

CM500 VFD User Manual

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Safety Precautions



Warning

“ Warning ” Indicates that if you do not follow the regulations, it may result in death or serious bodily injury




Danger

“ Danger ”Indicates that if you do not follow the regulations, it will result in death or serious bodily injury


Security statement

- 1) When installing, operating, and maintaining the product, please read and follow these safety precautions first.
- 2) In order to ensure the safety of people and equipment, please follow all safety precautions described on the product and in the manual when installing, operating and maintaining the product.
- 3) The "Caution", "Warning" and "Danger" items in the manual do not represent all the safety items that should be followed, but only as a supplement to all the safety precautions.
- 4) This product should be used in an environment that meets the design specifications, otherwise it may cause malfunctions, and malfunctions or component damage caused by non-compliance with relevant regulations are not within the scope of product quality assurance.
- 5) Our company will not bear any legal responsibility for personal safety accidents and property losses caused by illegal operation of the product.


1. Purpose

 Danger	<p>This series is suitable for controlling the variable speed operation of three-phase AC motors, and cannot be used for single-phase motors or other purposes, otherwise it may cause inverter failure or fire.</p> <p>This series of inverters cannot be simply applied to occasions directly related to personal safety, such as medical devices.</p>
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2. Goods Inspection

 Warning	<p>When unpacking, it is found that the product and its accessories are damaged, rusted, signs of use, etc., please do not install!</p> <p>When unpacking, if water is found inside the product, parts missing, or parts damaged, please don't install it!</p> <p>Please check the packing list , if you find that the packing list does not match the product name, please do not install it!</p>
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3. Safe operation

 Warning	<p>It is strictly forbidden for non-professionals to install, connect, maintain, inspect or replace parts of the product!</p> <p>The installation, wiring, maintenance, inspection or component replacement of this product can only be carried out by professionals who have received relevant training in electrical equipment and have sufficient electrical knowledge.</p> <p>The installer must be familiar with the product installation requirements and related technical information.</p> <p>When it is necessary to install equipment with strong electromagnetic interference such as a transformer, please install a shielding protection device to avoid malfunction of this product!</p>
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4. Operation and maintenance



Danger

When the function of automatic fault reset or restart after power failure is set, safety isolation measures should be taken for the mechanical equipment, otherwise it may cause equipment damage and personal safety accidents.

After the inverter is connected to the power supply, even if it is in the stop state, the terminals of the inverter are still live and cannot be touched, otherwise there is a danger of electric shock.

In the occasions where there is power frequency and variable frequency switching, the two contactors that control the power frequency and variable frequency should be interlocked, otherwise the inverter will be damaged.

Wait at least 5 minutes after power off to ensure that the electrolytic capacitor of the main circuit is fully released, otherwise there is a danger of electric shock.

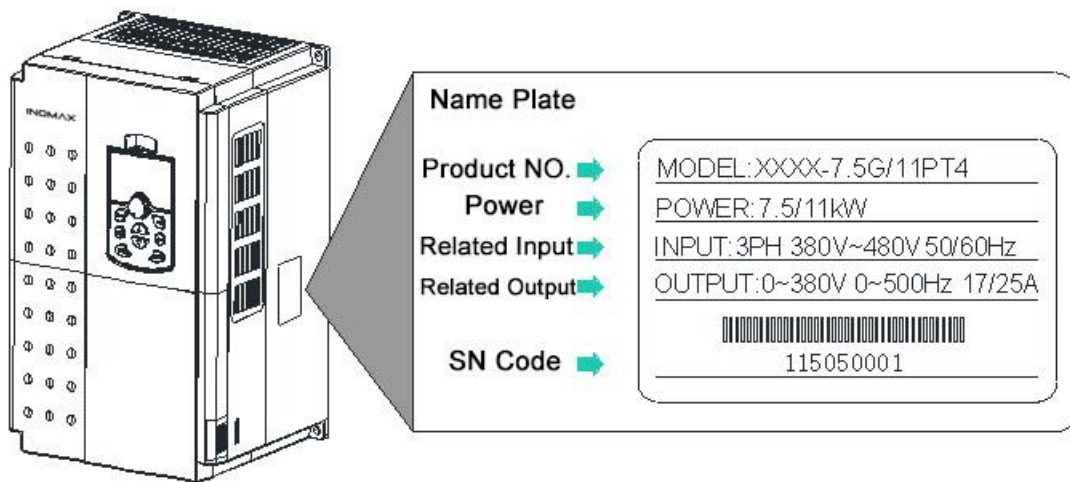
I . Product Information

1.1 Inverter checking

Before leaving the factory, each inverter has undergone strict quality control and strengthened anti-collision packaging. After unpacking, please check the following items:

- Check whether the inverter has been damaged during transportation
- Check whether there are instructions in the packing box (with certificate of conformity attached)
- Check the nameplate of the inverter and confirm that it is the model of the product you ordered
- If you have ordered the optional accessories of the inverter, please check to confirm

1.1.1 Inverter name plate



1.1.2 Model Number description

Model	Power Capacity	Input Current	Output Current	Adaptable Motor		Inverter Size
	(KVA)	(A)	(A)	KW	HP	mm
Three-phase 380V~480V, 50/60Hz						
CM500-R75GT4	1.5	3.4	2.1	0.75	1	185*118*167
CM500-1R5GT4	3	5	3.8	1.5	2	185*118*167
CM500-2R2GT4	4	5.8	5.1	2.2	3	185*118*167
CM500-3R7G/5R5PT4	5.9	10.5	9	3.7	5	185*118*167
CM500-5R5G/7R5PT4	8.9	14.6	13	5.5	7.5	185*118*187
CM500-7R5G/011PT4	11	20.5	17	7.5	10	247*160*190
CM500-011G/015PT4	17	26	25	11	15	247*160*190
CM500-015G/018PT4	21	35	32	15	20	320*220*205
CM500-018G/022PT4	24	38.5	37	18.5	25	320*220*205
CM500-022/030PGT4	30	46.5	45	22	30	320*220*205
CM500-030G/037PT4	40	62	60	30	40	432*255*235
CM500-037G/045PT4	57	76	75	37	50	432*255*235
CM500-045G/055PT4	69	92	91	45	60	518*300*260

CM500-055G/075PT4	85	113	112	55	75	518*300*260
CM500-075G/090PT4	114	157	150	75	100	620*390*300
CM500-090G/110PT4	134	180	176	90	125	620*390*300
CM500-110G/132PT4	160	214	210	110	150	620*390*300
CM500-132G/160PT4	192	256	253	132	175	780*480*360
CM500-160G/185PT4	231	307	304	160	210	780*480*360
CM500-185G/200PT4	240	340	335	185	250	855*500*360
CM500-200G/220PT4	250	385	377	200	260	855*500*360
CM500-220G/250PT4	280	430	426	220	300	1320*650*418
CM500-250G/280PT4	355	468	465	250	350	1320*650*418
CM500-280G/315PT4	396	525	520	280	370	1320*650*418
CM500-315G/355PT4	445	590	585	315	420	1320*650*418
CM500-355G/400PT4	500	665	650	355	470	1720*800*490
CM500-400G/450PT4	565	785	725	400	530	1720*800*490
CM500-450G/500PT4	630	883	820	450	600	1720*800*490
CM500-500G/560PT4	710	1000	930	500	660	1720*800*490

Model	Power Capacity	Input Current	Output Current	Adaptable Motor		Inverter Size
	(KVA)	(A)	(A)	KW	HP	mm
3phase 200V-240V , 50/60Hz						
CM500-R75GT2	3	5	3.8	0.75	1	185*118*167
CM500-1R5GT2	4	5.8	5.1	1.5	2	185*118*167
CM500-2R2GT2	5.9	10.5	9	2.2	3	185*118*167
CM500-3R7GT2	8.9	14.6	13	3.7	5	185*118*187
CM500-5R5GT2	17	26	25	5.5	7.5	247*160*190
CM500-7R5GT2	21	35	32	7.5	10	320*220*205
CM500-011GT2	30	46.5	45	11	15	320*220*205
CM500-015GT2	40	62	60	15	20	432*255*235
CM500-018GT2	57	76	75	18.5	25	432*255*235
CM500-022GT2	69	92	91	22	30	518*300*260
CM500-030GT2	85	113	112	30	40	518*300*260
CM500-037GT2	114	157	150	37	50	620*390*300
CM500-045GT2	134	180	176	45	60	620*390*300
CM500-055GT2	160	214	210	55	75	620*390*300
CM500-075GT2	231	307	304	75	100	780*480*360

1.1.3 Specification model, technical specification

Functions		Description
Highest frequency	Vector control: 0 ~ 300Hz V/F control: 0 ~ 500Hz (general purpose); 0 ~ 3200Hz (high frequency)	
Carrier frequency	0.5kHz ~ 16kHz The carrier frequency can be automatically adjusted according to the load characteristics.	
Input frequency resolution	Digital setting: 0.01Hz Analog setting: highest frequency•0.025%	
control method	Open loop vector control (SVC) Closed loop vector control (FVC) V/F control	
Starting torque	0.5Hz/150% (SVC); 0Hz/180% (FVC)	
Speed range	1:100 (SVC) 1:1000 (FVC)	1:100 (SVC) 1:1000 (FVC)
Stable speed accuracy	±0.5% (SVC) ±0.02% (FVC)	±0.5% (SVC) ±0.02% (FVC)
Torque control accuracy	±5% (FVC)	
Overload capacity	G type machine: 150% rated current 60s; 180% rated current 3s.	
Torque boost	P type machine: 120% rated current 60s; 150% rated current 3s.	
V/F curve	Automatic torque boost; manual torque boost 0.1% ~ 30.0%	
V/F separation	Three methods: linear type; multi-point type; N-th power V/F curve	
Acceleration and deceleration curve	Linear or S-curve acceleration and deceleration mode. Four kinds of acceleration and deceleration time 0.0 ~ 6500.0s	
DC braking	DC braking frequency: 0.00Hz ~ CMimum frequency braking time: 0.0s ~ 36.0s	
Jog control	Braking current value: 0.0% ~ 100.0%	
PLC, multi-speed operation	Jog frequency range: 0.00Hz ~ 50.00Hz. Jog acceleration/deceleration time is 0.0s ~ 6500.0s.	
Built-in PID	Through the built-in simple PLC or control terminal to achieve up to 16-speed operation	
Automatic voltage adjustment (AVR)	It is convenient to realize the process control closed-loop control system	
Over voltage and over current stall speed control	When the grid voltage changes, it can automatically keep the output voltage constant	
Fast current limiting function	Minimize over-current faults to protect the normal operation of the inverter	
Torque limit and control	The "shovel" feature automatically limits the torque during operation to prevent frequent over-current trips; closed-loop vector mode can realize torque control	
Functions		Description
Mainly functions	Outstanding performance	Realize asynchronous motor and synchronous motor control with high-performance current vector control technology
	Stop momentarily	When instantaneous power failure occurs, the load feedback energy is used to compensate for the voltage drop, and maintain the inverter to continue running for a short period of time
	Fast current limit	Avoid frequent over-current faults of the inverter
	Virtual IO	Five groups of virtual input and output can realize simple logic control
	Timing control	Timing control function: set time range 0.0Min ~ 6500.0Min
	Multi-motor switching	Two sets of motor parameters can realize switching control of two motors
	Multi-threaded bus support	Support a variety of field buses: R S-4 8 5, C A N I n k, CANopen, etc.
	Motor overheat protection	Extended analog input A I 3 Motor temperature sensor input PT100, PT1000

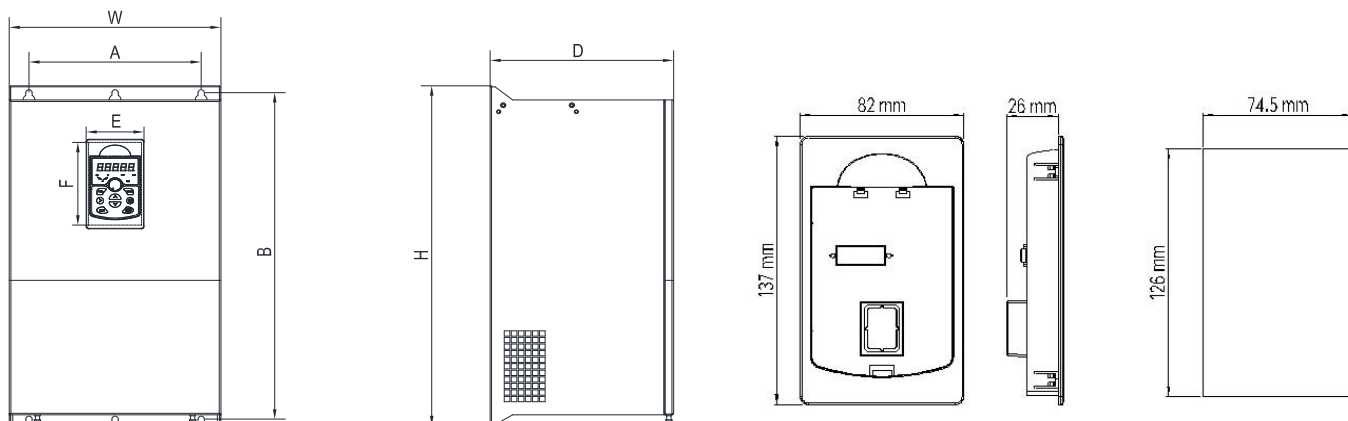
	Multi-encoder support	Support differential, open collector, UVW, resolver, sine and cosine encoders
	Command source	Operation panel setting, control terminal setting, communication setting and there are many ways to switch
	Frequency source	10 kinds of frequency sources: digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting. Can be switched in a variety of ways
Running	Auxiliary frequency source	10 kinds of auxiliary frequency sources. Flexible realization of auxiliary frequency fine-tuning and frequency synthesis
	Input terminal	standard: 6 digital input terminals, one of which supports high-speed pulse input up to 100kHz 2 analog input terminals, 1 only supports 0~10V voltage input, 1 supports 0~10V voltage input or 4~20mA current input Expansion: 3 digital input terminals 1 analog input terminal, support -10~10V voltage input (PT100\PT1000)
	Output terminal	standard: 1 high-speed pulse output terminal (open-collector type is optional), supports 0~100kHz square wave signal output 1 digital output terminal 1 relay output terminal 1 analog output terminal, support 0~20mA current output or 0~10V voltage output Expansion: 1 digital output terminal 1 relay output terminal 1 analog output terminal, support 0~20mA current output or 0~10V voltage output
Key and display	LED display	Display parameters, status information, fault information, etc.
	Key lock and function selection	Realize partial or full lock of keys, define the range of some keys
	Protective function	Power-on motor short circuit detection, input and output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, overload protection, etc.
Environment	Use place	Indoor, not exposed to direct sunlight, free of dust, corrosive gas, flammable gas, oil mist, water vapor, dripping water or salt, etc., the altitude is less than 1000m
	Ambient temperature	-10℃~+50℃ (Ambient temperature is 40℃~50℃, please use with derating)
	Humidity vibration	Humidity is less than 95%RH, no condensation, vibration is less than 5.9m/s ² (0.6g)
	storage temperature	-20℃~+60℃

II. Installation

2.1 Product dimensions and installation dimensions

1. box (optional accessory)

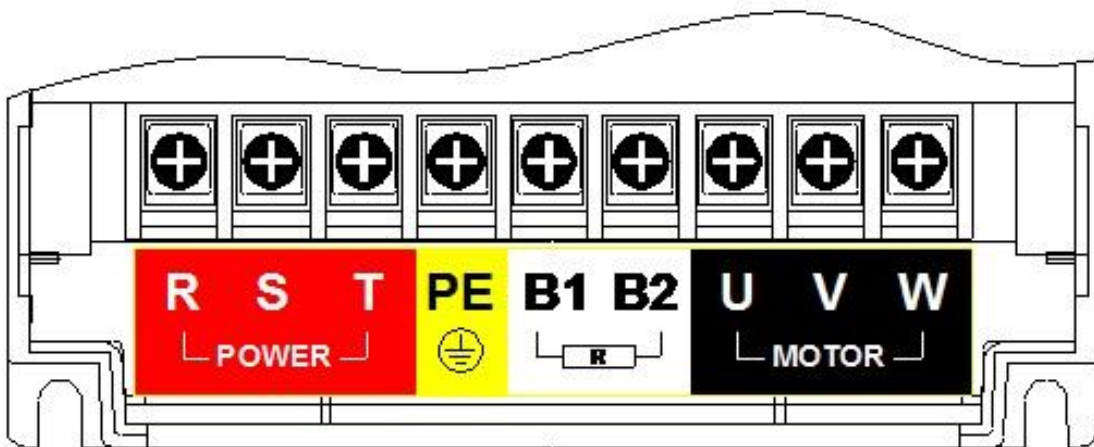
2. Bottom drag installation size of external operation



Model Type	Installation Dimensions		Inverter Dimensions			Installation aperture (mm)	
	A (mm)	B (mm)	H (mm)	W (mm)	D (mm)		
CM500-R75GT4	107	175	185	118	167	Φ4.5	
CM500-1R5GT4							
CM500-2R2GT4							
CM500-3R7G/5R5PT4	107	175	185	118	187	Φ4.5	
CM500-5R5G/7R5PT4							
CM500-7R5G/011PT4							
CM500-011G/015PT4	148	235	247	160	190	Φ5.5	
CM500-015G/018PT4							
CM500-018G/022PT4							
CM500-022/030PGT4	205	305	320	220	205	Φ5.5	
CM500-030G/037PT4							
CM500-037G/045PT4							
CM500-045G/055PT4	180	416	432	255	234.5	Φ7	
CM500-055G/075PT4							
CM500-075G/090PT4							
CM500-090G/110PT4	244	497	518	300	260	Φ9	
CM500-110G/132PT4							
CM500-132G/160PT4							
CM500-160G/185PT4	300	598	620	390	300	Φ11	
CM500-185G/200PT4							
CM500-200G/220PT4							
CM500-220G/250PT4	350	745	780	480	360	Φ12	
CM500-250G/280PT4							
CM500-280G/315PT4	Hanging	400	830	855	500	360	Φ12
CM500-315G/355PT4							
CM500-355G/400PT4	Cabinet	/	/	1138.4	500	360	/
CM500-280G/315PT4	Hanging	480	942	970	650	418	Φ13
CM500-315G/355PT4							
CM500-355G/400PT4							

CM500-400G/450PT4	Cabinet						
CM500-450G/500PT4							
CM500-500G/560PT4							
CM500-185G/200PT4		/	/	1320	650	418	/
CM500-200G/220PT4							
CM500-220G/250PT4							
CM500-250G/280PT4	Cabinet						
CM500-280G/315PT4							
CM500-315G/355PT4		/	/	1720.4	800	490	/
CM500-355G/400PT4							

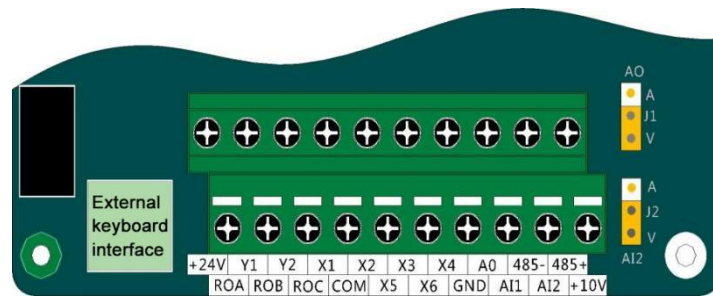
2.2 Schematic diagram of main circuit terminals



2.3 Main circuit power input terminal

Terminal	Terminal Name			Terminal function description
	22KW and below	30-37KW	45KW and above	
R S T	Main circuit power input terminal			AC 380V 3 phase input terminal
L N				AC 220V 1 phase input terminal
U V W	Inverter output terminal			Connect with 3 phase AC motor
P	no this terminal	no this terminal	DC reactor terminal 1	B1,B2 connect with braking resistor terminal,(+),(-) connect with braking unit terminal,P,(+) connect with DC reactor,need to remove the Short link between P and (+)when do connection
(+) or B1	Braking resistor terminal 1	/	DC reactor terminal 2	
		Braking Unit terminal 1		
(-)	no this terminal	Braking Unit terminal 2		
B2	Braking resistor terminal 2	no this terminal		
PE	Ground Terminal			make sure terminal do ground

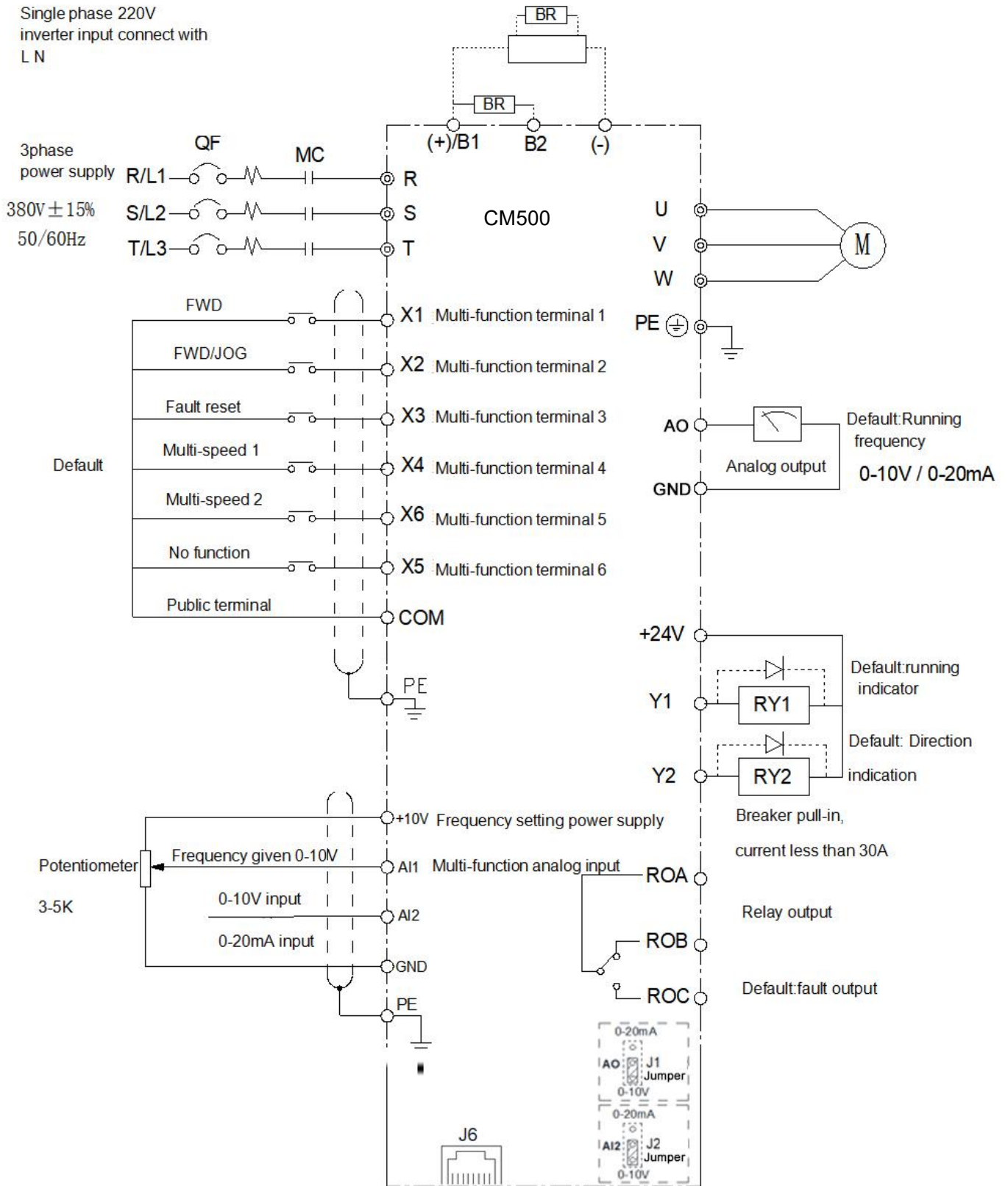
2.4 Control circuit power input terminal



Type	Terminal	Terminal Name	Description and default
Multi-input terminal	X1	Multi-function input terminal 1	Default: forward
	X2	Multi-function input terminal 2	Default: reverse
	X3	Multi-function input terminal 3	Default: No function
	X4	Multi-function input terminal 4	Default: No function
	X5	Multi-function input terminal 5	Default: No function
	X6	Multi-function input terminal 6	Default: No function, can be used as high-speed pulse input
	COM	Common terminal	Multi-function input common terminal, +24V power reference ground
Analog input	AI1	Analog input 1	0~10V input
	AI2	Analog input 2	0~10V/0~20mA input (J2 jumper is optional)
	+10V	Power supply for analog quantity setting	+10V DC 10mA (potentiometer 3~5K)
	GND	Analog reference ground	Analog input and output reference ground
Multi-function output	Y1	Multi-function output terminal 1	Default: running status
	Y2	Multi-function output terminal 2	Default: no output, can be used as high-speed pulse output
	ROA ROB ROC	Relay output ROA-ROB normally closed ROA-ROC normally open	Default: inverter fault output
	AO	Analog output terminal	0~10V/0~20mA output (J1 jumper is optional)
Input	+24V		GND is the reference ground
Communication	485+	Analog output terminal	+24V DC 100mA COM is the power ground.
	485-	+24V power supply	

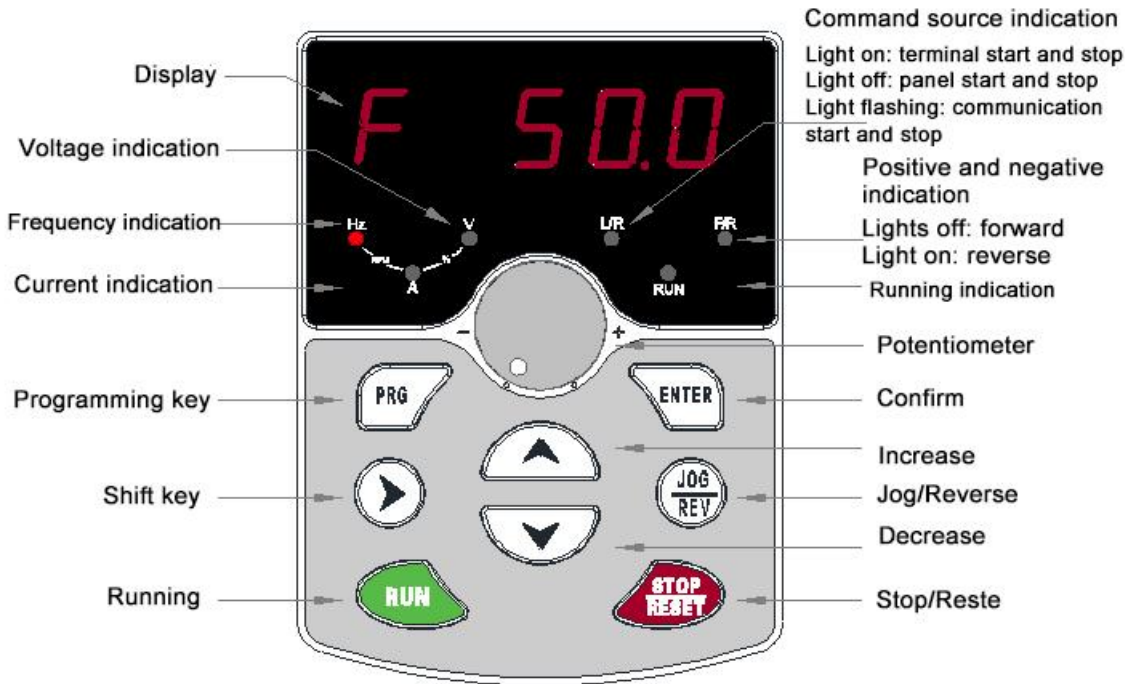
III. Standard wiring

Single phase 220V
inverter input connect with
L N



IV. Basic operation and trial run

4.1 Keypad description



4.2 Keypad indicator light description

Indicator status	Status Description
RUN Running lights	Light off: stop
	Light on: Running
L/R Run command indicator	Light off: Keypad control
	Light on: Terminal control
	Flashing: Communication control
F/R Positive and negative indicator	Light off: Forward running
	Light on: Reverse
Unit indicator	Light on: shows frequency
	Light on: shows current
	Light on: shows voltage
	Hz/A light on: show motor running RPM
	A/V light on: shows percentage

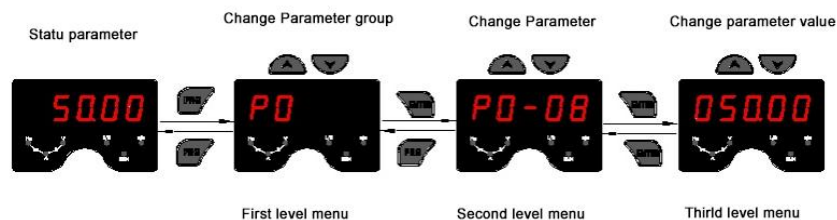
a) Keyboard instructions

Button function description

Button	Name	Function
PRG	Programming key	Enter or exit the first level menu.
ENTER	Enter	Enter the menu screen step by step and confirm the setting parameters.
▲	Increment key	Increment of data or function code.
▼	Decrement key	Decrement of data or function codes.
▶	Shift key	In the stop display interface and the running display interface, the display parameters can be selected cyclically; when modifying the parameters, the modification position of the parameters can be selected.
RUN	Run key	In keyboard operation mode, it is used for running operation.
STOP/RESET	Stop/reset	In the running state, pressing this key can be used to stop the running operation; in the fault alarm state, it can be used to reset the operation; the characteristics of this key are restricted by the function code P7-02.
JOG/REV	Multi-function selection key	According to P7-01 for function switching selection, it can quickly switch the command source and direction.

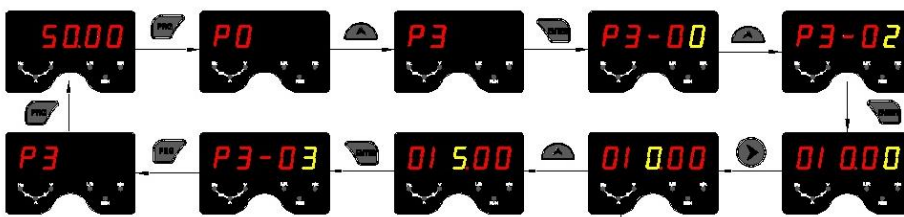
b) Function code modification instructions

The operation panel of the inverter adopts a three-level menu structure for parameter setting and other operations. The three-level menus are: function parameter group (first-level menu) → function code (second-level menu) → function code setting value (third-level menu). The operation flow is shown in the figure below.



Note: When operating in the third-level menu, you can press PRG or ENTER to return to the second-level menu. The difference between the two is: press the ENTER key to save the set parameters and return to the secondary menu and automatically transfer to the next function code; while pressing the PRG key will directly return to the secondary menu without storing the parameters, and return to the current function code .

Example: An example of changing the function code P3-02 from 10.00Hz to 15.00Hz. (Black characters indicate flashing bits)



In the third level menu, if the parameter has no flashing bit, it means that the function code cannot be modified. The possible reasons are:

- 1) This function code is an unmodifiable parameter. Such as actual test parameters, running record parameters, etc.
- 2) This function code cannot be modified in the running state, and can be modified only after stopping.

V. Function parameter

PP-00 is set to a non-zero value, that is, the parameter protection password is set. The parameter menu must be entered after the password is entered correctly. To cancel the password, set PP-00 to 0.

“☆”: Indicates that this parameter can be changed while the inverter is running or stopped.

“★”: Indicates that this parameter cannot be changed while the inverter is running.

“●”: Indicates that this parameter is only the actual detected record value and cannot be changed.

5.1 Basic function parameter

P0 Basic function parameter				
Function code	Parameter Name	Setting Range	Default	Property
P0-00	GP type	1: G (Constant torque load model) 2: P (Fan, pump type load model)	1	★
P0-01	Speed control mode selection	0: Speed sensorless vector control (SVC) 1: Speed sensor vector control (FVC) 2: V/F control	2	★
P0-02	Run command source selection	0: Operation panel command channel (LED close) 1: Terminal command channel (LED open) 2: Communication command channel (LED Flashing)	0	☆
P0-03	Main frequency source X selection	0: Digital setting (UP/DOWN) non-record at power failure 1: Digital setting (UP/DOWN) record at power failure 2: AI1 3: AI2 4: panel potentiometer 5: Pulse setting (X6) 6: Multi-segment instruction 7: Simple PLC 8: PID 9: Communication given	1	★
P0-04	Auxiliary frequency source Y selection	Same as P0-03 (main frequency source X selection)	0	★
P0-05	Frequency offset of auxiliary frequency source for X operation	0: relative to the CMimum frequency 1: relative to the frequency source X	0	☆
P0-06	Frequency offset of auxiliary frequency source for Y operation	0%~150%	100%	☆
P0-07	Frequency source overlay selection	Unit position: frequency source selection 0: main frequency source X 1: primary and secondary operations (the operation relationship is determined by ten bits) 2: Main frequency source X and auxiliary frequency source Y are switched 3: Main frequency source X and main and auxiliary operation result switching 4: Auxiliary frequency source Y and main and auxiliary operation result switching Ten digits: frequency source primary and secondary operation relationship 0: main + auxiliary 1: main - auxiliary 2: the CMimum of the two 3: the minimum of the two	00	☆
P0-08	Preset frequency	0.00Hz~CMimum frequency (P0-10)	50.00Hz	☆
P0-09	Running direction	0: Consistent direction 1: Opposite direction	0	☆
P0-10	CMimum frequency	50.00Hz~600.00Hz	50.00Hz	★
P0-11	Upper frequency source	0: Set by P0-12 1: AI1 2: AI2 3: AI3 4: Pulse setting 5: Communication given	0	★
P0-12	Source of frequency upper limit	Lower limit frequency P0-14~CMimum frequency P0-10	50.00Hz	☆
P0-13	Frequency upper limit offset	0.00Hz~CMimum frequency P0-10	0.00Hz	☆
P0-14	Frequency lower limit	0.00Hz~Upper limit frequency P0-12	0.00Hz	☆
P0-15	Carrier frequency	0.5kHz~16.0kHz	depending	☆

P0-16	Carrier frequency is adjusted with temperature	0: no 1: yes	0	☆
P0-17	acceleration time 1	0.00s~65000s	depending	☆
P0-18	deceleration time 1	0.00s~65000s	depending	☆
P0-19	Acceleration/deceleration unit	0: 1S 1: 0.1S 2: 0.01S	1	★
P0-21	Frequency offset of auxiliary frequency source for X and Y operation	0.00Hz~CMimum frequency P0-10	0.00Hz	☆
P0-22	Frequency command resolution	1: 0.1Hz 2: 0.01Hz	2	★
P0-23	Digital setting frequency shutdown memory selection	0: non-record 1: record	1	☆
P0-24	Motor parameter group selection	0: motor parameter1 1: motor parameter 2	0	★
P0-25	Acceleration/deceleration time reference frequency	0: CMimum frequency (P0-10) 1: Setting frequency 2: 100Hz	0	★
P0-26	Runtime frequency command UP/DOWN benchmark	0: running frequency 1: setting frequency	0	★
P0-27	Command source bundle frequency source	Single digit: operation panel command binding frequency source selection 0: No binding 1: Digital setting frequency 2: AI1 3: AI2 4: AI3 5: Pulse X6 6: Multi-speed 7: Simple PLC 8: PID 9: Communication given Tens place: terminal command binding frequency source selection Hundreds place: communication command binding frequency source selection Thousands: automatic operation binding frequency source selection	0000	☆

P1 motor parameter

Function code	Parameter Name	Setting Range	Default	Property
P1-00	Motor type selection	0: Ordinary asynchronous motor 1: Variable frequency asynchronous motor	0	★
P1-01	Motor rated power	0.1kW~1000.0kW	depending	★
P1-02	Motor rated voltage	1V~2000V	depending	★
P1-03	Motor rated current	0.1A~6553.5A	depending	★
P1-04	Motor rated frequency	0.01Hz~CMimum frequency	depending	★
P1-05	Motor rated speed	1rpm~65535rpm	depending	★
P1-06	Asynchronous motor stator resistance	0.001Ω~65.535Ω	auto tuning	★
P1-07	Synchronous motor stator resistance	0.001Ω~65.535Ω	auto tuning	★
P1-08	Leakage inductive reactance(asynchronous motor)	0.01mH~655.35mH	auto tuning	★
P1-09	Mutual inductive reactance(asynchronous motor)	0.1mH~6553.5mH	auto tuning	★
P1-10	No-load current (asynchronous motor)	0.01A~P1-03	auto tuning	★
P1-27	Encoder line number	1~65535	1024	★
P1-28	Encoder type	0: ABZ Incremental encoder 1: UVW Incremental encoder 2: Resolver	0	★
P1-30	A/B phase sequence of ABZ incremental encoder	0: forward 1:reserve		
P1-31	Encoder mounting angle	0.0 ~ 359.9°	0	★
P1-32	UVW incremental encoder	0: forward 1:reserve	0.0°	☆
P1-33	UVW Encoder offset angle	0.0 ~ 359.9°	0	★
P1-34	Rotary transformer pole pair	1~65535	1	★
P1-36	Speed feedback PG disconnection detection time	0.0: no act 0.1s~10.0s	0.0s	★
P1-37	Tuning selection	0:no act 1: Static tuning 2: Complete tuning 3: Static full tuning	0	★

Group P2 Motor vector control parameter

Motor code	Parameter Name	Setting Range	Default	Property
P2-00	Speed loop proportional gain 1	1~100	30	☆
P2-01	Speed loop integration time 1	0.01s~10.00s	0.50s	☆
P2-02	Switching frequency 1	0.00~P2-05	5.00Hz	☆
P2-03	Speed loop proportional gain 2	1~100	20	☆
P2-04	Speed loop integration time 2	0.01s~10.00s	1.00s	☆
P2-05	Switching frequency 2	P2-02~CMimum frequency	10.00Hz	☆
P2-06	Vector control slip gain	50%~200%	100%	☆
P2-07	Speed loop filter time constant	0.000s~0.100s	0.055s	☆
P2-08	Vector controlled overexcitation gain	0~200	64	☆
P2-09	Torque upper limit source in speed control mode	0: function code P2-10 set 1: AI1 2: AI2 3: AI3 4: Pulse setting 5: Communication given 6: MIN (AI1,AI2) 7: CM (AI1,AI2) 1-7 option correspond to P2-10	0	☆
P2-10	Torque upper limit in speed control mode	0.0%~200.0%	160.0%	☆
P2-13	Excitation adjustment proportional gain	0~60000	2000	☆
P2-14	Excitation regulation integral gain	0~60000	1300	☆
P2-15	Torque adjustment proportional gain	0~60000	2000	☆
P2-16	Torque adjustment integral gain	0~60000	1300	☆
P2-17	Speed loop integral separation	0: Invalid 1: Valid	0	☆
P2-20	CMimum output voltage coefficient	100%~110%	105%	★
P2-21	Weak magnetic zone CMimum torque factor	50%~200%	100%	☆

P3 Group V/FControl parameters

Function code	Parameter Name	Setting Range	Default	Property
P3-00	VF Curve setting	0: Linear V/F 1: V/F 2: Square V/F 3: 1.2-power V/F 4: 1.4-power V/F 6: 1.6-power 8: 1.8-power V/F 9: Reserved 10: V/F complete separation 11: V/F half separation	0	★
P3-01	Torque boost	0.0% (Auto) 0.1%~30.0%	Model dependent	☆
P3-02	Torque boost cutoff frequency	0.00Hz~CMimum frequency	50.00Hz	★
P3-03	Multi-point VF frequency point 1	0.00Hz~P3-05	0.00Hz	★
P3-04	Multi-pointVF voltage 1	0.0%~100.0%	0.0%	★
P3-05	Multi-pointVF frequency 2	P3-03~P3-07	0.00Hz	★
P3-06	Multi-pointVF voltage 2	0.0%~100.0%	0.0%	★
P3-07	Multi-pointVF frequency3	P3-05~Motor rated frequency (P1-04)	0.00Hz	★
P3-08	Multi-pointVF voltage 3	0.0%~100.0%	0.0%	★
P3-09	VF Slip compensation gain	0.0%~200.0%	0.0%	☆
P3-10	VF Overexcitation gain	0~200	120	☆
P3-11	VF Oscillation suppression gain	0~100	40	☆
P3-12	Oscillation suppression mode selection	0~4	3	★

P3-13	Voltage source for V/F separation	0: Digital setting(d3-12) 1: AI1 2: AI2 3: AI3 4: Pulse setting(HDI) 5: Multi-function 6: Simple PLC 7: PID 8: Communication setting Note:100.0% corresponds to the rated motor voltage	0	☆
P3-14	Voltage digital setting for V/F separation	0 V ~ rated motor voltage	0V	☆
P3-15	Voltage rise time of V/F separation	0.0s~1000.0s	0.0s	☆
P3-16	VF Separate voltage deceleration time	0.0s ~ 1000.0s note: Indicates the time from 0V changes to the rated voltage of the motor	0.0s	☆
P3-17	VF Separate shutdown mode selection	0: frequency / voltage is independently reduced to 0 1: After the voltage is reduced to 0, the frequency is reduced again.	0	☆
P3-18	Overcurrent stall operating current	50~200%	150%	★
P3-19	Over-current suppression	0 Invalid、 1 Valid	1	★
P3-20	Over current stall gain	0~100	20	☆
P3-21	Double speed overrun speed action current compensation coefficient	50~200%	50%	★
P3-22	Overvoltage stall operating voltage	200.0V~2000.0V	Model dependent 220V: 380V 380V: 760V 480V: 850V 690V: 1250V 1140V: 1900V	★
P3-23	Overvoltage stall enable	0 Invalid、 1 Valid	1	★
P3-24	Overvoltage stall suppression frequency gain	0~100	30	☆
P3-25	Overvoltage stall suppression voltage gain	0~100	30	☆
P3-26	Overvoltage stall CMimum rising frequency limit	0~50Hz	5Hz	★
P3-27	Slip compensation time constant	0.1~10.0s	0.5	☆
P3-34	Water supply mode selection	0: Turn off the water supply mode 1: Turn on the water supply mode	0	★
P3-35	Pressure gauge range	Range: 0.00~5.00Mpa Set according to the actual pressure gauge range	1.00MPa	☆
P3-36	Target pressure	Range: 0.00~P3-35 target pressure value (Mpa)	0.50MPa	☆
P3-37	Sleep frequency	Range: 0.00~upper limit frequency P0-10	25.00HZ	☆
P3-38	Sleep delay	Range: 0.0~3600.0s	0.0S	☆
P3-39	Percentage of wake-up stress	When the feedback pressure is greater than the target pressure and the operating frequency is less than P3-38 sleep delay, it will enter the sleep state	80.00%	☆
P3-40	Wake-up delay	Range: 0.0~100%, percentage of target pressure P3-36	0.0s	☆

Group P4 Input terminal

function code	Parameter Name	Setting Range	Default	Property
P4-00	X1 Terminal function selection	0: No function	1	★
P4-01	X2 Terminal function selection	1: Forward running	2	★
P4-02	X3 Terminal function selection	2: Reverse running	0	★
P4-03	X4 Terminal function selection	3: Three-line running	0	★
P4-04	X6 Terminal function selection	4: Forward turning	0	★
P4-05	X5 Terminal function selection	5: Reverse jog	0	★
P4-06	X7 Terminal function selection	6: Terminal UP	0	★
P4-07	X8 Terminal function selection	7: Terminal DOWN	0	★
P4-08	X9 Terminal function selection	8: Free stop 9: Fault reset 10: Run pause 11: External fault normally open input 12: Multi-speed 1 13: Multi-speed 2 14: Multi-speed 3 15: Multi-speed 4	0	★

		16: Acceleration/deceleration time selection 1 17: Acceleration/deceleration time selection 2 18: Frequency source switching 19: Keyboard UP/DOWN setting is cleared (terminal\keyboard) 20: Run command switch 21: Acceleration/deceleration prohibition 22: PID pause 23: PLC reset 24: swing frequency pause 25: counter input 26: Counter reset 27: Length count input 28: Length reset 29: Torque control prohibited 30: Pulse frequency input 32: Immediate DC braking 33: External fault normally closed input 34: If this terminal is valid, frequency modification is allowed; if the terminal status is invalid, frequency modification is prohibited. 35: PID action direction is reversed 36: External parking terminal 1 37: Control command switch 2 38: PID integration pause 39: Frequency source X and preset frequency switching 40: Frequency source Y and preset frequency switching 43: PID parameter switching 44: User-defined fault 1 45: User-defined fault 2 46: Speed/torque control switching 47: Emergency stop 48: External parking terminal 2 49: Deceleration DC braking 50: This running time is cleared. 51: Two-wire/three-wire switching 52: Reverse rotation is prohibited		
P4-10	Input terminal filter time	0.000s~1.000s	0.10s	☆
P4-11	Terminal command mode	0: two-wire type 1: two-wire type 2 2: Three-wire type 1 3: Three-wire type 2	0	★
P4-12	Terminal UP/DOWN rate of change	0.001Hz/s~65.535Hz/s	1.00Hz/s	☆
P4-13	AI Curve 1 minimum input	0.00V~P4-15	0.00V	☆
P4-14	AI Curve 1 minimum input corresponding value	-100.0%~+100.0%	0.0%	☆
P4-15	AI Curve 1 CMimum input	P4-13~+10.00V	10.00V	☆
P4-16	AI Curve 1 CMimum input corresponding value	-100.0%~+100.0%	100.0%	☆
P4-17	AI1 Filtering time	0.00s~10.00s	0.10s	☆
P4-18	AI Curve 2 minimum input	0.00V~P4-20	0.00V	☆
P4-19	AI Curve 2 minimum input corresponding value	-100.0%~+100.0%	0.0%	☆
P4-20	AI Curve 2 CMimum input	P4-18~+10.00V	10.00V	☆
P4-21	AI Curve 2 CMimum input corresponding value	-100.0%~+100.0%	100.0%	☆
P4-22	AI2 Filtering time	0.00s~10.00s	0.10s	☆
P4-23	AI Curve 3 minimum input	-10.00V~P4-25	0V	☆
P4-24	AI Curve 3 minimum input corresponding value	-100.0%~+100.0%	0%	☆
P4-25	AI Curve 3 CMimum input	P4-23~+10.00V	10.00V	☆
P4-26	AI Curve 1 CMimum input corresponding value	-100.0%~+100.0%	100.0%	☆
P4-27	AI3 Filtering time	0.00s~10.00s	0.10s	☆
P4-28	Pulse minimum input	0.00kHz~P4-30	0.00kHz	☆
P4-29	Pulse minimum input corresponding value	-100.0%~100.0%	0.0%	☆
P4-30	Pulse CMimum input	P4-28~100.00kHz	50.00kHz	☆
P4-31	Pulse CMimum input corresponding value	-100.0%~100.0%	100.0%	☆
P4-32	Pulse input filtering time	0.00s~10.00s	0.10s	☆
P4-33	AI Curve selection	Unit: AI1 curve selection 1: curve 1 (2 points, P4-13 to P4-16) 2: Curve 2 (2 points, P4-18 to P4-21) 3: Curve 3 (2 points, P4-23 to P4-26) 4: Curve 4 (4 points, A6-00 to A6-07) 5: Curve 5 (4 points, A6-08 to A6-15) Ten: AI2 curve selection, ibid. Hundreds: AI3 curve selection, ibid.	H.321	☆

P4-34	AI Below the minimum input setting selection	Unit digit: AI1 is lower than the minimum input setting selection 0: corresponding to the minimum input setting 1:0.0% Ten digits: AI2 is lower than the minimum input setting selection, the same as above hundreds: AI3 is lower than the minimum input setting selection, the same as above	H.000	☆
P4-35	Input terminal X1 delay time	0.0s~3600.0s	0.0s	★
P4-36	Input terminal X2 delay time	0.0s~3600.0s	0.0s	★
P4-37	Input terminal X3 delay time	0.0s~3600.0s	0.0s	★
P4-38	Input terminal valid mode selection 1	Unit's digit: X1 Ten's digit: X2 Hundred's digit: X3 Thousands digit: X4 million: X6 0: The X terminal is connected to COM and the disconnection is invalid. 1: X terminal and COM connection are invalid, the disconnection is valid.	00000	★
P4-39	Input terminal valid mode selection 2	Unit's: X5 Ten's: X7 Hundred's: X8 Thousand's: X9 0: The X terminal is connected to COM and the disconnection is invalid. 1: X terminal and COM connection are invalid, the disconnection is valid.	00000	★

P5 Group Output terminal

function code	Parameter Name	Setting Range	Default	Property
P5-00	Y2 Output mode selection	0: Pulse output 1: Switch output	1	☆
P5-01	Y2 Switch output function selection	0: No function 1: The inverter is running 2: Fault shutdown output 3: Frequency level detection FDT1 4: Frequency arrival 5: Zero speed operation 6: Motor overload pre-alarm 7: Inverter overload pre-alarm 8: Set the value to arrive 9: Specify the value to arrive 10: Length reached 11: PLC cycle completed 12: Accumulated running time reaches 13: Frequency limit 14: Torque limit 15: Ready to run 16: AI1>AI2 17: Upper limit frequency arrival 18: Lower limit frequency arrives (no output when stopped) 19: Undervoltage status output 20: Communication setting 23: 2 in zero speed operation (also output when stopping) 24: Accumulated power-on time arrives 25: Frequency level detection FDT2 26: Frequency 1 reaches output 27: Frequency 2 reaches output 28: Current 1 reaches the output 29: Current 2 reaches the output 30: Timing arrives at output 31: AI1 input exceeds limit 32: Offload 33: Reverse running 34: Zero current state 35: Module temperature reached 36: Output current overrun 37: Lower limit frequency arrives (stop output also) 38: Fault warning output (continue to run) 39: Motor overheat pre-alarm 40: This running time arrives	0	☆
P5-02	Relay output function selection		2	☆
P5-03	Relay output function selection 2(Optional)		0	☆
P5-04	Y1 switch output function selection		1	☆
P5-05	Y3 switch output function selection (optional)		4	☆
P5-06	Y2 Pulse output function selection	0: running frequency 1: setting frequency 2: Output current 3: Output torque (absolute value) 4: Output power 5: Output voltage	0	☆

P5-07	AO Output function selection	6: Pulse input (100.0% corresponds to 100.0kHz) 7: AI1 8: AI2 9: AI3 (extended) 10: length 11: Record the value 12: Communication settings 13: Motor speed	0	☆
P5-08	AO2 Output function selection (optional)	14: Output current (Output current 55KW and below 100% corresponds to 100.0A, 75KW and above 100% corresponds to 1000.0A) 15: Output voltage (According to the bus voltage 1000.0V corresponding to 100%)	1	☆
P5-09	Y2 Pulse output CMimum frequency	0.01kHz~100.00kHz	50.00kHz	☆
P5-10	AO Zero offset coefficient	-100.0%~+100.0%	0.0%	☆
P5-11	AO Gain	-10.00~+10.00	1.00	☆
P5-12	Extended AO2 zero bias coefficient	-100.0%~+100.0%	0.0%	☆
P5-13	Extended AO2 gain	-10.00~+10.00	1.00	☆
P5-17	Y2 output delay time	0.0s~3600.0s	0.0s	☆
P5-18	Relay output delay time	0.0s~3600.0s	0.0s	☆
P5-19	Relay 2 delay time	0.0s~3600.0s	0.0s	☆
P5-20	Y1 Output delay time	0.0s~3600.0s	0.0s	☆
P5-21	Y3 Delay time (expansion)	0.0s~3600.0s	0.0s	☆
P5-22	Output terminal valid state selection	Unit's: Y2 Ten's: Relay Hundred's: Relay 2 Thousand's: Y1 Ten thousand's digit: Y3 0: The output terminal is connected to COM and the disconnection is invalid. 1: The output terminal is not connected to COM, and the disconnection is valid.	00000	☆

P6 Group Start and stop control

function	Parameter Name	Setting Range	Default	Property
P6-00	Startup mode	0: Direct start 1: Speed tracking restart 2: Pre-excitation start (AC asynchronous machine)	0	☆
P6-01	Speed tracking method	0: Start from stop frequency 1: Start at zero speed 2: Starting with CMimum frequency	0	★
P6-02	Speed tracking	1~100	20	☆
P6-03	Starting frequency	0.00Hz~10.00Hz	0.00Hz	☆
P6-04	Start frequency hold time	0.0s~100.0s	0.0s	★
P6-05	Start DC braking current	0%~100%	50%	★
P6-06	Start DC braking time	0.0s~100.0s	0.0s	★
P6-07	Acceleration and deceleration	0: Linear acceleration/deceleration 1: S-curve acceleration/deceleration A 2: S curve acceleration and deceleration B	0	★
P6-08	S curve starting time ratio	0.0%~ (100.0%-P6-09)	30.0%	★
P6-09	S curve stop time ratio	0.0%~ (100.0%-P6-08)	30.0%	★
P6-10	Stop mode	0: slow down stop 1: free stop	0	☆
P6-11	Stop DC braking start frequency	0.00Hz~CMimum frequency	0.00Hz	☆
P6-12	DC brake waiting time	0.0s~100.0s	0.0s	☆
P6-13	DC braking current at stop	0%~100%	50%	☆
P6-14	DC braking time at stop	0.0s~100.0s	0.2s	☆
P6-15	Brake usage rate	0%~100%	100%	☆
P6-18	Speed tracking current	30%~200%	Model dependent	★
P6-21	Demagnetization time	0.0~5.0s	Model dependent	★
P6-23	AVR function	0: Not effective 1: Only deceleration effective 2: Fully effective	2	☆

P7 Group Keypad and display

function code	Parameter Name	Setting Range	Default	Property
P7-01	JOG/REV button	0: JOG/REV key is invalid 1: Keyboard command and terminal (communication) command switching 2: Forward and reverse switching 3: Forward rotation 4: Reverse jog	0	★
P7-02	Function selection	0: Only the button command under the keyboard command is valid. 1: Button stop is valid under any circumstances	1	☆
P7-03	STOP/RESET button	0000~FFFF Bit0: Operating frequency 1 (Hz) Bit1: Setting frequency (Hz) Bit2: Bus voltage (V) Bit3: Output voltage (V) Bit4: Output current (A) Bit5: Output power (kW) Bit6: Output torque (%) Bit7: Input status	1F	☆

		Bit8: Output Status Bit9: AI1 Voltage (V) Bit10: AI2 voltage (V) Bit11: AI3 voltage (V) Bit12: Count value Bit13: Length value Bit14: Load speed display Bit15: PID setting		
P7-04	LED operation display parameter 2	0000~FFFF Bit0: PID feedback Bit1: PLC stage Bit2: Pulse input frequency (kHz) Bit3: Operating frequency 2 (Hz) Bit4: remaining running time Bit5: AI1 pre-correction voltage (V) Bit6: AI2 pre-correction voltage (V) Bit7: AI3 pre-correction voltage (V) Bit8: Line speed Bit9: Current power-on time (Hour) Bit10: Current running time (Min) Bit11: PULSE input pulse frequency (Hz) Bit12: Communication setting value Bit13: Encoder feedback speed (Hz) Bit14: Main frequency X Display (Hz) Bit15: Auxiliary frequency Y display (Hz)	0	☆
P7-05	LED stop display parameters	0000~FFFF Bit00: Set frequency (Hz) Bit01: Bus voltage (V) Bit02: X input status Bit03: 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 Bit11: PID setting Bit12: PULSE input pulse frequency (kHz)	33	☆
P7-06	Load speed display factor	0.0001~6.5000	1.0000	☆
P7-07	Module heat sink temperature	0.0°C~100.0°C	-	●
P7-08	Product ID	-	-	●
P7-09	Cumulative running time	0h~65535h	-	●
P7-10	Product ID	-	-	●
P7-11	Software version number	-	-	●
P7-12	Load speed display	0: 0 decimal place 1:1 decimal place 2: 2 decimal places 3: 3 decimal places	1	☆
P7-13	Decimal point	0~65535h	-	●
P7-14	Cumulative power-on time	0~65535 degree	-	●

P8 Group Auxiliary Functions

function code	Parameter Name	Setting Range	Default	Property
P8-00	Jog running frequency	0.00Hz~CMimum frequency	2.00Hz	☆
P8-01	Jog acceleration time	0.0s~6500.0s	20.0s	☆
P8-02	Jog deceleration time	0.0s~6500.0s	20.0s	☆
P8-03	Acceleration time 2	0.0s~6500.0s	Model dependent	☆
P8-04	Deceleration time 2	0.0s~6500.0s	Model dependent	☆
P8-05	Acceleration time 3	0.0s~6500.0s	Model dependent	☆
P8-06	Deceleration time 3	0.0s~6500.0s	Model dependent	☆
P8-07	Acceleration time 4	0.0s~6500.0s	Model dependent	☆
P8-08	Deceleration time 4	0.0s~6500.0s	Model dependent	☆
P8-09	Jump frequency 1	0.00Hz~CMimum frequency	0.00Hz	☆
P8-10	Jump frequency 2	0.00Hz~CMimum frequency	0.00Hz	☆
P8-11	Jump frequency amplitude	0.00Hz~CMimum frequency	0.01Hz	☆
P8-12	Positive reversal dead time	0.0s~3000.0s	0.0s	☆
P8-13	Reverse control enable	0: Allow 1: Prohibit	0	☆
P8-14	The set frequency is lower than the lower limit frequency.	0: Run at the following frequency limit 1: stop 2: Zero speed operation	0	☆
P8-15	Droop control	0.00Hz~10.00Hz	0.00Hz	☆
P8-16	Set the cumulative power-on arrival time	0h~65000h	0h	☆

P8-17	Set cumulative run arrival time	0h~65000h	0h	☆
P8-18	Start protection selection	0: no protection 1: protection	0	☆
P8-19	Frequency detection value FDT1	0.00Hz~CMimum frequency	50.00Hz	☆
P8-20	Frequency detection hysteresis value (FDT1)	0.0%~100.0% (FDT1)	5.0%	☆
P8-21	Frequency arrival detection width	0.0%~100.0% (CMimum frequency)	0.0%	☆
P8-22	Whether the jump frequency is effective during acceleration and deceleration	0: Invalid 1: Valid	0	☆
P8-25	Acceleration time 1 and acceleration time 2 switch frequency points	0.00Hz~CMimum frequency	0.00Hz	☆
P8-26	Deceleration time 1 and deceleration time 2 switch frequency points	0.00Hz~CMimum frequency	0.00Hz	☆
P8-27	Terminal jog priority	0: Invalid 1: Valid	1	☆
P8-28	Frequency detection value FDT2	0.00Hz~CMimum frequency	50.00Hz	☆
P8-29	Frequency detection hysteresis value (FDT2)	0.0%~100.0% (FDT2)	5.0%	☆
P8-30	Arbitrary arrival frequency detection value 1	0.00Hz~CMimum frequency	50.00Hz	☆
P8-31	Arbitrary arrival frequency detection width 1	0.0%~100.0% (CMimum frequency)	0.0%	☆
P8-32	Arbitrary arrival frequency detection value 2	0.00Hz~CMimum frequency	50.00Hz	☆
P8-33	Arbitrary arrival frequency detection width 2	0.0%~100.0% (CMimum frequency)	0.0%	☆
P8-34	Zero current detection level	0.0%~300.0% 100.0% Corresponding motor rated current	5.0%	☆
P8-35	Zero current detection delay time	0.01s~600.00s	0.10s	☆
P8-36	Output current limit	0.0% (Not detecting) 0.1%~300.0% (Motor rated current)	200.0%	☆
P8-37	Output current overrun detection delay time	0.00s~600.00s	0.00s	☆
P8-38	Arbitrary arrival current 1	0.0%~300.0% (Motor rated current)	100.0%	☆
P8-39	Arbitrary current 1 width	0.0%~300.0% (Motor rated current)	0.0%	☆
P8-40	Arbitrary arrival current 2	0.0%~300.0% (Motor rated current)	100.0%	☆
P8-41	Arbitrary current 2 width	0.0%~300.0% (Motor rated current)	0.0%	☆
P8-42	Timing function selection	0:Invalid 1:Valid	0	★
P8-43	Timing run time selection	0: P8-44 setting 1: AI1 2: AI2 3: AI3 Analog input range corresponding P8-44	0	★
P8-44	Timed running time	0.0Min~6500.0Min	0.0Min	★
P8-45	AI1 input voltage protection value lower limit	0.00V~P8-46	3.10V	☆
P8-46	AI1 input voltage protection value upper limit	P8-45~10.00V	6.80V	☆
P8-47	Module temperature reached	0℃~100℃	75℃	☆
P8-48	Cooling fan control	0: The fan is running during operation 1: The fan is always running	0	☆
P8-49	Wake-up frequency	Sleep frequency (P8-51) ~CMimum frequency (P0-10)	0.00Hz	☆
P8-50	Wake-up delay time	0.0s~6500.0s	0.0s	☆
P8-51	Sleep frequency	0.00Hz~Wake-up frequency (P8-49)	0.00Hz	☆

P8-52	Sleep delay time	0.0s~6500.0s	0.0s	☆
P8-53	This run arrival time setting	0.0Min~6500.0Min	0.0Min	★
P8-54	Output power correction factor	0.00% ~ 200.0%	100.0%	☆
P9 Group Failure and protection				
function code	Parameter Name	Setting Range	Default	Property
P9-00	Motor overload protection option	0: Not allow 1: Allow	1	☆
P9-01	Motor overload protection gain	0.20~10.00	1.00	☆
P9-02	Motor overload warning coefficient	50%~100%	80%	☆
P9-03	Overvoltage stall gain	0~100	30	☆
P9-04	Overvoltage stall protection voltage	650~800	760V	☆
P9-05	Over-current stall suppression gain	0~100,same as P3-20	20	☆
P9-06	Over-current stall action current	50% ~ 200%, same as P3-18	150%	☆
P9-07	Power-on short circuit protection option	0: Invalid 1: Valid	1	☆
P9-08	Brake unit action starting voltage	200.0~2000.0V 220V: 360V 380V: 690V	690V	☆
P9-09	Number of automatic resets	0~20	0	☆
P9-10	Fault DO action selection during automatic fault reset	0: no act 1: act	0	☆
P9-11	Fault auto reset interval	0.1s~100.0s	1.0s	☆
P9-12	Input phase loss / contactor suction protection option	Unit's: Input phase loss protection option Ten's: Contactor suction protection option 0: Disable 1: Allow	11	☆
P9-13	Output phase loss protection option	0: Disable 1: Allow	1	☆
P9-14	First failure type	0: no fault 2: accelerated overcurrent 3: Deceleration over current 4: Constant speed over current 5: Accelerated overvoltage 6: Deceleration overvoltage 7: Constant speed overvoltage 8: Buffer resistor overload 9: Under voltage 10: Inverter overload 11: Motor overload 12: Input phase loss	—	●
P9-15	Second failure type	13: Output phase loss 14: Module overheating 15: External fault 16: Communication error 17: Contactor abnormality 18: Abnormal current detection 19: Tuning error 20: PG card is abnormal 21: Parameter read and write error 22: Inverter hardware is abnormal 23: Motor short circuit to ground 24: Reserved	—	●

P9-16	Third (most recent) fault type	26: Run time arrives 27: User Defined Fault 1 28: User-defined fault 2 29: Power on time arrives 30: Offload 31: Loss of PID feedback at runtime 40: Fast current limit timeout 41: Switching motor during operation 42: Speed deviation is too large 43: Motor overspeed 45: Motor overheating 51: Initial position error	—	•
P9-17	Frequency at the third failure	—	—	•
P9-18	Current at the third fault	—	—	•
P9-19	Bus voltage at the third fault	—	—	•
P9-20	Third fault input terminal status	—	—	•
P9-21	Third fault output terminal status	—	—	•
P9-22	Inverter status at the third fault	—	—	•
P9-23	Power-on time during the third fault	—	—	•
P9-24	Run time at the third fault	—	—	•
P9-27	Frequency at the second failure	—	—	•
P9-28	Current at the second fault	—	—	•
P9-29	Bus voltage at the second fault	—	—	•
P9-30	Second fault input terminal status	—	—	•
P9-31	Second fault output terminal status	—	—	•
P9-32	Inverter status at the second fault	—	—	•
P9-33	Power-on time during the second fault	—	—	•
P9-34	Run time at the second fault	—	—	•
P9-37	Frequency at the first failure	—	—	•
P9-38	Current at the first fault	—	—	•
P9-39	Bus voltage at the first fault	—	—	•
P9-40	First fault input terminal status	—	—	•
P9-41	First fault output terminal status	—	—	•
P9-42	Inverter status at the first fault	—	—	•
P9-43	Power-on time at the first failure	—	—	•
P9-44	Run time at the first failure	—	—	•
P9-47	Fault protection action selection 1	Unit's: Motor overload (Err 11) 0: free stop 1: Stop by stop mode 2: Keep running Ten's: Input phase loss (Err12) as above Hundred's: Output phase loss (Err13) as above Thousand's: External fault (Err15) is the same as above Ten Thousand's digits: communication abnormality (Err16) is the same as above	00000	☆
P9-48	Fault protection action selection 2	Unit's digit: Encoder/PG card incorrect (Err20) 0: free stop 1: Stop by stop mode 2: keep running Ten's digit: function code reading and writing incorrect (Err21) 0: free stop 1: stop by stop mode Thousand's digit: motor too hot (Err25) same as P9-47 Ten Thousand's digit: Run time arrives (Err26) with P9-47	00000	☆

P9-49	Fault protection action selection 3	Unit's: Custom Fault 1 (Err27) Same as P9-47 Ten's: Custom Fault 1 (Err27) Same as P9-47 Hundred's: Power-on time arrives (Err29) with P9-47 Thousand's: Offload (Err30) 0: Free parking 1: slow down parking 2: Deceleration to 7% of the rated frequency, automatically return to the set frequency when no load is lost Ten Thousand's digit: PID feedback loss (Err31) with P9-47	00000	☆
P9-50	Fault protection action selection 4	Unit's: Speed deviation is too large (Err42) with P9-47 Ten's: Motor overspeed (Err43) with P9-47 Hundred's: Initial position error (Err51) Same as P9-47 Thousand's: Speed feedback error (Err52) with P9-47	00000	☆
P9-54	Continue to run frequency selection when fault occurs	0: Run at the current operating frequency 1: run at the set frequency 2: Run at the upper limit frequency 3: Run at the following frequency limit 4: Run at abnormal standby frequency	0	☆
P9-55	Abnormal backup frequency	60.0%~100.0% (100.0% correspond CMimum frequencyP0-10)	100.0%	☆
P9-56	Motor temperature sensor type	0: No temperature sensor 1: PT100 2: PT1000	0	☆
P9-57	Motor overheat protection threshold	0℃~200℃	110℃	☆
P9-58	Motor overheat pre-alarm threshold	0℃~200℃	90℃	☆
P9-59	Instantaneous power failure action selection	0: Invalid 1: deceleration 2: Deceleration stop	0	☆
P9-60	Instantaneous stop action pause judgment voltage	80.0~100.0%	85.0%	☆
P9-61	Instantaneous power failure voltage rise judgment time	0.00s~100.00s	0.50s	☆
P9-62	Instantaneous power failure action judgment voltage	60.0%~100.0% (Standard bus voltage)	80.0%	☆
P9-63	Drop protection option	0: Invalid 1: Valid	0	☆
P9-64	Drop detection level	0.0~100.0%	10.0%	☆
P9-65	Drop detection time	0.0~60.0s	1.0s	☆
P9-67	Overspeed detection value	0.0%~50.0% (CMimum frequency)	20.0%	☆
P9-68	Overspeed detection time	0.0s~60.0s	5.0s	☆
P9-69	Speed deviation excessive detection value	0.0%~50.0% (CMimum frequency)	20.0%	☆
P9-70	Speed deviation too large detection time	0.0s~60.0s	5.0s	☆
P9-71	Instantaneous stop non-stop gain Kp	0~100	40	☆
P9-72	Instantaneous stop non-stop integral coefficient Ki	0~100	30	☆
P9-73	Instantaneous stop and stop motion deceleration time	0~300.0s	20.0s	★
PA Group PID function				
function code	Parameter Name	Setting Range	Default	Property
PA-00	PID given source	0: PA-01 set 1: AI1 2: AI2 3: AI3 (panel potentiometer) 4: Pulse setting 5: Communication given 6: Multi-speed given	0	☆

PA-01	PID value given	0.0%~100.0%	50.0%	☆
PA-02	PID feedback source	0: AI1 1: AI2 2: AI3/ Panel potentiometer 3: AI1-AI2 4: Pulse setting (X6) 5: Communication given 6: AI1+AI2 7: CM (AI1 , AI2) 8: MIN (AI1 , AI2)	0	☆
PA-03	PID action direction	0: Positive action 1: Negative	0	☆
PA-04	PID given feedback range	0~65535	1000	☆
PA-05	Proportional gain Kp1	0.0~100.0	40.0	☆
PA-06	Integration time Ti1	0.01s~10.00s	1.00s	☆
PA-07	Derivative time Td1	0.000s~10.000s	0.000s	☆
PA-08	PID reverse cutoff frequency	0.00~CMimum frequency	2.00Hz	☆
PA-09	PID deviation limit	0.0%~100.0%	0.0%	☆
PA-10	PID differential limiting	0.00%~100.00%	0.10%	☆
PA-11	PID given change time	0.00~650.00s	0.00s	☆
PA-12	PID feedback filter time	0.00~60.00s	0.00s	☆
PA-13	PID output filtering time	0.00~60.00s	0.00s	☆
PA-15	Proportional gain Kp2	0.0~100.0	20.0	☆
PA-16	Integration time Ti2	0.01s~10.00s	2.00s	☆
PA-17	Derivative time Td2	0.000s~10.000s	0.000s	☆
PA-18	PID parameter switching condition	0: Do not switch 1: Switch through the input terminal 2: Automatic switching according to deviation	0	☆
PA-19	PID parameter switching deviation 1	0.0%~PA-20	20.0%	☆
PA-20	PID parameter switching deviation 2	PA-19~100.0%	80.0%	☆
PA-21	PID initial value	0.0%~100.0%	60%	☆
PA-22	PID initial value hold time	0.00~650.00s	5s	☆
PA-25	PID integral attribute	Unit's: Integral separation 0: Invalid 1: Valid Ten's: Whether to stop integration after output to the limit 0: Continue to integrate 1: Stop the points	00	☆
PA-26	PID feedback loss detection value	0.0%: no judge feedback loss 0.1%~100.0%	0.0%	☆
PA-27	PID feedback loss detection time	0.0s~20.0s	0.0s	☆
PA-28	PID shutdown operation	0: stop does not operate 1: stop operation	1	☆

Pb Group Swing frequency, fixed length and counting

function code	Parameter Name	Setting Range	Default	Property
Pb-00	Swing frequency setting method	0: Relative to the center frequency 1: Relative to the CMimum frequency	0	☆
Pb-01	Swing frequency range	0.0%~100.0%	0.0%	☆
Pb-02	Kick frequency amplitude	0.0%~50.0%	0.0%	☆
Pb-03	Wobble cycle	0.1s~3000.0s	10.0s	☆
Pb-04	Swing frequency triangle wave rise time	0.1%~100.0%	50.0%	☆
Pb-05	Set length	0m~65535m	1000m	☆
Pb-06	Actual length	0m~65535m	0m	☆
Pb-07	Pulse number per meter	0.1~6553.5	100.0	☆
Pb-08	Set count value	1~65535	1000	☆
Pb-09	Specified count value	1~65535	1000	☆

PC Group Multi-segment instruction, simple PLC

function code	Parameter	Setting Range	Default	Property
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PC-00	Multi-segment instruction 0	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-01	Multi-segment instruction 1	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-02	Multi-segment instruction 2	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-03	Multi-segment instruction 3	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-04	Multi-segment instruction 4	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-05	Multi-segment instruction 5	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-06	Multi-segment instruction 6	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-07	Multi-segment instruction 7	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-08	Multi-segment instruction 8	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-09	Multi-segment instruction 9	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-10	Multi-segment instruction 10	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-11	Multi-segment instruction 11	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-12	Multi-segment instruction 12	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-13	Multi-segment instruction 13	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-14	Multi-segment instruction 14	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-15	Multi-segment instruction 15	0.0Hz ~ ±P0-10	0.0Hz	☆
PC-16	Simple PLC operation mode	0: Single run end shutdown 1: Keep the final value at the end of a single run 2: Always cycle	0	☆
PC-17	Simple PLC power-down memory selection	Unit's: Power-down memory selection 0: No power loss, no memory 1: Power failure memory Ten's: Stop memory selection 0: Stop without memory 1: Stop memory	00	☆
PC-18	0th run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-19	The 0th section acceleration and deceleration time selection	0~3	0	☆
PC-20	First run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-21	The first stage acceleration and deceleration time selection	0~3	0	☆
PC-22	2nd run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-23	The second stage acceleration and deceleration time selection	0~3	0	☆
PC-24	Third run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-25	The third stage acceleration and deceleration time selection	0~3	0	☆
PC-26	Stage 4 run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-27	Section 4 acceleration and deceleration time selection	0~3	0	☆
PC-28	5th run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-29	Section 5 acceleration and deceleration time selection	0~3	0	☆
PC-30	Run time of paragraph 6	0.0s (h) ~6553.5s (h)	0.0s(h)	☆

PC-31	Section 6 acceleration and deceleration time selection	0~3	0	☆
PC-32	Run time of paragraph 7	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-33	Section 7 acceleration and deceleration time selection	0~3	0	☆
PC-34	8th run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-35	Section 8 acceleration and deceleration time selection	0~3	0	☆
PC-36	9th run time	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-37	The 9th paragraph acceleration and deceleration time selection	0~3	0	☆
PC-38	Run time of paragraph 10	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-39	Section 10 acceleration and deceleration time selection	0~3	0	☆
PC-40	Run time in paragraph 11	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-41	The 11th paragraph acceleration and deceleration time selection	0~3	0	☆
PC-42	Run time in paragraph 12	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-43	The 12th paragraph acceleration and deceleration time selection	0~3	0	☆
PC-44	Run time of paragraph 13	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-45	The 13th paragraph acceleration and deceleration time selection	0~3	0	☆
PC-46	Run time in paragraph 14	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-47	The 14th paragraph acceleration and deceleration time selection	0~3	0	☆
PC-48	Run time in paragraph 15	0.0s (h) ~6553.5s (h)	0.0s(h)	☆
PC-49	The 15th paragraph acceleration and deceleration time selection	0~3	0	☆
PC-50	Simple PLC runtime unit	0: s (second) 1: h (hour)	0	☆
PC-51	Multi-segment instruction 0 given mode	0: given by PC-00 1: given by AI1 2: AI2 given 3: AI3 given (panel potentiometer) 4: Pulse given 5: PID given 6: PO-08 can be modified by UP/DOWN	0	☆

Pd Group Communication parameter

function code	Parameter	Setting Range	Default	Property
Pd-00	Baud rate	Unit's: MODBUS 0: 300BPS 1: 600BPS 2: 1200BPS 3: 2400BPS 4: 4800BPS 5: 9600BPS 6: 19200BPS 7: 38400BPS 8: 57600BPS 9: 115200BPS Ten's: Profibus-DP 0: 115200BPs 1: 208300BPs 2: 256000BPs 3: 512000Bps Thousand's : CANlink Baud rate (Hundred's : Reserved) 0: 20 1: 50 2: 100 3: 125 4: 250 5: 500 6: 1M	5005	☆
Pd-01	Data Format	0: no checking (8-N-2) 1: even checking (8-E-1) 2: odd checking (8-O-1) 3: 8-N-1	0	☆
Pd-02	Local address	1~247, 0 Broadcast address	001	☆
Pd-03	Response delay	0ms~20ms	02	☆

Pd-04	Communication timeout	0.0 (Invalid) , 0.1s~60.0s	0.0	☆
Pd-05	Data transfer format selection	Unit's: 0: Non-standard MODBUS protocol 1: Standard MODBUS protocol	31	☆
Pd-06	Communication read current resolution	0: 0.01A 1: 0.1A	0	☆
Pd-08	Canlink communication timeout	0.0s: Invalid 0.1~60.0s	0.0	☆

PE Group Customized function code

function code	Parameter Name	Setting Range	Default	Property
PE-00	User function code 0	P0-00 ~ PP-xx A0-00 ~ Ax-xx U0-xx ~ U0-xx U3-00~U3-xx	U3-17	☆
PE-01	User function code 1		U3-16	☆
PE-02	User function code 2		P0.00	☆
Reserved	Reserved		Reserved	☆
PE-28	User function code 28		P0.00	☆
PE-29	User function code 29		P0.00	☆

PP Group function code management

function code	Parameter Name	Setting Range	Default	Property
PP-00	user password	0~65535	0	☆
PP-01	Parameter initialization	0: no operation 1: Restore factory value, excluding motor parameters 2: Clear record information 3: Restore factory values, including motor parameters 4: Backup user current parameters 501: Restore user backup parameters	0	★
PP-02	Function parameter group display selection	Unit's digit: U group display 0: not displayed 1: display Ten's digit: A group display 0: not displayed 1: display	11	★
PP-03	Personality parameter group display selection	Unit's digit: User customization 0: Do not display 1: Display Ten's digit: User change 0: Do not display 1: Display	00	☆
PP-04	Function code	0: Can be modified 1: Cannot be modified	0	☆

A0 Group Torque control parameter

function code	Parameter Name	Setting Range	Default	Property
A0-00	Speed/torque control selection	0: speed control 1: torque control	0	★
A0-01		0: Digital setting (A0-03) 1: AI1 2: AI2 3: AI3 4: Pulse setting 5: Communication reference 6: MIN (AI1, AI2) 7: CM (AI1, AI2) (1-7 options full scale, Corresponding to A0-03 number setting)	0	★
A0-03	Torque setting source selection in torque control mode	-200.0%~200.0%	150.0%	☆
A0-05	Torque digital setting	0.00Hz~CMimum frequency	50.00Hz	☆
A0-06	Torque control forward CMimum frequency	0.00Hz~CMimum frequency	50.00Hz	☆

A0-07	Torque control reverse CMimum frequency	0.00s~65000s	0.00s	☆
A0-08	Torque control acceleration time	0.00s~65000s	0.00s	☆

A5 Group Control optimization parameter

function code	Parameter Name	Setting Range	Default	Property
A5-00	DPWM switching upper limit frequency	5.00Hz ~CMimum frequency	8.00Hz	☆
A5-01	PWM modulation method	0: Asynchronous modulation 1: Synchronous modulation	0	☆
A5-02	Dead zone compensation mode selection	0: No compensation 1: Compensation mode 1 2: Compensation mode 2	1	☆
A5-03	Random PWM depth	0: Invalid 1~10: Random PWM depth	0	☆
A5-04	Fast current limiting	0: Invalid 1: Valid	1	☆
A5-05	Current detection compensation	0~100	5	☆
A5-06	Under voltage setting	60.0%~140.0%	100.0%	☆
A5-07	SVC optimization mode selection	0: Not optimized 1: Optimized mode 1 2: Optimized mode 2	1	☆
A5-08	Dead time adjustment	100%~200%	150%	★
A5-09	Overvoltage setting	200.0V ~ 2200.0V	Model dependent	★

A6 Group AI Curve setting

function code	Parameter Name	Setting Range	Default	Property
A6-00	AI curve 4 minimum input	-10.00V ~ A6-02	0.00V	☆
A6-01	AI curve 4 minimum input correspondence setting	-100.0% ~ +100.0%	0.0%	☆
A6-02	AI curve 4 inflection point 1 input	A6-00 ~ A6-04	3.00V	☆
A6-03	AI curve 4 inflection point 1 input corresponding setting	-100.0% ~ +100.0%	30.0%	☆
A6-04	AI curve 4 inflection point 2 input	A6-02 ~ A6-06	6.00V	☆
A6-05	AI curve 4 inflection point 2 input corresponding setting	-100.0% ~ +100.0%	60.0%	☆
A6-06	AI curve 4 CMimum input	A6-06 ~ +10.00V	10.00V	☆
A6-07	AI curve 4 CMimum input corresponding setting	-100.0% ~ +100.0%	100.0%	☆
A6-08	AI curve 5 minimum input	-10.00V ~ A6-10	-10.00V	☆
A6-09	AI curve 5 minimum input corresponding setting	-100.0% ~ +100.0%	-100.0%	☆
A6-10	AI curve 5 inflection point 1 input	A6-08 ~ A6-12	-3.00V	☆

A6-11	AI curve 5 inflection point 1 input corresponding setting	-100.0% ~ +100.0%	-30.0%	☆
A6-12	AI curve 5 inflection point 2 input	A6-10 ~ A6-14	3.00V	☆
A6-13	AI curve 5 inflection point 2 input corresponding setting	-100.0% ~ +100.0%	30.0%	☆
A6-14	AI curve 5 CMimum input	A6-12 ~ +10.00V	10.00V	☆
A6-15	AI curve 5 CMimum input corresponding setting	-100.0% ~ +100.0%	100.0%	☆
A6-24	AI1 sets the jump point	-100.0% ~ 100.0%	0.0%	☆
A6-25	AI1 sets the jump range	0.0% ~ 100.0%	0.5%	☆
A6-26	AI2 sets the jump point	-100.0% ~ 100.0%	0.0%	☆
A6-27	AI2 sets the jump range	0.0% ~ 100.0%	0.5%	☆
A6-28	AI3 sets the jump point	-100.0% ~ 100.0%	0.0%	☆
A6-29	AI3 sets the jump range	0.0% ~ 100.0%	0.5%	☆

AC Group AIAO checking

function code	Parameter Name	Setting Range	Default	Property
AC-00	AI1 measured voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-01	AI1 display voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-02	AI1 measured voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-03	AI1 display voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-04	AI2 measured voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-05	AI2 display voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-06	AI2 measured voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-07	AI2 display voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-08	AI3 measured voltage 1	-9.999V ~ 10.000V	factory reset	☆
AC-09	AI3 display voltage 1	-9.999V ~ 10.000V	factory reset	☆
AC-10	AI3 measured voltage 2	-9.999V ~ 10.000V	factory reset	☆
AC-11	AI3 display voltage 2	-9.999V ~ 10.000V	factory reset	☆
AC-12	AO1 target voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-13	AO1 measured voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-14	AO1 target voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-15	AO1 measured voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-16	AO2 target voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-17	AO2 measured voltage 1	0.500V ~ 4.000V	factory reset	☆
AC-18	AO2 target voltage 2	6.000V ~ 9.999V	factory reset	☆
AC-19	AO2 measured voltage 2	6.000V ~ 9.999V	factory reset	☆

5.2 Monitoring parameter

U0 Group Basic monitoring parameter				
function code	Parameter name	Display range	Instruction	Communication address

U0-00	Operating frequency	0.01~320.00Hz	Display operating frequency and set frequency (Hz)	7000H
U0-01	Setting frequency			7001H
U0-02	bus voltage	0.0~3000.0V	Display bus voltage (V)	7002H
U0-03	The output voltage	0~1140V	Display inverter output voltage (V)	7003H
U0-04	Output current	0.0~6553.5A	Display inverter output current (A)	7004H
U0-05	Output Power	0~32767kW	Display inverter output power (kW)	7005H
U0-06	Output torque	-200.0~200.0%	Display inverter output torque during operation	7006H
U0-07	Input terminal status	0~32767	Input status: X1~X9 corresponds to Bit0~Bit8	7007H
U0-08	Output terminal status	0~1023	Output terminal status: Y2, relay,	7008H
U0-09	AI1 voltage	0.01V	Y1 corresponds to Bit0, Bit1, Bit3	7009H
U0-10	AI2 voltage	0.01V	Display input AI1 voltage (V)	700AH
U0-11	AI3 voltage	0.01V	Display input AI2 voltage (V)	700BH
U0-12	Count value	0~65535	Display input AI3 voltage (V)	700CH
U0-13	Length value	0~65535	Display count value	700DH
U0-14	Load speed display	0~65535	Display length value	700EH
U0-15	PID setting	0~65535	Display load speed	700FH
U0-16	PID feedback value	0~65535	Display PID settings	7010H
U0-17	PLC stage	0~16	Display PLC operation phase	7011H
U0-18	Input pulse frequency	0.00~10.00kHz	Display X6 input pulse frequency (kHz)	7012H
U0-19	Feedback speed	-320.0~+320.0	Display the actual output frequency of the inverter Hz	7013H
U0-20	Remaining running time	0.0~6500.0 Minutes	Show remaining runtime	7014H
U0-21	AI1 pre-correction voltage	0.01~10.20V	Display AI1 pre-correction voltage	7015H
U0-22	AI2 pre-correction voltage	0.01~10.20V	Display AI2 pre-correction voltage	7016H
U0-23	AI3 pre-correction voltage	0.01~10.20V	Display AI3 pre-correction voltage	7017H
U0-24	Line speed	0~65535m/Min	The number of pulses per minute and	7018H
U0-25	Current power-on time	1Min	PB-07, calculate the line speed value	7019H
U0-26	Current running time	0.1Min	Display current cumulative power-on time	701AH
U0-27	Input pulse frequency	1Hz	Display PULSE input pulse frequency	701BH
U0-28	Communication setting	0.01%	Display communication settings	701CH
U0-29	Encoder feedback speed	0.01Hz	Display encoder feedback speed	701DH
U0-30	Main frequency X	0.01Hz	Display main frequency X display	701EH
U0-31	Auxiliary frequency Y	0.01Hz	Display auxiliary frequency Y display	701FH
U0-32	View memory address values	1	Display to view any memory address value	7020H
U0-33	Synchronous machine rotor position	0.0°	Display synchronous machine rotor position	7021H
U0-34	Motor temperature value	1 °C	Display motor temperature value	7022H
U0-35	Target torque	0.1%	Display target torque (%)	7023H
U0-36	Rotational position	1	Display the position of the rotation	7024H
U0-37	Power factor angle	0.1	Display power factor angle	7025H

U0-38	ABZ position	0.0	Show ABZ position	7026H
U0-39	VF separation target voltage	1V	Display VF separation target voltage	7027H
U0-40	VF separation output voltage	1V	Display VF separate output voltage	7028H
U0-41	Input status visual display	1	Display input status visual display	7029H
U0-42	Output status visual display	1	Display output status visual display	702AH
U0-43	Input status visual display 1	1	Display input status visual display 1	702BH
U0-44	Input status visual display 2	1	Display input status visual display 2	702CH
U0-45	accident details	0	Display fault information	702DH
U0-58	Z signal counter	-	1	703AH
U0-59	Set frequency (%)	-	0.01%	703BH
U0-60	Operating frequency (%)	-	0.01%	703CH
U0-61	Inverter status	-	1	703DH
U0-62	Current fault code	-	1	703EH
U0-64	Number of slaves	-	1	7040H
U0-65	Torque limit	-	0.01%	7041H
U0-73	Motor serial number	-	0: motor 1 1: motor 2	7046H
U0-74	Actual output torque of the motor	-	-300-300%	7047H

VI. Inverter braking resistor selection table

AC drive power	Braking Unit	Recommended resistance power	Minimum resistance value	QTY
0.75kW-220V	Built-in Braking unit as standard	80W	$\geq 80\Omega$	1
1.5kW-220V		200W	$\geq 55\Omega$	1
2.2kW-220V		200W	$\geq 35\Omega$	1
3.7kW-220V		300W	$\geq 25\Omega$	1

0.75kW-380V		150W	$\geq 300\Omega$	1
1.5kW-380V		150W	$\geq 220\Omega$	1
2.2kW-380V		250W	$\geq 200\Omega$	1
3.7kW-380V		400W	$\geq 130\Omega$	1
5.5kW-380V		500W	$\geq 90\Omega$	1
7.5kW-380V		800W	$\geq 65\Omega$	1
11kW-380V		1kW	$\geq 43\Omega$	1
15kW-380V		1.3kW	$\geq 32\Omega$	1
18.5kW-380V		1.5kW	$\geq 25\Omega$	1
22kW-380V		1.5kW	$\geq 22\Omega$	1
30kW and above	External			

Note: There is high voltage and high temperature on the surface of the braking resistor when it is working. Please consider the safety and flammability of the surrounding environment when installing.

The connection of multiple braking resistors is parallel. Please consult the brake manufacturer for specific information on the selection of external brake units and resistors.

VII. Fault alarm and Solutions

When the inverter fails during operation, the inverter will immediately protect the motor from output, and the inverter fault relay contact will act and display the fault code on the inverter display panel. Before seeking service, users can perform self-checking according to the tips in this section to analyze the cause of the fault. If the fault cannot be solved, please seek technical support from our company or product agent.

Fault name	display	Troubleshoot the cause	solutions
Inverter unit protection	Err01	1, the inverter output circuit is short circuit 2. The motor and inverter are too long. 3, the module is overheated 4, the internal wiring of the inverter is loose 5. The main control board or driver board is abnormal.	1, eliminate peripheral faults 2, install reactor or output filter 3. Check if the air duct is blocked and the fan is normal. 4, plug in all the cables

		6, the inverter module is abnormal	5, seeking technical support 6, seeking technical support
Accelerating overcurrent	Err02	<ol style="list-style-type: none"> 1. There is grounding or short circuit in the output circuit of the inverter. 2. The control mode is vector and there is no parameter identification. 3, the acceleration time is too short 4. Manual torque boost or V/F curve is not suitable 5, the voltage is low 6. Start the motor that is rotating 7. Sudden load during acceleration 8, the frequency converter selection is too small 	<ol style="list-style-type: none"> 1, eliminate peripheral faults 2. Perform motor parameter identification 3, increase the acceleration time 4, adjust the manual lift or V / F curve 5, adjust the voltage to the normal range 6, select the speed tracking start or wait for the motor to stop and then start 7, cancel the sudden load 8, select the inverter with a larger power level
Deceleration over current	Err03	<ol style="list-style-type: none"> 1. There is grounding or short circuit in the output circuit of the inverter. 2. The control mode is vector and there is no parameter identification. 3, the deceleration time is too short 4, the voltage is low 5, sudden load during deceleration 6, no brake unit and brake resistor installed 	<ol style="list-style-type: none"> 1, eliminate peripheral faults 2. Perform motor parameter identification 3, increase the deceleration time 4, adjust the voltage to the normal range 5, cancel the sudden load 6, install the brake unit and resistor
Constant speed over current	Err04	<ol style="list-style-type: none"> 1. There is grounding or short circuit in the output circuit of the inverter. 2. The control mode is vector and there is no parameter identification. 3, the voltage is low 4. Is there a sudden load during operation? 5, the frequency converter selection is too small 	<ol style="list-style-type: none"> 1, eliminate peripheral faults 2. Perform motor parameter identification 3. Adjust the voltage to the normal range 4, cancel the sudden load 5, select the inverter with a larger power level
Accelerated over voltage	Err05	<ol style="list-style-type: none"> 1, the input voltage is too high 2. There is an external force drag motor running during the acceleration process. 3, the acceleration time is too short 4, no brake unit and brake resistor installed 	<ol style="list-style-type: none"> 1. Adjust the voltage to the normal range 2, cancel the additional power or install braking resistor 3, increase the acceleration time 4, install the brake unit and resistor
Deceleration over voltage	Err06	<ol style="list-style-type: none"> 1, the input voltage is too high 2. There is external force drag motor running during deceleration 3, the deceleration time is too short 4, no brake unit and brake resistor installed 	<ol style="list-style-type: none"> 1. Adjust the voltage to the normal range 2, cancel the additional power or install braking resistor 3, increase the deceleration time 4, install the brake unit and resistor
Constant speed over voltage	Err07	<ol style="list-style-type: none"> 1, the input voltage is too high 2. There is an external force drag motor running during the running process. 	<ol style="list-style-type: none"> 1. Adjust the voltage to the normal range 2, cancel the additional power or install braking resistor
Control power failure	Err08	<ol style="list-style-type: none"> 1. The input voltage is not within the range specified by the specification. 	<ol style="list-style-type: none"> 1. Adjust the voltage to the specification
Under voltage fault	Err09	<ol style="list-style-type: none"> 1, instantaneous power outage 2. The input voltage of the inverter is not within the scope of the specification. 3, the bus voltage is not normal 4, rectifier bridge and buffer resistor are not normal 5, the driver board or control board is abnormal 	<ol style="list-style-type: none"> 1, reset failure 2. Adjust the voltage to the normal range 3. Ask for technical support 4, Ask for technical support 5, Ask for technical support
Inverter overload	Err10	<ol style="list-style-type: none"> 1. Is the load too large or the motor is blocked? 2, the inverter selection is too small 	<ol style="list-style-type: none"> 1. Reduce the load and check the motor and mechanical conditions. 2, select the inverter with a larger power level
Motor overload	Err11	<ol style="list-style-type: none"> 1. Is the motor protection parameter P9-01 suitable? 2. Is the load too large or the motor stalls? 3, the frequency converter selection is too small 	<ol style="list-style-type: none"> 1, set this parameter correctly 2. Reduce the load and check the motor and mechanical conditions 3. Select a frequency converter with a larger power level
Input phase loss	Err12	<ol style="list-style-type: none"> 1, three-phase input power is not normal 2. The drive board or lightning protection board is abnormal. 	<ol style="list-style-type: none"> 1. Troubleshooting the peripheral lines 2, seeking technical support

Output phase loss	Err13	<ol style="list-style-type: none"> 1. The lead of the inverter to the motor is not normal. 2. The three-phase output is unbalanced when the motor is running. 3. The driver board or module is abnormal. 	<ol style="list-style-type: none"> 1, eliminate peripheral faults 2. Check if the three phases of the motor are normal. 3. Seek technical support
Module overheating	Err14	<ol style="list-style-type: none"> 1, the ambient temperature is too high 2. Air duct blockage or fan damage 3, module thermistor is damaged 4, the inverter module is damaged 	<ol style="list-style-type: none"> 1, reduce the ambient temperature 2, clean the air duct or replace the fan 3, replace the thermistor 4. Replace the inverter module
External device failure	Err15	Check external terminal input fault signal	Reset operation
communication fail	Err16	<ol style="list-style-type: none"> 1, the host computer is not working properly 2, the communication line is not normal 3. The communication parameter PD group setting is incorrect. 	<ol style="list-style-type: none"> 1. Check the wiring of the upper computer 2, check the communication cable 3, correctly set the communication parameters
Contactors failure	Err17	<ol style="list-style-type: none"> 1. The driver board and power supply are abnormal. 2, the contactor is not normal 3, three-phase input power shortage 	<ol style="list-style-type: none"> 1. Replace the driver board or power board 2, replace the contactor 3, check the three-phase input power
Current detection fault	Err18	<ol style="list-style-type: none"> 1, check the Hall device is abnormal 2, the driver board is abnormal 	<ol style="list-style-type: none"> 1, replace the Hall device 2, replace the driver board
Motor tuning failure	Err19	<ol style="list-style-type: none"> 1. The motor parameters are not set according to the nameplate. 2. The parameter identification process times out. 	<ol style="list-style-type: none"> 1. Set the motor parameters correctly according to the nameplate 2. Check the inverter to the motor lead
Code disk failure	Err20	<ol style="list-style-type: none"> 1, the encoder model does not match 2, the encoder connection error 3, the encoder or PG card is damaged 	<ol style="list-style-type: none"> 1, correctly set the encoder type 2, eliminate line faults 3. Replace the encoder or PG card
EEPROM read and write failure	Err21	<ol style="list-style-type: none"> 1, EEPROM chip damage 	<ol style="list-style-type: none"> 1. Replace the main control board
Inverter hardware failure	Err22	Overvoltage or overcurrent	According to overvoltage or overcurrent fault handling
Short circuit to ground	Err23	Motor short to ground	Replace cable or motor
Accumulated running time to failure	Err26	Cumulative running time reaches the set value	Parameter initialization clear record information
User-defined fault 1	Err27	Check the signal of the terminal input custom fault 1	Reset operation
User-defined fault 2	Err28	Check the signal of the terminal input custom fault 2	Reset operation
Accumulated power-on time to failure	Err29	Cumulative power-on time reaches the set value	Parameter initialization clear record information
Download fault	Err30	The inverter running current is less than P9-64	Check if the load is out of range or whether the P9-64 and P9-65 settings are in accordance with the actual working conditions.
Runtime PID feedback loss failure	Err31	PID feedback is less than PA-26 set value	Check the PID feedback signal or set PA-26 to a suitable value
Wave-by-wave	Err40	<ol style="list-style-type: none"> 1. Is the load too large or the motor is blocked? 2, the inverter selection is too small 	<ol style="list-style-type: none"> 1. Reduce the load and check the motor and mechanical conditions. 2.

current limiting fault			Select the inverter with higher power level.
Switching motor failure during operation	Err41	Change the current motor selection through the terminal while the inverter is running	After the inverter stops, the motor is switched.
Speed deviation is too large	Err42	1. Encoder parameter setting is incorrect 2. no parameter identification 3. The parameters P9-69 and P9-60 are unreasonable.	1, set the encoder parameters correctly 2. Perform motor parameter identification 3. Set the detection parameters according to the actual conditions.
Motor overspeed failure	Err43	1. Encoder parameter setting is incorrect 2. no parameter identification 3. The parameters P9-69 and P9-60 are unreasonable.	1, set the encoder parameters correctly 2. Perform motor parameter identification 3. Set the detection parameters reasonably
Motor over temperature fault	Err45	1, the temperature sensor wiring is loose 2, the motor temperature is too high	1, detecting temperature sensor wiring 2. Reduce the carrier frequency or take other heat dissipation measures to dissipate the motor
Initial position error	Err51	The motor parameters are too different from the actual deviation	Check if the motor parameters are correct and pay attention to whether the rated current is set too small.

VIII. Common faults and solution

The following fault conditions may be encountered during the use of the inverter. Please refer to the following method for simple fault analysis.

Table 8-1 Common faults and solutions

No.	Fault phenomenon	Possible Causes	solutions
1	No display after power on	The grid voltage is not or too low; The switching power supply on the inverter drive board is faulty; The control board is disconnected from the driving board and the keyboard; The internal components of the inverter are damaged.	Check the input power or bus voltage; Re-insert 8-core and 34-core cable; Seek factory services;
2	Power on display FZKJ	Poor contact between the drive board and the control board; The relevant device on the control board is damaged; The motor or motor line is shorted to ground;	Re-insert 8-core and 34-core cable; Seek factory services;

		Hall failure or grid voltage is too low;	
3	Power on display "Err23" alarm	The motor or output line is shorted to ground; The inverter is damaged;	Use a shaker to measure the insulation of the motor and the output line; seek factory service;
4	The power-on inverter is normal, and it displays "FZKJ" after running and stops immediately.	The fan is damaged or blocked; The peripheral control terminal wiring has a short circuit; The internal components of the inverter are damaged.	Replace the fan; Eliminate external short circuit faults; Seek factory services;
5	Frequently reported Err14 module overheat fault	The carrier frequency setting is too high. The fan is damaged or the air duct is blocked. Inverter internal device damage	Reduce the carrier frequency (P0-15). Replace the fan and clean the air duct. Seek factory to replace.
6	The motor does not rotate after the inverter is running.	Motor and motor line; Inverter parameter setting error (motor parameter); Poor contact between the driver board and the control board;	Reconfirm the connection between the inverter and the motor; Replace the motor or remove mechanical problems; Check and reset the motor parameters;
7	The input terminal is invalid.	The parameter setting is incorrect; External signal error; Control board failure;	Check and reset the P4 group parameters; Reconnect the external signal line; Seek factory services;
8	When closed loop vector control, the motor speed cannot be increased.	Encoder failure; The encoder is connected to the wrong line or has poor contact; PG card or drive board failure;	Replace the code wheel and reconfirm the wiring; replace the PG card; Seeking service;
9	The inverter frequently reports over current and over voltage faults.	Motor parameter setting is incorrect; The acceleration and deceleration time is not suitable Load fluctuations;	Reset motor parameters or motor tuning; Set the appropriate acceleration and deceleration time; Seek factory services;
10	Power up (or run) to report Err17	The soft start contactor is not attracted; Phase loss of three-phase input power supply;	Check if the contactor cable is loose; Check if the contactor is faulty; Check if the 24V power supply of the contactor is normal.;
11	Power on display EEEE	The relevant device on the control board is damaged;	Replace the control panel;