Retain	0	0.0	–	Real Time Changes
A0-07	0×A007	Torque acceleration time	0.00s~650.00s	1.00	s	Real Time Changes
A0-08	0×A008	Torque deceleration time	0.00s~650.00s	1.00	s	Real Time Changes
A0-09	0×A009	Selection of speed limit setting source	0: A0-05 setting 1: Frequency source setting	0	–	Real Time Changes
A0-10	0×A00A	Speed limit bias/ window frequency	0.00Hz~P0-10	5.00	Hz	Real Time Changes
A0-11	0×A00B	Effective speed limit bias	0: Bidirectional bias is effective 1: Unidirectional bias is effective 2: Window mode	1	–	Shutdown Change
A0-12	0×A00C	Frequency acceleration time	0.0s~6500.0s	1.0	s	Real Time Changes
A0-13	0×A00D	Frequency deceleration time	0.0s~6500.0s	1.0	s	Real Time Changes
A0-14	0×A00E	Torque mode switching	0: Do not switch 1: Shutdown switch to speed mode 2: The target torque for shutdown is 0	1	–	Shutdown Change

A1 VIRTUAL D1, VIRTUAL DO

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A1-00	0×A100	Virtual VDI1 terminal function selection	Same as P4-00	0	–	Shutdown Change
A1-01	0×A101	Virtual VDI2 terminal function selection	Same as P4-00	0	–	Shutdown Change
A1-02	0×A102	Virtual VDI3 terminal function selection	Same as P4-00	0	–	Shutdown Change
A1-03	0×A103	Virtual VDI4 terminal function selection	Same as P4-00	0	–	Shutdown Change
A1-04	0×A104	Virtual VDI5 terminal function selection	Same as P4-00	0	–	Shutdown Change
A1-05	0×A105	VDI terminal status setting mode	Position: VDI1 0: Function code setting (A1-06) 1: DO status 2: DI status Tenth digit: VDI2 0: Function code setting (A1-06) 1: DO status 2: DI status Hundred digit: VDI3 0: Function code setting (A1-06) 1: DO status 2: DI status Thousand positions: VDI4 0: Function code setting (A1-06) 1: DO status 2: DI status 10000 positions: VDI5 0: Function code setting (A1-06) 1: DO status 2: DI status	0	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A1-06	0×A106	Virtual VDI terminal status settings	Position: VDI1 0: Invalid 1: Effective Tenth digit: VDI2 0: Invalid 1: Effective Hundred digit: VDI3 0: Invalid 1: Effective Thousand positions: VDI4 0: Invalid 1: Effective 10000 positions: VDI5 0: Invalid 1: Effective	0	–	Real Time Changes
A1-07	0×A107	AI1 terminal function selection (as DI)	Same as P4-00	0	–	Shutdown Change
A1-08	0×A108	AI2 terminal function selection (as DI)	Same as P4-00	0	–	Shutdown Change
A1-09	0×A109	AI3 terminal function selection (as DI)	Same as P4-00	0	–	Shutdown Change
A1-10	0×A10A	AI as effective state selection for DI	Position: AI1 0: High level effective 1: Low level effective Ten: AI2 0: High level effective 1: Low level effective Hundred: AI3 0: High level effective 1: Low level effective	0	–	Shutdown Change

A5 CONTROL OPTIMIZATION

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A5-00	0×A500	DPWM switching upper limit frequency	0.00Hz~P0-10	12.00	Hz	Real Time Changes
A5-01	0×A501	PWM modulation method	0: Asynchronous modulation 1: Synchronous modulation	0	–	Real Time Changes
A5-02	0×A502	Dead zone compensation mode selection	0: No compensation 1: Compensation	2	–	Shutdown Change
A5-03	0×A503	Random PWM Depth	0~10	0	–	Real Time Changes
A5-04	0×A504	Quick current limiting enable	0: Do not enable 1: Enable	0	–	Real Time Changes
A5-05	0×A505	Sampling delay time	1~13	5	–	Real Time Changes
A5-06	0×A506	Undervoltage point setting	0.0V~450.0V	350.0	V	Real Time Changes
A5-07	0×A507	SVC optimization selection	0: Not optimized 1: Optimization Mode 1 2: Optimization Mode 2	1	–	Shutdown Change
A5-09	0×A509	Over modulation selection (currently not implemented, reserved)	0: Invalid 1: Effective			

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A5-10	0×A50A	Narrow pulse control selection	0: Invalid 1: Effective			
A5-11	0×A50B	Reduce switch frequency selection under vector control	0: Invalid 1: Effective			
A5-13	0×A50D	Function section sets bus voltage	100~20000	5310	-	
A5-14	0×A50E	Temperature correction enable	0: Do not enable 1: Enable	0	-	
A5-16	0×A510	Display parameter address 1 (currently not functional)	0~100	0	-	
A5-17	0×A511	Display parameter address 2 (currently not functional)	0~100	1	-	
A5-18	0×A512	Display parameter address 3 (currently not functional)	0~100	2	-	
A5-19	0×A513	Display parameter address 4 (currently not functional)	0~100	3	-	
A5-21	0×A515	Low speed carrier frequency setting	0.0~16.0	0.0	-	

A6AI CURVE

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A6-00	0×A600	Curve 4 Minimum Input	-10.00V~A6-02	0.00	V	Real Time Changes
A6-01	0×A601	Curve 4 minimum input corresponding setting	-100.0%~100.0%	0.0	%	Real Time Changes
A6-02	0×A602	Curve 4 inflection point 1 input	A6-00~A6-04	3.00	V	Real Time Changes
A6-03	0×A603	Curve 4 inflection point 1 input corresponding setting	-100.0%~100.0%	30.0	%	Real Time Changes
A6-04	0×A604	Curve 4 inflection point 2 input	A6-02~A6-06	6.00	V	Real Time Changes
A6-05	0×A605	Curve 4 inflection point 2 input corresponding setting	-100.0%~100.0%	60.0	%	Real Time Changes
A6-06	0×A606	Curve 4 Maximum Input	A6-04~10.00V	10.00	V	Real Time Changes
A6-07	0×A607	Curve 4 maximum input corresponding setting	-100.0%~100.0%	100.0	%	Real Time Changes
A6-08	0×A608	Curve 5 minimum input	-10.00V~A6-10	-10.00	V	Real Time Changes
A6-09	0×A609	Curve 5 minimum input corresponding setting	-100.0%~100.0%	-100.0	%	Real Time Changes
A6-10	0×A60A	Curve 5 inflection point 1 input	A6-08~A6-12	-3.00	V	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A6-11	0×A60B	Curve 5 inflection point 1 input corresponding setting	-100.0%~100.0%	-30.0	%	Real Time Changes
A6-12	0×A60C	Curve 5 inflection point 2 input	A6-10~A6-14	3.00	V	Real Time Changes
A6-13	0×A60D	Curve 5, inflection point 2, input corresponding settings	-100.0%~100.0%	30.0	%	Real Time Changes
A6-14	0×A60E	Curve 5 maximum input	A6-12~10.00V	10.00	V	Real Time Changes
A6-15	0×A60F	Curve 5 maximum input corresponding setting	-100.0%~100.0%	100.0	%	Real Time Changes
A6-16	0×A610	AI1 gain	-10.00~10.00	1.00	-	Real Time Changes
A6-17	0×A611	AI1 offset	-100.0%~100.0%	0.0	%	Real Time Changes
A6-18	0×A612	AI2 gain	-10.00~10.00	1.00	-	Real Time Changes
A6-19	0×A613	AI2 offset	-100.0%~100.0%	0.0	%	Real Time Changes
A6-20	0×A614	AI3 gain	-10.00~10.00	1.00	-	Real Time Changes
A6-21	0×A615	AI3 offset	-100.0%~100.0%	0.0	%	Real Time Changes
A6-22	0×A616	AI disconnection detection threshold	0.0%~100.0%	0.0	%	Real Time Changes
A6-23	0×A617	AI disconnection detection time	0.0s~6553.5s	0.0	s	Real Time Changes
A6-24	0×A618	AI1 sets the jump point	-100.0%~100.0%	0.0	%	Real Time Changes
A6-25	0×A619	AI1 sets the jump amplitude	0.0%~100.0%	0.5	%	Real Time Changes
A6-26	0×A61A	AI2 sets jump points	-100.0%~100.0%	0.0	%	Real Time Changes
A6-27	0×A61B	AI2 sets the jump amplitude	0.0%~100.0%	0.5	%	Real Time Changes
A6-28	0×A61C	AI3 sets jump points	-100.0%~100.0%	0.0	%	Real Time Changes
A6-29	0×A61D	AI3 sets jump amplitude	0.0%~100.0%	0.5	%	Real Time Changes

A9 VECTOR CONTROL SUPPLEMENTARY PARAMETERS

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A9-00	0×A900	Online identification of rotor time constant for asynchronous machines	0: Unrecognized 1: Identification	0	-	Real Time Changes
A9-01	0×A901	Identification of rotor resistance gain using asynchronous machine FVC	0~100	5	-	Real Time Changes
A9-02	0×A902	Identification of rotor resistance starting frequency using asynchronous machine FVC	2Hz~100Hz	7	Hz	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A9-03	0×A903	Observation of magnetic field coefficient of asynchronous machine FVC	30~150	40	–	Real Time Changes
A9-04	0×A904	Maximum torque limit coefficient in weak magnetic zone of asynchronous machine	30~150	80	–	Real Time Changes
A9-05	0×A905	Asynchronous SVC speed filtering time	5ms~32ms	15	ms	Real Time Changes
A9-06	0×A906	During speed control asynchronous SVC speed feedback processing	0: No special treatment 1: Limit the minimum synchronization frequency based on load changes 2: Output fixed current during low-speed operation 3: Output fixed current during low-speed operation4: Small torque optimization	0	–	Real Time Changes
A9-07	0×A907	Asynchronous SVC magnetic field regulation bandwidth	0.0~8.0	2.0	–	Real Time Changes
A9-08	0×A908	Asynchronous SVC low-speed operation current setting	30~170	100	–	Real Time Changes
A9-09	0×A909	Switching frequency of fixed current output from SVC asynchronous machine	0.1Hz~1.0Hz	0.3	Hz	Shutdown Change
A9-10	0×A90A	Asynchronous SVC suppresses speed fluctuation coefficient	80~100	95	–	Shutdown Change
A9-11	0×A90B	Asynchronous SVC acceleration and deceleration time	10s~3000s	200	s	Shutdown Change
A9-12	0×A90C	Quickly identify stator resistance before starting asynchronous machine	0: Unrecognized 1: Identification	0	–	Shutdown Change
A9-13	0×A90D	Asynchronous machine quickly identifies stator resistance coefficient 1	0~65535	10	–	Shutdown Change
A9-14	0×A90E	Asynchronous machine quickly identifies stator resistance coefficient 2	0~65535	10	–	Shutdown Change
A9-17	0×A911	Real time angle of synchronous machine	0.0~359.9	0.0	–	Cannot be changed
A9-18	0×A912	Synchronous machine initial position angle detection	0: Check every time it runs 1: Not detecting 2: First power on operation detection	0	–	Real Time Changes
A9-20	0×A914	Weak magnetic mode selection	0: Automatic demagnetization 1: Synchronous machine adjustment method with weak magnetic field 2: Synchronous machine mixed mode weak magnetic field 3: Not weak magnetic	1	–	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A9-21	0×A915	Synchronous machine weak magnetic gain	0~50	5	-	Real Time Changes
A9-22	0×A916	Upper limit margin of synchronous machine output voltage	0%~50%	5	%	Real Time Changes
A9-23	0×A917	Maximum output adjustment gain of synchronous machine	20%~300%	100	%	Real Time Changes
A9-24	0×A918	Synchronous machine calculates excitation current adjustment gain	40%~200%	100	%	Real Time Changes
A9-25	0×A919	Synchronous SVC speed estimation integral gain	5%~1000%	30	%	Real Time Changes
A9-26	0×A91A	Synchronous SVC speed estimation proportional gain	5%~300%	20	%	Real Time Changes
A9-27	0×A91B	Synchronous SVC estimation speed filtering	10~2000	100	-	Real Time Changes
A9-28	0×A91C	Synchronous SVC Minimum Carrier Frequency	0.8~P0-15	2.0	-	Real Time Changes
A9-29	0×A91D	Synchronous SVC low-speed excitation current	0%~80%	30	%	Real Time Changes
A9-30	0×A91E	Low speed closed-loop current (for VVC use)	0%~65535%	0	%	Real Time Changes
A9-31	0×A91F	Vibration suppression damping coefficient (used for VVC)	0%~65535%	0	%	Real Time Changes
A9-32	0×A920	Synchronous machine control retains parameter 8	0~65535	0	-	Real Time Changes
A9-33	0×A921	Synchronous machine control retains parameter 9	0~5	0	-	Shutdown Change
A9-34	0×A922	Synchronous machine control retains parameter 10	0%~65535%	0	%	Real Time Changes
A9-35	0×A923	Performance first fault sub code	0~65535	0	-	Cannot be changed
A9-36	0×A924	Performance second fault sub code	0~65535	0	-	Cannot be changed
A9-37	0×A925	Performance third fault sub code	0~65535	0	-	Cannot be changed
A9-40	0×A928	Does low speed enable closed current (for VVC use)	0: Not enabled 1: Open it	0	-	Shutdown Change
A9-41	0×A929	Low speed closed-loop current (for VVC use)	30%~200%	50	%	Shutdown Change

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
A9-42	0×A92A	Vibration suppression damping coefficient (used for VVC)	0%~500%	100	%	Real Time Changes
A9-43	0×A92B	Initial position compensation angle (used by VVC)	0~5	0	-	Shutdown Change
A9-44	0×A92C	Synchronous machine initial position compensation angle	0.0~360.0	0.0	-	Real Time Changes
A9-45	0×A92D	Enable low-speed processing of synchronous machine	0: Do not enable 1: Enable	0	-	Shutdown Change
A9-46	0×A92E	Synchronous machine low-speed processing switching frequency	0.01~P0-10	5.00	-	Shutdown Change
A9-47	0×A92F	Synchronous machine low-speed processing current	10~200	100	-	Shutdown Change
A9-48	0×A930	Feedback suppression coefficient for low-speed processing of synchronous machine	0~300	32	-	Shutdown Change
A9-49	0×A931	Synchronous machine energy-saving control enable	0: Do not enable 1: Enable	0	-	Shutdown Change

AC AIAO CORRECTION

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
AC-00	0×AC00	AI1 measured voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-01	0×AC01	AI1 displays voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-02	0×AC02	AI1 measured voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-03	0×AC03	AI1 displays voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-04	0×AC04	AI2 measured voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-05	0×AC05	AI2 displays voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-06	0×AC06	AI2 measured voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-07	0×AC07	AI2 displays voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-08	0×AC08	AI3 measured voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-09	0×AC09	AI3 displays voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-10	0×AC0A	AI3 measured voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-11	0×AC0B	AI3 displays voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-12	0×AC0C	AO1 measured voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
AC-13	0×AC0D	AO1 target voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-14	0×AC0E	AO1 measured voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-15	0×AC0F	AO1 target voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-16	0×AC10	AO2 measured voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-17	0×AC11	AO2 target voltage 1	-10.000V~10.000V	2.000	V	Real Time Changes
AC-18	0×AC12	AO2 measured voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes
AC-19	0×AC13	AO2 target voltage 2	-10.000V~10.000V	8.000	V	Real Time Changes

AF PROCESS DATA ADDRESS MAPPING

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
AF-00	0×AF00	RPDO1-SubIndex0-H	0~65535	0	-	Real Time Changes
AF-01	0×AF01	RPDO1-SubIndex0-L	0~65535	0	-	Real Time Changes
AF-02	0×AF02	RPDO1-SubIndex1-H	0~65535	0	-	Real Time Changes
AF-03	0×AF03	RPDO1-SubIndex1-L	0~65535	0	-	Real Time Changes
AF-04	0×AF04	RPDO1-SubIndex2-H	0~65535	0	-	Real Time Changes
AF-05	0×AF05	RPDO1-SubIndex2-L	0~65535	0	-	Real Time Changes
AF-06	0×AF06	RPDO1-SubIndex3-H	0~65535	0	-	Real Time Changes
AF-07	0×AF07	RPDO1-SubIndex3-L	0~65535	0	-	Real Time Changes
AF-08	0×AF08	RPDO2-SubIndex0-H	0~65535	0	-	Real Time Changes
AF-09	0×AF09	RPDO2-SubIndex0-L	0~65535	0	-	Real Time Changes
AF-10	0×AF0A	RPDO2-SubIndex1-H	0~65535	0	-	Real Time Changes
AF-11	0×AF0B	RPDO2-SubIndex1-L	0~65535	0	-	Real Time Changes
AF-12	0×AF0C	RPDO2-SubIndex2-H	0~65535	0	-	Real Time Changes
AF-13	0×AF0D	RPDO2-SubIndex2-L	0~65535	0	-	Real Time Changes
AF-14	0×AF0E	RPDO2-SubIndex3-H	0~65535	0	-	Real Time Changes
AF-15	0×AF0F	RPDO2-SubIndex3-L	0~65535	0	-	Real Time Changes
AF-16	0×AF10	RPDO3-SubIndex0-H	0~65535	0	-	Real Time Changes
AF-17	0×AF11	RPDO3-SubIndex0-L	0~65535	0	-	Real Time Changes
AF-18	0×AF12	RPDO3-SubIndex1-H	0~65535	0	-	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
AF-19	0×AF13	RPDO3-SubIndex1-L	0~65535	0	–	Real Time Changes
AF-20	0×AF14	RPDO3-SubIndex2-H	0~65535	0	–	Real Time Changes
AF-21	0×AF15	RPDO3-SubIndex2-L	0~65535	0	–	Real Time Changes
AF-22	0×AF16	RPDO3-SubIndex3-H	0~65535	0	–	Real Time Changes
AF-23	0×AF17	RPDO3-SubIndex3-L	0~65535	0	–	Real Time Changes
AF-24	0×AF18	RPDO4-SubIndex0-H	0~65535	0	–	Real Time Changes
AF-25	0×AF19	RPDO4-SubIndex0-L	0~65535	0	–	Real Time Changes
AF-26	0×AF1A	RPDO4-SubIndex1-H	0~65535	0	–	Real Time Changes
AF-27	0×AF1B	RPDO4-SubIndex1-L	0~65535	0	–	Real Time Changes
AF-28	0×AF1C	RPDO4-SubIndex2-H	0~65535	0	–	Real Time Changes
AF-29	0×AF1D	RPDO4-SubIndex2-L	0~65535	0	–	Real Time Changes
AF-30	0×AF1E	RPDO4-SubIndex3-H	0~65535	0	–	Real Time Changes
AF-31	0×AF1F	RPDO4-SubIndex3-L	0~65535	0	–	Real Time Changes
AF-32	0×AF20	TPDO1-SubIndexO-H	0~65535	0	–	Real Time Changes
AF-33	0×AF21	TPDO1-SubIndexO-L	0~65535	0	–	Real Time Changes
AF-34	0×AF22	TPDO1-SubIndex1-H	0~65535	0	–	Real Time Changes
AF-35	0×AF23	TPDO1-SubIndex1-L	0~65535	0	–	Real Time Changes
AF-36	0×AF24	TPDO1-SubIndex2-H	0~65535	0	–	Real Time Changes
AF-37	0×AF25	TPDO1-SubIndex2-L	0~65535	0	–	Real Time Changes
AF-38	0×AF26	TPDO1-SubIndex3-H	0~65535	0	–	Real Time Changes
AF-39	0×AF27	TPDO1-SubIndex3-L	0~65535	0	–	Real Time Changes
AF-40	0×AF28	TPDO2-SubIndex0-H	0~65535	0	–	Real Time Changes
AF-41	0×AF29	TPDO2-SubIndex0-L	0~65535	0	–	Real Time Changes
AF-42	0×AF2A	TPDO2-SubIndex1-H	0~65535	0	–	Real Time Changes
AF-43	0×AF2B	TPDO2-SubIndex1-L	0~65535	0	–	Real Time Changes
AF-44	0×AF2C	TPDO2-SubIndex2-H	0~65535	0	–	Real Time Changes
AF-45	0×AF2D	TPDO2-SubIndex2-L	0~65535	0	–	Real Time Changes
AF-46	0×AF2E	TPDO2-SubIndex3-H	0~65535	0	–	Real Time Changes

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
AF-47	0×AF2F	TPDO2-SubIndex3-L	0~65535	0	-	Real Time Changes
AF-48	0×AF30	TPDO3-SubIndex0-H	0~65535	0	-	Real Time Changes
AF-49	0×AF31	TPDO3-SubIndex0-L	0~65535	0	-	Real Time Changes
AF-50	0×AF32	TPDO3-SubIndex1-H	0~65535	0	-	Real Time Changes
AF-51	0×AF33	TPDO3-SubIndex1-L	0~65535	0	-	Real Time Changes
AF-52	0×AF34	TPDO3-SubIndex2-H	0~65535	0	-	Real Time Changes
AF-53	0×AF35	TPDO3-SubIndex2-L	0~65535	0	-	Real Time Changes
AF-54	0×AF36	TPDO3-SubIndex3-H	0~65535	0	-	Real Time Changes
AF-55	0×AF37	TPDO3-SubIndex3-L	0~65535	0	-	Real Time Changes
AF-56	0×AF38	TPDO4-SubIndex0-H	0~65535	0	-	Real Time Changes
AF-57	0×AF39	TPDO4-SubIndex0-L	0~65535	0	-	Real Time Changes
AF-58	0×AF3A	TPDO4-SubIndex1-H	0~65535	0	-	Real Time Changes
AF-59	0×AF3B	TPDO4-SubIndex1-L	0~65535	0	-	Real Time Changes
AF-60	0×AF3C	TPDO4-SubIndex2-H	0~65535	0	-	Real Time Changes
AF-61	0×AF3D	TPDO4-SubIndex2-L	0~65535	0	-	Real Time Changes
AF-62	0×AF3E	TPDO4-SubIndex3-H	0~65535	0	-	Real Time Changes
AF-63	0×AF3F	TPDO4-SubIndex3-L	0~65535	0	-	Real Time Changes
AF-66	0×AF42	RPDO effective number	0~65535	0	-	Real Time Changes
AF-67	0×AF43	TPDO effective number	0~65535	0	-	Real Time Changes

AF PROCESS DATA ADDRESS MAPPING

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
U0-00	0×7000	Operating Frequency			Hz	Read-only
U0-01	0×7001	Set Frequency			Hz	Read-only
U0-02	0×7002	Bus Voltage			V	Read-only
U0-03	0×7003	Output Voltage			V	Read-only
U0-04	0×7004	Output Current			A	Read-only
U0-05	0×7005	Output Power			kW	Read-only
U0-06	0×7006	Output Torque			%	Read-only
U0-07	0×7007	DI Input Status			-	Read-only
U0-08	0×7008	Do Output Status			-	Read-only
U0-09	0×7009	AI1 Voltage			V	Read-only
U0-10	0×700A	AI2 Voltage			V	Read-only

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
U0-11	0×700B	Ai3 Voltage			V	Read-only
U0-12	0×700C	Count Value			–	Read-only
U0-13	0×700D	Length Value			–	Read-only
U0-14	0×700E	Load Speed Display			Hz	Read-only
U0-15	0×700F	Pid Setting			%	Read-only
U0-16	0×7010	Pid Feedback			%	Read-only
U0-17	0×7011	Plc Stage			–	Read-only
U0-18	0×7012	Pulse Input Pulse Frequency			kHz	Read-only
U0-19	0×7013	Response Speed			Hz	Read-only
U0-20	0×7014	Remaining Running Time			min	Read-only
U0-21	0×7015	Ai1 Pre Calibration Voltage			V	Read-only
U0-22	0×7016	Ai2 Pre Calibration Voltage			V	Read-only
U0-23	0×7017	Ai3 Pre Calibration Voltage			V	Read-only
U0-24	0×7018	Linear Velocity			m/min	Read-only
U0-25	0×7019	Current Power On Time			min	Read-only
U0-26	0×701A	Current Running Time			min	Read-only
U0-27	0×701B	Pulse Input Pulse Frequency			Hz	Read-only
U0-28	0×701C	Communication Settings			%	Read-only
U0-29	0×701D	Encoder Feedback Speed			Hz	Read-only
U0-30	0×701E	Main Frequency X Display			Hz	Read-only
U0-31	0×701F	Auxiliary Frequency Y Display			Hz	Read-only
U0-32	0×7020	View Any Memory Address Value			–	Read-only
U0-33	0×7021	Synchronous Machine Rotor Position			–	Read-only
U0-34	0×7022	Motor Temperature			℃	Read-only
U0-35	0×7023	Target Torque			–	Read-only
U0-36	0×7024	Rotating Position			%	Read-only
U0-37	0×7025	Power Factor Angle			◦	Read-only
U0-38	0×7026	Abz Position			–	Read-only
U0-39	0×7027	V/f Separation Target Voltage			V	Read-only
U0-40	0×7028	V/f Separation Output Voltage			V	Read-only
U0-41	0×7029	Direct Display Of Di Input Status			–	Read-only
U0-42	0×702A	Visual Display Of Do Output Status			–	Read-only
U0-43	0×702B	Visual Display Of Di Function Status			–	Read-only

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
U0-44	0×702C	Visual Display Of Do Function Status			-	Read-only
U0-45	0×702D	Fault Subcode			-	Read-only
U0-46	0×702E	Inverter Module Temperature			℃	Read-only
U0-47	0×702F	Voltage Before Ptc Channel Calibration			V	Read-only
U0-48	0×7030	Voltage After Ptc Channel Calibration			V	Read-only
U0-49	0×7031	Zero Servo Deviation Pulse Count			-	Read-only
U0-50	0×7032	Roll Diameter			mm	Read-only
U0-51	0×7033	Tension (after Taper)			N	Read-only
U0-52	0×7034					Read-only
U0-53	0×7035					Read-only
U0-54	0×7036					Read-only
U0-55	0×7037					Read-only
U0-56	0×7038					Read-only
U0-57	0×7039					Read-only
U0-58	0×703A	Z-signal counter			-	Read-only
U0-59	0×703B	Set frequency (%)			-	Read-only
U0-60	0×703C	Operating frequency (%)			-	Read-only
U0-61	0×703D	Inverter status			-	Read-only
U0-62	0×703E	Current fault code			-	Read-only
U0-63	0×703F	Operating frequency (after sagging)			Hz	Read-only
U0-64	0×7040	back electromotive force			V	Read-only
U0-65	0×7041	Initiate identification of stator resistance			-	Read-only
U0-66	0×7042	Communication expansion card model			-	Read-only
U0-67	0×7043	Communication expansion card version number			-	Read-only
U0-68	0×7044	DP card frequency converter status			-	Read-only
U0-69	0×7045	Transfer speed of DP card/0.01Hz			Hz	Read-only
U0-70	0×7046	Transfer DP card speed/rpm			rpm	Read-only
U0-71	0×7047	Communication card dedicated current display			A	Read-only
U0-72	0×7048	Communication card error status			-	Read-only
U0-73	0×7049	Target torque before filtering			%	Read-only

Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
U0-74	0×704A	Target torque after filtering			%	Read-only
U0-75	0×704B	Set torque after acceleration and deceleration			%	Read-only
U0-76	0×704C	Electric torque upper limit			%	Read-only
U0-77	0×704D	Upper limit of power generation torque			%	Read-only
U0-78	0×704E					Read-only
U0-79	0×704F					Read-only
U0-80	0×7050	Ether CAT Slave Site Naming			-	Read-only
U0-81	0×7051	Ether CAT Slave Site Alias			-	Read-only
U0-82	0×7052	Ether CAT ESM transmission error code			-	Read-only
U0-83	0×7053	Ether CAT XML file version number			-	Read-only
U0-84	0×7054	Ether CAT synchronization loss count			-	Read-only
U0-85	0×7055	Maximum invalid frames and errors for Ether CAT port 0 per unit time			-	Read-only
U0-86	0×7056	Maximum invalid frames and errors of Ether CAT port 1 per unit time			-	Read-only
U0-87	0×7057	Maximum Ether CAT forwarding errors per unit time			-	Read-only
U0-88	0×7058	Maximum error count of Ether CAT data frame processing unit per unit time			-	Read-only
U0-89	0×7059	Maximum Ether CAT port link loss per unit time			-	Read-only
U0-90	0×705A					Read-only
U0-91	0×705B					Read-only
U0-92	0×705C					Read-only
U0-93	0×705D					Read-only
U0-94	0×705E					Read-only
U0-95	0×705F					Read-only
U0-96	0×7060	Asynchronous machine vector online observation of no-load current			A	Read-only
U0-97	0×7061	Asynchronous machine vector online observation mutual inductance impedance			mH	Read-only

U1 GENERAL MONITORING PARAMETERS						
Parameter	Mailing Address	Parameter Name	Set Value	Default Value	Unit	Change Method
U1-00	0×7100	Linear Velocity	0.0m/min~0.0m/min	0.0	m/min	Cannot be changed
U1-01	0×7101	Current Roll Diameter Value	0.0mm~0.0mm	0.0	mm	Cannot be changed
U1-02	0×7102	Linear Velocity Synchronous Frequency	0.00Hz~0.00Hz	0.00	Hz	Cannot be changed
U1-03	0×7103	Frequency Pd Output	0.00Hz~0.00Hz	0.00	Hz	Cannot be changed
U1-04	0×7104	Current Tension Setting	ON~0N	0	N	Cannot be changed
U1-05	0×7105	Set Tension After Taper	ON~ON	0	N	Cannot be changed
U1-06	0×7106	Tension Control Setting Torque	0.0%-0.0%	0.0	%	Cannot be changed
U1-07	0×7107	Torque Pid Output	0.0%-0.0%	0.0	%	Cannot be changed
U1-08	0×7108	Tension Control Mode	0~0	0	-	Cannot be changed
U1-09	0×7109	Tension Pid Given	0.0%~0.0%	0.0	%	Cannot be changed
U1-10	0×710A	Tension Pid Feedback	0.0%-0.0%	0.0	%	Cannot be changed
U1-11	0×710B	Tension Pid Proportional Gain	0~0	0	-	Cannot be changed
U1-12	0×710C	Tension Pid Integration Time Ti	0s~0s	0	s	Cannot be changed
U1-13	0×710D	Tension Pid Differential Time Td	0s~0s	0	s	Cannot be changed
U1-14	0×710E	Tension Time	0s~0s	0	s	Cannot be changed
U1-15	0×710F	Curling Mode	0~0	0	-	Cannot be changed
U1-16	0×7110	Retain	0.0%~0.0%	0.0	%	Cannot be changed
U1-17	0×7111	Retain	0.0%~0.0%	0.0	%	Cannot be changed
U1-18	0×7112	Calculate The Upper Limit Of Torque For Vertical Application Of Cable Reel	0.0%~0.0%	0.0	%	Cannot be changed
U1-19	0×7113	Calculate The Lower Limit Of Torque For Vertical Application Of Cable Reel	0.0%~0.0%	0.0	%	Cannot be changed
U1-20	0×7114	Actual Upper Limit Of Torque For Vertical Application Of Cable Reel	0.0%~0.0%	0.0	%	Cannot be changed
U1-21	0×7115	Actual Lower Limit Of Torque For Vertical Application Of Cable Reel	0.0%~0.0%	0.0	%	Cannot be changed

Chapter 5 List of Fault Codes

During the use of the product, the following types of faults may be encountered. Please refer to the following methods for troubleshooting and handling.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err02.00	Accelerated over current	The output circuit of the frequency converter is grounded or short circuited	Check if there is a short circuit in the motor or interrupt contactor.
		The control mode is FVC or SVC and no parameter tuning has been performed	Set the motor parameters according to the motor nameplate and tune the motor parameters.
		Rapid acceleration condition, acceleration time set too short	Increase acceleration time (P0-17)
		Inappropriate setting for over current stall suppression	Confirm that the over current stall suppression function (P3-19) has been enabled; The set value of over current stall action current (P3-18) is too high. It is recommended to adjust it within 120% to 160%; The over current stall suppression gain (P3-20) is set too small, and it is recommended to adjust it within 20 to 40.
		Manual torque increase or inappropriate V/F curve	Adjust the manual torque or V/F curve.
		Start the rotating motor	Choose to start with speed tracking or wait for the motor to stop before restarting.
		Affected by external interference	Check whether the current value during the fault reaches over current (P3-18) through historical fault records; If it has not been reached, it is judged to be external interference, and the external interference source needs to be investigated to resolve the fault; If there is no external interference source after investigation, it may be due to damage to the driver board or Hall device, and the manufacturer needs to be contacted for replacement.
Err03.00	Deceleration over current	The output circuit of the frequency converter is grounded or short circuited	Check if there is a short circuit in the motor or interrupt contact or.
		The control mode is FVC or SVC and no parameter tuning has been performed	Set the motor parameters according to the motor nameplate and tune the motor parameters.
		Rapid acceleration condition, acceleration time set too short	Increase acceleration time (P0-18)
		Inappropriate setting for over current stall suppression	Confirm that the over current stall suppression function (P3-19) has been enabled; The set value of over current stall action current (P3-18) is too high. It is recommended to adjust it within 120% to 160%; The over current stall suppression gain (P3-20) is set too small, and it is recommended to adjust it within 20 to 40.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
		Manual torque increase or inappropriate V/F curve	Adjust manual torque or V/F curve
		Start the rotating motor	Choose to start with speed tracking or wait for the motor to stop before restarting.
		Affected by external interference	Check whether the current value during the fault reaches over current (P3-18) through historical fault records; If it has not been reached, it is judged to be external interference, and the external interference source needs to be investigated to resolve the fault; If there is no external interference source after investigation, it may be due to damage to the driver board or Hall device, and the manufacturer needs to be contacted for replacement.
Err04.00	Constant speed over current	Affected by external interference	Check whether the current value during the fault reaches over current (P3-18) through historical fault records; If it has not been reached, it is judged to be external interference, and the external interference source needs to be investigated to resolve the fault; If there is no external interference source after investigation, it may be due to damage to the driver board or Hall device, and the manufacturer needs to be contacted for replacement.
Err04.00	Constant speed over current	The output circuit of the frequency converter is grounded or short circuited	Check if the motor has a short circuit or open circuit.
		The control mode is FVC or SVC and no parameter tuning has been performed	Set the motor parameters according to the motor nameplate and tune the motor parameters.
		Inappropriate setting for over current stall suppression	Confirm that the over current stall suppression function (P3-19) has been enabled; The set value of over current stall action current (P3-18) is too high. It is recommended to adjust it within 120% to 150%; The over current stall suppression gain (P3-20) is set too small, and it is recommended to adjust it within 20 to 40.
		The selection of frequency converter is too small	In a stable operating state, if the operating current exceeds the rated current of the motor or the rated output current of the frequency converter, please choose a frequency converter anvil with a higher power level.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err05.00	Accelerated over voltage	The input grid voltage is too high	Adjust the voltage to the normal range.
		During the acceleration process, there is an external force dragging the motor to run	Cancel additional power or install braking resistors; The maximum rise frequency of over voltage suppression (P3-26) is relatively small, and it is recommended to adjust it within 5Hz to 15Hz. This parameter should be adjusted in situations where there is external force dragging.
		Inappropriate over voltage suppression setting	Confirm that the over voltage suppression function (P3-23) has been enabled; The set value of the over voltage suppression action voltage (P3-22) is too high. It is recommended to use Adjust within 770V~700V; The over voltage suppression gain (P3-24) is set too small, and it is recommended to adjust it within 30 to 50.
		No brake unit or brake resistor installed	Install a braking unit and resistor.
		The acceleration time is too short	Increase acceleration time.
Err06.00	Deceleration over voltage	Inappropriate over voltage suppression setting	Confirm that the over voltage suppression function (P3-23) has been enabled; The set value of the over voltage suppression action voltage (P3-22) is too high. It is recommended to adjust it within 770V~700V; The over voltage suppression gain (P3-24) is set too small,and it is recommended to adjust it within 30 to 50.
		During the deceleration process, there is an external force dragging the motor to operate	Cancel additional power or install braking resistors; The maximum rise frequency of over voltage suppression (P3-26) is relatively small, and it is recommended to adjust it within 5Hz to 15Hz. This parameter should be adjusted in situations where there is external force dragging.
		The deceleration time is too short	Increase deceleration time
		No brake unit or brake resistor installed	Install a braking unit and resistor.
Err07.00	Constant speed over voltage	Inappropriate over voltage suppression setting	Confirm that the over voltage suppression function (P3-23) has been enabled; The set value of the over voltage suppression action voltage (P3-22) is too high. It is recommended to use Adjust within 770V ~700V; The over voltage suppression frequency gain (P3-24) is set too small, and it is recommended to adjust it within 30 to 50.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
		There is external force dragging the motor during operation	Cancel additional power or install braking resistors; The maximum rise frequency of over voltage suppression (P3-26) is relatively small, and it is recommended to adjust it within 5Hz to 15Hz. This parameter should be adjusted in situations where there is external force dragging.
Err08.00	Buffer resistor fault	The input voltage is not within the specified range, and due to the relationship between the input voltage, the conductor repeatedly opens and closes	Check whether the input grid voltage fluctuates greatly; Adjust the voltage to the range required by the specifications, ensuring that the bus voltage fluctuation is not within the range of the conductor suction point.
Err09.00	Undervoltage fault	Instantaneous power outage	Enable the instant stop function (P9-59) to prevent transient power outages and undervoltage faults.
		The input voltage of the frequency converter is not within the range required by the specifications	Adjust the voltage to the normal range.
		Abnormal bus voltage	Seeking technical support.
Err09.00	Undervoltage fault	Rectification section, inverter drive board, and inverter control board are abnormal	Seeking technical support.
Err10.00	Drive Overload	Is the motor protection parameter P9-01 set appropriately	Correctly setting this parameter and increasing P9-01 can prolong the motor overload time
		Is the load too large or is there motor stalling	Reduce the load and check the condition of the motor and machinery.
Err11.00	Motor Overload	Is the motor protection parameter P9-01 set appropriately	Correctly setting this parameter and increasing P9-01 can prolong the motor overload time.
		Is the load too large or is there motor stalling	Reduce the load and check the motor and mechanical condition
Err12.00	Input Phase Loss	The three-phase input power supply is abnormal	Check if the input RST wiring and three-phase input voltage are normal:
			Check if the input RST wiring is connected to the ground wire
		Abnormal driving board, lightning protection board, main control board, rectifier bridge	Seeking technical support:
Err13.00	Output phase loss	Motor failure	Check if the motor is open circuited
		The lead from the frequency converter to the motor is abnormal	Eliminate peripheral faults
		The three-phase output of the frequency converter is unbalanced during the operation of the motor	Check if the three-phase winding of the motor is normal and eliminate the fault
		Abnormal driver board and IGBT module	Seeking technical support

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err14.00	Drive overheating	The ambient temperature is too high	Reduce ambient temperature
		Air duct blockage	Clean the air duct
		Fan damaged	Replace the fan
		Module thermistor damaged	Seeking technical support
		Module damage	Seeking technical support
Err15.01	External device frequently open fault	External fault input through multi-functional terminal DI normally open	Check the peripheral faults, confirm that the machine is allowed to restart (P8-18), and reset the operation.
		External fault input through virtual 10 function normally open	Confirm that the parameters for group A1 virtual 10 are set correctly and reset to run.
Err15.02	External device malfunction	External fault input through multi functional terminal DI normally closed	Check the peripheral faults, confirm that the machine is allowed to restart (P8-18), and reset the operation.
		External fault input through virtual 10 function normally closed	Confirm that the parameters for group A1 virtual 10 are set correctly and reset to run.
Err16.01	Modbus communication timeout	Modbus communication timeout	Check if the 485 communication cable connection is correct; Check if the Pd-04 setting value and PLC communication cycle are reasonable.
Err16.02	Warning that the protective cover of the three-way terminal is not connected	The PDO mapping of CANopen configuration is inconsistent with the actual communication mapping	Check the PDO mapping of FErT/AF group parameters.
Err16.11	CANopen communication timeout	CANopen communication timeout	Check if the CAN communication cable connection is correct; Check the parameters Fd-15~17 to confirm the interference situation.
Err16.15	Communication timeout fault	Synchronization control communication timeout	Check for synchronization control parameters or timeout settings greater than 0
Err16.21	CANlink heartbeat timeout	CANlink heartbeat timeout	Check if the CAN communication cable connection is correct; Check the parameters Pd-15-17 and confirm the interference situation.
Err16.22	CANlink station number conflict	CANlink station number conflict	Modify the same CAN station number in the network with parameter Pd-13
Err16.41	PROFIBUS-DP communication timeout	DP communication timeout	Check if the DP communication cable connection is correct.
Err17.00	Contactor failure	Abnormal driver board and power supply	Replace the driver board or power board
		Abnormal contactor	Replace the contactor.
		Abnormal lightning protection board	Replace the lightning protection board
Err18.00	Current detection circuit fault	Abnormal current sampling of frequency converter	Check if the main circuit is powered on.
		Abnormal current sampling of frequency converter	Hall sensor damaged, current sampling current damaged, contact manufacturer
Err19.02	Synchronous machine magnetic pole position angle tuning fault	Synchronous machine magnetic pole position angle tuning fault	Perhaps the motor is not connected or the output is out of phase.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err19.06	Quick stator resistance tuning fault	Stator resistance tuning fault	Not connected to the motor; Please confirm that the rated current parameter (P1-03) of the motor is set according to the motor nameplate.
Err19.07	Stator resistance tuning fault	Stator resistance tuning fault	Not connected to the motor; Please confirm that the rated current parameter (P1-03) of the motor is set according to the motor nameplate.
Err19.08	Stator resistance tuning cannot be completed	Stator resistance tuning fault	Not connected to the motor; Please confirm that the rated current parameter (P1-03) of the motor is set according to the motor nameplate.
Err19.09	Transient leakage inductance tuning fault of asynchronous machine	Transient leakage inductance tuning fault of asynchronous machine	Possible absence of motor connection or output phase loss; Confirm effective connection to the motor.
Err19.10	Asynchronous machine leakage inductance tuning fault	Transient leakage inductance tuning fault of asynchronous machine	Possible absence of motor connection or output phase loss; Confirm effective connection to the motor.
Err19.11	Motor tuning fault	Inertia tuning fault	Please confirm that the rated current parameter (P1-03) of the motor is set according to the motor nameplate; Increase inertia tuning and dynamically set speed(P2-43) Set value.
Err19.20	Motor tuning fault	The zero position angle tuning process of the synchronous machine without load has timed out	Check the feedback Z signal.
Err19.23	Synchronous machine magnetic pole position angle tuning fault (wave by wave current limiting)	Synchronous machine magnetic pole position tuning fault	Please confirm that the rated current parameter (P1-03) of the motor is set according to the motor nameplate; Reduce the initial position angle detection of the synchronous machine Set value for flow (P2-29); Check if the motor is rotating during startup; Check if the direct axis inductance Ld (P1-17) of the motor is Is it too small (0.1mH).
Err19.24	Transient leakage inductance tuning fault of asynchronous machine (wave by wave current limiting)	DP communication timeout	The power selection of the frequency converter is too small; Select the appropriate frequency converter based on the motor power.
Err20.00	ABZ encoder disconnection fault	Encoder disconnection	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.
Err20.01	Encoder hardware disconnection fault	Encoder failure	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err20.03	Synchronous machine no-load tuning encoder AB signal fault	Synchronous machine no-load tuning encoder fault	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.
Err20.04	Synchronous machine no-load tuning encoder absolute position signal fault	Synchronous machine no-load tuning encoder fault	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.
Err20.06	Synchronous machine ABZ encoder with load tuning Z signal loss fault	Synchronous machine with load tuning encoder fault	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.
Err20.07	Encoder line count error	Synchronous machine no-load tuning encoder fault	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.
Err20.08	Synchronous machine with load tuning encoder absolute position signal fault	Synchronous machine tuning encoder malfunction	Correct the broken section; Check if the PG cable wiring is correct; Confirm the wiring of PG cable power supply; Confirm whether the number of encoder lines is consistent with the set value of encoder lines (P1-27); Check if the wiring of the AB signal line is correct.
Err20.09	Synchronous machine with load tuning encoder absolute position signal fault	Synchronous machine tuning encoder malfunction	The encoder Z signal is abnormal, please confirm the PG card wiring.
Err20.10	Synchronization machine encoder Z signal calibration fault	Synchronous machine encoder malfunction	The encoder Z signal is abnormal, please confirm the PG card wiring.
Err20.11	Asynchronous machine no-load current tuning encoder fault	Asynchronous machine closed-loop vector no-load tuning encoder fault	Connect the encoder correctly;Please confirm if the number of encoder lines is consistent with the set value of encoder lines (P1-27).
Err20.12	Encoder failure	The encoder feedback speed deviates significantly from the SVC estimated speed	Check if the encoder is disconnected; Confirm whether the motor parameters are set correctly; Confirm whether to perform motor tuning.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err20.13	Encoder failure	Hardware disconnection fault of rotary encoder	Check the encoder wiring
Err20.17	23 bit encoder disconnection fault	23 bit encoder disconnection fault	Check the encoder wiring
Err21.01	EEPROM Uninterrupted Operation Timeout	EEPROM Read/write Exception	If it is a communication writing function code, confirm whether the RAM address of the corresponding function code is being operated on, map the RAM addresses of each group of function codes, and check the parameter address representation rules.
		EEPROM Read/write Exception	If the EEROM chip is damaged, contact the manufacturer to replace the control board.
Err21.02	EEPROM Read Fault	EEPROM Read/write Exception	If it is a communication writing function code, confirm whether the RAM address of the corresponding function code is being operated on, map the RAM addresses of each group of function codes, and check the parameter address representation rules.
		EEPROM Read/write Exception	If the EEROM chip is damaged, contact the manufacturer to replace the control board.
Err21.03	EEPROM Operation Timeout	EEPROM Read/write Exception	If it is a communication writing function code, confirm whether the RAM address of the corresponding function code is being operated on, map the RAM addresses of each group of function codes, and check the parameter address representation rules.
		EEPROM Read/write Exception	If the EEROM chip is damaged, contact the manufacturer to replace the control board.
Err21.04	EEPROM Buffer Overflow	EEPROM Read/write Exception	If it is a communication writing function code, confirm whether the RAM address of the corresponding function code is being operated on, map the RAM addresses of each group of function codes, and check the parameter address representation rules.
		EEPROM Read/write Exception	If the EEROM chip is damaged, contact the manufacturer to replace the control board.
Err22.00	Warning for stator resistance tuning result	The tuned stator resistance exceeds the reasonable range	The rated voltage and rated current parameters of the motor are set incorrectly. Please correctly set the rated voltage (P1-02) and rated current (P1-03) parameters of the P1 group motor according to the motor nameplate.
Err22.01	Warning of rotor resistance tuning result	The rotor resistance of the tuned asynchronous machine exceeds the reasonable range	Confirm that parameter tuning is performed when the motor is already stationary.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err22.02	Warning for no-load current and mutual inductance tuning results	The tuned asynchronous machine's no-load current and mutual inductance exceed the reasonable range. If such a warning is issued, the frequency converter will calculate a mutual inductance and no-load current value based on known motor parameters, which may differ from the optimal value to some extent	Set the P1 group motor parameters correctly according to the motor nameplate; Please confirm that the motor is unloaded before tuning.
Err22.03	Warning on the tuning result of back electromotive force	The back electromotive force of the tuned synchronous machine exceeds the reasonable range	Confirm that the rated voltage parameters (P1-02) of the motor are set according to the motor nameplate; Confirm that the motor is in an unloaded state during tuning.
Err22.04	Inertia tuning result warning	Inertia tuning fault	Please confirm that the rated current parameter (P1-03) of the motor is set according to the motor nameplate.
Err23.00	Over current during short circuit detection of driver output to ground	Motor short circuit to ground	Replace and inspect cables or motors for any short circuits to ground.
Err24.00	Output phase to phase short circuit	Motor phase short circuit	There is a two-phase short circuit in the output UWW.
Err25.00	Rectification Fault	Abnormal input grid voltage	Check if the input power is too high or too low.
		Abnormal rectification unit	Seeking manufacturer services.
Err26.00	Accumulated running time reaches fault	Accumulated running time reaches the set value	Use parameter initialization function to clear record information.
Err27.00	User defined fault 1	Input user-defined fault 1 signal through the multifunctional terminal DI	Reset operation.
		Input user-defined fault 1 signal through virtual I0 function	Reset operation.
Err28.00	User defined fault 2	Input the signal of user-defined fault 2 through the multi functional terminal DI	Reset operation.
		Input the signal of user-defined fault 2 through the virtual 10 function	Reset operation.
Err29.00	Accumulated power on time reaches fault	Accumulated power on time reaches the set value	Use parameter initialization function to clear record information.
Err30.00	Output load shedding	The operating current of the frequency converter is less than P9-64	Confirm whether the load is detached or whether the parameter settings of P9-64 and P9-65 are in line with the actual operating conditions.
Err31.00	PID feedback lost during PID operation	PID feedback is less than the set value of PA-26	Check the PID feedback signal or set PA-26 to an appropriate value.
Err40.00	Wave by wave current limiting fault	Is the load too large or is there motor stalling	Reduce the load and check the condition of the motor and machinery.
		The selection of frequency converter is too small	Choose a frequency converter with a higher power rating.

Fault Code	Fault Code Name	Cause Of Failure	Treatment Measures
Err42.00	Excessive speed deviation fault	Incorrect encoder parameter settings	Set the encoder parameters correctly.
		Not all parameters have been tuned	Perform motor parameter adjustment
		The detection parameters P9-69 and P9-70 for excessive speed deviation are set improperly	Reasonably set the detection parameters according to the actual situation.
Err43.00	Motor over speed fault	Incorrect encoder parameter settings	Set the encoder parameters correctly.
		No parameter tuning has been performed	Perform motor parameter adjustment.
		The detection parameters P9-69 and P9-70 for excessive speed deviation are set improperly	Reasonably set the detection parameters according to the actual situation.
Err45.00	Motor overheating fault	Loose wiring of temperature sensor	Check the wiring of the temperature sensor and eliminate any issues,
		Motor temperature is too high	Increase the carrier frequency or take other heat dissipation measures to dissipate the heat of the motor.
		F9-57 motor over temperature protection threshold set too small	Increase the over temperature protection threshold of the motor (the set value for ordinary motors is 90-100 degrees)
Err47.00	STO malfunction	STO terminal abnormality	Check if the STO function is enabled on P8-54; If the STO function is enabled: Check if there is a 24V input at the STO terminal of the inverter module.
Err48.01	Motor detection 1 overheating	Enable AI1 wire breakage detection function and AI1 wire breakage	Check AI1 for broken external wiring
Err48.02	Motor detection 1 overheating warning	Enable AI2 disconnection detection function and AI2 disconnection	Check AI2 for broken external wiring
Err48.03	Motor detection 2 overheating	Enable AI3 disconnection detection function and AI3 disconnection	Check AI3 for disconnected external wiring
Err60.00	Internal fan malfunction	The internal temperature of the frequency converter is too high	Replace the internal fan of the frequency converter
Err61.00	Brake pipe overload	The braking resistor is too small	Replace the braking resistor with a higher resistance value
Err62.00	Brake pipe straight through	Brake unit straight through	Check if the brake pipe is functioning properly
		Brake unit straight through	Check if there is an external braking resistor
Err63.00	Low liquid level warning	The water tank level is too low	Add coolant
Err64.00	Water cooling system malfunction	Water cooling system control unit malfunction	Reset operation
		Water cooling system control unit malfunction	Replace the control unit

Chapter 6 Communication

6.1 Parameter Communication Address

Parameter Introduction

This series of frequency converters supports 8 communication protocols including 485, CANlink, CANopen, PROFIBUS-DP, EtherCAT, Ethernet/IP,Modbus TCP, and PROFINET. User programmable cards and point-to-point communication are derivatives of the CANlink protocol. The upper computer can control, monitor, and modify functional parameters of the frequency converter through these communication protocols. Communication data can be divided into parametric data and non parametric data, the latter including running commands, running status, running parameters, alarm information, etc.

Parameter Data

Parameter Data	P group (readable and writable)	P0、P1、P2、P3、P4、P5、P6、P7、P8、P9、PA、PB、PC、PD、PE、PF
	Group A (readable and writable)	A0、A1、A2、A3、A4、A5、A6、A7、A8、A9、AA、AB、AC、AD、AE、AF

The parameter data communication address is defined as follows:

1. When reading parameter data for communication For P0~PF and A0~AF group parameter data, the upper 8 bits of the communication address are directly the functional group number, and the lower 8 bits are directly the parameters.

In the functional group, the numbering is as follows:

P0-16 function parameter, with a communication address of F010H, where F0H represents the P0 group function parameter and 10H represents the hexadecimal data format of parameter number 16 in the function group.

The AC-08 functional parameter has a communication address of AC08, where ACH represents the AC group functional parameter and 08H represents the hexadecimal data format of parameter number 8 in the functional group.

2. When writing parameter data for communication

For the P0~PF group parameter data, the communication address is divided into 00~0F or F0~FF based on whether it is written to EEPROM. The lower 8 bits are directly the serial number of the parameter in the functional group. For example, when writing the functional parameter P0-16: when it is not necessary to write to EEPROM, its

communication address is 0010H; when it is necessary to write to EEPROM, its communication address is F010H. For the A0~AF group parameter data, the communication address is divided into 40~4F or A0~AF based on whether it needs to be written to EEPROM, with the lower 8 bits directly indicating the sequence number of the parameter in the functional group. For example, when writing the functional parameter AC-08: When it is not necessary to write to EEPROM, its communication address is 4C08H; When writing to EEPROM, its communication address is AC08H.

Non parametric data

Parameter Data	Status data(read-only)	U-group monitoring parameters, frequency converter fault description, frequency converter operating status
	Control parameters (write only)	Control commands, communication settings, digital output terminal control, analog output AO1 control, analog output AO2 control, high-speed pulse (FMP) output control, parameter initialization

1. Status data

The status data is divided into U group monitoring parameters, frequency convect fault description, and frequency converter operating status.

- U-group parameter monitoring parameters

  U0~UF, The upper 8 bits of its communication address are 70~7F, and the lower 8 bits are the sequence numbers of the monitoring parameters in the group. For example, the following is an example:

  U0-11, Its mailing address is 700BH.

- Fault description of frequency converter

  When reading the fault description of the frequency converter through communication, the communication address is fixed at 8000H. The upper computer can obtain the current frequency converter fault code by reading the data at this address. The fault code description is defined in the P9-14 parameter.

- Operating status of frequency converter

  When reading the operating status of the frequency converter through communication, the communication address is fixed at 3000H. The upper computer can obtain the current operating status information of the frequency converter by reading the data from this address. The definition is as follows:

Communication address for the operating status of the frequency converter	Read status word definition
3000H	1: Forward running
	2: Reverse operation
	3: Shutdown

2. Control parameters

Control parameters are divided into: control commands, communication settings, digital output terminal control, analog output AO1 and AO2 control, and parameter initialization.

● Control Command

When selecting P0-02 (Command Source) as 2: Communication Control, the upper computer can control the start stop and other related commands of the frequency converter through this communication address. The control commands are defined as follows:

Communication address for the operating status of the frequency converter	Read status word definition
2000H	1: Forward running 2: Reverse operation 3: Forward turning jog 4: Reverse jog 5: Free shutdown 6: Slow down and stop the machine 7: Fault reset

● Communication settings

The communication setting values are mainly used for selecting frequency sources, torque sources, torque upper limit sources, V/F separated voltage sources, PID reference sources, PID feedback sources, etc. as the given data for communication timing in frequency converters. Its communication address is 1000H, and when the upper computer sets the communication address value, its data range is -10000~10000, corresponding to a relative given value of -10.00% ~100.00%.

● Digital output terminal control

When the digital output terminal function is selected as 20: communication control, the upper computer can control the digital output terminal of the frequency converter through this communication address, defined as follows:

Communication address for the operating status of the frequency converter	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 output FMP control

When the analog output AO1, AO2, high-speed pulse output FMP output function is selected as 12: communication settingThe bit machine can control the analog and high-speed pulse output of the frequency converter through this communication address, defined as follows:

Output control communication address		Command content
AO1	2002H	0~7FFF represents 0%~100%
AO2	2003H	
FMP	2004H	

● parameter initialization

When it is necessary to initialize the parameters of the frequency converter through the upper computer, this function needs to be used.

If PU-00 (user password) is not 0, the first step is to verify the password through communication. After passing the verification, the upper computer will perform parameter initialization within 30 seconds.

The communication address for user password verification is 1F00H. By directly writing the correct user password into this address, password verification can be completed. The communication address for parameter initialization is 1F01H, and its data content is defined as follows:

Parameter initialization communication address	Command content
1F01H	0: No operation 1: Restore factory parameter mode 1 2: Clear record information 4: Backup the current parameters of the user 501: Restore user backup parameters 503: Factory parameter recovery mode 2

6.2 Modbus Communication Protocol

Overview

Provide RS485 communication interface and support Modbus RTU slave communication protocol. Users can achieve centralized control through computers or PLCs, set frequency converter operation commands, modify or read parameters, and read the working status and fault information of the frequency converter through this communication protocol.

This serial communication protocol defines the content and format of information transmitted in serial communication. This includes: host polling (or broadcasting) format;The encoding method of the host includes parameters for required actions, data transmission, and error checking. The response of the slave machine also adopts the same structure, including action confirmation, data return, and error verification. If the slave encounters an error while receiving information or cannot complete the actions required by the host, it will organize a fault message as a response feedback to the host.

Application method

The frequency converter is connected to a "single master multi slave" PC/PLC control network with RS485 bus as a communication slave.

hardware interface

RS485 expansion card MD38TX1 hardware needs to be inserted into the frequency converter.

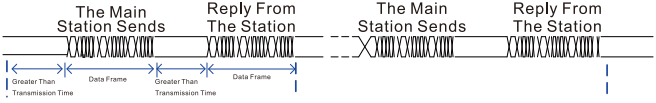
Topological Structure

Single host multi slave system. Each communication device in the network has a unique slave address, with one device acting as the communication host (usually a PC, PLC, HMI, etc.), actively initiating communication and performing parameter read or write operations on the slave. Other devices act as communication slaves, responding to inquiries or communication operations from the host to the local machine. Only one device can send data at a time, while the other devices are in a receiving state.

The setting range of the slave address is 1-247, with 0 being the broadcast communication address. The slave address in the network must be unique.

Communication transmission method

Asynchronous serial, half duplex transmission mode. In the process of serial asynchronous communication, data is sent in the form of messages, one frame at a time. According to the Modbus RTU protocol, when the idle time on the communication data line exceeds 3.5 bytes of transmission time, it indicates the start of a new communication frame.



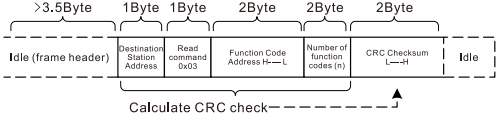
The built-in communication protocol is Modbus RTU slave communication protocol, which can respond to the host's "query/command" or make corresponding actions based on the host's " query/command" and respond to communication data.

The host can refer to a personal computer (PC), industrial control equipment, or programmable logic controller (PLC), etc. The host can communicate with a specific slave individually or broadcast information to all slaves. For the individual access " query/command"of the host, the accessed slave should return a response frame; For the broadcast information sent by the host, the slave does not need to provide feedback to the host.

6.3 Communication Data Frame Structure

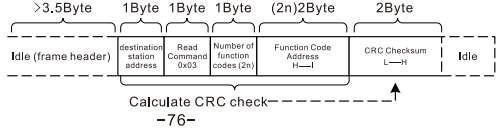
The communication data format of Modbus RTU protocol is as follows. The frequency converter only supports reading or writing Word type parameters, and the corresponding communication read operation command is 0x03; The write operation command is 0x06, the multi write operation command is 0x10, and byte or bit read/write operations are not supported:

Master station reads command frames

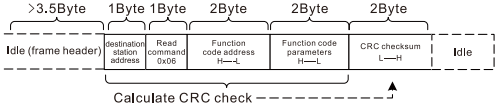


In theory, the upper computer can read multiple consecutive parameters at once (i.e.up to a maximum of 12 parameters in n), but it should be noted that it cannot cross the last parameter in this parameter group, otherwise it will reply with an error.

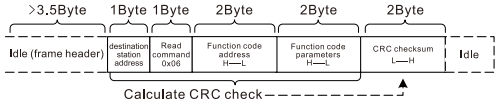
Read response frames from the station



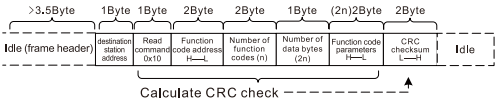
Master station writes command frames



Write a response frame from the station

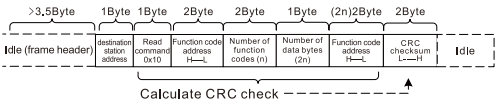


Master station writes multiple command frames



Like multiple reads, multiple writes can only operate on a maximum of 12 parameters consecutively.

Write multiple response frames from the station



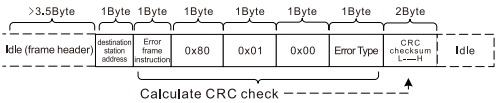
If the slave detects a communication frame error or other reasons causing read and write failures, it will reply with an error frame.

Instructions

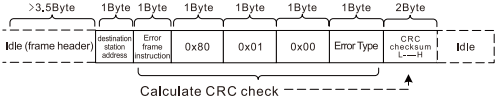
CRC check error will not reply.

● When PD-05=0, bits: Modbus mode is a non-standard Modbus protocol.

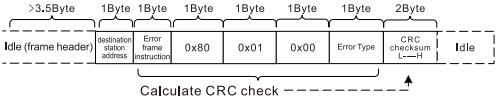
Read response error frame from the station



Write response error frame from the station



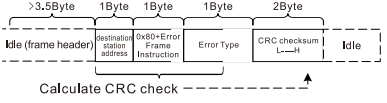
Write multiple response error frames from the station



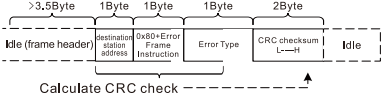
● When PD-05=1, bits: Modbus mode is the standard Modbus protocol.

Error type:
01: Command code error
02: Address error
03: Jiang data error
04: Command cannot be processed

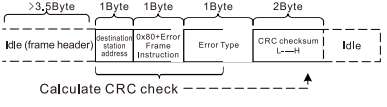
Read response error frame from the station



Write response error frame from the station



Write multiple response error frames from the station



Error type:
01: Command code error
02: Address error
03: Jiang data error
04: Command cannot be processed

Table 16-1 Data Frame Field Description Table

Frame header START	Idle transmission time greater than 3.5 characters.
Slave Address ADR	Communication address range: 1-247; 0=Broadcast address.
Command code CMD	03: Read slave parameters; 06: Write slave parameters; 10: Write more slave parameters.
Parameter address H	The parameter address inside the frequency converter, represented in hexadecimal; It is divided into parametric and non parametric parameters (such as running status parameters, running commands, etc.), as defined in the address.
Parameter address L	When transmitting, high bytes come first and low bytes come last.
Number of parameters H	The number of parameters read in this frame, if it is 1, it means reading 1 parameter. When transmitting, high bytes come first and low bytes come last.
Number of parameters L	This agreement can only rewrite one parameter at a time, without this field.
Number of data bytes	The length of the data is twice the number of parameters.
Data H	When transmitting response data or data to be written, the high byte comes first and the low byte comes second.
Data L	
CRC low bit	Detection value: CRC16 verification value. When transmitting, low bytes come first and high bytes come last.
CRC high position	The calculation method is detailed in the explanation of CRC check in this section.
END	At 3.5 characters.

CRC verification method:

CRC (Cyclic Redundancy Check) uses RTU frame format, and Modbus messages include an error detection field based on CRC method. The CRC domain detects the content of the entire message. The CRC field is two bytes containing a 16 bit binary value. It is calculated by the transmission device and added to the message. The receiving device recalculates the CRC of the received message and compares it with the values in the received CRC field. If the two CRC values are not equal, it indicates that there is an error in the transmission.

CRC stores 0xFFFF first, and then calls a process to process the consecutive 8-bit bytes in the message with the value in the current register. Only 8-bit data in each character is valid for CRC, and the start, stop, and parity bits are invalid.

During the CRC generation process, each 8-bit character is individually XOR with the register content, resulting in the least significant value Move the bit direction, and fill the most significant bit with 0. LSB is extracted for detection. If LSB is 1, the register is separate and pre-setIf the values are different, or if the LSB is 0, no further action will be taken. The entire process needs to be repeated 8 times. After completing the last position (8th position),The next 8-bit byte is separately different from the current value of the register. The value in the final register is all the bytes in the message All CRC values after execution.

When adding CRC to a message, the low byte is added first, followed by the high byte. The CRC simple function is as follows:

```
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）;
  }
```

Definition of Address for Communication Parameters:

Read and write parameters (some parameters cannot be changed and are only used by manufacturers or for monitoring purposes)

6.4 Parameter Address Labeling Rules

Representing rules with parameter group numbers and labels as parameter addresses:

High byte: F0~FF (P group), A0~AF (A group), 70~7F (U group)
Low byte: 00~FF
For example, if you want to access parameter P3-12, the access address of the parameter is represented as 0xF30C;
PF group: parameters cannot be read or changed; U-group: Only readable, parameters cannot be changed.

Some parameters cannot be changed when the frequency converter is in operation; Some parameters cannot be changed regardless of the state of the frequency converter. When changing parameter parameters, it is also important to pay attention to the range, units, and related explanations of the parameters.

Parameter Group Number	Communication Access Address	Modify parameter addresses in RAM through communication
P0~PE组	0xF000~0xFEFF	0x0000~0x0EFF
A0~AC组	0xA000~0xACFF	0x4000~0x4CFF
U0组	0x7000~0x70FF	-

Instructions

Due to frequent storage of EEPROM, its linesman can be reduced. Therefore, some parameters are used in communication in mode, no storage is required, only the values in RAM need to be changed. The cycle of a single read/write function code is about 15ms, with high frequency there is a possibility of unsuccessful data exchange (read/write) due to multiple operations on EEPROM.

If it is a P group parameter, to achieve this function, simply change the high-order F of the parameter address to 0. If it is a parameter in group A, to achieve this function, simply change the high-order A of the parameter address to 4.

The corresponding parameter addresses are represented as follows:

High byte: 00~0F (P group), 40~4F (A group)

Low byte: 00~FF

For example:

Parameter P3-12 is not stored in EEPROM, with an address of 030C; parameter A0-05 is not stored in EEPROM, with an address of 4005. This address indicates that it can only be used for writing to RAM and cannot be used for reading. When reading, it is an invalid address.

Please refer to the table below for the shutdown/operation parameters.

Parameter Address	Parameter Description	Parameter Address	Parameter Description
1000H	*Communication setting value (decimal) (write only) -10000~10000	1010H	PID setting
1001H	Operating Frequency	1011H	PID feedback
1002H	Bus Voltage	1012H	PLC stage
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 running time
1006H	Output Torque	1016H	A11 pre calibration voltage
1007H	Running Speed	1017H	A12 pre calibration voltage
1008H	Di Input Flag	1018H	AI3 pre calibration voltage
1009H	D0 Output Flag	1019H	linear velocity
100AH	A11 Voltage	101AH	Current power on time
100BH	A112 Voltage	101BH	Current running time
100CH	A13 Voltage	101CH	PULSE input pulse frequency, unit 1HZ
100DH	Count Value Input	101DH	Current communication setting value (read-only)
100EH	Length Value Input	101EH	Actual feedback speed
100FH	Load Speed	101FH	Main frequency X display
–	–	1020H	Auxiliary frequency Y display

Instructions

The communication setting value is a percentage of relative values, with 10000 corresponding to 100.00% and -10000 corresponding to -10.00%. It is a number in the frequency dimension According to reports, this percentage is the percentage of the relative maximum frequency (P0-10). The percentage for torque dimension data is P2-10A2-48 (torque upper limit digital setting, corresponding to the first and second motors respectively).

Due to the communication settings of parameters P0-03, P0-04, P0-11, P2-11, PA-00, PA-02, and P0-01 being determined by H1000, only one parameter can be set as the communication setting value at a time. If all of the above parameters need to be set through communication, the following methods can be adopted:

Taking P0-03 and P0-11 as examples: if P0-03 is set to 9, the operating frequency is controlled by H1000; P0-11 cannot be set to 5 anymore, it can be set to 0. Modifying the value of P0-12 through communication can achieve consistent results.

Control command input to frequency converter: (write only)

Command Word Address	Command Function
2000H	0001: Running forward
	0002: Reverse operation
	0003: Forward turning jog
	0004: Reverse jog
	0005: Free shutdown
	0006: Deceleration and shutdown
	0007: Fault reset

Read the status of the frequency converter: (read-only)

Command Word Address	Command Function
3000H	0001: Running forward
	0002: Reverse operation
	0003: Shutdown

Parameter lock password verification: If the actual password value is returned, it indicates that the password verification has passed. (If there is no password, i.e. password 0, verification returns 0000H)

Password address	Enter the content of the password
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 output control: (write only)

Command Address	Command Content
2004H	0~7FFF represents 0%~100%

Fault description of frequency converter:

Frequency Converter Fault Address	Inverter Fault Information
8000H	0000: No malfunction 0001: Reserved 0002: Accelerated 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 0001: Inverter overload 000B: Motor overload 000C: Input phase loss 000D: Output phase loss 000E: Module overheating 000F: External malfunction 0010: Communication exception 0011: Abnormal contactor 0012: Current detection fault 0013: Motor tuning fault 0014: Encoder/PG card malfunction

	0015: Parameter read/write exception 0016: Hardware malfunction of frequency converter 0017: Motor to ground short circuit fault 0018: Reserved 0019: Reserved 001A: The running time has arrived 001B: User defined fault 1 001C: User defined fault 2 001D: Power on time has arrived 001E: Load shedding 001F: PID feedback lost during runtime 0028: Fast current limiting timeout fault 0029: Motor switching fault during operation 002A: Excessive speed deviation 002B: Motor overspeed 002D: Motor overheating 005A: Encoder line number setting error 005B: Encoder not connected 005C: Initial position error 005E: Speed feedback error

6.5 PD Group Communication Parameter Description

The PD-00 parameter is used to set the data transmission rate between the upper computer and the frequency converter. Note that the baud rate set between the upper computer and the frequency converter must be consistent, otherwise communication cannot proceed. The higher the baud rate, the faster the communication speed.

Parameter	Parameter Name	Factory Default	Set The Scope
PD-00	Baud Rate	5005	Bit: Modbus baud rate 0：300bps 1：600bps 2：1200bps 3：2400bps 4：4800bps 5：9600bps 6：19200bps 7：38400bps 8：57600bps 9：115200bps

The data format set between the upper computer and the frequency converter must be consistent, otherwise communication cannot proceed.

Parameter	Parameter Name	Factory Default	Set The Scope
PD-01	Data Format	0	0: No verification: Data format<8, N,2> 1: Occasional test: Data format<8, E,1> 2: Odd verification: Data format<8, O,1> 3: No verification: data format<8, N,1>

When the local address is set to 0, it is the broadcast address, which realizes the broadcasting function of the upper computer. The local address has uniqueness (except for the broadcast address), which is the basis for achieving point-to-point communication between the upper computer and the frequency converter.

Parameter	Parameter Name	Factory Default	Set The Scope
PD-02	Localhost	1	1~247, 0 is the broadcast address

Response delay: refers to the interval between the end of data reception by the frequency converter and the transmission of data to the upper computer. If the response delay is less than the system processing time, the response delay shall be based on the system processing time. If the response delay is longer than the system processing time, the system shall delay and wait until the response delay time expires before sending the data to the upper computer.

Parameter	Parameter Name	Factory Default	Set The Scope
PD-03	Response delay	2ms	0~20ms

When the parameter is set to 0.0s, the communication timeout parameter is invalid.

When this parameter is set to a valid value, if the interval between one communication and the next exceeds the communication timeout, the system will report a communication failure error (Err16). Usually, it is set to invalid. If this parameter is set in a continuous communication system, the communication status can be monitored,

Parameter	Parameter Name	Factory Default	Set The Scope
PD-04	Communication timeout	0.0s	0.0s (invalid); 0.1~60.0S