MIKOM

MV Series Vector Inverter
User Manual

V1.3

MIKOM Electrical Technology Co.,Ltd.

Preface

Thank you for purchasing the MV series AC drive developed by Weihai MIKOM Electrical Technology Co., Ltd. The MV series AC drive is a general-purpose high-performance vector control AC drive. It can implement the control of asynchronous motor and permanent magnet synchronous motor (PMSM). It increases the user programmable function, background monitoring software and communication bus function, and supports multi-kind PG cards. It is used to drive various automation production equipment involving textile, paper-making, wiredrawing, machine tool, packing, food, fan and pump.

This manual describes the correct use of the MV series AC drive, including selection, parameter setting, commissioning, maintenance & inspection. Read and understand the manual before use and forward the manual to the end user.

Inverter is precision electronic products, for first-time users of this product, should read this manual carefully. When you happen any problems in use and can't help you with the solution of this manual, please relate our local agent or directly contact with our company, our professional and technical personnel will be positive to serve you.

Product Checking

Upon unpacking, check:

• Whether the nameplate model and AC drive ratings are consistent with your order. The box contains the AC drive, certificate of conformity, user manual and warranty card.

• Whether the AC drive is damaged during transportation. If you find any omission or damage, contact Inovance or your supplier immediately.

Catalogue

Chapter 1   Safety Information

1.1 Safety Information

In this manual, the notices are graded based on the degree of danger:

⚡ **Danger**   indicates that failure to comply with the notice will result in severe personal injury or even death.

⚠ **Warning**   indicates that failure to comply with the notice will result in personal injury or property damage.

Read this manual carefully so that you have a thorough understanding. Installation,commissioning or maintenance may be performed in conjunction with this chapter. Inovance will assume no liability or responsibility for any injury or loss caused by improper operation.

Use	Safety Grade	Precautions
Before installation	⚡ **Danger**	◆ Do not install the equipment if you find water seepage, component missing or damage upon unpacking. ◆ Do not install the equipment if the packing list does not conform to the product you received.
	⚠ **Warning**	◆ Handle the equipment with care during transportation to prevent damage to the equipment. ◆ Do not use the equipment if any component is damaged or missing.Failure to comply will result in personal injury. ◆ Do not touch the components with your hands. Failure to comply will result in static electricity damage.
During installation	⚡ **Danger**	◆ Install the equipment on incombustible objects such as metal,and keep it away from combustible materials. Failure to comply may result in a fire. ◆ Do not loosen the fixed screws of the components, especially the screws with red mark.
	⚠ **Warning**	◆ Do not drop wire end or screw into the AC drive. Failure to comply will result in damage to the AC drive. ◆ Install the AC drive in places free of vibration and direct sunlight. ◆ When two AC drives are laid in the same cabinet, arrange the installation positions properly to ensure the cooling effect.
At wiring	⚡ **Danger**	◆ Wiring must be performed only by qualified personnel under instructions described in this manual. Failure to comply may result in unexpected accidents. ◆ A circuit breaker must be used to isolate the power supply and the AC drive. Failure to comply may result in a fire. ◆ Ensure that the power supply is cut off before wiring. Failure to comply may result in electric shock. ◆ Tie the AC drive to ground properly by standard. Failure to comply may result in electric shock.
	⚠ **Warning**	◆ Never connect the power cables to the output terminals (U,V, W) of the AC drive. Pay attention to the marks of the wiring terminals and ensure correct ◆ wiring. Failure to comply will result in damage to the AC drive.

Use	Safety Grade	Precautions
		◆ Never connect the braking resistor between the DC bus terminals (+) and (-). Failure to comply may result in a fire. ◆ Use wire sizes recommended in the manual. Failure to comply may result in accidents. ◆ Use a shielded cable for the encoder, and ensure that the shielding layer is reliably grounded.
Before power-on	⚡ **Danger**	◆ Check that the following requirements are met: – The voltage class of the power supply is consistent with the rated voltage class of the AC drive. – The input terminals (R, S, T) and output terminals (U, V, W) are properly connected. – No short-circuit exists in the peripheral circuit. – The wiring is secured. Failure to comply will result in damage to the AC drive ◆ Do not perform the voltage resistance test on any part of the AC drive because such test has been done in the factory. Failure to comply will result in accidents.
	⚠ **Warning**	◆ Cover the AC drive properly before power-on to prevent electric shock. ◆ All peripheral devices must be connected properly under the instructions described in this manual. Failure to comply will result in accidents.
After power-on	⚠ **Danger**	◆ Do not open the AC drive's cover after power-on. Failure to comply may result in electric shock. ◆ Do not touch any I/O terminal of the AC drive. Failure to comply may result in electric shock.
	⚠ **Warning**	◆ Do not touch the rotating part of the motor during the motor auto-tuning or running. Failure to comply will result in accidents. ◆ Do not change the default settings of the AC drive. Failure to comply will result in damage to the AC drive.
During operation	⚠ **Danger**	◆ Do not touch the fan or the discharging resistor to check the temperature. Failure to comply will result in personal burnt. ◆ Signal detection must be performed only by qualified personnel during operation. Failure to comply will result in personal injury or damage to the AC drive.
	⚠ **Warning**	◆ Avoid objects falling into the AC drive when it is running. Failure to comply will result in damage to the AC drive. ◆ Do not start/stop the AC drive by turning the contactor ON/OFF. Failure to comply will result in damage to the AC drive.
During maintenance	⚡ **Danger**	◆ Repair or maintenance of the AC drive may be performed only by qualified personnel. Failure to comply will result in personal injury or damage to the AC drive. ◆ Do not repair or maintain the AC drive at power-on. Failure to comply will result in electric shock. ◆ Repair or maintain the AC drive only ten minutes after the AC drive is powered off. This allows for the residual voltage in the capacitor to discharge to a safe

Use	Safety Grade	Precautions
		value. Failure to comply will result in personal injury. ◆ Ensure that the AC drive is disconnected from all power supplies before starting repair or maintenance on the AC drive. ◆ Set and check the parameters again after the AC drive is replaced. ◆ All the pluggable components must be plugged or removed only after power-off. ◆ The rotating motor generally feeds back power to the AC drive. As a result, the AC drive is still charged even if the motor stops, and the power supply is cut off. Thus ensure that the AC drive is disconnected from the motor before starting repair or maintenance on the AC drive.

1.2   Inverter scrap matters needing attention

Please note:

◆ The electrolytic capacitors on the main circuits and PCB may explode when they are burnt.

◆ Poisonous gas is generated when the plastic parts are burnt.

◆ Treat them as ordinary industrial waste.

Chapter 2   Product Specifications

2.1   Model Code

2.1.1   Explanation to nameplate

MIKOM®   INVERTER

MODEL：MV20G-4T5.5G/7.5PS CE
INPUT：3PH 380±15％ 16.5A 50/60Hz
OUTPUT：3PH 0~380V 14.0A 8.6KVA
FREQUENCY RANGE：0～400Hz
TEL：400-680-8951
S/N: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
        D303352644343

2-1 Nameplate

2.1.2   Series Description

MV10 G － 4 T 5.5G/7.5P S

Version type
S：Standard edition   G：Customized version

Power level
5.5G:5.5KW Overloading type   7.5P：7.5KWLight load type

Input power
S：Single-phase T：Three-phase

Votage grade
2：220V 4：380V

Subfamily
G：general type F: high-frequency type L: ascension type B: grate

T: spinning   M: machine tool spindle

Inverter series
MF10：Multi-function V/F offset press special   MV10: common vector
MV20: High-performance open-loop vector model vector
MV30: High-performance closed-loop vector model

2-2 Inverter series

2.2   Technical Specifications

Chart 2-1   Technology index

Item		Specifications
Input	Rated voltage, frequency	single-phase:220V±15%,50Hz/60Hz,frequency:±5%
		three-phase:380V±15%,50Hz/60Hz,frequency:±5%
	Rated current	Refer to the rating (Chart 2-2)
Output	Voltage	0～input voltage
	Frequency	0～400Hz
	Current overload capacity	150% Rated current for 1min,180% Rated current for 10s，200% Rated current for 1s
	Modulation	The magnetic flux vector PWM modulation

Item		Specifications
Standard functions	Mode	
	Motor type	Induction motors
	Speed range	Closed-loop vector (asynchronous)1:5000 Open-loop vector 1:200 V/F1:100
	Startup torque	Closed-loop vector (asynchronous)0Hz 180% Open-loop vector 0.25Hz 150% V/F0.5Hz 150%
	Speed stability accuracy	Closed-loop vector (asynchronous)0.02% Open-loop vector 0.2% V/F0.5%
	Velocity pulsation	Closed-loop vector (asynchronous)0.1% Open-loop vector 0.3%；V/F0.5%
	Frequency accuracy	Digital setting: Max frequency×±0.02%；Analog setting: Max frequency×±1%
	Torque boost	Fixed boost Customized boost 0.1%–30.0%
	V/F curve	Straight-line curve, 4 kinds of users set V/F curve,A variety of torque characteristic curve
	Ramp mode	Two kinds of way:Straight-line ramp、S-curve ramp Four groups of acceleration/deceleration time with the range of 0.1～3600s
	DC braking	DC braking frequency:0.00～60.00Hz Braking time: 0.1～30.0s
	Jog	Jog frequency range:0.10～60.00Hz Jog acceleration/deceleration time:0.1～60.0s, Jog time interval can be set
	Multistage speed operation	Through the built-in PLC control or terminal control 16 segment speed operation
	Onboard PID	It realizes process-controlled closed loop control system easily.
	Automatic energy saving operation	Automatic optimization control according to the load situation, achieve energy-saving operation
	Auto voltage regulation(AVR)	It can keep constant output voltage automatically when the mains voltage changes.
	Speed tracking start function	Rotation of motor no impact smooth start
	Automatic current limiting	Current limit automatically during the operation, prevent frequent over-current fault tripping
	Textile pendulum frequency	Textile pendulum frequency control, the realization of center frequency adjustable frequency function
	Fixed-length control	Through the terminal count input function, the realization of fixed length control
	Busbar voltage over-voltage suppression	Real-time dynamic control of busbar voltage, prevent the frequent overvoltage fault tripping
	Power dip ride through	The load feedback energy compensates the voltage reduction so that the AC drive can continue to run for a short time.
Run control	Bind function	Bind the run command channel and the frequency of a given channel, synchronous switch
	Run the	Operation panel control command channel、terminal control command channel、

Item		Specifications
	command channel	Modbus/MXLink communication command channel. Can switch through a variety of ways.
	Given frequency channel	Keybord setting,analog voltage,Analog current setting, simple PLC setting, Multistage speed setting, process of the closed loop setting、Modbus/MXLink communications setting. Can switch through a variety of ways.
	Protection mode	Motor short-circuit detection at power-on, input/output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection and overload protection.
	Auxiliary frequency source	It can implement fine tuning of auxiliary frequency and frequency synthesis.
Peripheral interface	Analog input	3 roads analog signal input 2 roads 0～10V/4～20mA,1 road differential input -10～+10V
	Analog output	2 roads analog signal output 0～10V/4～20mA, Can realize the set frequency, output frequency and so on the analog output.
	Digital input	8-way multi-function input terminals,X8/DI high-speed pulse input terminals, maximum support (50KHz)
	Digital output	2 ways multifunctional output terminals,Y2/DO high-speed pulse output terminals, maximum support (50KHz)
	2 ways relay output	R relay output MA NC,MB NO,MC COM T relay output M1 NC,M2 NO,M3 COM
	Configurable PLC card	6 ways input terminals, 4 ways output terminals; basic instruction processing speed is 0.084 us/step, comprehensive instruction processing speed for step 1 k/ms, program capacity of 12 K steps
Communication	485 communication	Standard 485 difference signal, support the Modbus protocol and MXLink protocol
Panel	LED display	It can display a set frequency, output frequency, output voltage, output current and other parameters
	Key lock to choose	By setting the buttons can change some or all of the lock, in order to prevent wrong operation
	Multifunctional MK key	Can realize point, free downtime, running direction switch, menu to switch, command channel switch
	Outer join	For 485 interface between panel and control panel, built-in voltage chip, more than 100 m distance connection can be realized
Other	Installation location	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapour, drip or salt.
	Ambient temperature	-10℃～50℃,de-rated if the ambient temperature is more than 40℃
	Altitude	Lower than 1000 m
	Humidity	5%～95%RH, without condensing
	Vibration	Less than 5.9m/s^2(0.6g)
	Storage temperature	-40℃～+70℃

2.3   Inverter model and adaptation motor

Chart 2-2 Inverter adaptation motor list

Number	Model	Rated capacity (KWA)	Rated power current(A)	Rated output current(A)	Motor
1	MV10/MV20/MV30-**2S0.4GS**	1.0	4.5	3.1	0.4
2	MV10/MV20/MV30-**2S0.75GS**	1.5	9.3	4.7	0.75
3	MV10/MV20/MV30-**2S1.5GS**	3.0	16.5	7.8	1.5
4	MV10/MV20/MV30-**2S2.2GS**	4.0	23	10	2.2
5	MV10/MV20/MV30-**4T0.75GS**	1.5	3.4	2.5	0.75
6	MV10/MV20/MV30-**4T1.5GS**	2.5	5.0	3.7	1.5
7	MV10/MV20/MV30-**T2.2GS**	3.0	5.8	5.0	2.2
8	MV10/MV20/MV30-**4T4GS**	5.9	10.5	9.3	3.7
9	MV10/MV20/MV30-**4T5.5GS**	8.6	16.5	14.0	5.5
10	MV10/MV20/MV30-**4T7.5GS**	11.2	20.5	17.0	7.5
11	MV10/MV20/MV30-**4T11GS**	17.0	26.0	25.0	11
12	MV10/MV20/MV30-**4T15GS**	21.0	35.0	32.0	15
13	MV10/MV20/MV30-**4T18.5GS**	24.0	47.0	38.0	18.5
14	MV10/MV20/MV30-**4T22GS**	25.0	56.0	45.0	22
15	MV10/MV20/MV30-**4T30GS**	35.0	70.0	60.0	30
16	MV10/MV20/MV30-**4T37GS**	40.0	80.0	75.0	37
17	MV10/MV20/MV30-**4T45GS**	50.0	94.0	92.0	45
18	MV10/MV20/MV30-**4T55GS**	60.0	128.0	115.0	55
19	MV10/MV20/MV30-**4T75GS**	80.0	160.0	150.0	75
20	MV10/MV20/MV30-**4T90GS**	95.0	190.0	180.0	90
21	MV10/MV20/MV30-**4T110GS**	120.0	225.0	215.0	110
22	MV10/MV20/MV30-**4T132GS**	140.0	265.0	260.0	132
23	MV10/MV20/MV30-**4T160GS**	178.0	310.0	305.0	160
24	MV10/MV20/MV30-**4T185GS**	198.0	345.0	340.0	185
25	MV10/MV20/MV30-**4T200GS**	210.0	385.0	380.0	200
26	MV10/MV20/MV30-**4T220GS**	230.0	430.0	425.0	220
27	MV10/MV20/MV30-**4T250GS**	265.0	485.0	480.0	250
28	MV10/MV20/MV30-**4T280GS**	290.0	540.0	530.0	280
29	MV10/MV20/MV30-**4T315GS**	330.0	610.0	600.0	315
30	MV10/MV20/MV30-**4T350GS**	360.0	630.0	650.0	350
31	MV10/MV20/MV30-**4T400GS**	450.0	715.0	720.0	400

2.4   Inverter parts name

Ventilation outlets

Operation panel

Power light

Cover plate

Control terminal line hole

Vent

Cover plate fixed mouth

Nameplate

The power input into the line

Control terminal line hole

Vent

Inverter output outlet hole

The engine mounting holes

Open holes

Fixed at the bottom of the mounting holes

2-3   Inverter parts name

Vent

PG card terminal

Control panel terminals

Main circuit terminals

Fan
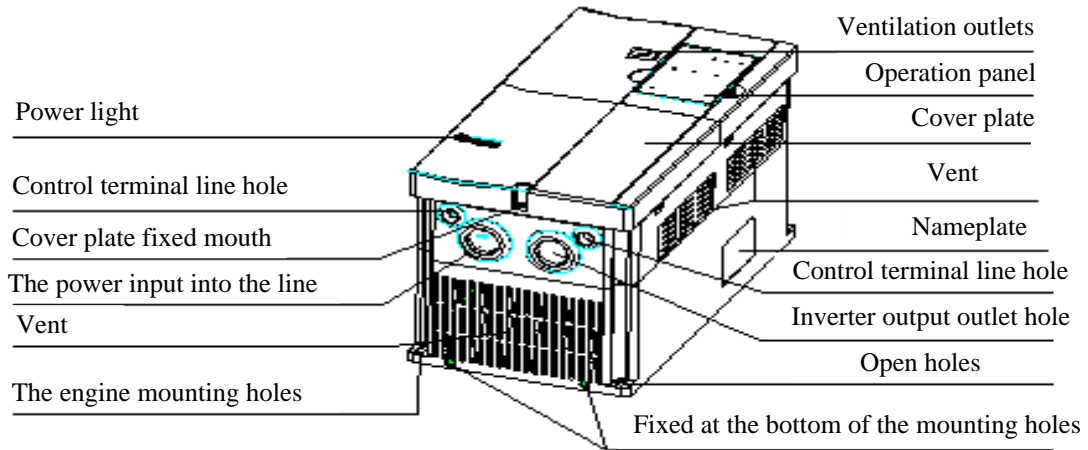
Open hole
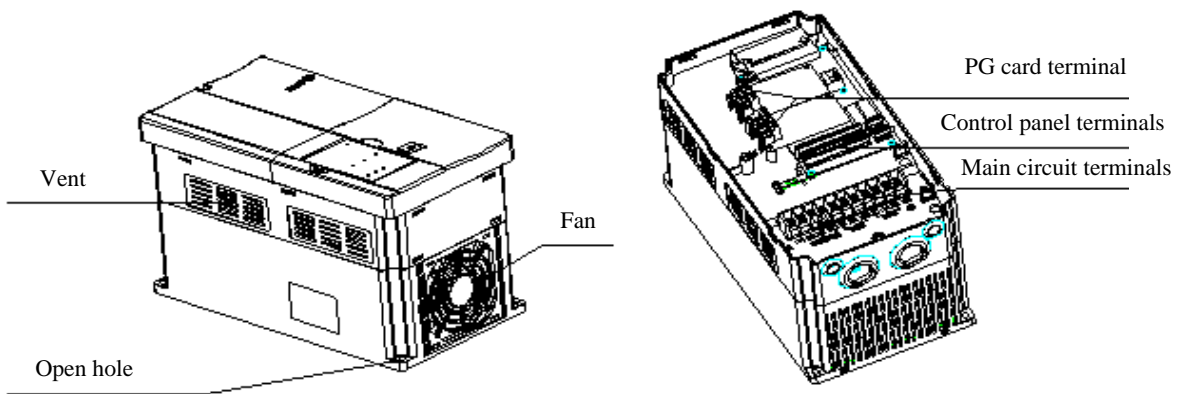
2-4   Inverter parts name

Chapter 3   Wiring Installation

3.1   Inverter overall dimensions

Application:MV10/MV20/MV30-2S0.4GS～2.2GS，MV10/MV20/MV30-4T0.4GS～2.2GS
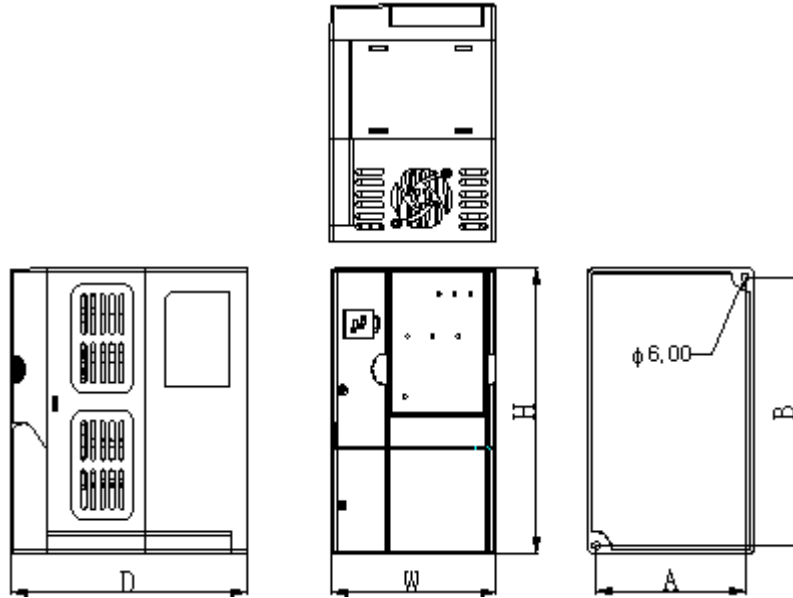
3-1 Boundary dimension（B1 Plastic shell series）

Application:MV10/MV20/MV30-4T4GS～11GS
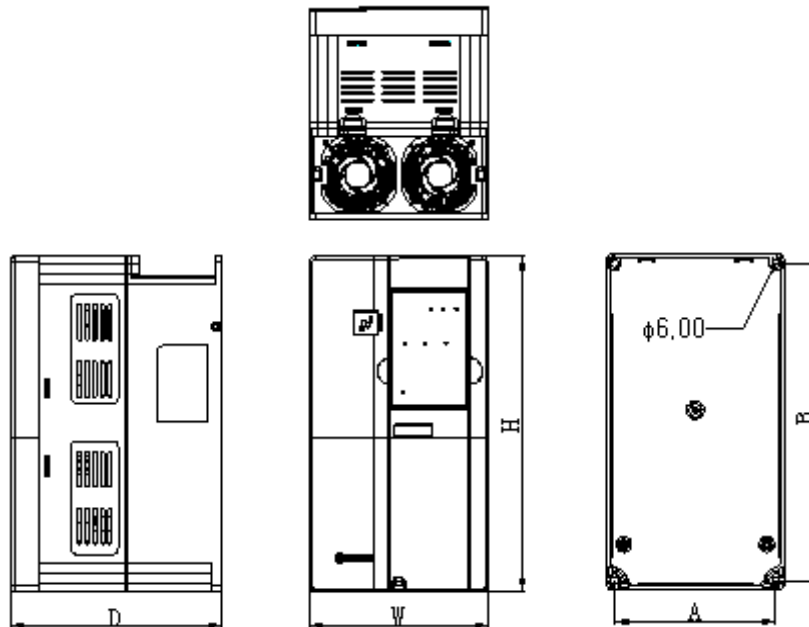
3-2 Boundary dimension（B2、B3 Plastic shell series）

Application:MV10/MV20/MV30-4T15GS～315GS
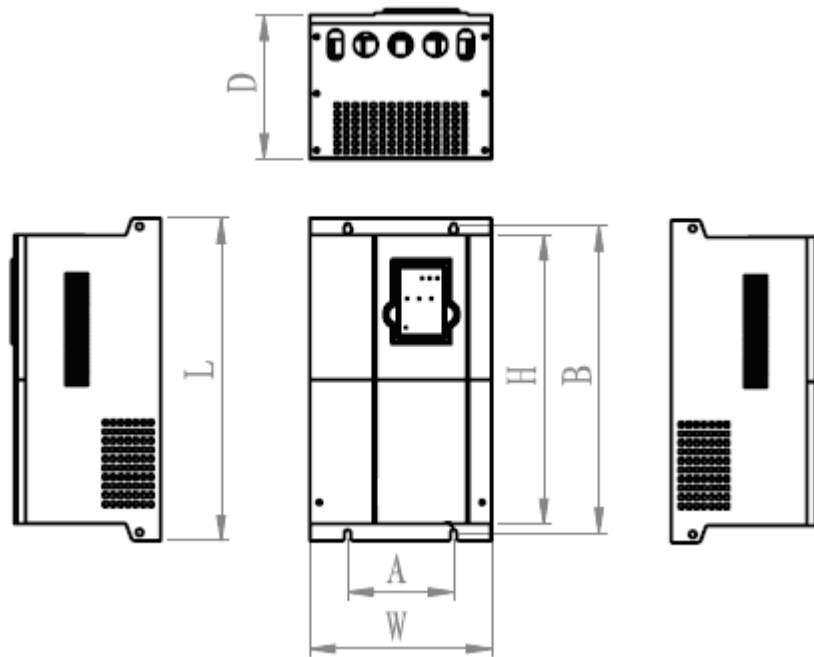
3-3 Boundary dimension（C Metal wall series, D is for the metal wall can also be used for vertical series）

Chart 3-1   Dimension

Power	A(mm)	B(mm)	H(mm)	W(mm)	D(mm)	L(mm)	Diameter of mounting recess(mm)	Structural type of code
	Installation dimension		Boundary dimension					
MV10/MV20/MV30-**2S0.4GS**	94.00	169.00	180.00	105.00	150.00	180.00	6.00	B1
MV10/MV20/MV30-**2S0.75GS**								
MV10/MV20/MV30-**2S1.5GS**								
MV10/MV20/MV30-**2S2.2GS**								
MV10/MV20/MV30-**4T0.75GS**								
MV10/MV20/MV30-**4T1.5GS**								
MV10/MV20/MV30-**4T2.2GS**								
MV10/MV20/MV30-**4T4GS**	126.00	246.00	260.00	140.00	165.00	260.00	6.00	B2
MV10/MV20/MV30-**4T5.5GS**								
MV10/MV20/MV30-**4T7.5GS**	154.00	305.00	320.00	170.00	193.60	320.00	6.00	B3
MV10/MV20/MV30-**4T11GS**								
MV10/MV20/MV30-**4T15GS**	140.00	406.00	382.00	240.00	190.00	426.00	6.50	C1
MV10/MV20/MV30-**4T18.5GS**								
MV10/MV20/MV30-**4T22GS**								
MV10/MV20/MV30-**4T30GS**	150.00	478.00	452.00	290.00	212.00	494.00	6.50	C2
MV10/MV20/MV30-**4T37GS**								
MV10/MV20/MV30-**4T45GS**	190.00	574.00	540.00	315.00	243.00	600.00	8.50	C3
MV10/MV20/MV30-**4T55GS**								
MV10/MV20/MV30-**4T75GS**	300.00	733.00	703.00	390.00	302.00	760.00	9.00	D1
MV10/MV20/MV30-**T90GS**								

Power	A(mm)	B(mm)	H(mm)	W(mm)	D(mm)	L(mm)	Diameter of mounting recess(mm)	Structural type of code
	Installation dimension		Boundary dimension					
MV10/MV20/MV30-**4T110GS**								
MV10/MV20/MV30-**4T132GS**	380.00	733.00	703.00	390.00	302.00	760.00	11.00	D2
MV10/MV20/MV30-**4T160GS**								
MV10/MV20/MV30-**4T185GS**								
MV10/MV20/MV30-**4T200GS**								
MV10/MV20/MV30-**4T220GS**								
MV10/MV20/MV30-**4T250GS**	500.00	1025.00	990.00	640.00	370.00	1070.00	13.00	D3
MV10/MV20/MV30-**4T280GS**								
MV10/MV20/MV30-**4T315GS**								

注:A and B are plastic shell series，C is metal wall series，D is for the metal wall can also be used for vertical series.

3.2 Operation panel size
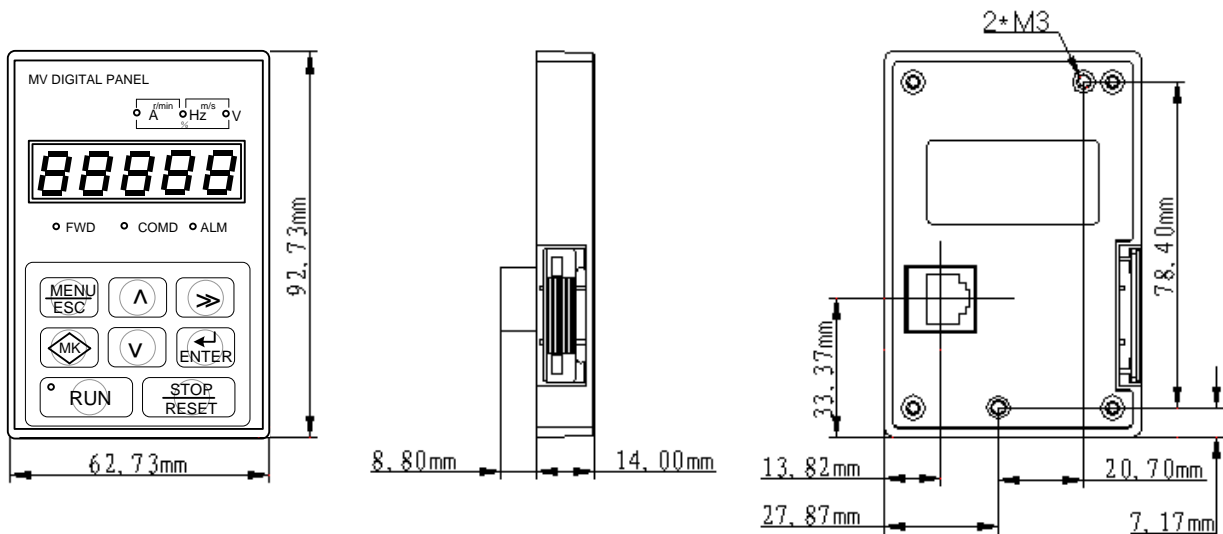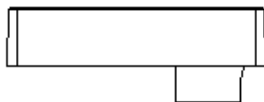
3-4   Operation panel size diagram

3.3 The installation of the inverter

3.3.1 Installation of interval and distance
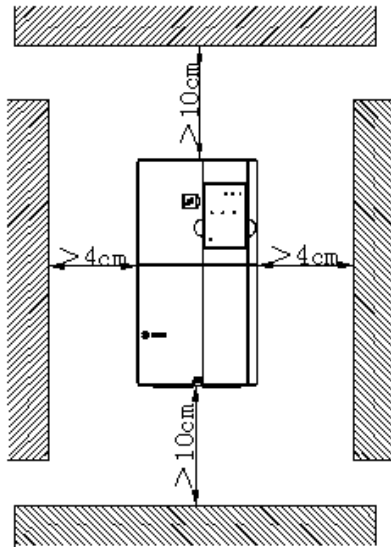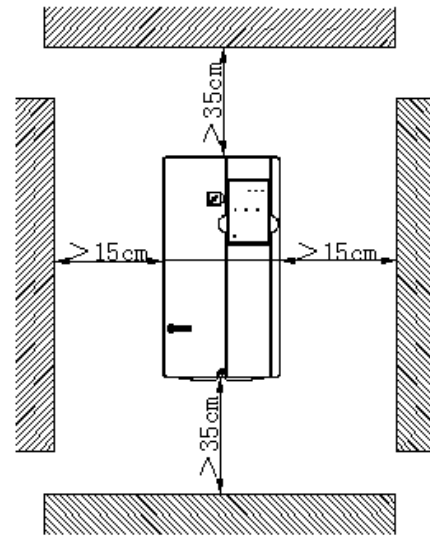
| 3-5   Below the 11KW | 3-6   More than 15 kw |

3.3.2   Disassembly and installation of the inverter

Panel disassembly and installation:
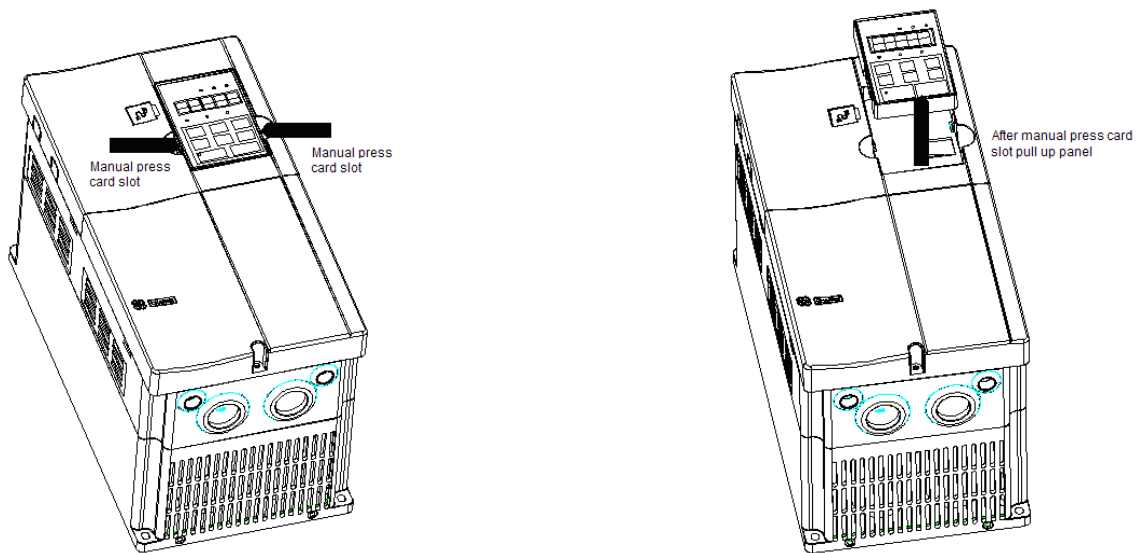
3-7 Panel disassembly and installation diagram

3.3.3   Remove the front cover of the inverter
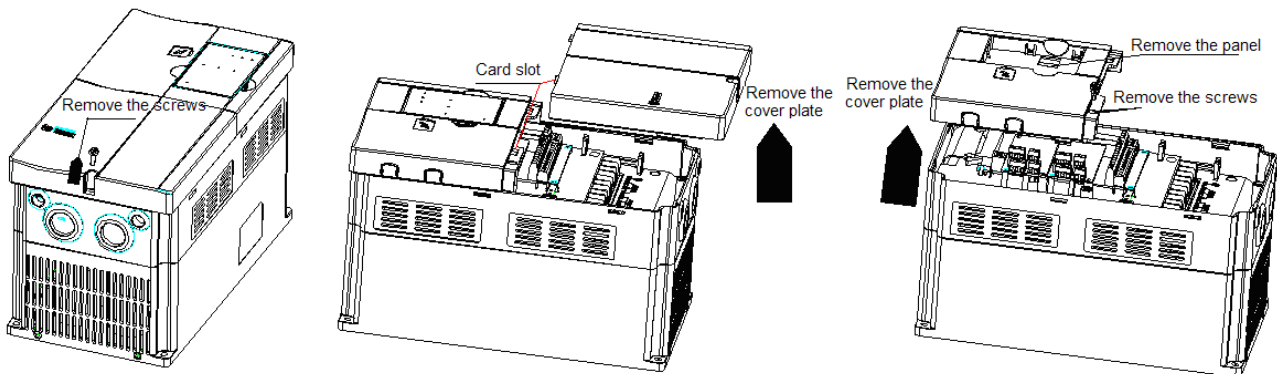
3-8 The diagram of the removal front cover

Remove the steps:

Step 1: Remove fixed screw of the down cover board

Step 2: Remove the down cover plate

Step 3: remove the operation panel

Step 4: Remove fixed screw of the up cover board

Step 2: Remove the up cover plate

3.4   Description of Main Circuit wiring and Terminals

3.4.1   Single/three phase less than or equal to 2.2KW inverter terminals

MV10/MV20/MV30-2S0.4GS～2.2GS   MV10/MV20/MV30-4T0.75 GS～2.2GS

Main circuit terminals:
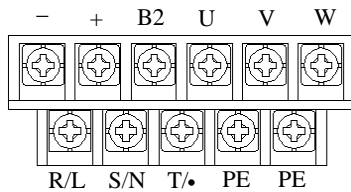
3-9 Main circuit terminals

Description of main circuit terminals:

Chart 3-2 Description of main circuit terminals

Terminal	Function declaration
R、S、T	Three-phase power input
L、N	Single-phase power input（T terminal without）
U、V、W	Output three-phase AC
+、-	Busbar voltage terminal
B2、+	Reserved external braking resistor terminals
PE	Earth terminal

3.4.2   Three phase more than or equal to 4KW inverter terminals

MV10/MV20/MV30-4T4GS～18.5GS

Main circuit terminals:
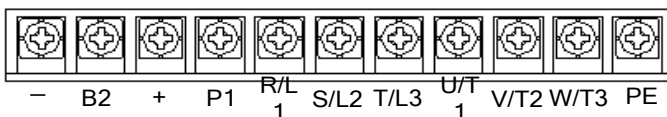
3-10 Main circuit terminals

Description of main circuit terminals:

Chart 3-3 Description of main circuit terminals

Terminal	Function declaration
R/L1、S/L2、T/L3	Three-phase power input
U/T1、V/T2、W/T3	Output three-phase AC
+、-	Busbar voltage terminal
B2、+	Reserved external braking resistor terminals
P1、+	Connect the DC reactor

Terminal	Function declaration
PE	Earth terminal

MV10/MV20/MV30-**4T22GS～110GS**

Main circuit terminals:
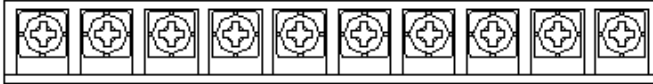
R/L1 S/L2 T/L3 P1 + B2 − U/T1 V/T2 W/T3

3-11 22～30KW Main circuit terminals

Chart 3-4 Control circuit terminal

Terminal	Function declaration
R/L1、S/L2、T/L3	Three-phase power input
U/T1、V/T2、W/T3	Output three-phase AC
+、-	Busbar voltage terminal
B2、+	Reserved external braking resistor terminals
P1、+	Connect the DC reactor
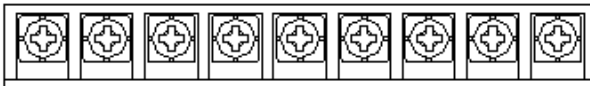
R/L1 S/L2 T/L3 P1 + − U/T1 V/T2 W/T3

3-12 22～110KW Main circuit terminals

Description of main circuit terminals:

Chart 3-5 Control circuit terminal

Terminal	Function declaration
R/L1、S/L2、T/L3	Three-phase power input
U/T1、V/T2、W/T3	Output three-phase AC
+、-	Busbar voltage terminal
P1、+	Connect the DC reactor

3.4.3 The inverter system main circuit terminal wiring and grounding

● Circuit breaker MCCB or leakage switch

With short circuit protection, overload protection function.

● Electromagnetic contactor

Contactor only to control the power supply, can't be used to directly control the start and stop of frequency converter.

● AC input reactor

When the AC input side converter and power between higher harmonic is bigger, can not meet the requirement of the system, can add AC input reactor.

● Input EMI noise filter

Optional EMI filter to suppress the high frequency noise interference from inverter power supply cord.

● Output EMI noise filter

Optional EMI filter to suppress the output side of the inverter noise interferences and wire leakage current.

● Output AC reactor

When the inverter to motor connection more than 60 meters, suggest to install AC output reactor. To avoid electrical insulation damage, leakage flow and inverter frequency protection.

● Safety ground

Inverter within the leakage current, in order to ensure the safety, the inverter and motor must be grounded, grounding resistance should be less than 10 Ω.
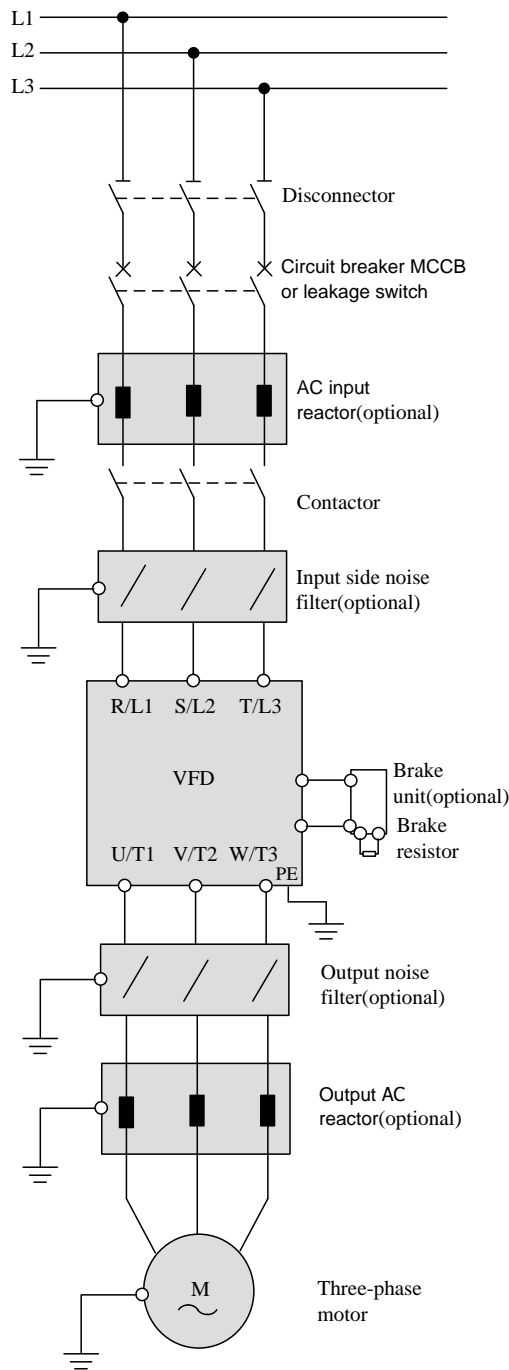
3-13 The inverter and the peripheral equipment standard connection diagram

☞ **Notice**

◆ Do not install capacitance or surge suppressor in the inverter output side, otherwise easy to damage.

◆ Communication lines need to use twisted-pair shielded wire.

Grounding:

Terminal ⏚ PE, this terminal must be reliably connected to the main earthing conductor.

Ground wire do not share with welding machine and power equipment, etc.

Ground wire, please use the specifications stipulated in the technical standards of electrical equipment, and with the pick up location as short as possible.

Using two or more inverters at the same time, do not use ground wire forming circuit.
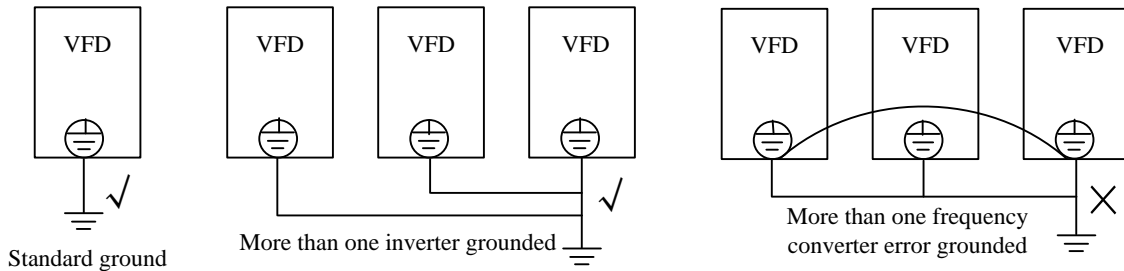
3-14 Inverter grounding diagram

3.4.4 The inverter and motor wiring diagram and the matters needing attention

● Is absolutely forbidden to will power output terminals.

● Do not directly touch output terminals, or to match the output and inverter shell sub, otherwise there will be a risk of electric shock and short circuit.

● Absolute ban the use of phase shift capacitor.

  Absolute ban the use of electromagnetic switch.

● In order to switch the power frequency power supply and set the electromagnetic contactor, must ensure that the inverter and motor stop to switch

● Motor used in for the first time or place for a long time before using should be tested for motor insulation inspection, prevent damage to the inverter for motor winding insulation failure. When testing, please use 500v voltage megohmmeter, should guarantee the measured insulation resistance is not less than 5 mΩ.
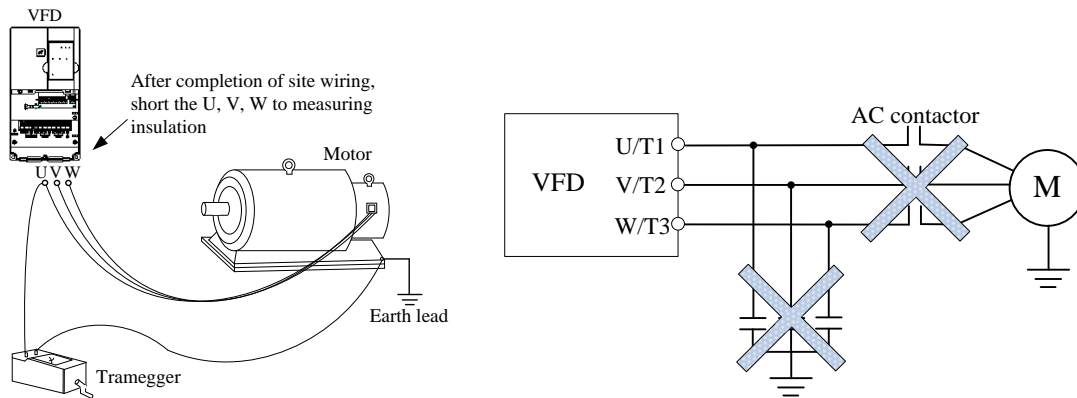
3-15 The inverter output is prohibited to use capacitor diagram

3.5 The inverter control circuit wiring and terminals

3.5.1 Single/three phase less than or equal to 2.2 KW inverter terminals
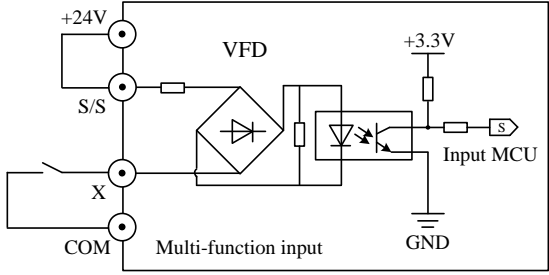
Control circuit terminal:
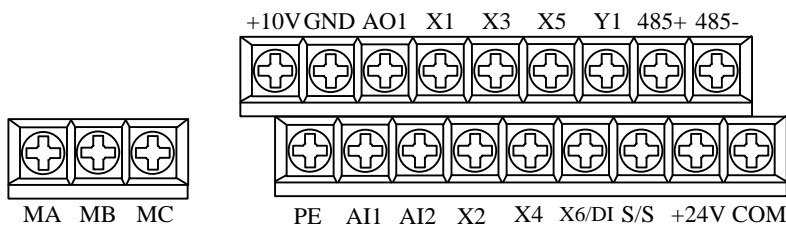
3-16 Control circuit terminal diagram

Description of control circuit terminals:

Chart 3-6 Description of control circuit terminals

Type	Terminal Symbol	Function description	Specification
Communication terminal	RS485+	485 Positive differential signal	Standard RS - 485 communication interface
	RS485-	485 Negative differential signal	Please use the twisted-pair shielded wire
Analog input	AI1、AI2	Analog input voltage/current GND	AI1 input:0～10V or 0～20mA AI2 input:0～10V Input resistance: It is 20KΩ at the time of voltage input and 500Ω at the time of current input；error ±1%,30℃
Analog output	AO1	Analog voltage output GND	Output 0～10V Error±1%，30℃
on-off input	S/S	Multi-function input terminal X1 ~ X6 public side	Input resistance:4.3KΩ; Voltage range: 20～30V Maximum input frequency:1KHz
	X1～X6	Multi-function input terminal	
	X6/DI	X6 can be used as ordinary multi-function terminal(as X1～X5),also programmable as high-speed pulse input port	Input resistance:3.3KΩ Maximum input frequency:80KHz The input voltage range: 20～30V
+24V power	+24V	Provide reference 24v power	The maximum output current 200mA
24V GND	COM	24V GND	
+10V power	+10V	Provide reference 10v power	The maximum output current 40mA
10V GND	GND	Analog signal and 10v GND	Segregate inside and COM
on-off output	Y1	Multi-function terminal output	NPN switch output,0～50 mA
Relay output	MA、MB、MC	Multi-function relay output	220～250V AC 7A ；24～30 DC 7A original state :MA-MC NO; MB-MC NC
GND	PE	Shield earthing	Internally connected to the terminals of main loop PE

Inverter basic wiring:
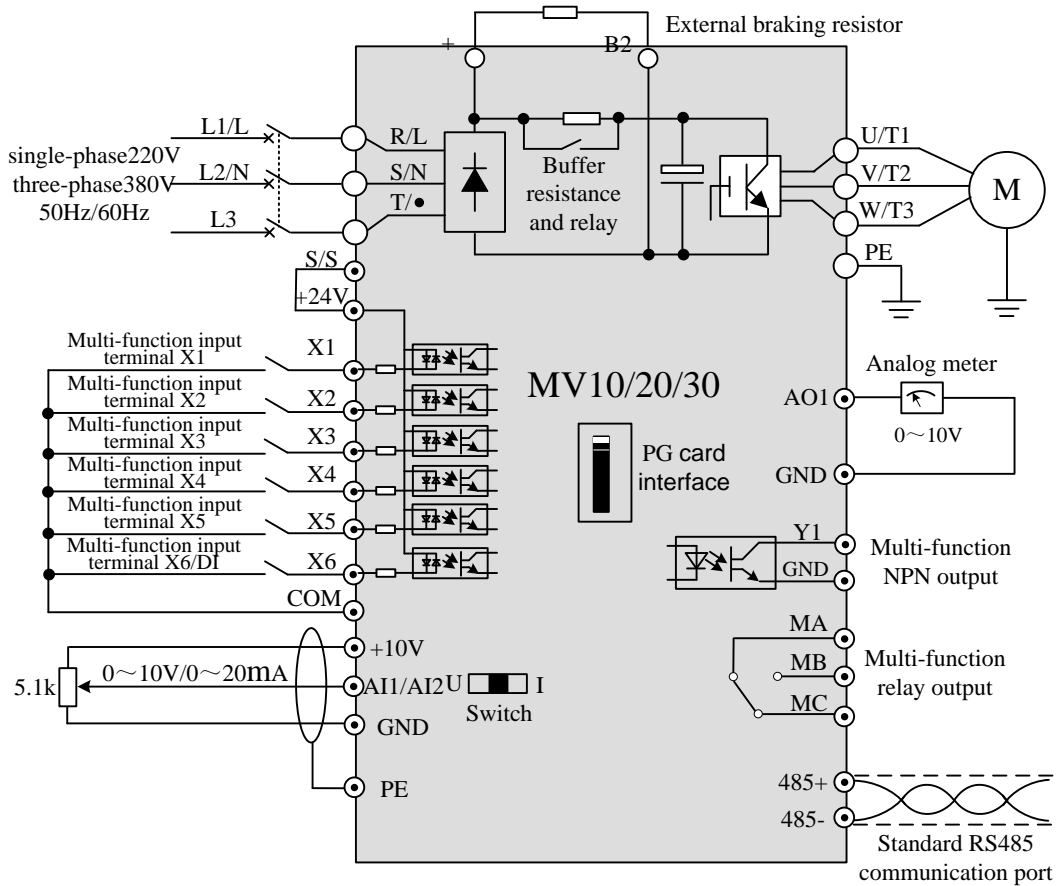
3-17 Single/three phase inverter basic wiring diagram

Note: MV10/20 no PG card interface

3.5.2 Single/three phase more than or equal to 2.2 KW inverter terminals

Control circuit terminal:
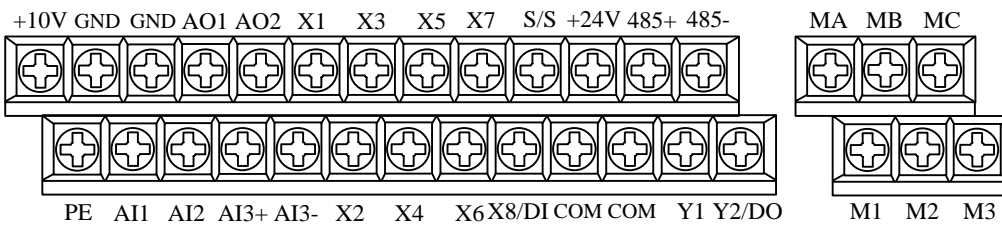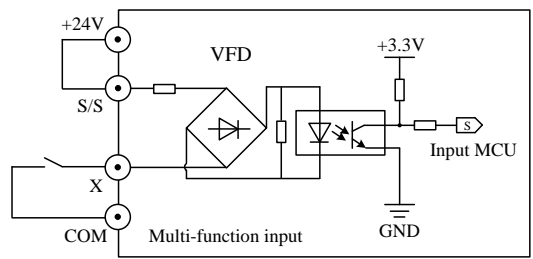
3-18 Control circuit terminal diagram

Description of control circuit terminals:

Chart 3-7 Description of control circuit terminals

Type	Terminal Symbol	Function description	Specification
Communication terminal	RS485+	485 Positive differential signal	Standard RS - 485 communication interface
	RS485-	485 Negative differential signal	Please use the twisted-pair shielded wire
Analog input Analog input	AI1、 AI2	Analog input voltage/current GND	AI1 input:0～10V or 0～20mA AI2 input:0～10V Input resistance: It is 20KΩ at the time of voltage input and 500Ω at the time of current input ; error ±1%

Type	Terminal Symbol	Function description	Specification
	AI3+	The analog input voltage difference, AI3 + for the same phase input, AI3 - for inverting input;	The input voltage range: -10～10V
	AI3-	The single-ended input analog voltage, AI3 + for signal input, AI3 - connect to GND GND	Input impedance: 100kΩ when the input voltage Error±1%
Analog output	AO1、AO2	Analog voltage output GND	Output 0～10Vor0～20mA Selected through the dial code switch 3, 4 Error ±1%
On-off input	S/S	Multi-function input terminal X1 ~ X8 public side	Input impedance: 4.3KΩ; Voltage range: 20～30V Maximum input frequency: 1KHz
	X1～X8	Multi-function input terminal	
	X8/DI	X8 can be used as ordinary multi-function terminal(as X1 ~ X7),also programmable as high-speed pulse input port	Input impedance: 3.3KΩ Maximum input frequency:80KHz The input voltage range:20～30V
+24V power	+24V	Provide reference 24v power	The maximum output current 200mA
24VGND	COM	24V GND	
+10V power	+10V	Provide reference power 10v	The maximum output current 40mA
10VGND	GND	Analog signal and 10v GND	Segregate inside and COM
On-off output	Y1	Multi-function terminal output	NPN switch output 0～50mA
High-speed pulse output	Y2/DO	The pulse signal output terminal	Output frequency: 0～50KHz，0～50mA
Relay output	MA、MB、MC	Multi-function relay terminal output	220～250V AC 7A;24～30V DC 7A Original state :MA-MC NO;MB-MC NC
	M1、M2、M3	Multi-function relay terminal output	220～250V AC 7A;24～30V DC 7A Original state :M1-M3 NO;M2-M3 NC
GND	PE	GND	Internally connected to the terminals of main loop PE

Inverter basic wiring:
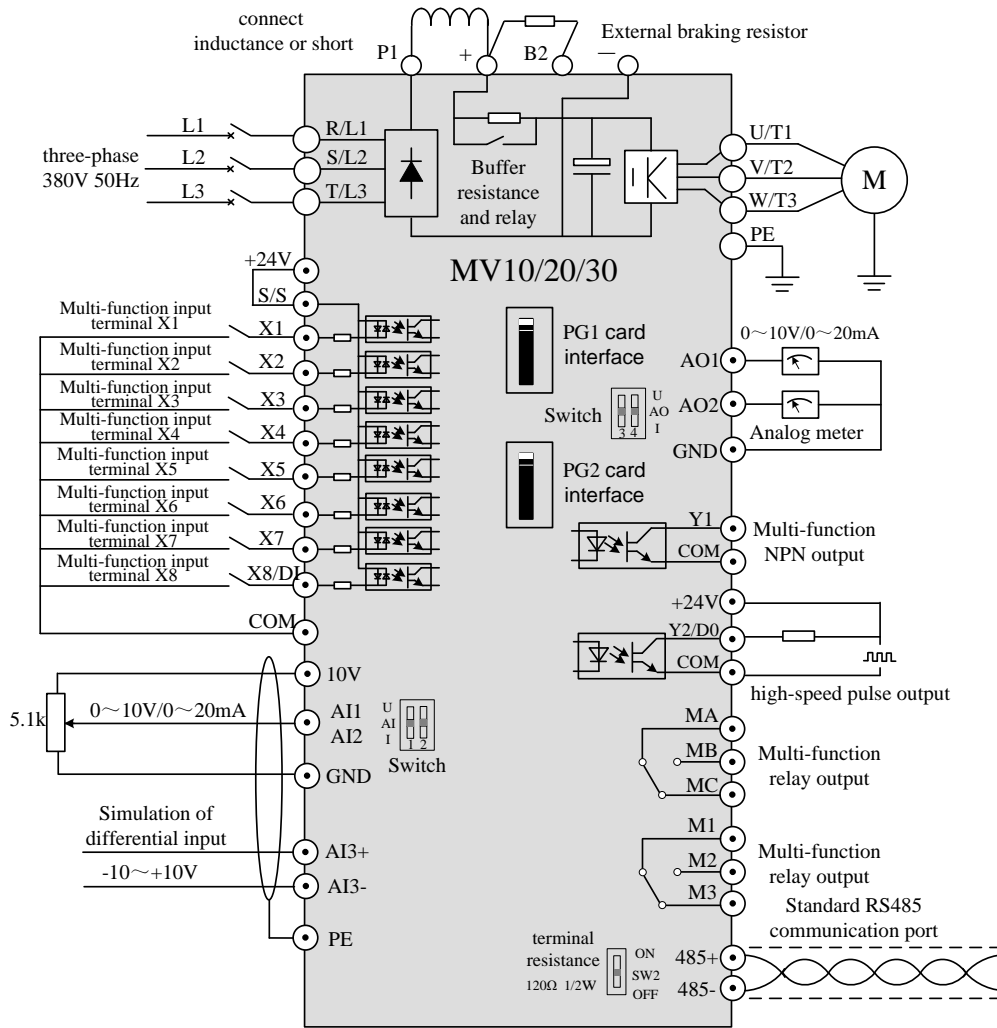
3-19 Three phase inverter basic wiring diagram

Note: MV10/20 no PG card interface

3.5.3   Communication wiring

Inverter with RS485 interface communication:

VFD		twisted shielded pair	Upper computer	
Terminal instructions	The name of the terminal		Terminal instructions	The name of the terminal
485 signal -	RS485-		485 signal -	RS485-
485 signal +	RS485+		485 signal +	RS485+
485 GND	GND		485 GND	GND
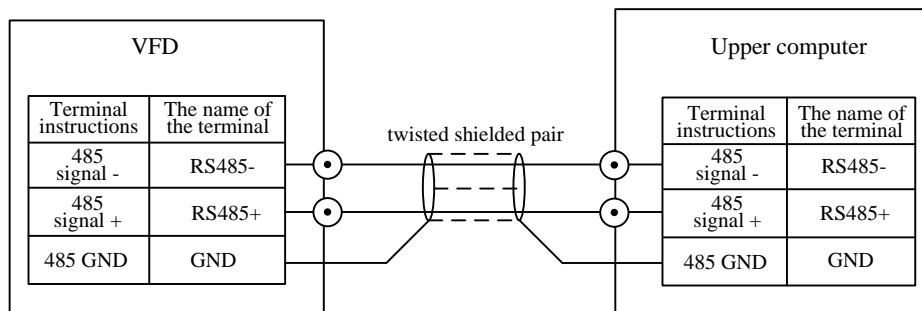
3-20 RS485 and RS485 communication wiring

Inverter with RS232 communication interface:
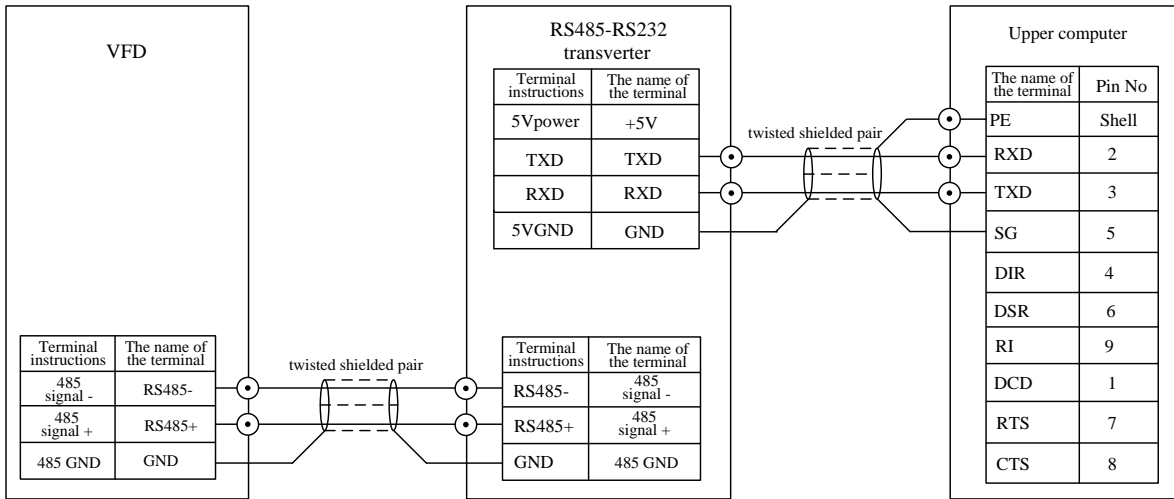
3-21 485 and RS232 communication wiring

More than one inverter articulated in the same RS485 system wiring:

More than one inverter to hook up in the same RS485 system, communication interference enhancement, wiring is very important, recommend the user according to the following way connection:
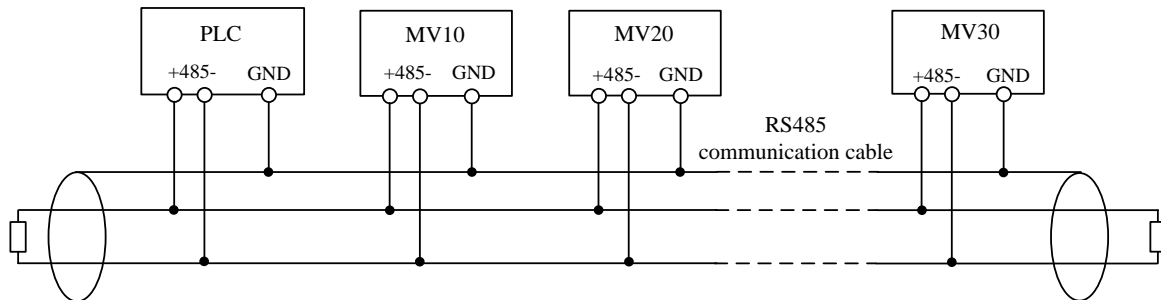
3-22 Wiring diagram

☞ Note

◆ It is recommended to use standard 485 communications.

◆ Please use the standard twisted-pair shielded wire, cable shielding layer of proximal (on one end of the frequency converter) should be connected to the inverter the earthing terminal of PE.

◆ Walk line twisted-pair shielded wire should be fully away from the main circuit and high voltage lines.

◆ If you use the RS485 / RS232 converter module, can consider to separate power conversion module.

◆ If the condition allows, Inverter carrier frequency can be appropriately reduced.

3.5.4 Analog input wiring

Analog input connection mode:
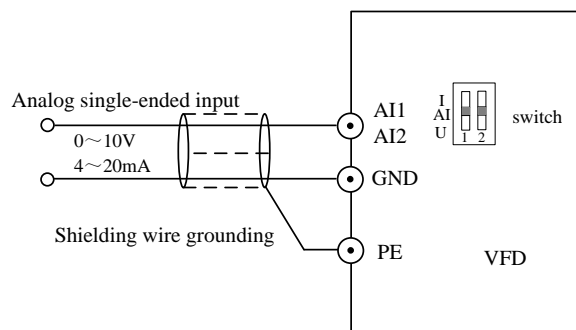
3-23 Single-ended input analog AI

Analog terminal AI1 and AI2 single-ended input:through the dial switch select the input voltage/current selection（0～10V/0～20mA）．Below 2.2 KW AI2 only supports the input voltage.
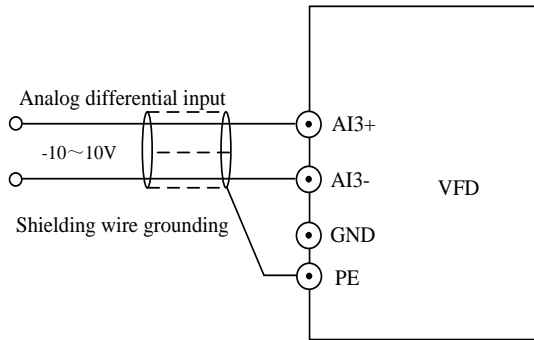
3-24 Analog differential input
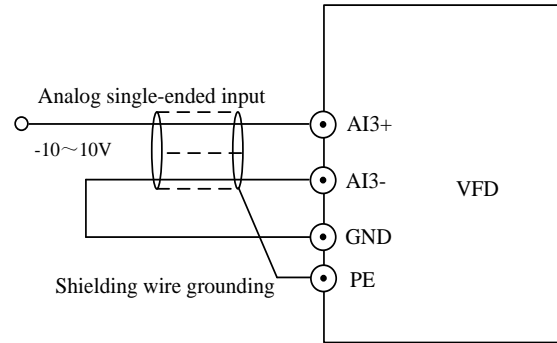
3-25 Analog single-ended input

Analog terminal AI3 differential input/single-ended input: -10～+10V.

☞ Note

◆ When using analog input, can Install filter or common-mode inductor between AI and GND.

◆ Analog signal easily disturbed, so the shield grounding.

3.5.5 Analog output wiring

Analog output connection mode:
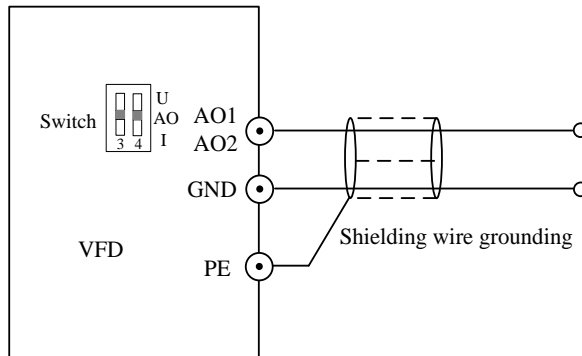
3-26 Analog output

Analog AO1 output: output voltage/current through dial the code switch selection(0～10V/0～20Ma),below 2.2 KW AO1 only supports the output voltage.

3.5.6 Switch input and wiring

1．Dry contact output wiring
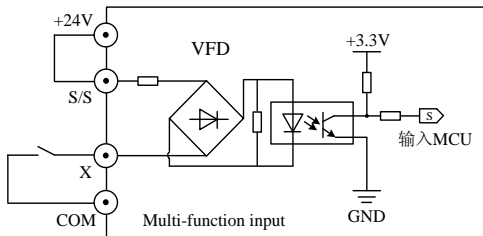
3-27 Using internal power wiring diagram
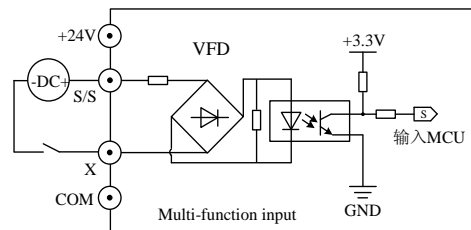
3-28 Using external power wiring diagram

2．External controls source electrode (drain electrode) output wiring

External controller for the NPN emitter output connection.
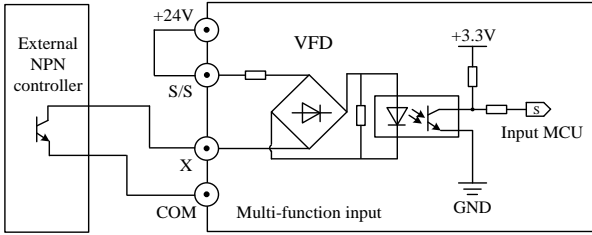
3-29 Using internal power wiring diagram
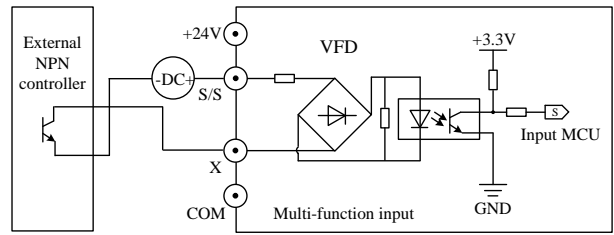
3-30 Using external power wiring diagram

External controller for the NPN emitter output connection.
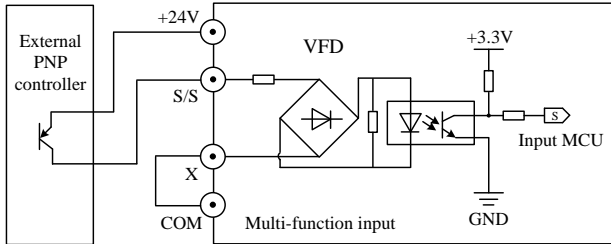
3-31 Using internal power wiring diagram
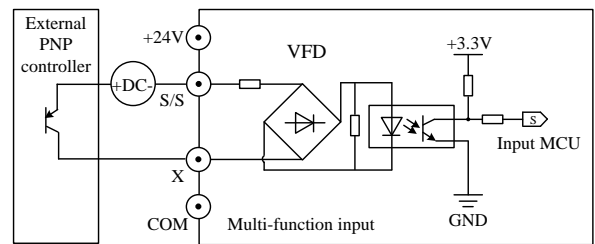
3-32 Using external power wiring diagram

☞ **Note**

◆ Do not short circuit the 24v terminal and COM terminal, otherwise it may cause the damage of the control panel.

◆ Multi-function input terminal of the voltage is 20 ~ 30v DC.

◆ Please use multicore shielded cable or twisted wire (above $0.5mm^2$) connection control terminals.

◆ Please use the standard twisted-pair shielded wire, cable shielding layer of proximal (on one end of the frequency converter) should be connected to the inverter the earthing terminal of PE.

◆ Walk line twisted-pair shielded wire should be fully away from the main circuit and high voltage lines.

3.5.7 Switch output wiring
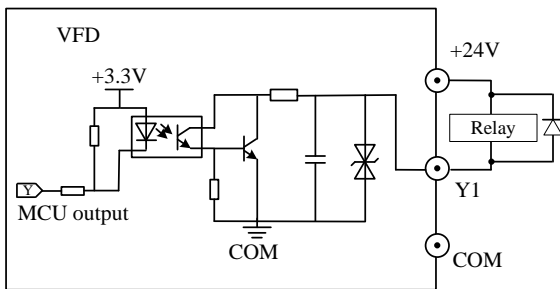
3-33 Switch value Y1 use internal power supply wiring
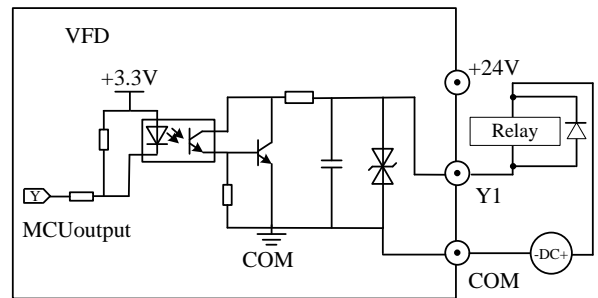
3-34 Switch value Y1 use external power supply wiring

☞ **Note**

◆ Inverter internal 24v power supply provides 200mA current biggest, If the relay power devices are too small to concatenate the energy consumption resistance to prevent the current is too big to damage the internal power supply.

3.5.8 High-speed pulse output port Y2 / DO, input port X8 / DI

High-speed pulse output port Y2 / DO:
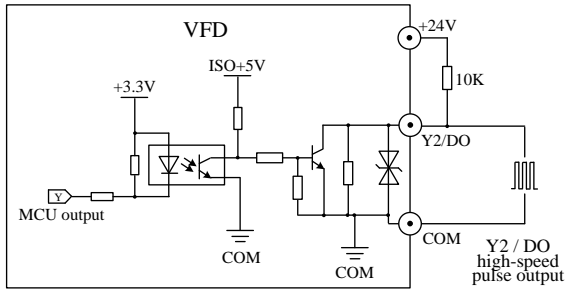
3-35 High-speed pulse using internal output power wiring

3-36 High-speed pulse using internal intput power wiring

High-speed pulse intput port Y2 / DO:
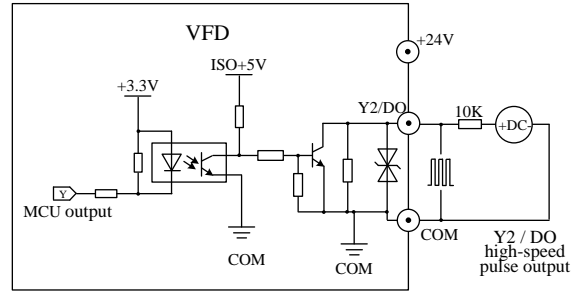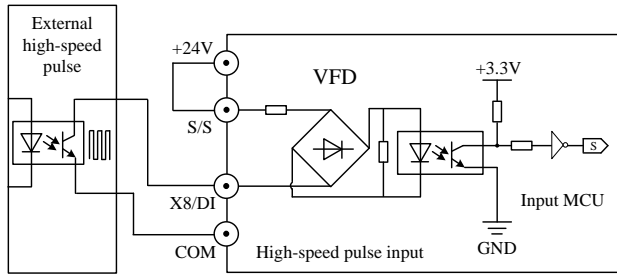
3-37 High-speed pulse using internal output power wiring
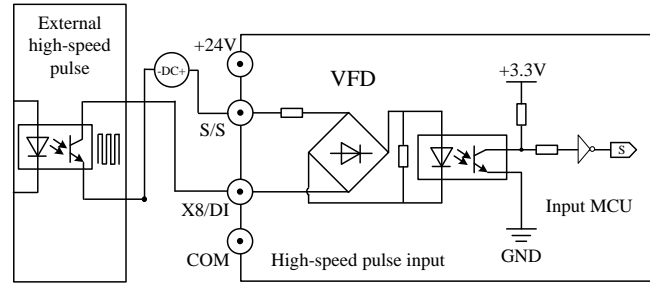
3-38 High-speed pulse using internal intput power wiring

3.5.9 Relay output wiring
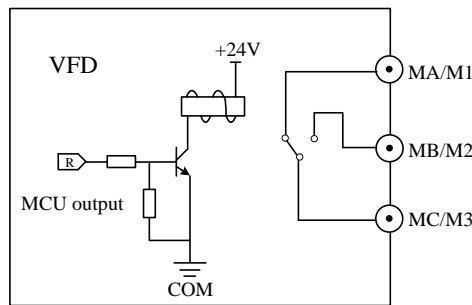
3-39 Relay output wiring

☞ Note

◆   Relay 220～250V AC 7A ;24～30V DC 7A.

◆   Using the perceptual element such as relay, should be equipped with surge voltage absorbing circuit, varistor, or fly-wheel diode to absorb the circuit produced by the ON-OFF.

3.6   The MV series inverter system configuration scheme

Chart 3-8   The MV series inverter system configuration scheme

Inverter type	Brake unit	Braking resistor unit		Braking torque
		Brake resistor	Number	
MV10/MV20/MV30-**2S0.4GS**	Standard built-in	200Ω/70W	1	220
MV10/MV20/MV30-**2S0.75GS**		200Ω/70W	1	125
MV10/MV20/MV30-**2S1.5GS**		100Ω/260W	1	125
MV10/MV20/MV30-**2S2.2GS**		70Ω/260W	1	120
MV10/MV20/MV30-**4T0.75GS**		750Ω/70W	1	130
MV10/MV20/MV30-**4T1.5GS**		400Ω/260W	1	125
MV10/MV20/MV30-**4T2.2GS**		250Ω/260W	1	135

Inverter type	Brake unit	Braking resistor unit		Braking torque
		Brake resistor	**Number**	
MV10/MV20/MV30-**4T4GS**		150Ω/390W	1	135
MV10/MV20/MV30-**4T5.5GS**		100Ω/520W	1	135
MV10/MV20/MV30-**4T7.5GS**		75Ω/780W	1	130
MV10/MV20/MV30-**4T11GS**		50Ω/1040W	1	135
MV10/MV20/MV30-**4T15GS**		40Ω/1560W	1	125
MV10/MV20/MV30-**4T18.5GS**		32Ω/4800W	1	125
MV10/MV20/MV30-**4T22GS**	Optional/built-in	27.2Ω/4800W	1	125
MV10/MV20/MV30-**4T30GS**		20Ω/6000W	1	125
MV10/MV20/MV30-**4T37GS**		16Ω/9600W	1	125
MV10/MV20/MV30-**4T45GS**		13.6Ω/9600W	1	125
MV10/MV20/MV30-**4T55GS**	Optional the outer	10Ω/6000W	1	135
MV10/MV20/MV30-**4T75GS**		6.8Ω/1200W	1	135
MV10/MV20/MV30-**4T90GS**		6.8Ω/1200W	1	125
MV10/MV20/MV30-**4T110GS**		6.8Ω/1200W	1	125

☞ **Attention**

◆ Please in accordance with the data provided by the company to choose the braking resistor value and power.

◆ When using external braking unit, properly set brake unit brake voltage grade, such as voltage level setting is not correct, will affect the normal operation of the inverter.

The brake component options guide:

Table 3-8 provides data for reference. You can select different resistance and power based on actual needs. However, the resistance must not be lower than the recommended value. The power may be higher than the recommended value.

Physical Dimensions of External DC Reactor:

The motor and load's regenerative energy is almost completely consumed on the braking resistor when braking.

According to the formula U x U/R = Pb:

• U refers to the braking voltage at system stable braking.

  Different systems select different braking voltages. The 380 VAC system usually selects 700 V braking voltage.

• Pb refers to the braking power.

Selection of Power of Braking Resistor:

In theory, the power of the braking resistor is consistent with the braking power. But in consideration that the de-rating is 70%, you can calculate the power of the braking resistor according to the formula 0.7 x Pr = Pb x D.

• Pr refers to the power of resistor.

• D refers to the braking frequency (percentage of the regenerative process to the whole working process)

 General application**---**10%

 Elevator-------20%～30%

 Winding and unwinding--20%～30%

 Centrifuge-----50%～60%

Chapter 4 The operation of the keyboard

4.1 Operation panel is introduced
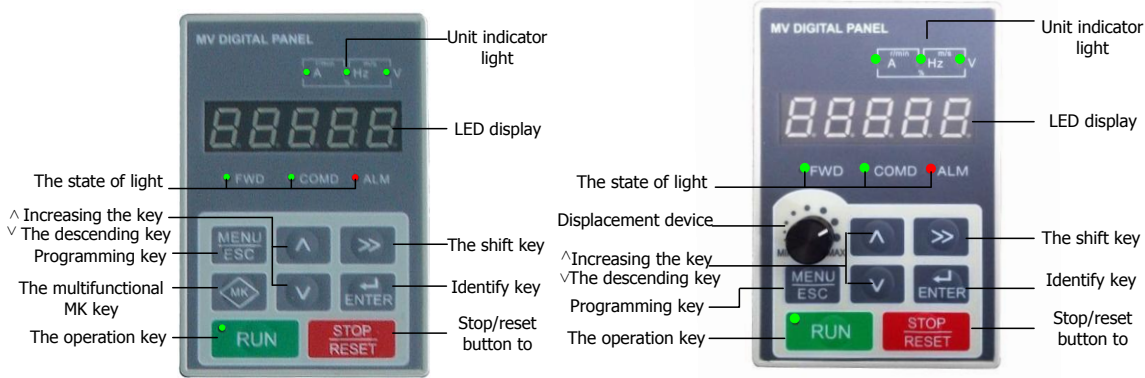
Figure 4-1 operation panel

4.2 Indicator light show

Unit indicator light:
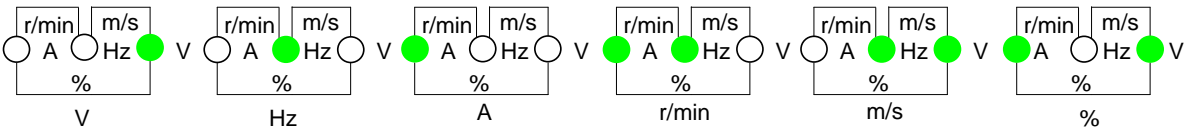
Figure 4-2 units indicator light

Status indicators:

	Meaning		Light codor
FWD	Forward/reverse light	Bright: reverse run	green
		Turn out: is running	/
COMD	Run the command channel signals	Bright: operation panel control state	green
		Out: the terminal control state	/
		Flash: serial communication control state	green
ALM	Fault indicator light	Bright: inverter in fault condition	red
		Flash: frequency converter in the alarm condition	red
RUN	Running status indicator	Bright: Running state	green
		Flash:stop condition	/

4.3 The LED display area

According	Meaning	According	Meaning	According	Meaning	According	Meaning
0	0	A	A	I	I	S	S
1	1	b	b	J	J	T	T
2	2	C	C	L	L	t	t

According	Meaning	According	Meaning	According	Meaning	According	Meaning
	3		c		N		U
	4		d		n		V
	5		E		O		y
	6		F		o		_
	7		G		P		8.
	8		H		q		.
	9		h		r		

4.4   Introduction to run or stop display parameters

Display symbols	Parameter is introduced
F 50.0.0	If the character does not flicker, show that displays the current output frequency of the motor;If flashing character, it shows that show the current setting frequency
A 3.0.0	According to the output side of U/T1、V/T2、W/T3 output current
E 38.0	According to the output voltage
U 58.0	According to frequency converter bus voltage
o 10.0	Displays the percentage of the output power
3 20.0	Display output power factor percentage
U 2.88	According to the AI output voltage, Display panel potentiometer voltage
o 28.8	Displays the percentage of your AI curve adjustment, The percentage of the display panel potentiometer by the curve
b 000	Switch terminal and status display
C 0000	Display terminal count
8.8.8.8.8	Display PLC running stage, stage of multistage position
d 58.8	Shows the closed loop feedback, closed loop setting (flash), the percentage of the output, the closed-loop error(you need to use the shift key can display hidden)
h 58.8	Displays the inverter overload or motor overload the percentage of the total (you need to use the shift key can display hidden)

Display symbols	Parameter is introduced
⊟⊟**68.0**	According to the temperature of the inverter
⊓**0000**	Show the current motor running speed(You need to use the shift key can display hidden place)
⊟⊟**10.0**	According to the currently running linear velocity

4.5 Operation panel button is introduced

The keys	Name	Function
MENU ESC	Programming/exit key	Level 1 menu to enter or exit
MK	MK key(Multifunction button)	The key function defined by the parameter P50.03
ENTER	Identify key	Into the secondary menu, set parameter confirmation
∧	Increases the key	Increasing data or function code
∨	The reduction of key	Diminishing data or function code
≫	The shift key	Under the outage display interface and operation interface, can choose according to cycle parameters
RUN	The operation key	Under the keyboard operation, used to run the operation
STOP RESET	Stop/reset button to	Running state, press this button can be used to stop running operation; Fault alarm state, can be used to copy operation.

4.6 The operation panel display status

NO.	According to the State	Instructions	The panel light
1	Stop parameter display state	By " ≫ ", according to set parameters for choosing P50.09.	/
2	Operation parameters display status	Can switch by " ≫ ", according to set parameters for choosing P50.10 and P50.11.	RUN：Bright FWD：Run a direction COMD：Indicating control run a command
3	The alarm parameters display status	Press " ≫ " button to cycle according to running status parameters and alarm code.	ALM：Flashing
4	Fault parameters display status	Press " ≫ " button to cycle according to running status parameters and alarm code.	ALM：Normally on
5	Level 1 menu	Any display mode, press the programming/exit key to	

NO.	According to the State	Instructions	The panel light
	display state	enter or exit	
6	The secondary menu display state	Into the level menu, press confirm button to enter or exit	

4.7 Keyboard

Parameter Settings:

Two levels of menu are:

1．Function block number and the function code label (menu)

2．Function code set value (secondary menu);

Description: In the secondary menu operation, can press the " MENU ESC " key or" ENTER "return to menu key, The

difference is: Press " ENTER " button to save setting parameters after return level menu, And automatically move to the

next function code; And press " MENU ESC " button directly return level menu, No storage parameters, and returns to the

current function code.
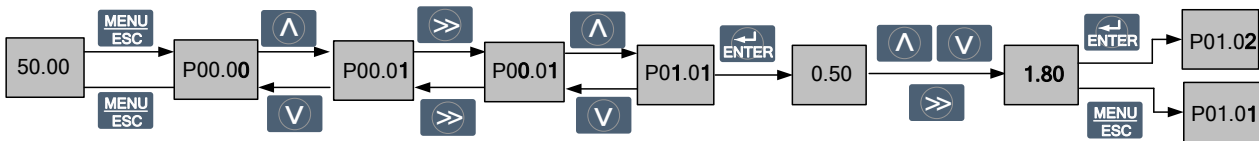
figure 4-3 Modify parameters schematic diagram

In any level 1 menu state, if the parameter is not flashing, said the function code cannot be modified, Possible reasons are:

1）This function code is not modify parameters. Such as the actual testing parameters, operation records, etc.;

2）The function code under running immutable, Need to stop after the operation can be modified

LED display function code parameter menu mode:

There are four kinds of MV series inverter menu mode: Basic menu, senior menu, the user model and factory value comparison. By setting function code P50.01 switch parameters (menu mode), Different parameter mode, display the function of different parameter set.

How to set up the inverter password:

In order to protect the parameter, frequency converter provides password protection function.

Set the user password, the user input user password must be correct, To press " MENU ESC " button after entering the

function code editor. For the factory area set parameters, still need to input the factory correct password.

When need the user password, set the P50.00 nonzero Numbers for any group，And click on the " ENTER "key to

confirm，If after this row 1 minutes without any key operation, the password protection function to take effect．

After the correct input user password, if 1 minutes without keystrokes, password protection will give effective protection.

☞ **Pay attention to**
◆ Please do not attempt to modify the manufacturer set parameters, If the parameter Settings, easy to cause the inverter work abnormal or even damage.

How to lock and unlock operation panel:

Through the function code P50.03 one thousand can set the lock operation panel.

In the condition of downtime parameter display, Press the ENTER key and maintain, then press " MENU ESC "key，LED

display " 8.8.L.0.6. " Lock operation panel.

When all operation panel button is locked, can be unlocked by the following：Press " ENTER " key and maintain，then

press " ∧ " key three times.

☞ **Pay attention to**

◆   Whatever P50.03 before setting, inverter every time after power on, the operation panel are not locked.

Asynchronous motor parameter self learning:

Choosing vector control operation mode, input motor nameplate parameters must be accurate, Frequency converter according to the nameplate parameters matching standard motor; In order to get good control performance, it is suggested that to motor parameter self learning and self learning steps are as follows:

First will run command channel (PO0.01) choice for keyboard commands；Then please click the parameters of the motor under the actual parameter input

P51.00	Encoder wiring harness (closed-loop vector control)
P60.00	Rated power
P60.01	Rated current
P60.02	The rated voltage
P60.03	Rated frequency
P60.04	Rated speed

If the motor shall not release the load, the P60.11 please select 1 (static setting), And then press " RUN " button on the

panel, and inverter automatically measuring stator resistance and rotor resistance and leakage inductance in turn three parameters, Don't measure the mutual inductance and resistance of the motor no-load current, the user can according to the motor nameplate parameters to calculate the three parameters, Used in the calculation of the motor nameplate parameters are: rated voltage U, rated current, rated frequency f I eta, power factor, rated power and rated speed.

If it is the motor and load completely release P60.11 please select 2 (rotating self-tuning) And then press " RUN " button

on the panel, and inverter will automatically calculate the motor parameters.In the process of self-learning, electricity opportunities slowly rolling, When the motor rotation after downtime, motor parameter since the end of the learning process.
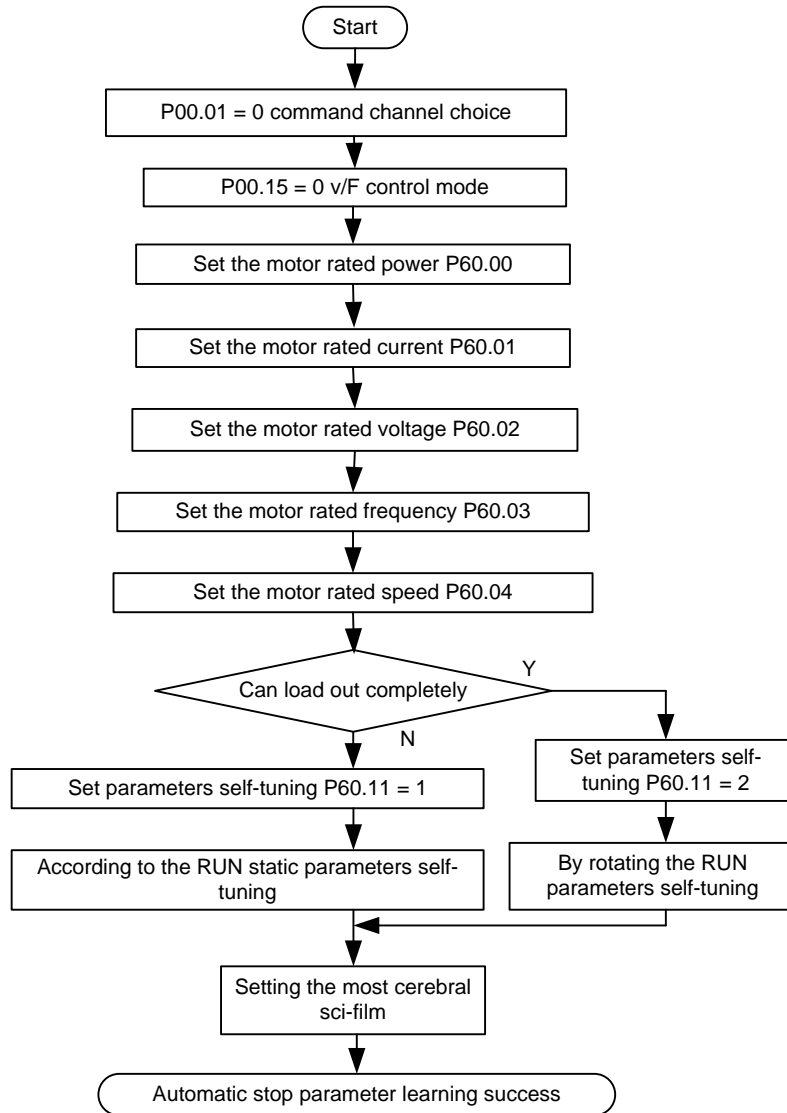
Figure 4-4 asynchronous motor self-tuning flow chart

Chapter 5 For the first time on electricity to run

Wiring and power check and correct, the input side converter ac power air switch to electricity, VFD operation panel first shows "8.8.8.8.8."

The contactor is normal and When the digital tube display character into a set frequency, shows that inverter is initialized.If the COMD LED indicator on the operation panel to light condition, suggests that for the operation panel control state.

☞ **Pay attention to**

◆ In case of failure, please use chapter 7 faults and alarm information list judgment in reason,troubleshooting.

◆ If the motor can choose to release the load rotating self-tuning (P60.11 = 2), otherwise can only
   choose static self-tuning. Starting parameters from the timing, please ensure that the motor is in static state, in
   the process of the self-tuning if seen through the pressure failure, can be appropriately extended P00.07,
   P00.08 deceleration time.

```
                          ┌─────────────┐
                          │    Start    │
                          └──────┬──────┘
                                 ▼
                    ┌──────────────────────────┐
                    │ Check the wiring correctly│
                    └────────────┬─────────────┘
                                 ▼
                    ┌──────────────────────────┐
                    │   Access to electricity   │
                    └────────────┬─────────────┘
                                 ▼
                    ┌──────────────────────────┐
                    │ Restore the factory       │
                    │ parameterP50.20 = 22      │
                    └────────────┬─────────────┘
```

According to the nameplate set motor parametersP60.00 ~ P60.04	According to the nameplate set motor parameters P61.00 ~ P61.04
Set the running motor P00.16 = 1	Set the running motor P00.16 = 2

Machine self-learning Can load out completely — Y / N

Set parameters self-tuning P60.11 = 1Press the RUN key static parameters self-tuning	Set parameters self-tuning P60.11 = 2Press the RUN key parameters of rotating self-tuning

V/F control modeP00.15 = 0	Asynchronous open-loop vectorP00.15 = 1	Asynchronous closed-loop vector P00.15 = 2

VF controlling parameters P04 group	Vector control parameters P02, P03 group

```
                    ┌──────────────────────────┐
                    │ Start-stop frequency      │
                    │ converter                 │
                    └────────────┬─────────────┘
                                 ▼
                          ┌─────────────┐
                          │ The end of the│
                          └─────────────┘
```

Figure 5-1 on electric operation flow chart for the first time

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Chapter6 Function parameter profiles

Function code	Functions within the group number and group number, such as P01.02 is 01 group, 02 function code
Name of the function code	The name of the function code, explain the function of the function code
setting range	Function code minimum to the maximum effective set range
Factory	The factory setting of the function code
Parameters in detail	Parsing the meaning represented different function code parameter values
Unit	The unit of function code: V-voltage；A-current；Hz、KHz-frequency；rpm-Speed；KW-power；℃-temperature； ms、s、min、h、kh-time；%-percentage；bps-Baud rate；kgm/s＾2-moment of inertia；/-No unit
change	Function code allows parameter change of conditions: ○-The parameter can be modified when the AC drive is in either stop or running state. ×-The parameter cannot be modified when the AC drive is in the running state. *-The parameter is the actually measured value and cannot be modified.
mailing address	Modbus and MXLinkmailing address，In the table for hexadecimal display
Basic menu item	√-Basic menu contains the function code；×-Basic menu does not contain the function code

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P00 The basic function parameters							
P00.00	Keypad set frequency	0.00～400.00	30.00	√	○	0000
P00.01	Command source selection	0: Operation panel control 1: Terminal control 2: Modbus/MXLink Communication control 3: Communication expansion card control	0	√	○	0001
P00.02	A frequency Command	0: Keypad　(P00.00 Set frequency by Keypad) 1: AI1 2: AI2 3: AI3 4: Pulse setting (DI)	0	√	○	0002
P00.03	B frequency Command	5: Simple PLC 6: Multi-reference 7: PID 8: Modbus/MXLink　Communication setting 9: Communication expansion card	1	×	○	0003
P00.04	B frequency Command Reference	0: Maximum output frequency , 100% of　B Frequency setting corresponds to the maximum output frequency	0	×	○	0004

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		1: A frequency Command，100% of B Frequency setting corresponds to the maximum output frequency , Select this setting if needs				
P00.05	Conbination of the setting	0: A , the current frequency setting is A frequency Command 1: B , the current frequency setting is B frequency Command 2: A+B, the current frecluency setting isAfrequency command+ B frequencycommand 3: A-B, the current frequency setting is Afrequency command- B frequency command 4:Max(A，B):The bigger one betweenAfrequency command and B frecluenGy is the set frecluency 5: Min(A，B):Thelower one betweenAfrecluency	0	×	○	0005
P00.06	Running direction	0: forward 1: reverse	0	×	○	0006
P00.07	Acceleration time 1	0.1～3600.0	6.0	√	○	0007
P00.08	Deceleration time 1	0.1～3600.0	6.0	√	○	0008
P00.09	keep					0009
P00.10	keep					000A
P00.11	Maximum output frequency	Max(50.00，P00.12)～400.00	50.00	×	×	000B
P00.12	Frequency lower limit	0.00～P00.13(Frequency upper limit)	0.00	×	×	000C
P00.13	Frequency upper limit	P00.12(Frequency lower limit) ～ P00.13(Frequency upper limit)	50.00	×	×	000D
P00.14	Nching operation frequency	0.01～60.00	5.00	×	○	000E

P00.15	control mode	Unit's digit (FMR valid mode): Motor 1 control mode
		  0: V/F control mode
		  1: Asynchronous open-loop vector
		  2: Asynchronous closed-loop vector
		  Ten's digit (Relay 1 valid mode: Motor 2 control mode Same as above
			0x00	√	×	000F

P00.16	motor selection	0: Motor 1 1: Motor 2	1	×	×	0010
P01 Start-stop control parameters						
P01.00	Start mode	0: Stal,t-up directly:stallfrom the staltil'1g freoluenGy P01.01	0	√	×	0100

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		1: Stal,t-up after DC braking 2: Rotational speed tracking restart				
P01.01	Startup frequency	0.00～60.00	0.50	×	×	0101
P01.02	Startup frequency holding time	0.00～600.00	0.00	×	×	0102
P01.03	Startup DC braking current Pre-excited current	0.0～100.0	50.0	×	×	0103
P01.04	Startup DC braking time Pre-excited time	0.00～30.00	0.00	×	×	0104
P01.05	Stop mode	0: Decelerate to stop 1: Coast to stop	0	√	×	0105
P01.06	Initial frequency of stop DC braking	0.00～60.00	1.00	×	×	0106
P01.07	Waiting time of stop DC braking	0.00～10.00	0.00	×	×	0107
P01.08	Stop DC braking current	0.0～100.0	50.0	×	×	0108
P01.09	Stop DC braking time	0.00～30.00	0.00	×	×	0109
P01.10	Anti-reverse choice	0: Allow the reversal 1: Ban reversal	0	×	×	010A
P01.11	Forward/Reverse rotation dead-zone time	0.00～600.00	0.00	×	×	010B
P01.12	Shifting between FWD/REV rotation	0: Switch after zero frequency 1: Switch after the starting frequency	0	×	×	010C
P01.13	Restart after power off	0: Ddisable 1: Enable	0	×	×	010D
P01.14	The waiting time of Restart after power off	0.00～60.00	0.00	×	×	010E
P01.15	Stoppingg	0.00～60.00	0.10	×	×	010F

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	speed					
P01.16	Detection of stoppoing speed	0: Detect according to speed setting (no stopping delay) 1: Detect according to speed feedback (only valid for vector control)	0	×	×	0110
P01.17	Detection time of feedback speed	0.00～10.00	0.05	×	×	0111
P01.18	Tining stopping time	0.00～650.00	0.00	×	○	0112
P01.19	Timing stopping set	Unit's digit: stopping tine gallery 0: Tining stopping time P01.18 1: AI1 2: AI2 3: AI3 AI 100%Correspond to the time P01.18 Ten's digit: unit of stopping tine 0: s 1: min 2: h Hundred's digit: timer stop action keep 0: stoping，timer reset 1: stoping，timer keep Pay attention: timer time arrive，time constraint　Reset	0X000	×	○	0113
P01.20	Running time preset values	0.00～650.00	0.00	×	○	0114
P01.21	Frequency lower limit operation mode	0～1	0	×	×	0115
P01.22	suspension detection delay of Frequency lower limit	0.000～60.000	0.100	○	×	0116
P02 Vector control parameters						
P02.00	Speed loop proportional gain 1(High speed) (ASR1-Kp)	0.00～100.00	20.00	√	○	0200
P02.01	Speed loop integral time 1 (High speed)	0.000～10.000	0.200	√	○	0201

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	(ASR1-Ti)					
P02.02	Switchover frequency 1	P02.05(ASR2 Switchover frequency) ～ P00.11(MXM frequency of output)	10.00	×	○	0202
P02.03	Speed loop integral time 2 (low speed)(ASR2-Ti)	0.00～100.00	20.00	√	○	0203
P02.04	Speed loop integral time 1 (low speed) (ASR2-Ti)	0.000～10.000	0.200	√	○	0204
P02.05	ASR2 Switchover frequency 2	0.00～P02.02 (ASR1 Switchover frequency 2)	5.00	×	○	0205
P02.06	Speed loop output filter	0.000～0.100	0.000	×	○	0206
P02.07	Electromotion torque set	0.0～300.0	180.0	×	○	0207
P02.08	Upper braking torque astrict set	0.0～300.0	180.0	×	○	0208
P02.09	Current loop percentage coefficient	0.001～2.000	1.000	×	○	0209
P02.10	Current loop integral coefficient	0.1～500.0	10.0	×	○	020A
P02.11	Pre-exciting time	0.00～10.00	0.30	×	×	020B
P02.12	Pre-exciting current	50.0～200.0	100.0	×	×	020C
P02.13～ P02.15	Keep					
P02.16	Compensation coefficient of electromotion slip	10.0～300.0	100.0	×	○	0210
P02.17	Compensation coefficient of braking slip	10.0～300.0	100.0	×	○	0211
P03 Torque control parameters						
P03.00	torque /speed control	0: speed control 1: torque control	0	√	○	0300
P03.01	Given torque figures	-300.0～300.0	0.0	×	○	0301

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P03.02	Torque setting method	0: Keypad setting torquen P03.01 1: Analog AI1 setting troque 2: Analog AI2 setting troque 3: Analog AI3 setting troque 4: Pulse frequency HDI setting torque 5: PID output 6: Modbus/MXLink communication setting torque 7: PLC Extension control card setting torque	0	×	○	0302
P03.03	Torque reference filter time	0.000～60.000	0.100	×	○	0303
P03.04	Torque proportionality coefficient set	0.000～3.000	0.100	×	○	0304
P03.05	Upper frequency of forward rotation in vector control	0: Keypad setting torquen P02.07 1: Analog AI1 setting troque 2: Analog AI2 setting troque 3: Analog AI3 setting troque 4: Pulse frequency HDI setting torque 5: PID output 6: Modbus/MXLink communication setting torque 7: PLC Extension control card setting torque	0	×	○	0305
P03.06	Upper frequency of reverse rotation in vector control	0: Keypad setting torquen P02.08 1: Analog AI1 setting troque 2: Analog AI2 setting troque 3: Analog AI3 setting troque 4: Pulse frequency HDI setting torque 5: PID output 6: Modbus/MXLink communication setting torque 7: PLC Extension control card setting torque	0	×	○	0306
P03.07	Torque limit ratio	0.000～3.000	2.000	×	○	0307
P03.08	Forward maximum frequency gallery	0: Keypad setting P03.10 1: Analog AI1 setting 2: Analog AI2 setting 3: Analog AI3 setting 4: Pulse frequency HDI setting 5: PID output 6: Modbus/MXLink communication setting 7: PLC Extension control card setting	0	×	○	0308
P03.09	REV maximum frequency gallery	0: Keypad setting P03.10 1: Analog AI1 setting 2: Analog AI2 setting 3: Analog AI3 setting	0	×	○	0309

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		4: Pulse frequency HDI setting 5: PID output 6: Modbus/MXLink communication setting 7: PLC Extension control card setting				
P03.10	Forward maximum frequency	0.0～100.0	100.0	×	○	030A
P03.11	REV maximum frequency	0.0～100.0	100.0	×	○	030B
P03.12	Coefficient of friction compensation	0.00～20.00	0.00	×	○	030C
P03.13	Torque offset number given	-100.0～100.0	0.0	×	×	030D
P04　V/F control parameters						
P04.00	V/F curve setting	0: Linear V/F 1: Multi-point V/F 2～11: 1.1～2.0Power down torqueV/F 12: V/F complete separation	0	√	×	0400
P04.01	V/F frequency f1	0.00～P04.03(V/F frequency f2)	0.00	×	×	0401
P04.02	V/F voltage V1	0.0～P04.04(V/F voltage V2)	0.0	×	×	0402
P04.03	V/F frequency f2	P04.01(V/F frequency f1)～P04.05(V/F frequency f3)	0.00	×	×	0403
P04.04	V/F voltage V2	P04.02(V/F voltage V1)～P04.06(V/F voltage V3)	0.0	×	×	0404
P04.05	V/F frequency f3	P04.03(V/F frequency f2)～P04.07(V/F frequency f4)	0.00	×	×	0405
P04.06	V/F voltage V3	P04.04(V/F voltage V2)～P04.08(V/F voltage V4)	0.0	×	×	0406
P04.07	V/F frequency f4	P04.05(V/F frequency f3)～P00.11(Maximum output frequency)	0.00	×	×	0407
P04.08	V/F voltage V4	P04.06(V/F voltage V3)～100.0	0.0	×	×	0408
P04.09	AVR function	0：forbid AVR　1：enable AVR	1	×	×	0409
P04.10	Torque compensation	0.0: AUTO Torque compensation 0.1～30.0: Manual Torque compensation	0.0	×	○	040A
P04.11	Cut-off frequency of torque boost	0.0～100.0	100.0	×	○	040B
P04.12	V/F slip compensation gain	0.0～200.0	100.0	×	○	040C
P04.13	V/F slip	0.0～300.0	200.0	×	○	040D

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	compensation Limit					
P04.14	V/F slip compensation Prop filter	0.001～10.000	2.000	×	○	040E
P04.15	V/F oscillation suppression gain	0.00～10.00	1.00	×	○	040F
P04.16	V/F Separation set	units' digit: After downtime command voltage set value 0: Given the output voltage value of the minimum voltage P04.22 1: Voltage to maintain set the channel set value ten, hundred, thousand: keep	0x00	×	×	0410
P04.17	Voltage source for V/F separation	0: Keypad setting P04.18 1: Analog AI1 setting 2: Analog AI2 setting 3: Analog AI3 setting 4: Pulse frequency HDI setting 5: keep 6: PID output 7: Modbus/MXLink communication setting 8: PLC Extension control card setting	0	×	○	0411
P04.18	Voltage digital setting for V/F separation	0.0～100.0	0.0	×	○	0412
P04.19	Voltage rise time of V/F separation	0.1～3600.0	6.0	×	○	0413
P04.20	Voltage decline time of V/F separation	0.1～3600.0	6.0	×	○	0414
P04.21	Maximum output voltage	P04.22(Minimum output voltage)～100.0	100.0	×	×	0415
P04.22	Minimum output voltage	0.0～P04.21(Maximum output voltage)	0.0	×	×	0416
P05 Frequency of auxiliary parameters						
P05.00	Auxiliary frequency source selection	0: keypad ∧∨ set 1: terminal UP/DN set 2: keep	0	×	○	0500
P05.01	Auxiliary frequency	units' digit： 0: Frequency power storage	0x00	×	○	0501

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address

	control	1: Frequency power no store
		
		ten's digit:
		   0: Auxiliary frequency trimming stop is adjustable
		   1: Auxiliary frequency tuning is adjustable in the run, only stop keeping
		   2: Assisted in the operation of the frequency tuning is adjustable，Stop reset
		The above function applies only to P05.00 of 0 and 1				

P05.02	Run the command channel bundling frequency channel	units' digit: Operation panel control command
		0: No bound
		1: Keypad setting P04.18
		2: Analog AI1 setting
		3: Analog AI2 setting
		4: Analog AI3 setting
		5: Pulse frequency HDI setting
		 6: Simple PLC
		 7: multi-speed
		 8: PID
		 9: Modbus/MXLink communication setting
		 10: PLC Extension control card setting
		Ten' digit: Terminal command control ditto
		  hundred's: Modbus/MXLink command control ditto
		  Thousand digit: Command and control communications extension card ditto
			0x0000	×	○	0502

P05.03	Linear velocity coefficient	0.1~400.0	1.0	×	○	0503

P05.04	Keyboard digital potentiometer Settings	units' digit: Digital potentiometer scope
		  0: Only for frequency fine tuning
		  1: Frequency fine tuning, and the contents of the function code
		  2: The frequency tuning and the contents of the function code and selection function code sequence number
		ten's digit:
		  0: Digital potentiometer initial step 0.01
		  1: Digital potentiometer initial step 0.10
		  2: Digital potentiometer initial step 1.00
		  3: Digital potentiometer initial step 10.00
			0x02	×	○	0504

P05.05	Jump frequency 1	0.00~400.00	0.00	×	×	0505
P05.06	Frequency 1 jump amplitude	0.00~30.00	0.00	×	×	0506

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P05.07	Jump frequency 2	0.00～400.00	0.00	×	×	0507
P05.08	Frequency 2 jump amplitude	0.00～30.00	0.00	×	×	0508
P05.09	Jump frequency 3	0.00～400.00	0.00	×	×	0509
P05.10	Frequency 3 jump amplitude	0.00～30.00	0.00	×	×	050A
P05.11	Keep					050B
P06 Deceleration parameters						
P06.00	Acceleration time 2	0.1～3600.0	6.0	×	○	0600
P06.01	Deceleration time 2	0.1～3600.0	6.0	×	○	0601
P06.02	Acceleration time 3	0.1～3600.0	6.0	×	○	0602
P06.03	Deceleration time 3	0.1～3600.0	6.0	×	○	0603
P06.04	Acceleration time 4	0.1～3600.0	6.0	×	○	0604
P06.05	Deceleration time 4	0.1～3600.0	6.0	×	○	0605
P06.06	Frequency switchover point between acceleration time 1 and acceleration time 2	0.00～400.00	0.00	×	○	0606
P06.07	Frequency switchover point between deceleration time 1 and deceleration time 2	0.00～30.00	1.00	×	○	0607
P06.08	S curve of time start to accelerate	0.0～10.0	0.0	×	×	0608
P06.09	Accelerate the end time of S curve	0.0～10.0	0.2	×	×	0609
P06.10	Slow start S	0.0～10.0	0.2	×	×	060A

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	curve					
P06.11	End S curve time reduction	0.0～10.0	0.0	×	×	060B
P06.12	JOG acceleration time	0.1～60.0	6.0	×	○	060C
P06.13	JOGdeceleration time	0.1～60.0	6.0	×	○	060D
P06.14	JOG interval time	0.0～100.0	0.0	×	○	060E
P06.15	Emergency stop deceleration time	0.0～6000.0	1.0			060F
P07 Control enhancement parameters						
P07.00	carrier frequency	1.0～15.0	8.0	×	○	0700
P07.01	SVPWM modulation parameter	units' digit: Carrier adjust themselves according to the temperature inside the machine 0: ban 1: enabled Carrier frequency automatically adjust action selection, inverter can adjust automatically according to the temperature inside the machine to the carrier frequency. ten's digit: PWM modulation output 0: ban 1: enabled When the input power is low, the PWM modulation can improve the busbar voltage utilization ratio, to maintain the output voltage, output of motor.	0x0011	×	○	0701
P07.02	The open loop vector model	0: mode 1,Better steady speed precision 1: mode 2,Lower speed pulsation	0	×	×	0702
P07.03	energy-saving operation	0: orbid 1: enabled	0	×	○	0703
P07.04	V/F running coefficient	0.0～50.0	30.0	×	○	0704
P07.05	Keep					0705
P07.06	Keep					0706
P07.07	Automatic current limiting options	0: Effective acceleration and deceleration, constant speed is invalid 1: Deceleration, constant speed are effective 2: constant speed, acceleration and deceleration are invalid	1	×	×	0707
P07.08	Automatic current limit levels	50.0～200.0	160.0	×	×	0708

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P07.09	V/F current limit control gain	0.00～10.00	1.00	×	○	0709
P07.10	Function of overpressure stall	0: orbid 1: enabled	0	×	×	070A
P07.11	Stall point overvoltage	640～780	750	×	×	070B
P07.12	Over-excitation deceleration function	0: No Operation 1: Inhibition of busbar voltage over-voltage, don't over excitation control 2: Inhibition of busbar voltage over-voltage, and excitation control	2	×	×	070C
P07.13	Overvoltage suppression detection value	680～740	720	×	×	070D
P07.14	Instantaneous stop function	0.000～4.000	1.000	×	○	070E
P07.15	Instantaneous stop function	0: orbid 1: enabled	0	×	×	070F
P07.16	Instantaneous stop detection value	400～480	450	×	×	0710
P07.17	Instantaneous stop deceleration gain	0.000～4.000	1.000	×	○	0711
P07.18~ P07.21	Keep					0712~0715
P07.22	The droop control gain	0.0～100.0	0.0	×	○	0716
P07.23	Droop control filtering time	0.01～5.00	0.50	×	○	0717
P08 Speed and torque protection parameters						
P08.00	Detection value of too large speed deviation	0.0～50.0	30.0	×	×	0800
P08.01	Detection time of too large speed deviation	0.0～60.0	10.0	×	×	0801

P08.02	Speed deviation is too large to protect	units' digit: Check out the selection
		   0: Non detection
		   1: Only in constant speed detection
		   2: Has been detectied
			0x00	×	×	0802

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		ten's digit: alarm select 0: Free downtime and failure 1: Alarm and continue running				
P08.03	Rapid detection threshold	0.0～150.0	110.0	×	×	0803
P08.04	Rapid detection of time	0.000～2.000	0.010	×	×	0804
P08.05	Rapid protection action	units' digit: Check out the selection 0: Non detection 1: Only in constant speed detection 2: Has been detectied ten's digit: alarm select 0: Free downtime and failure 1: Alarm and continue running	0x00	×	×	0805
P08.06	Torque is insufficient or big protections	units' digit: Check out the selection (1) protection 0: Non detection 1: Detect torque is too big 2: Only in the constant speed test torque is too big 3: Torque measurement is insufficient 4: Only in the constant speed test torque ten's digit: alarm select 0: Free downtime and failure 1: Alarm and continue running hundred's digit: Check out the selection (1) protection 0: Non detection 1: Detect torque is too big 2: Only in the constant speed test torque is too big 3: Torque measurement is insufficient 4: Only in the constant speed test torque Thousand's digit: alarm select 0: Free downtime and failure 1: Alarm and continue running	0x0000	×	×	0806
P08.07	Torque is insufficient/big detection threshold 1	0.0～200.0	30.0	×	×	0807
P08.08	Torque is insufficient/big checkout time 1	0.0～60.0	10.0	×	×	0808
P08.09	Torque is insufficient/big detection threshold 2	0.0～200.0	30.0	×	×	0809

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P08.10	Torque is insufficient/big checkout time 2	0.0～60.0	10.0	×	×	080A
P08.11	keep			×	×	080B
P09 Protect the parameter Settings						

P09.00	Option 1 protection action	units' digit: Abnormal communication action choice
		    0: Protection movement and free parking
		    1: The alarm and continues to run
		ten's digit: Brake pipe abnormal action choice
		    0: Protection movement and free parking
		    1: The alarm and continues to run
		     2: no detect
		hundred's digit: EEPROMAbnormal action choice
		    0: Protection movement and free parking
		    1: The alarm and continues to run
			0x101	×	×	0900

P09.01	Option 2 protection action	units' digit: input phase action choice
		    0: failure to actuate
		    1: Protection movement and free parking
		    2: The alarm and continues to run
		ten's digit: output phase action choice
		    0: failure to actuate
		    1: Protection movement and free parking
		    2: The alarm and continues to run
		hundred's digit: Temperature detection circuit fault
		    0: failure to actuate
		    1: Protection movement and free parking
		    2: The alarm and continues to run
		 Thousdand's digit: In the operation of busbar undervoltage fault movements
		0: failure to actuate
		1: Protection movement and free parking
			0x1111	×	×	0901

P09.02	Fault indicator selection	units' digit: Under-voltage fault indicator action choice
		 0: failure to actuate
		1: Protection movement and free parking
		ten's digit: Automatic reset interval fault indicator action choice
		    0: Fault locking function allows, but no action instructions
		    1: Fault locking action and action
		hundred's digit: Fault locking action choice
		    0: Fault locking function is prohibited, but the instructions action
			0x000	×	×	0902

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		1: Fault locking function is prohibited, but no action instructions 2: Fault locking and direct action				
P09.03	alarm frequency set	0: alarm frequency given is invalid 1: alarm standby frequency(P09.04) 2: The current running frequency * alarm frequency coefficients(P09.05) 3: P00.00 set frequency 4: lower rate limit 5: upper limiting frequency	0	×	×	0903
P09.04	alarm standby frequency	0.00～400.00	1.00	×	×	0904
P09.05	alarm frequency coefficient	0.0～100.0	100.0	×	×	0905
P09.06	Fault auto reset times	0～100	0	×	×	0906
P09.07	Time interval of fault auto reset	1.0～60.0	5.0	×	×	0907

P09.08	Overload forecasting warning detection Settings	units' digit: Overload warning detection Settings
		  0: no detect
		  1: Has been testing
		  2: Only constant speed detection
		ten's digit: Underload early warning detection Settings
		  0: no detect
		  1: Has been testing
		  2: Only constant speed detection
		 hundred's digit: alarm select
		  0: Underload were warning, continue to run
		  1: Underload warning continues to run, overload protection and free parking
		  2: Overload alarms continues to run, underload protection and free parking
		  3: Underload fault protection actions and free parking
		Thousdand's digit: Check out the amount of choice
		  0: Relative to the motor rated current
		  1: Relative frequency converter rated current
			0x0000	×	×	0908

P09.09	Overload forecasting warning detection levels	P09.11～200.0	130.0	×	×	0909
P09.10	Overload forec	1.0～60.0	5.0	×	×	090A

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	asting warning detection time					
P09.11	Off load detection levels	0.0～P09.08	30.0	×	×	090B
P09.12	Off load detection time	1.0～60.0	5.0	×	×	090C
P09.13	Output current limit alarm detection time	0.0～120.0	5.0	×	×	090D
P09.14	Output current limiting fault detection duration	0.0～600.0	60.0	×	×	090E
P09.15	Three-phase input imbalance	0.0～300.0	100.0	×	×	090F
P09.16	keep					0910
P10　Switch input parameters						
P10.00	Terminal status effectively	Bit0～Bit7: X1～X8 　0: positive logic 　1: negative logic	0x00	×	○	0A00
P10.01	Terminal starting protection option	0: Protection is invalid, enter the running state starting motor inverter 1：Effective protection, frequency converter does not respond to the start command, must run a command to cancel first, and then run making effective, so that the frequency converter into the running state	1	×	×	0A01
P10.02	X1　terminal function	0: No function 1: Three-line control	6	√	×	0A02
P10.03	X2　terminal function	2: Command to switch to the keyboard 3: Command to switch to the terminals	7	√	×	0A03
P10.04	X3　terminal function	4: Command to switch to Modbus/MXLink 5: Command to switch to extend communication card	17	√	×	0A04
P10.05	X4　terminal function	6: Forward RUN (FWD) 7: Reverse RUN (REV)	18	√	×	0A05
P10.06	X5　terminal function	8: Forward JOG 9: Reverse JOG	12	√	×	0A06
P10.07	X6　terminal function	10: External downtime (press down way down) 11: Coast to stop	42	×	×	0A07
P10.08	X7　terminal function	12: Fault reset (RESET) 13: RUN pause	0	×	×	0A08
P10.09	X8　terminal	14: shift between A seting and B setting 15: shift between combinatiom seting and A setting	0	×	×	0A09

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	function	16: shift between combinatiom seting and B setting				
		17: Terminal UP				
		18: Terminal DOWN				
		19: Auxiliary setting frequency reset				
		20:Terminal 1 for acceleration/deceleration time selection				
		21: Terminal 2 for acceleration/deceleration time selection				
		22: Acceleration/Deceleration prohibited				
		23: pre-magnetized command				
		24: starting DC braking				
		25: stop DC braking				
		26: Multi-reference terminal 1				
		27: Multi-reference terminal 2				
		28: Multi-reference terminal 3				
		29: Multi-reference terminal 4				
		30: Multi-reference pause				
		31: keep				
		32: PLC Stop memory clear				
		33: Simple PLC pause				
		34: PID control pause				
		35: PID Integral pause				
		36: PID Reverse PID action direction				
		37: PID Integra cleer				
		38: Multi-reference closed-loop terminal 1				
		39: Multi-reference closed-loop terminal 2				
		40: Multi-reference closed-loop terminal 3				
		41: Multi-reference closed-loop terminal 4				
		42: Swing pause				
		43: Swing reset				
		44: Speed/torque control switch control				
		45: keep				
		46: External fault input				
		47: External fault input				
		48: Motors 1, 2, select switch				
		49: Counter input(<200Hz)				
		50: Counter keep				
		51: Counter clear				
		52: Auxiliary frequency is invalid				
		53: Frequency jog				
		54: Emergency stop				
		55: PID parameter switchover				
		56: Running time pause				

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		57: Running time clear 58: S curve deceleration banned 59: keep 60: High-speed pulse input(DI) 61~95: keep				
P10.10	Terminal command mode	0: Two-line mode 1 1: Two-line mode 2 2: Three-line mode 1 3: Three-line mode 2	0	×	×	0A0A
P10.11	Terminal UP rate	0.01~50.00	1.00	×	○	0A0B
P10.12	Terminal DOWN rate	0.01~50.00	1.00	×	○	0A0C
P10.13	Preset count value given	1~P10.14	10	×	×	0A0D
P10.14	To count the given	P10.13~60000	20	×	×	0A0E
P10.15	Terminal count preassigned frequency	1~65535	1	×	×	0A0F

P10.16	Terminal count configuration	units' digit: Count the input terminals
		    0: Count the input is not action
		    1: Ordinary Terminal (X1~X8)200Hz
		    2: High speed input terminals(X8)
		ten's digit: trigger edge
		    0: Rising edge the effective
		    1: Falling edge effectively
		    2: Rising edge and Falling edge are effective
		hundred's digit: Stop counting reset option
		    0: Stop count value reduction
		    1: Stop continue to count
		 Thousand's digit: Terminal count reaches the acti on
		    0: No action
		    1: Produce halt command
		    2: Reset the count
		    3: Reset the count value and generate stop command
			0x0000	×	×	0A10

P10.17	Maximum input pulse frequency	0.1~80.0	10.0	×	○	0A11
P10.18	Pulse filter time is given	0.001~9.999	0.010	×	○	0A12
P10.19	Pulse center model	0: No center 1: Center pattern 1	0	×	×	0A13

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		2: Center mode 2				
P10.20	Keep					
P10.21	Keep					
P10.22	Switch- on delay of X1 terminal	0.000～60.000	0.010	×	○	0A16
P10.23	Switch- on delay of X2 terminal	0.000～60.000	0.010	×	○	0A17
P10.24	Switch- on delay of X3 terminal	0.000～60.000	0.010	×	○	0A18
P10.25	Switch- on delay of X4 terminal	0.000～60.000	0.010	×	○	0A19
P10.26	Switch- on delay of X5 terminal	0.000～60.000	0.010	×	○	0A1A
P10.27	Switch- on delay of X6 terminal	0.000～60.000	0.010	×	○	0A1B
P10.28	Switch- on delay of X7 terminal	0.000～60.000	0.010	×	○	0A1C
P10.29	Switch- on delay of X8 terminal	0.000～60.000	0.010	×	○	0A1D
P10.30	Switch- off delay of X1 terminal	0.000～60.000	0.010	×	○	0A1E
P10.31	Switch- off delay of X2 terminal	0.000～60.000	0.010	×	○	0A1F
P10.32	Switch- off delay of X3 terminal	0.000～60.000	0.010	×	○	0A20
P10.33	Switch- off delay of X4 terminal	0.000～60.000	0.010	×	○	0A21
P10.34	Switch- off delay of X5 terminal	0.000～60.000	0.010	×	○	0A22
P10.35	Switch- off delay of X6 terminal	0.000～60.000	0.010	×	○	0A23
P10.36	Switch- off delay of X7 terminal	0.000～60.000	0.010	×	○	0A24
P10.37	Switch- off delay of X8 terminal	0.000～60.000	0.010	×	○	0A25
P11　Switch output parameters						
P11.00	Output terminal set effective operation	Bit0～Bit3: Y1、Y2、BR，TR Relay 0: positive logic　　1: negative logic	0x000F	×	○	0B00
P11.01	Y1 output terminals function	0: AC drive running 1: Motor and reversing instructions 2: Frequency reached	0	√	○	0B01

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	selection	3: Frequency-level detection				
P11.02	R function of relay selection	FDT1 output 4: Frequency-level detection	14	√	○	0B02
P11.03	T function of relay selection	FDT2 output 5: Zero-speed running (no output	15	×	○	0B03
P11.04	Y2/DO output terminals function selection	at stop) 6: Frequency upper limit reached 7: Frequency lower limit reached 8: Motor overload pre-warning 9: Motor underload pre-warning 10: Current limit alarm output 11: Customize the alarm output 12: under voltage blocking 13: External downtime 14: inverter alarm 15: Inverter fault 16: Ready for RUN 17: completion of simple plc stage 18: completion of simple plc cycle 19: setting count value arrival 20: defined count value arrival 21: Modbus/MXLink control 22: Expand communication card control action 23: Closed-loop detection 24: closed-loop feedback low threshold detection 25:closed-loop feedback high threshold detection 26: Timing shutdown time 27: Running time presets to action 28~31: keep 32: AO1 analog detection action 1 33: AO1 analog detection action 2 34: AO2 analog detection action 1 35: AO2 analog detection action 1 36: VAO1 analog detection action 1 37: VAO1 analog detection action 2 38: VAO1 analog detection action 3 39: VAO2 analog detection action 1 40: VAO2 analog detection action2 41: VAO2 analog detection action 3 42: VAO3 analog detection action 1 43: VAO3 analog detection action 2 44: VAO3 analog detection action 3 45: A torque/owe early warning detection 1 torque	2	×	○	0B04

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		46: A torque/owe early warning detection 2 torque				
		47: torque control frequency limit				
		48: torque control torque limit				
		49~63: Keep				
		Y2/DO Output terminal function selection:				
		64: output frequency				
		65: set frequency				
		66: Output current (relative 2 times the rated current of transducers)				
		67: Output current (relative 2 times the motor rated current)				
		68: Output voltage				
		69: busbar voltage				
		70: Output torque				
		71: keep				
		72: exciting flux				
		73: Output speed				
		74: output power				
		75: Cumulative frequency converter overloading				
		76: Motor overload the cumulative				
		77: Temperature of the inverter				
		78: temperature of the rectifier				
		79: PC percentage				
		80: PID setting				
		81: PID Feedback				
		82: PID Input bias				
		83: PID output				
		84: Analog input AI1				
		85: Analog input AI2				
		86: Analog input AI2				
		87: After the adjustment AI1				
		88: After the adjustment AI2				
		89: After the adjustment AI3				
		90: High-speed pulse input frequency				
		91: Set torque				
		92: Extend communication card set value				
		93~95: keep				
P11.05	Frequency to check out the width	0.00~200.00	2.50	×	○	0B05
P11.06	Zero speed operation	0.00~10.00	0.50	×	○	0B06

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	thresholds					
P11.07	FDT1 Upper bounds of the level	P11.08~400.00	50.00	×	○	0B07
P11.08	FDT1 lower bounds of the level	0.00~P11.07	49.00	×	○	0B08
P11.09	FDT2 Upper bounds of the leve	P11.10~400.00	25.00	×	○	0B09
P11.10	FDT2 lower bounds of the level	0.00~P11.09	24.00	×	○	0B0A
P11.11	highest frequency pulse output	0.1~80.0	10.0	×	○	0B0B
P11.12	Pulse output filtering time	0.001~9.999	0.010	×	○	0B0C
P11.13	Action 1 low simulation detection	0.0~P11.14	20.0	×	○	0B0D
P11.14	Analog detection action 1 high value	P11.13~100.0	100.0	×	○	0B0E
P11.15	Action 2 low simulation detection	0.0~P11.16	40.0	×	○	0B0F
P11.16	Analog detection action 2 high value	P11.15~100.0	100.0	×	○	0B10
P11.17	Action 3 low simulation detection	0.0~P11.18	60.0	×	○	0B11
P11.18	Analog detection action 3 high value	P11.17~100.0	100.0	×	○	0B12
P11.19	Custom alarm output alarm code	0~20	0	×	○	0B13
P11.20 ~ P11.23	Keep					
P11.24	Y1 output	0.000~60.000	0.000	×	○	0B18

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	terminals close time delay					
P11.25	R closed relay time delay	0.000～60.000	0.005	×	○	0B19
P11.26	T closed relay time delay	0.000～60.000	0.005	×	○	0B0A
P11.27	Y2 output terminals close time delay	0.000～60.000	0.000	×	○	0B0B
P11.28	Y1 output terminals shut off time delay	0.000～60.000	0.000	×	○	0B0C
P11.29	R relay shut off time delay	0.000～60.000	0.005	×	○	0B0D
P11.30	T relay shut off time delay	0.000～60.000	0.005	×	○	0B0E
P11.31	Y2 output terminals shut off time delay	0.000～60.000	0.000	×	○	0B0F
P12 Analog input parameters						
P12.00	AI1 minimum input	0.00～P12.02	0.00	×	○	0C00
P12.01	Corresponding setting of AI1 minimum input	-100.0～100.0%	0.0	×	○	0C01
P12.02	AI1 maximum input	P12.02～10.00	10.00	×	○	0C02
P12.03	Corresponding setting of AI1 maximum input	-100.0～100.0%	100.0	×	○	0C03
P12.04	AI1 filter time	0.001～9.999	0.010	×	○	0C04
P12.05	AI2 minimum input	0.00～P12.07	0.00	×	○	0C05
P12.06	Corresponding setting of AI2 minimum input	-100.0～100.0%	0.0	×	○	0C06
P12.07	AI2 maximum input	P12.05～10.00	10.00	×	○	0C07
P12.08	Corresponding setting of AI2 maximum input	-100.0～100.0%	100.00	×	○	0C08
P12.09	AI2 filter time	0.001～9.999	0.010	×	○	0C09

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P12.10	AI3 minimum input	-10.00～P12.12	0.00	×	○	0C0A
P12.11	Corresponding setting of AI3 minimum input	-100.0～100.0%	0.0	×	○	0C0B
P12.12	Corresponding setting of AI3 maximum input	P12.10～10.00	10.00	×	○	0C0C
P12.13	Corresponding setting of AI3 maximum input	-100.0～100.0%	100.00	×	○	0C0D
P12.14	AI3 filter time	0.001～9.999	0.010	×	○	0C0E
P12.15	keep					
P13 Analog output parameters						
P13.00	AO1 function selection	0: Running frequency 1: Set frequency 2: Output current(Relative double inverter rated current) 3: Output current(Relative double the motor rated current) 4: Output voltage 5: output voltages 1 6: Output torque 7: keep 8: exciting flux 9: Output speed 10: Output power 11: Cumulative converter overloading 12: Cumulative motor overloading 13: Temperature of the inverter 14: The temperature of the rectifier 15: PC percentage 16: PID set 17: PID Feedback 18: PID Input bias 19: PID output 20: AI1 21: AI2 22: AI3 23: After the adjustment AI1 24: After the adjustment AI2 25: After the adjustment AI3 26: DI Pulse input	0	√	○	0D00

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		27: set torque 28: Extend communication card set value 29: Simple PLC operation stage 30~31: keep				
P13.01	AO1 gain	0.0～200.0	100.0	×	○	0D01
P13.02	AO1 offset coefficient	-100.0～100.0	0.0	×	○	0D02
P13.03	AO1 Prop filter	0.001～9.999	0.010	×	○	0D03
P13.04	AO2 function selection	With AO1	0	×	○	0D04
P13.05	AO1 gain	0.0～200.0	100.0	×	○	0D05
P13.06	AO2 offset coefficient	-100.0～100.0	0.0	×	○	0D06
P13.07	AO2 Prop filter	0.001～9.999	0.010	×	○	0D07
P14 The custom input curve						
P14.00	curve adjust and choose	Unit's digit: AI1 input curve 　0: Do not make adjustment curve 　1: curve 1 　2: curve 2 Ten's digit: AI2 input curve With AI1 set hundred's digit: AI3 input curve 　With AI1 set Thousand 's digit: Pulse input curve 　With AI1 set	0x0000	√	○	0E00
P14.01	AI curve 1 minimum input	0.0～P14.03	0.0	×	○	0E01
P14.02	Corresponding setting of AI curve 1 minimum input	0.0～100.0	0.0	×	○	0E02
P14.03	AI curve 1 inflexion 1 input	P14.01～P14.05	0.0	×	○	0E03
P14.04	Corresponding setting of AI curve 1 inflexion 1 input	0.0～100.0	0.0	×	○	0E04
P14.05	AI curve 1 inflexion 2 input	P14.03～P14.07	100.0	×	○	0E05
P14.06	Corresponding	0.0～100.0	100.0	×	○	0E06

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	setting of AI curve 1 inflexion 2 input					
P14.07	AI curve 1 maximum input	P14.05～100.0	100.0	×	○	0E07
P14.08	Corresponding setting of AI curve 1 maximum input	0.0～100.0	100.0	×	○	0E08
P14.09	AI curve 2 minimum input	0.0～P14.11	0.0	×	○	0E09
P14.10	Corresponding setting of AI curve 2 minimum input	0.0～100.0	0.0	×	○	0E0A
P14.11	AI curve 2 inflexion 1 input	P14.09～P14.13	0.0	×	○	0E0B
P14.12	Corresponding setting of AI curve 2 inflexion 1 input	0.0～100.0	0.0	×	○	0E0C
P14.13	AI curve 1 inflexion 2 input	P14.11～P14.15	100.0	×	○	0E0D
P14.14	Corresponding setting of AI curve 1 inflexion 2 input	0.0～100.0	100.0	×	○	0E0E
P14.15	AI curve 1 maximum input	P14.13～100.0	100.0	×	○	0E0F
P14.16	Corresponding setting of AI curve 1 maximum input	0.0～100.0	100.0	×	○	0E10
P15　Virtual switch parameters						
P15.00	Virtual VX1 terminal function	With P10.02	0	×	×	0F00
P15.01	Virtual VX2 terminal function	With P10.02	0	×	×	0F01
P15.02	Virtual VX3 terminal	With P10.02	0	×	×	0F02

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	function					
P15.03	Virtual VX4 terminal function	With P10.02	0	×	×	0F03
P15.04	Virtual VX5 terminal function	With P10.02	0	×	×	0F04
P15.05	Virtual X terminal input source	Virtual terminal input source selection Bit0: 0: The X1 as VX1 input 1: The virtual source as the VX1 input(P15.06) Bit1~Bit4: ditto	0x00	×	○	0F05
P15.06	Virtual terminal X virtual source selection	Virtual terminal virtual source selection Bit0: 0: VY1 as VX1 input 1: By setting P15.07 VX1 state Bit1~Bit4: ditto	0x00	×	○	0F06
P15.07	Virtual terminal X input status	Virtual terminal X input status Bit0~Bit4: VX1~VX5 0: Virtual terminal is invalid 1: Virtual terminal effective	0x00	×	○	0F07
P15.08	Virtual VY1 terminal function	With P11.01	0	×	×	0F08
P15.09	Virtual VY2 terminal function	With P11.01	0	×	×	0F09
P15.10	Virtual VY3 terminal function	With P11.01	0	×	×	0F0A
P15.11	Virtual VY4 terminal function	With P11.01	0	×	×	0F0B
P15.12	Virtual VY5 terminal function	With P11.01	0	×	×	0F0C
P15.13	Virtual terminal Y effective state	Virtual terminal Y effective state Bit0~Bit4: VY1~VY5 0: positive logic 1: negative logic	0x00	×	○	0F0D
P15.14	Closed VY1 terminal latency	0.000~60.000	0.005	×	○	0F0E

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P15.15	Closed VY2 terminal latency	0.000～60.000	0.005	×	○	0F0F
P15.16	Closed VY3 terminal latency	0.000～60.000	0.005	×	○	0F10
P15.17	Closed VY4 terminal latency	0.000～60.000	0.005	×	○	0F11
P15.18	Closed VY5 terminal latency	0.000～60.000	0.005	×	○	0F12
P15.19	VY1 terminal disconnection time delay	0.000～60.000	0.005	×	○	0F13
P15.20	VY2 terminal disconnection time delay	0.000～60.000	0.005	×	○	0F14
P15.21	VY3 terminal disconnection time delay	0.000～60.000	0.005	×	○	0F15
P15.22	VY4 terminal disconnection time delay	0.000～60.000	0.005	×	○	0F16
P15.23	VY5 terminal disconnection time delay	0.000～60.000	0.005	×	○	0F17
P15.24	Virtual VA01 function	With P13.00	0	×	○	0F18
P15.25	Virtual VA02 function	With P13.00	0	×	○	0F19
P15.26	Virtual VA03 function	With P13.00	0	×	○	0F1A
P20 Multistage parameters						
P20.00	Multistage frequency 1	0.00～400.00	5.00	×	○	1400
P20.01	Multistage frequency 2	0.00～400.00	10.00	×	○	1401
P20.02	Multistage frequency 3	0.00～400.00	15.00	×	○	1402
P20.03	Multistage frequency 4	0.00～400.00	20.00	×	○	1403
P20.04	Multistage frequency 5	0.00～400.00	25.00	×	○	1404
P20.05	Multistage frequency 6	0.00～400.00	30.00	×	○	1405

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P20.06	Multistage frequency 7	0.00～400.00	35.00	×	○	1406
P20.07	Multistage frequency 8	0.00～400.00	40.00	×	○	1407
P20.08	Multistage frequency 9	0.00～400.00	45.00	×	○	1408
P20.09	Multistage frequency 10	0.00～400.00	50.00	×	○	1409
P20.10	Multistage frequency 11	0.00～400.00	45.00	×	○	140A
P20.11	Multistage frequency12	0.00～400.00	40.00	×	○	140B
P20.12	Multistage frequency13	0.00～400.00	35.00	×	○	140C
P20.13	Multistage frequency14	0.00～400.00	30.00	×	○	140D
P20.14	Multistage frequency15	0.00～400.00	25.00	×	○	140E
P20.15	Multistage frequency16	0.00～400.00	20.00	×	○	140F
P20.16	Multistage closed-loop1	0.00～10.00	1.00	×	○	1410
P20.17	Multistage closed-loop2	0.00～10.00	2.00	×	○	1411
P20.18	Multistage closed-loop3	0.00～10.00	3.00	×	○	1412
P20.19	Multistage closed-loop4	0.00～10.00	4.00	×	○	1413
P20.20	Multistage closed-loop5	0.00～10.00	5.00	×	○	1414
P20.21	Multistage closed-loop6	0.00～10.00	6.00	×	○	1415
P20.22	Multistage closed-loop7	0.00～10.00	7.00	×	○	1416
P20.23	Multistage closed-loop8	0.00～10.00	8.00	×	○	1417
P20.24	Multistage closed-loop9	0.00～10.00	9.00	×	○	1418
P20.25	Multistage closed-loop10	0.00～10.00	10.00	×	○	1419
P20.26	Multistage closed-loop11	0.00～10.00	9.00	×	○	141A

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P20.27	Multistage closed-loop12	0.00～10.00	8.00	×	○	141B
P20.28	Multistage closed-loop13	0.00～10.00	7.00	×	○	141C
P20.29	Multistage closed-loop14	0.00～10.00	6.00	×	○	141D
P20.30	Multistage closed-loop15	0.00～10.00	5.00	×	○	141E
P20.31	Multistage closed-loop16	0.00～10.00	4.00	×	○	141F
P21 Simple PLC fuction						
P21.00	Simple PLC running mode	Unit's digit: LC retentive selection 0: Stop after the AC drive runs one cycle 1: Keep final values after the AC drive runs one cycle 2: Repeat after the AC drive runs one cycle Ten's digit :Retentive upon stop 0: No 1: Yes hundred's digit :(Retentive upon power failure) 0: No 1: Yes	0x000	√	×	1500
P21.01	Phase 1 set	Unit's digit: Deceleration time to choose 0: Deceleration time 1 1: Deceleration time 2 2: Deceleration time 3 3: Deceleration time 4 Ten's digit: Unit selection phase time 0: s 1: min hundred's digit: moving direction 0: Forward run 1: Reverse run	0x000	×	○	1501
P21.02	Phase 2 running time	0.0～6000.0	10.0	×	○	1502
P21.03	Phase 2 set	With P21.01	0x000	×	○	1503
P21.04	Phase 3 running time	0.0～6000.0	10.0	×	○	1504
P21.05	Phase 3 set	With P21.01	0x000	×	○	1505
P21.06	Phase 4 running time	0.0～6000.0	10.0	×	○	1506
P21.07	Phase 4 set	With P21.01	0x000	×	○	1507

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P21.08	Phase 5 running time	0.0～6000.0	10.0	×	○	1508
P21.09	Phase 5set	With P21.01	0x000	×	○	1509
P21.10	Phase 6 running time	0.0～6000.0	10.0	×	○	150A
P21.11	Phase 1 set	With P21.01	0x000	×	○	150B
P21.12	Phase 6 running time	0.0～6000.0	0.0	×	○	150C
P21.13	Phase 7 set	With P21.01	0x000	×	○	150D
P21.14	Phase 7 running time	0.0～6000.0	0.0	×	○	150E
P21.15	Phase 8 set	With P21.01	0x000	×	○	150F
P21.16	Phase 8 running time	0.0～6000.0	0.0	×	○	1510
P21.17	Phase 9 set	With P21.01	0x000	×	○	1511
P21.18	Phase 9 running time	0.0～6000.0	0.0	×	○	1512
P21.19	Phase 10 set	With P21.01	0x000	×	○	1513
P21.20	Phase 10 running time	0.0～6000.0	0.0	×	○	1514
P21.21	Phase 11 set	With P21.01	0x000	×	○	1515
P21.22	Phase 11 running time	0.0～6000.0	0.0	×	○	1516
P21.23	Phase 12 set	With P21.01	0x000	×	○	1517
P21.24	Phase 12 running time	0.0～6000.0	0.0	×	○	1518
P21.25	Phase 13 set	With P21.01	0x000	×	○	1519
P21.26	Phase 13 running time	0.0～6000.0	0.0	×	○	151A
P21.27	Phase 14 set	With P21.01	0x000	×	○	151B
P21.28	Phase 14 running time	0.0～6000.0	0.0	×	○	151C
P21.29	Phase 15 set	With P21.01	0x000	×	○	151D
P21.30	Phase 15 running time	0.0～6000.0	0.0	×	○	151E
P21.31	Phase 16 set	With P21.01	0x000	×	○	151F
P21.32	Phase 16 running time	0.0～6000.0	0.0	×	○	1520
P22 Closed-loop PID process parameters						
P22.00	A given channel selection	0: Digital keyboard(P22.01) 1: AI1 2: AI2	0	√	○	1600

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		3: AI3 4: Terminal pulse setting 5: More closed loop given 6: Modbus/MXLink communication 7: PLC Expand the communication card				
P22.01	Digital quantity setting	0.00～10.00	0.00	×	○	1601
P22.02	Filtering time coefficient of given channel	0.01～10.00	0.10	×	○	1602
P22.03	Feedback channel selection	0: AI1 1: AI2 2: AI3 3: AI1+AI2 4: AI1-AI2 5: (AI1,AI2)max 6: (AI1,AI2) min 7: Terminal pulse 8: Modbus/MXLink communication 9: PLC Expand the communication card	0	√	○	1603
P22.04	Filtering time coefficient of Feedback channel	0.01～10.00	0.10	×	○	1604
P22.05	PID deviation limit	0.00～20.00	0.10	×	○	1605
P22.06	Proportional gain Kp1	0.00～99.99	1.00	×	○	1606
P22.07	Integral time Ti1	0.0～600.0	1.0	×	○	1607
P22.08	Differential time Td1	0.000～9.999	0.000	×	○	1608
P22.09	Sampling cycle	0.01～60.00	0.10	×	○	1609
P22.10	PID output filter time	0.00～10.00	0.01	×	○	160A
P22.11	PID upper limit output	P21.12～100.0	100.0	×	○	160B
P22.12	PID Output lower limit	-100.0～P21.11	0.0	×	○	160C

P22.13	Closed loop control properties	units' digit: Positive and negative features
		  0: Forward action
		  1: Reverse action
		 ten's digit: Integral regulation properties
			0x00	×	×	160D

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		0: Differential regulation on deviation 1: Differential regulation on Feedback				
P22.14	Exit the detection threshold	0.0～100.0	0.0	×	×	160E
P22.15	closed-loop detection threshold	0.0～100.0	0.0	×	×	160F
P22.16	Closed-loop detection time	0.0～600.0	0.0	×	×	1610

P22.17	Feedback protections	units' digit: Low threshold protection test
		  0: Non detection
		  1: Has been testing
		  2: Running test, downtime is not detected
		ten's digit: Low threshold protection detection processing
		  0: Protection detection alarm, continue to run
		  1: To protect freedom of fault detection times, downtime
		hundred's digit: hing threshold protection test
		  0: Non detection
		  1: Has been testing
		  2: Running test, downtime is not detected
		Thousands' digit:
		High threshold protection detect processing
		  0: Protection detection alarm, continue to run
		  1:To protect freedom of fault detection times, downtime
			0x0000	×	×	1611

P22.18	Feedback too high value	P22.20～100.0	95.0	×	×	1612
P22.19	Feedback widely out time	0.1～60.0	5.0	×	×	1613
P22.20	Feedback too low value	0.0～P22.18	5.0	×	×	1614
P22.21	Low feedback check out time	0.0～60.0	5.0	×	×	1615
P22.22	PID initial value	-100%～100%	0.0	×	×	1616
P22.23	PID initial value holding time	0.00～600.00	0.0	×	×	1617
P22.24	Closed loop differential limiter	-100%～100%	1.0	×	×	1618

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P22.25	Proportional gain Kp1	0.000～9.999	0.100	○	×	1619
P22.26	Integral time Ti1	0.0～600.0	1.0	○	×	161A
P22.27	Differential time Td1	0.000～9.999	0.000	○	×	161B
P22.28	PID parameter switchover condition	0: No switchover 1: Switchover via DI 2: Automatic switchover based on deviation	0	○	×	161C
P22.29	PID switch low bias	0.0～P22.30	20.0	○	×	161D
P22.30	PID switch highbias	P22..29～100.0	80.0	○	×	161E
P23　Swing frequency fuction						
P23.00	Swing frequency	0: ban　1: enabled	0	√	○	1700
P23.01	Swing control	0: Relative to the central frequency 1: Relative to the maximum frequency	0	×	○	1701
P23.02	Swing frequency amplitude	0.00～50.00	10.00	×	○	1702
P23.03	Jump frequency amplitude	0.00～50.00	10.00	×	○	1703
P23.04	Swing frequency cycle	0.1～1000.0	20.0	×	○	1704
P23.05	Triangular wave rising time coefficient	0.0～100.0	50.0	×	○	1705
P23.06	keep					1706
P23.07	Keep					1707
P30 Status surveillance						
P30.00	output frequency	0.00～400.00	0.00	×	*	1E00
P30.01	output frequency (Including slip compensation)	0.00～400.00	0.00	×	*	1E01
P30.02	set frequency	0.00～400.00	0.00	×	*	1E02
P30.03	current output	0.0～3*Ib	0.0	×	*	1E03
P30.04	Output Voltage	0～P50.17	0	×	*	1E04
P30.05	busbar voltage	0～1000	0	×	*	1E05
P30.06	output torque	-300.0～300.0	0.0	×	*	1E06
P30.07	output power	-200.0～200.0	0.0	×	*	1E07

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P30.08	motor running speed	0～60000	0	×	*	1E08
P30.09	Motor line speed	0.00～600.00	0.00	×	*	1E09
P30.10	motor power factor	-1.00～1.00	0.00	×	*	1E0A
P30.11	SWITCH STATUS	0x000～0xFFF	0x000	√	*	1E0B
P30.12	DI Input Frequency	0.00～80.00	0.00	×	*	1E0C
P30.13	DI Enter the percentage	-100.0～100.0	0.0	×	*	1E0D
P30.14	AI1 Input	0.00～10.00	0.00	√	*	1E0E
P30.15	AI2 Input	0.00～10.00	0.00	×	*	1E0F
P30.16	AI3 Input	-10.00～10.00	0.00	×	*	1E10
P30.17	AI1 Input percentage	-100.0～100.0	0.0	√	*	1E11
P30.18	AI2 Input percentage	-100.0～100.0	0.0	×	*	1E12
P30.19	AI3 Input percentage	-100.0～100.0	0.0	×	*	1E13
P30.20	1 operation of converter	0x0000～0xFFFF	0x0000	×	*	1E14
P30.21	2 operation of converter	0x0000～0xFFFF	0x0000	×	*	1E15
P30.22	Inverter alarm status	0～15	0	×	*	1E16
P30.23	AO1 output	0.00～10.00	0.00	×	*	1E17
P30.24	AO2 output	0.00～10.00	0.00	×	*	1E18
P30.25	VAO1 output	0.00～10.00	0.00	×	*	1E19
P30.26	VAO2 output	0.00～10.00	0.00	×	*	1E1A
P30.27	VAO3 output	0.00～10.00	0.00	×	*	1E1B
P30.28	Terminal count	0～65535	0	×	*	1E1C
P30.29	encoder pulse number	0～65535	0	×	*	1E1D
P31 Application of monitoring						
P31.00	PID Control state	0x0000～0xFFFF	0x0000	×	*	1F00
P31.01	PID setting	0.0～100.0	0.0	√	*	1F01
P31.02	PID Feedback	0.0～100.0	0.0	√	*	1F02
P31.03	PID Deviation	-100.0～100.0	0.0	×	*	1F03
P31.04	PID output	-100.0～100.0	0.0	√	*	1F04
P31.05	Modbus/MXLin	0～65535	0	×	*	1F05

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	k Frame reception counter					
P31.06	Modbus/MXLink Effective frame reception counter	0～65535	0	×	*	1F06
P31.07	auxiliary frequency	0.00～400.0	0.00	×	*	1F07
P31.08	Simple PLC operation stage	1～16	1	×	*	1F08
P31.09	Terminal number 485 CRC error detection	0～65535	0	×	*	1F09
P31.10	Expansion card number 485 CRC error detection	0～65535	0	×	*	1F0A
P31.11	Communication card 1	0～9	0	×	*	1F0B
P31.12	Communication card 2	0～9	0	×	*	1F0C
P31.13	Communication card frame reception counter	0～65535	0	×	*	1F0D
P31.14 ～ P31.19	Keep					
P32　　Maintain surveillance						
P32.00	Motor overload accumulative total value	0.0～100.0	0.0	×	*	2000
P32.01	Inverter overload accumulative total value	0.0～100.0	0.0	×	*	2001
P32.02	motor power consumption low	0～10000	0	×	*	2002
P32.03	motor power	0～65535	0	×	*	2003

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	consumption high					
P32.04	Temperature side of rectifier module	0.0～100.0	0.0	×	*	2004
P32.05	Inverter side temperature	0.0～100.0	0.0	√	*	2005
P32.06	conduction time	0～65535	0	×	*	2006
P32.07	running time	0～65535	0	×	*	2007
P32.08	fan running time	0～65535	0	×	*	2008
P32.09	Regularly run time remaining	0.00～650.00	0.00	×	*	2009
P32.10	current fault code	0～99	0	×	*	200A
P32.11	current alarm code	0～99	0	×	*	200B
P34　failure record						
P34.00	1st fault type	000～099	000	√	*	2200
P34.01	Bus voltage upon 1rd fault	000～1000	000	×	*	2201
P34.02	Current upon 1rd fault	0.0～999.9	0.0	×	*	2202
P34.03	voltage upon 1rd fault	0～380	0	×	*	2203
P34.04	Frequency upon 1rd fault	0.00～400.00	0.00	×	*	2204
P34.05	Output terminal status upon 1rd fault	0x0000～0xFFFF	0x0000	×	*	2205
P34.06	AC drive status upon 1rd fault	0x0000～0xFFFF	0x0000	×	*	2206
P34.07	2st fault type	000～099	000	√	*	2207
P34.08	Bus voltage upon 2rd fault	0～1000	0	×	*	2208
P34.09	Current upon 2rd fault	0.0～999.9	0.0	×	*	2209
P34.10	voltage upon 2rd fault	0～380	0	×	*	220A
P34.11	Frequency upon 2rd fault	0.00～400.00	0.00	×	*	220B

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P34.12	Output terminal status upon 2rd fault	0x0000～0xFFFF	0x0000	×	*	220C
P34.13	AC drive status upon 2rd fault	0x0000～0xFFFF	0x0000	×	*	220D
P34.14	3st fault type	000～099	000	√	*	220E
P34.15	Bus voltage upon 3rd fault	000～1000	0	×	*	220F
P34.16	Current upon 3rd fault	0.0～999.9	0.0	×	*	2210
P34.17	voltage upon 3rd fault	0～380	0	×	*	2211
P34.18	Frequency upon 3rd fault	0.00～400.00	0.00	×	*	2212
P34.19	Output terminal status upon 2rd fault	0x0000～0x0FFF	0x0000	×	*	2213
P34.20	AC drive status upon 3rd fault	0x0000～0x0FFF	0x0000	×	*	2214
P50 System configuration management						
P50.00	user password	00000～65535	00000	√	○	3200
P50.01	list view	0: Basic menu mode 1: Advanced menu mode 2: user menu mode 3: factory value comparison mode	0	√	○	3201
P50.02	Parameters to protect	0: Besides the function code all the parameters from modification 1: Besides the function code and P00.00, modification is prohibited 2: All parameters are allowed to change	0	√	×	3202
P50.03	keyboard Settings	units' digit: MK key function to choose 0: non-function 1: Keyboard inching function 2: Free parking(All commands channel) 3:Take the running direction(keyboard command channel, stopping memory) 4:Take the running direction(keyboard command channel, stopping no memory) 5: Menu to switch function(Power lost is not saved) 6: command switch function(Effective downtime) (After pressing the MK need to press the ENTER key for 3 seconds to take effect)	0x0001	×	×	3203

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		7:command switch function(Transit stop are effective) ten's digit: STOP Double-click the function 0: non-function 1: Free parking(All commands channel) units' digit: STOP in key functions 0: keyboard control method is invalid 1: keyboard control mode in down way down 2: keyboard control way free downtime ten's digit: Key lock function 0: latch up free 1: lock 2:except RUN、STOP Key lock all 3:except SHIFT Key lock all 4: except MK Key lock all				
P50.04	MK function keys switching sequence	units' digit: Switch command order 　0: Keyboard ↔ terminal 　1: Keyboard ↔ communication 　2: Terminal ↔ communication 　3: Keyboard ↔ terminal ↔ communications 　4: Keyboar↔communicat ion communication terminal ↔ extension ten's digit: Menu switching sequence 　0: user menu mode ↔ senior menu mode 　1: user menu mode ↔ value comparison model factory 　2: user menu mode ↔ basic menu 　3: Basic menu mode ↔ senior menu mode ↔ user mode 　4: Basic menu mode ↔ senior menu ↔ user menu mode ↔ factory value comparison mode	0x00	×	×	3204
P50.05	Braking energy function	0: forbid　1: Enable	0	×	×	3205
P50.06	Braking action voltage	three phase: 650～750 single phase: 370~400	720 380	×	○	3206
P50.07	Braking energy usage	0.0～100.0	10.0	×	○	3207
P50.08	Fan operation control	0: Electricity has been running 1: Inverter operation is running 2: According to the machine temperature automatic control	1	×	○	3208
P50.09	Stop display	Binary set: 0- Not Displayed　1- display	0x0005	×	○	3209

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address

	preferences	units' digit:
		
		    Bit0: set frequency(Hz)
		
		    Bit1: Set the torque(%)
		
		Bit2: busbar voltage
		
		    Bit3: terminal state
		
		ten's digit:
		
		    Bit0: AI1(V)
		
		    Bit1: AI2(V)
		
		    Bit2: AI3(V)
		
		    Bit3: Pulse input frequency
		
		hundred's digit:
		
		    Bit0: Close Loop Correction
		
		    (%)
		
		    Bit1: closed loop setting
		
		    Bit2: Terminal count
		
		    Bit3: PLC run phase
		
		thousands' digit: keep
						320A

P50.10	According to parameter selection 1	Binary set: 0- Not Displayed 1- display
		
		units' digit:
		
		Bit0: output frequency(Hz)
		
		    Bit1: set frequency(Hz)
		
		    Bit2: output current(A)
		
		    Bit3: output voltage(V)
		
		ten's digit:
		
		    Bit0: busbar voltage(V)
		
		    Bit1: output power(%)
		
		    Bit2: Output torque(%)
		
		    Bit3: Output Power Factor (%)
		
		hundred's digit:
		
		    Bit0: torque given(%)
		
		    Bit1: AI1(V)
		
		    Bit2: AI2(V)
		
		    Bit3: AI3(V)
		
		thousands' digit:
		
		    Bit0:AI1(%)Internal percentile, the curve
		        adjustments
		
		    Bit1:AI2(%)Internal percentile, the curve
		        adjustments
		
		    Bit2:AI3(%)Internal percentile, the curve
		        adjustments
		
		    Bit3: keep
			0x0017	×	○	320A

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address

P50.11	According to parameter selection 2	Binary set: 0- Not Displayed 1- display
		units' digit:
		   Bit0: Terminal state
		   Bit1: Terminal count
		   Bit2: Pulse input frequency
		   Bit3: PLC operation/running period of location
		ten's digit:
		   Bit0: Close Loop Correction (%)
		   Bit1: closed loop setting(%)
		   Bit2: closed loop error(%)
		   Bit3: closed-loop output(%)
		hundred's digit:
		   Bit0:Cumulative frequency converter
		     overloading(%)
		   Bit1: Motor overload the cumulative(%)
		   Bit2: Temperature of the inverter
		   Bit3: temperature of the rectifier
		Thousands' digit:
		   Bit0: Running RPM
		   Bit1: Line speed
		   Bit2: position error
		   Bit3: keep
			0x0000	×	○	320B

P50.12	Product code	0～999	100	×	*	320C
P50.13	Control panel software version number	1.00～9.99	Factory set	×	*	320D
P50.14	Keyboard version of the software version	1.00～9.99	Factory set	×	*	320E
P50.15	Inverter load type	0: constant torque load 1: Variable torque load	0	×	×	320F
P50.16	Inverter power rating	0.0～999.9	Factory set	×	*	3210
P50.17	Inverter rated voltage	0～1000	Factory set	×	*	3211
P50.18	Inverter rated current	0.0～1000.0	25.0	×	*	3212
P50.19	Parameters of the copy	11: Block parameters uploaded to the operation panel EEPROM 22:Download from the block operation panel EEPROM parameters 33:Download from the block operation panel	00	×	×	3213

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		EEPROM parameters (except motor parameters)				
P50.20	Parameters to restore the backup Settings	0: failure to actuate 1〜10: keep 11: Restore basic menu parameters 12〜21: keep 22: Restore advanced menu parameters 23: keep 24: Restore advanced menu parameters (excluding motor) 25: keep 26: Restore factory value mapping parameters 27〜32: keep 33: Restore the user custom menu parameters 34〜43: keep 44: Eliminate malfunction records 45〜54: keep 55: Parameters of the backup 56〜65: keep 66: recover from a backup area parameters 67〜99: keep	00	√	×	3214
P51 Encoders conflg						
P51.00	Encoder 1 per pulse number	1〜10000	1000	×	×	3300
P51.01	encoder 1 direction	0: Forward 1: reverse	0	×	×	3301
P51.02	encoder 1 signal filter coefficients	0〜9	0	×	○	3302
P51.03	Z pulse fall insensible ones	0.0〜10.0	2.0	×	×	3303
P51.04	Z pulse fall insensible ones	0〜100	0	×	×	3304
P51.05	encoder output frequency division 1	1〜255	1	×	×	3305
P51.06	encoder configuration	0x0000〜0xFFFF	0x0000	×	×	3306
P51.07	Encoder 2 per pulse number	1〜10000	1000	×	×	3307

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P51.08	encoder 2 direction	0: Forward 1: reverse	0	×	×	3308
P51.09	encoder 2 signal filter coefficients	0～9	0	×	○	3309
P51.10	Z pulse fall insensible ones	0.0～10.0	2.0	×	×	330A
P51.11	Z pulse fall insensible ones	0～100	0	×	×	330B
P51.12	encoder output frequency division 2	1～255	1	×	×	330C
P51.13	encoder configuration	0x0000～0xFFFF	0x0000	×	×	330D
P52 communications parameters						

P52.00	Communication configuration	units' digit: Baud rate choice
		
		  0: 4800BPS
		
		  1: 9600BPS
		
		  2: 19200BPS
		
		  3: 38400BPS
		
		  4: 57600BPS
		
		  5: 115200BPS
		ten's digit: Data Format
		
		  0: 1-8-2-N，RTU
		
		  1: 1-8-1-E，RTU
		
		  2: 1-8-1-O，RTU
		hundred's digit: communication protocol
		
		  0: Modbus
		
		  1: MXLink
			0x01	√	×	3400

P52.01	machine address	0～247	5	×	×	3401
P52.02	Communication timeout detection time	0.0～60.0	0.0	×	×	3402
P52.03	The machine response delay	0.000～1.000	0.005	×	×	3403
P52.04	Frequency ratio	0.00～99.99	1.00	×	○	3404

P52.05	Communication parameters protection option	units' digit: Communication control parameters (0 x3bxx) user password protection Settings
		
		  0: Communication access 0 x3bxx parameter is not protected by the user password
		
		  1: Communication access 0 x3bxx parameters are
			0x0011	×	○	3405

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
		protected by user password ten's digit: P57 communication save the parameters (0 x39xx) user password protection Settings 0: Communication access P57 parameters, speaking, reading and writing is not protected by the user password 1: Communication access P57 parameters write protected by the user password, read from the password protection 2: Communication access P57 parameters, speaking, reading and writing are protected by the user password hundred's digit: P57 group Settings hidden communication save the parameters 0: Display 1: Hidden Thousand's digit: Address mapping parameter hidden P58 group Settings 0: Display 1: Hidden				
P52.06	Communication parameters save option	units' digit : Write command to save option 0: 0x06，0x10，0x12，0x17 1: 0x06 Power-down save，0x10，0x12，0x17 Power-down no save 2: 0x06,0x10,0x12,0x17 save the command when power supply drop ten's place: user to save parameters P57 save option 0: Be bound by communication write command is saved 1: Don't be bound by communication write command to save, write command to save hundred, thousand: reservations	0x00	×	○	3406
P52.07	Keep					3407
P52.08	Expansion CARDS coefficient of a given frequency	0.00～99.99	1.00	×	*	3408
P52.09	Expansion CARDS communication options	0x00～0x10	0x00	×	*	3409
P52.10	Commonly used state parameter index	0～41	11	×	*	340A
P52.11	Commonly used for a given	0～23	1	×	*	340B

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	parameter index					
P53 Users to customize parameter						
P53.00～ P53.31	User-defined function code	0.00～89.99	0.00 ～53.32	×	○	3500～ 351F
P53.32	Users to customize parameter is invalid	When a user customization parameters, function code is 5332, then the users to customize parameter is invalid	0	×	*	3520
P57.00	Saving parameters 1	0～65535	0	×	○	3900
P57.01	Saving parameters 2	0～65535	0	×	○	3901
P57.02	Saving parameters 3	0～65535	0	×	○	3902
P57.03	Saving parameters 4	0～65535	0	×	○	3903
P57.04	Saving parameters 5	0～65535	0	×	○	3904
P57.05	Saving parameters 6	0～65535	0	×	○	3905
P57.06	Saving parameters 7	0～65535	0	×	○	3906
P57.07	Saving parameters 8	0～65535	0	×	○	3907
P57.08	Saving parameters 9	0～65535	0	×	○	3908
P57.09	Saving parameters 10	0～65535	0	×	○	3909
P57.10	Saving parameters 11	0～65535	0	×	○	390A
P57.11	Saving parameters 12	0～65535	0	×	○	390B
P57.12	Saving parameters 13	0～65535	0	×	○	390C
P57.13	Saving parameters 14	0～65535	0	×	○	390D
P57.14	Saving parameters 15	0～65535	0	×	○	390E
P57.15	Saving parameters 16	0～65535	0	×	○	390F
P57.16	Saving parameters 17	0～65535	0	×	○	3910

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P57.17	Saving parameters 18	0～65535	0	×	○	3911
P57.18	Saving parameters 19	0～65535	0	×	○	3912
P57.19	Saving parameters 20	0～65535	0	×	○	3913
P57.20	Saving parameters 21	0～65535	0	×	○	3914
P57.21	Saving parameters 22	0～65535	0	×	○	3915
P57.22	Saving parameters 23	0～65535	0	×	○	3916
P57.23	Saving parameters 24	0～65535	0	×	○	3917
P57.24	Saving parameters 25	0～65535	0	×	○	3918
P57.25	Saving parameters 26	0～65535	0	×	○	3919
P57.26	Saving parameters 27	0～65535	0	×	○	391A
P57.27	Saving parameters 28	0～65535	0	×	○	391B
P57.28	Saving parameters 29	0～65535	0	×	○	391C
P57.29	Saving parameters 30	0～65535	0	×	○	391D
P57.30	Saving parameters 31	0～65535	0	×	○	391E
P57.31	Saving parameters 32	0～65535	0	×	○	391F
P57.32	Saving parameters 33	0～65535	0	×	○	3920
P57.33	Saving parameters 34	0～65535	0	×	○	3921
P57.34	Saving parameters 35	0～65535	0	×	○	3922
P57.35	Saving parameters 36	0～65535	0	×	○	3923
P57.36	Saving parameters 37	0～65535	0	×	○	3924
P57.37	Saving parameters 38	0～65535	0	×	○	3925

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P57.38	Saving parameters 39	0～65535	0	×	○	3926
P57.39	Saving parameters 40	0～65535	0	×	○	3927
P57.40	Saving parameters 41	0～65535	0	×	○	3928
P57.41	Saving parameters 42	0～65535	0	×	○	3929
P57.42	Saving parameters 43	0～65535	0	×	○	392A
P57.43	Saving parameters 44	0～65535	0	×	○	392B
P57.44	Saving parameters 45	0～65535	0	×	○	392C
P57.45	Saving parameters 46	0～65535	0	×	○	392D
P57.46	Saving parameters 47	0～65535	0	×	○	392E
P57.47	Saving parameters 48	0～65535	0	×	○	392F
P57.48	Saving parameters 49	0～65535	0	×	○	3930
P57.49	Saving parameters 50	0～65535	0	×	○	3931
P57.50	Saving parameters 51	0～65535	0	×	○	3932
P57.51	Saving parameters 52	0～65535	0	×	○	3933
P57.52	Saving parameters 53	0～65535	0	×	○	3934
P57.53	Saving parameters 54	0～65535	0	×	○	3935
P57.54	Saving parameters 55	0～65535	0	×	○	3936
P57.55	Saving parameters 56	0～65535	0	×	○	3937
P57.56	Saving parameters 57	0～65535	0	×	○	3938
P57.57	Saving parameters 58	0～65535	0	×	○	3939
P57.58	Saving parameters 59	0～65535	0	×	○	393A

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
P57.59	Saving parameters 60	0～65535	0	×	○	393B
P57.60	Saving parameters 61	0～65535	0	×	○	393C
P57.61	Saving parameters 62	0～65535	0	×	○	393D
P57.62	Saving parameters 63	0～65535	0	×	○	393E
P57.63	Saving parameters 64	0～65535	0	×	○	393F
P58 communications parameters						
P58.00	Address mapping make	Address mapping make 0: forbide 1:enable	0	×	×	3A00
P58.01	Mapping address1	0x0000～0xFFFF	0x0000	×	×	3A01
P58.02	Argument Addresses1	0x0000～0xFFFF	0x0000	×	×	3A02
P58.03	Mapping address2	0x0000～0xFFFF	0x0000	×	×	3A03
P58.04	Argument Addresses2	0x0000～0xFFFF	0x0000	×	×	3A04
P58.05	Mapping address3	0x0000～0xFFFF	0x0000	×	×	3A05
P58.06	Argument Addresses3	0x0000～0xFFFF	0x0000	×	×	3A06
P58.07	Mapping address4	0x0000～0xFFFF	0x0000	×	×	3A07
P58.08	Argument Addresses4	0x0000～0xFFFF	0x0000	×	×	3A08
P58.09	Mapping address5	0x0000～0xFFFF	0x0000	×	×	3A09
P58.10	Argument Addresses5	0x0000～0xFFFF	0x0000	×	×	3A0A
P58.11	Mapping address6	0x0000～0xFFFF	0x0000	×	×	3A0B
P58.12	Argument Addresses6	0x0000～0xFFFF	0x0000	×	×	3A0C
P58.13	Mapping address7	0x0000～0xFFFF	0x0000	×	×	3A0D
P58.14	Argument Addresses7	0x0000～0xFFFF	0x0000	×	×	3A0E
P58.15	Mapping	0x0000～0xFFFF	0x0000	×	×	3A0F

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	address8					
P58.16	Argument Addresses8	0x0000～0xFFFF	0x0000	×	×	3A10
P58.17	Mapping address9	0x0000～0xFFFF	0x0000	×	×	3A11
P58.18	Argument Addresses9	0x0000～0xFFFF	0x0000	×	×	3A12
P58.19	Mapping address10	0x0000～0xFFFF	0x0000	×	×	3A13
P58.20	Argument Addresses10	0x0000～0xFFFF	0x0000	×	×	3A14
P58.21	Mapping address11	0x0000～0xFFFF	0x0000	×	×	3A15
P58.22	Argument Addresses11	0x0000～0xFFFF	0x0000	×	×	3A16
P58.23	Mapping address12	0x0000～0xFFFF	0x0000	×	×	3A17
P58.24	Argument Addresses12	0x0000～0xFFFF	0x0000	×	×	3A18
P58.25	Mapping address13	0x0000～0xFFFF	0x0000	×	×	3A19
P58.26	Argument Addresses13	0x0000～0xFFFF	0x0000	×	×	3A1A
P58.27	Mapping address14	0x0000～0xFFFF	0x0000	×	×	3A1B
P58.28	Argument Addresses14	0x0000～0xFFFF	0x0000	×	×	3A1C
P58.29	Mapping address15	0x0000～0xFFFF	0x0000	×	×	3A1D
P58.30	Argument Addresses15	0x0000～0xFFFF	0x0000	×	×	3A1E
P58.31	Mapping address 16	0x0000～0xFFFF	0x0000	×	×	3A1F
P58.32	Argument Addresses 16	0x0000～0xFFFF	0x0000	×	×	3A20
P58.33	Mapping address17	0x0000～0xFFFF	0x0000	×	×	3A21
P58.34	Argument Addresses17	0x0000～0xFFFF	0x0000	×	×	3A22
P58.35	Mapping address18	0x0000～0xFFFF	0x0000	×	×	3A23
P58.36	Argument	0x0000～0xFFFF	0x0000	×	×	3A24

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	Addresses18					
P58.37	Mapping address19	0x0000～0xFFFF	0x0000	×	×	3A25
P58.38	Argument Addresses19	0x0000～0xFFFF	0x0000	×	×	3A26
P58.39	Mapping address20	0x0000～0xFFFF	0x0000	×	×	3A27
P58.40	Argument Addresses20	0x0000～0xFFFF	0x0000	×	×	3A28
P58.41	Mapping address21	0x0000～0xFFFF	0x0000	×	×	3A29
P58.42	Argument Addresses21	0x0000～0xFFFF	0x0000	×	×	3A2A
P58.43	Mapping address22	0x0000～0xFFFF	0x0000	×	×	3A2B
P58.44	Argument Addresses22	0x0000～0xFFFF	0x0000	×	×	3A2C
P58.45	Mapping address23	0x0000～0xFFFF	0x0000	×	×	3A2D
P58.46	Argument Addresses23	0x0000～0xFFFF	0x0000	×	×	3A2E
P58.47	Mapping address24	0x0000～0xFFFF	0x0000	×	×	3A2F
P58.48	Argument Addresses24	0x0000～0xFFFF	0x0000	×	×	3A30
P58.49	Mapping address25	0x0000～0xFFFF	0x0000	×	×	3A31
P58.50	Argument Addresses25	0x0000～0xFFFF	0x0000	×	×	3A32
P58.51	Mapping address26	0x0000～0xFFFF	0x0000	×	×	3A33
P58.52	Argument Addresses26	0x0000～0xFFFF	0x0000	×	×	3A34
P58.53	Mapping address27	0x0000～0xFFFF	0x0000	×	×	3A35
P58.54	Argument Addresses27	0x0000～0xFFFF	0x0000	×	×	3A36
P58.55	Mapping address28	0x0000～0xFFFF	0x0000	×	×	3A37
P58.56	Argument Addresses28	0x0000～0xFFFF	0x0000	×	×	3A38
P58.57	Mapping	0x0000～0xFFFF	0x0000	×	×	3A39

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	address29					
P58.58	Argument Addresses29	0x0000~0xFFFF	0x0000	×	×	3A3A
P58.59	Mapping address30	0x0000~0xFFFF	0x0000	×	×	3A3B
P58.60	Argument Addresses30	0x0000~0xFFFF	0x0000	×	×	3A3C
P58.61	Mapping address31	0x0000~0xFFFF	0x0000	×	×	3A3D
P58.62	Argument Addresses31	0x0000~0xFFFF	0x0000	×	×	3A3E
P58.63	Mapping address32	0x0000~0xFFFF	0x0000	×	×	3A3F
P58.64	Argument Addresses32	0x0000~0xFFFF	0x0000	×	×	3A40
P58.65	Reflection Parameter 1	0x0000~0xFFFF	0xFFFF	×	×	3A41
P58.66	Reflection parameter2	0x0000~0xFFFF	0xFFFF	×	×	3A42
P58.67	Reflection parameter3	0x0000~0xFFFF	0xFFFF	×	×	3A43
P58.68	Reflection parameter4	0x0000~0xFFFF	0xFFFF	×	×	3A44
P58.69	Reflection parameter5	0x0000~0xFFFF	0xFFFF	×	×	3A45
P58.70	Reflection parameter6	0x0000~0xFFFF	0xFFFF	×	×	3A46
P58.71	Reflection parameter7	0x0000~0xFFFF	0xFFFF	×	×	3A47
P58.72	Reflection parameter8	0x0000~0xFFFF	0xFFFF	×	×	3A48
P58.73	Reflection parameter9	0x0000~0xFFFF	0xFFFF	×	×	3A49
P58.74	Reflection parameter10	0x0000~0xFFFF	0xFFFF	×	×	3A4A
P58.75	Reflection parameter11	0x0000~0xFFFF	0xFFFF	×	×	3A4B
P58.76	Reflection parameter12	0x0000~0xFFFF	0xFFFF	×	×	3A4C
P58.77	Reflection parameter13	0x0000~0xFFFF	0xFFFF	×	×	3A4D
P58.78	Reflection	0x0000~0xFFFF	0xFFFF	×	×	3A4E
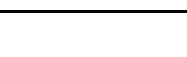
Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	parameter14					
P58.79	Reflection parameter15	0x0000~0xFFFF	0xFFFF	×	×	3A4F
P58.80	Reflection parameter16	0x0000~0xFFFF	0xFFFF	×	×	3A50
P58.81	Reflection parameter17	0x0000~0xFFFF	0xFFFF	×	×	3A51
P58.82	Reflection parameter18	0x0000~0xFFFF	0xFFFF	×	×	3A52
P58.83	Reflection parameter19	0x0000~0xFFFF	0xFFFF	×	×	3A53
P58.84	Reflection parameter20	0x0000~0xFFFF	0xFFFF	×	×	3A54
P60/P61 Electric machine parameter						
P60.00	Rated motor power	0.4~999.9	machine type determine	√	×	3C00
P60.01	Rated motor current	0.1~999.9		×	×	3C01
P60.02	Rated motor voltage	60~380		×	×	3C02
P60.03	Rated motor frequency	1.00~400.00		×	×	3C03
P60.04	Rated motor rotational speed	1~30000		×	×	3C04
P60.05	Power factor	0.01~1.00		×	×	3C05
P60.06	no-load current	0.1~999.9	8.4	×	×	3C06
P60.07	Stator resistance (asynchronous motor)	0.01~50.00	3.22	×	×	3C07
P60.08	Rotor resistance (asynchronous motor)	0.01~50.00	2.54	×	×	3C08
P60.09	Leakage inductive reactance (asynchronous motor)	0.01~50.00	20.73	×	×	3C09
P60.10	Mutual inductive reactance	0.1~2000.0	243.6	×	×	3C0A

Function code	Name of parameter	Set Range	Factory	Basic menu	change	mailing address
	(asynchronous motor)					
P60.11	Parameter Auto-tune	0～2	0	×	×	3C0B
P60.12	Motor overload protection mode selection	0～2	1	×	×	3C0C
P60.13	Motor overload protection curve coefficient	10.0～120.0	100.0	×	×	3C0D

Chapter 7   Common symbols display and fault alarm processing methods

7.1 Common display symbols causes and treatment

Display	Name	Possible Causes	Solutions
`r.u.n.F.`	Running is prohibited	1. Terminal effective state, the terminal choose 13 - running is prohibited 2. Communications given the run command is prohibited	1. Run ban function terminal status as invalid 2. Communications given allowed to run command
`PEnd`	Run for	Frequency is less than the given start frequency at startup	1. Check frequency size, so that it is greater than or equal to start frequency 2. P01.01 start frequency changes to 0.0
`t.u.n.E.`	Motor parameters tuning	In the operation of the motor self-tuning	Motor self-tuning complete disappear automatically
`PAuS`	Run to suspend	1. Terminal chose 47 - external interrupt input function, and terminal state is effective 2. In the Nick of time for automatic reset	1. The external interrupt input function terminal state as invalid 2. The time interval to disappear automatically
`dcb`	Dc brake	Starting dc brake or stop dc brake	Brake complete disappear automatically
`FYt`	Speed tracking	Starting speed tracking process	Speed tracking complete disappear automatically
`PAd`	Operation panel	Use the MK keys to switch command channel	Switch to complete or cancel will disappear automatically
`tEAL`	terminal		
`r.b.u.S.`	485 communication		
`CArd`	Communication expansion card		
`LoC`	Key lock effective	Through the key combination on the keyboard lock, During the operation or key lock button operation	Using a combination of keys to unlock
`ULoC`	Key lock is invalid	Through the key combinations of keys to unlock operation	
`bASE`	Basic menu	Use the MK keys on the keyboard menu to switch	After the completion of the switch will automatically disappear

8.**A**.8.**u**.8.**c**.	Top menu		
8.**c**.8.**u**.**5**.**t**.	The user menu		
8.**d**.**E**.**F**.**u**.	The default option is		
8.**P**.**A**.**5**.**5**.	The user password authentication	User password protection is valid input user password correctly	
8.**F**.**A**.**i**.**L**.	The user password authentication failed	User password protection is valid user password input error	Input the correct password

7.2 Fault alarm and processing method

There are two kinds of MV series VFD fault type：Fault and alarm. When failure occurs and alarm，Frequency converter according to the customer set us the corresponding code. When the VFD quoted fault code，VFD blockade output，And failure indicator ALM normally on，It is only to press the reset signal，VFD can normal boot, When p code converter report, normal operation of converter, failure indicator ALM flicker. When the VFD to the fault code, the alarm light is normally on. The following table lists the common fault causes and solutions, so that customers in accordance with this section suggest checking, analysis the cause of the problem, find out the solution. If the problem cannot be solved, can contact the purchased VFD agents or directly with your company.
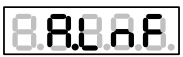
The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	**code**	**NO.**	**code**			
01	8.8.**o**.**C**.**1**. **Er.O1**			To accelerate the flow	1. The motor speed too fast 2. The motor speed is too fast 3. Load mutation or abnormal 4. Interphase short circuit or three-phase output To ground short circuit	1. Increase the acceleration time 2. Increase the acceleration/acceler ation/deceleration time 3. Check the load 4. Check the output connection, measuring machine And resistance, the insulation
02	8.8.**o**.**C**.**2**.			Slow flow	5. Starting rotation of the motor 6. A manual torque increase is too large	5. Use dc braking or starting Speed tracking

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
	Er.02				7. V/F curve is not appropriate 8. Motor vector control system parameters are set Setting is not correct 9. The closed-loop vector PG feedback often 10. The grid voltage is too low 11. The VFD power is too small	starting rotation of the motor 6. Set the appropriate manual torque Mention of appreciation 7. Set the appropriate V/F of the curve 8. Properly set parameters of motor nameplates Learning and motor parameters 9. Check the PG card connection 10. Check the input power supply 11. Increase the frequency converter capacity
03	8.8.o.C.3. **Er.03**			Constant speed over current		
04	8.8.o.U.1. **Er.04**			Accelerate the overvoltage	1. The abnormal input power 2.The instantaneous power, motor to stop Stop rotating to start again	1. Check the input power supply 2. To ensure that the motor after stop running restart
05	8.8.o.U.2. **Er.05**			Acceleration/acceleration/deceleration overvoltage	1. Abnormal input power 2.Slow down too fast 3.the load inertia	1. Check the input power 2. Increasing the acceleration/acceleration/deceleration time 3.Withproper braking resistor
06	8.8.o.U.3.			Constant speed over	1. The power input voltage instability 2. The load inertia	1. Check the input power, the use of pay Input flow

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
	Er.06			voltage		reactor 2.Use the appropriate braking resistor
07	😐oL.😐 (display) **Er.07**		😐A.😐0L.😐 (display) **AL.09**	The VFD overload	1. Power grid voltage is too low 2. Speed is too fast 3. VFD power is too small/motor is too large 4. Moments after the blackout, motor to stop rotating and start again	1. Check the input power supply 2. Increase the acceleration time 3. Select adapter converter or motor 4.Ensure the stop and start the motor
08	😐oL2.😐 (display) **Er.07**		😐A.😐0L.😐 (display) **AL.09**	Motor overload	1. Power grid voltage is too low 2. The motor rated current setting is not correct 3. Motor blocked or load sudden increase	1. Check the input power supply 2. Set the motor rated current 3. Check the load and torque increase quantity adjustment 4.Increase the coefficient of motor overload protection value
09	😐oH.1.😐 (display) **Er.09**			VFD is overheating	1. The fan is damaged or duct obstruction 2. The environment temperature is too high 3. The carrier frequency set too high 4. Temperature detecting element damage	1. Replace the fan or clean up the air duct 2. Reduce the environmental temperature 3. Use or lower carrier 4. Contact service or the company
10	😐oH2.😐 (display) **Er.10**			Rectifier is overheating		
11	😐F.ou.😐 (display) **Er.11**			The module failure	1. Motor phase fault 2. The abnormal load change	1. Check the motor wiring 2. Check the load
12	😐P.L.😐 (display)	01	😐A.P.L.😐 (display)	The input	1. The input power supply R, S and T	1. Check the input wiring
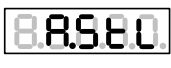
The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
	Er.12		**AL.01**	phase	phase 2. Input power serious imbalance	2.Check the input power supply
13	**P.L2** **Er.13**	02	**A.PL2** **AL.02**	The output phase	1. There are a lack of output U, V, W 2. The driver board	1. Check the wiring installation 2. Contact service or our company
14	**EFU** **Er.14**			External fault	1.Through the terminal input the external fault signal effectively	1. External reset after fault clearance The fault
15	**LFb** **Er.15**	06	**A.LFb** **AL.06**	Process of the closed loop feedback is too low	1. The feedback is broken 2. Low feedback detection parameter Settings	1. The testing feedback line is disconnected 2. Reset the feedback loss protection parameters
16	**hFb** **Er.16**	07	**A.hFb** **AL.07**	Process of the closed loop feedback is too high	1. The process of the closed loop disconnect the given line 2. The simulation to the timing, given value is too small	1. The detection of closed loop whether a given line break 2. Check whether simulation given within the range
17	**dEU** **Er.17**	11	**A.dEU** **AL.11**	DEV speed deviation is too large	1. ASR parameter setting is not reasonable 2. Excessive speed deviation detection threshold is too small 3. Load volatile	1. Reset P02 set of parameters 2. Too much increase speed deviation detection threshold 3. To eliminate the load fluctuation
18	**oS** **Er.18**	12	**A.oS** **AL.12**	OS overspeeding	1. The encoder wire break 2. The encoder parameter setting is not correct 3. Rapid detection threshold is too small	1.Check the encoder connection 2.Reset the encoder parameters 3.Increase rapid detection threshold

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
19	8.8.8.8.8. Er.19			Tuning the fault	1. The motor parameters according to the nameplate not set 2. The timeout parameter identification process	1. According to the nameplate set motor parameters correctly 2. Check the VFD to motor fuses
20	8.8.8.8.8. Er.20	08	8.8.8.8.8. AL.08	underl oad	1.Abnormal load 2.Motor parameter setting is not correct 3.Off load detection level is too big	1.Check the load 2.Reset the motor parameters 3.Reduced load detection levels
22	8.8.8.8.8. Er.22			Contact or and failure	1. The power grid voltage is too low 2. The relay is damaged 3. The electrical damage of buffer resistance 4. The control circuit damage 5. Input phase	1. Check the input power supply 2. Contact service or our company 3. Contact service or the company 4. Contact service or the company 5. Check the input power and wiring again
23	8.8.8.8.8. Er.23	13	8.8.8.8.8. AL.13	More than or less torque1	1. The motor parameters according to the nameplate not set 2. The torque detection threshold setting is not appropriate	1. According to the nameplate set motor parameters correctly 2. Reset the torque detection threshold
24	8.8.8.8.8. Er.24	14	8.8.8.8.8. AL.14	More than or less torque1	1. The motor parameters according to the nameplate not set 2. The torque detection threshold setting is not appropriate	1. According to the b nameplate set motor parameters correctly 2. Reset the torque detection threshold
25	8.8.8.8.8.			To ground short	1. The motor power line and ground short answer	1. Check the motor wiring to ensure power line and

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	**code**	**NO.**	**code**			
	Er.25			circuit	2. The motor and circuit aging, insulation deterioration	ground wire insulation 2. Replace the motor
26	**b.r.F.** **Er.26**	05	**A.b.r.F.** **AL.05**	Brake pipe failure	1. The brake line fault 2. Braking resistor is too small 3. Brake pipe damage	1. Check the rewiring 2.Replace the high power brake pipe 3.Replace the brake pipe or contact service or our company
27	**Ad.r.** **Er.27**			The ADC reference a given fault	1. A given hardware circuit malfunction 2. Software failure	1. Contact service or the company 2. Contact service or our company
28	**Ad.F.** **Er.28**			Current sampling circuit malfunction	1. Control panel loose connection or plug-in 2. Auxiliary power supply damage 3.Damage of the signal processing circuit	1. Check and reinstall the terminal 2. Contact service or the company 3. Contact service or the company
29	**CPU** **Er.29**			CPU interference failure	1. The external interference is serious 2. The CPU to read and write error	1. Press the STOP/RESET button RESET or plus the power filter in power input side 2. Press the STOP/RESET button RESET or contact the service provider or the company
30	**Cn.F.** **Er.30**	04	**A.Cn.F.** **AL.04**	485 communication failures	1.A serial port communication parameter setting is not correct 2.485 line break line terminal 3.Baud rate setting is not correct	1.To set the correct parameters of serial communication 2.Check 485 line connection 3.Set the correct baud rate

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
32	8.8.EEr. Er.32	03	8.R.EEr. AL.O3	EEPROM failure	1. The control parameters of the error, speaking, reading and writing Block 2. The EEPROM is damaged	1. Press the STOP/RESET button RESET Contact service or the company 2. Contact service or our company
33	8.8.CPY. Er.33			Copy and fault	1.Block operation panel EEPROM problems 2.The VFD parameters to the operation panel data errors 3.Operation panel version number is not correct	1.Contact service or the company 2.Check the operation panel connections 3.Contact service or the company
36	8.8.Pdc. Er.36			Keyboard communication failures	The operation panel communication break line	Check the operation panel with the host of the telecommunication lines
37	8.8.SOc. Er.37			Software supercurrent	1. Acceleration/acceleration/deceleration time is too short 2. The current detection circuit fault 3. Start the rotation of the motor	1.Extend the acceleration/acceleration/deceleration time 2.Contact service or the company 3.Motor stationary before you start
38	8.8.FOO. Er.38			The module failure	1. The reference module failure	1. The reference module failure
39	E-PrC. Er.39			Programming errors		
40	8.8.CLE. 	10	R.8.CLE. 	The fault current limiting continued	1. Motor acceleration/acceleration/deceleration too fast 2. The power grid	1. Increasing the acceleration/acceleration/deceleration time 2. Check the input

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
	Er.40		**AL.10**		voltage is too low 3. The VFD power is too small 4. Load inertia torque too large	power or power grid voltage 3. Replace the high power VFD
41	8.8.8.**Lo**. **Er.41**			Under voltage	1. The power grid voltage is too low	1. Check the input power or power grid voltage
42	8.**UEF**.8. **Er.42**			U phase module to protect	1. Motor phase fault 2. The VFD output to ground short circuit 3. The acceleration/acceleration/deceleration time Settings are too short 4. Abnormal load change 5. Interfere with serious	1. Check the motor wiring 2. Check the motor insulation 3. Prolonged acceleration/acceleration/deceleration 4. Check the load 5. Contact the manufacturer
43	8.**UEF2**. **Er.43**			V phase module to protect		
44	8.**UEF3**. **Er.44**			phase module to protect		
45	8.8.**nE**.8. **Er.45**			VFD modules detect abnormal temperature	1. The temperature detecting element connection disconnect 2.Temperature detection is beyond range 3.The temperature detecting element damage	1. Check the temperature detecting element connection 2. Ensure that use the environment temperature within the prescribed scope 3.Change the temperature detecting element
46	8.8.**nE2**. **Er.46**			Rectifier module detect abnormal temperature		
47	8.**EnE**.8. **Er.47**			Motor encoder single-line breakdown	1. The motor feedback encoder break line 2.The encoder communication head poor contact	1. Check the encoder wiring 2.Check coding communication connector

The fault		The alarm		The fault types	Possible reasons for failure type	The solution
NO.	code	NO.	code			
48	⌂ Er.48			Set the encoder single-line breakdown	1. The encoder feedback pulse is lost 2.Encoder communication connector poor contact	1. Check the encoder wiring 2. Check the encoder communications connector
49	⌂ Er.49			Set the encoder single-line breakdown	1. The encoder feedback pulse is lost 2.Encoder communication connector poor contact	1. Check the encoder wiring 2. Check the encoder communications connector
57	⌂ Er.57			Run time limit failure	Arrive time limit	1.Input the correct password, to change the running time 2.Input the correct password,change to no password
58	⌂ Er.58	20	⌂ AL.20	Motor locked-rotor	1.The load is too large 2.Small inverter capacity 3.Small motor type selection	1.Reduce the load 2.Replace the big level driver 3.Replace the big level motor

☞ **Pay attention to**

◆ Please carefully chosen fault alarm function, otherwise may cause accident expanded, personal injury and property damage to property.

7.3 Commom fault alarm and processing methods

No.	Common phenomenon	Possible reasons for	The solution
1	There is no display at power-on	1.There is no power supply to the VFD or the power input to the VFD is too low. 2.The power supply of the swiitch on the drive board of the VFD is faulty. 3.The reatifier bridge is damaged. 4.The cable connecting the control board and the drive board and the operation panel breaks. 5.The control board is damaged.	1. Check the power supply. 2 .Check the blus voltage. 3 .Check the control board and drive board, keyboard ribbon cable 4 . Contact the manufacturer

No.	Common phenomenon	Possible reasons for	The solution
2	The motor does not rotate after the VFD runs	1.The motor and the motor cables. 2.The VFD parameters are set improperly (motor parameters). 3.The cable between the drive board and the control board is in poor contact. 4.The drive board is faulty.	1.Ensure the cable between the VFD and the motor is normal. 2. Reset the VFD parameter 3. Test control board and drive board wiring 4. Contact the manufacturer
3	The motor running abnormal vibration or noise	1. The given unstable frequency 2. Vector control, the speed loop parameter setting is not appropriate 3. Closed-loop vector control, PG feedback parameter setting is not correct or PG feedback interference 4. Vector control, motor parameter setting is not correct	1. Inspection frequency for a given channel, set appropriate filter is given 2. From small to large set appropriate speed loop parameters 3. Check the encoder parameters or to earth shield encoder circuit interference 4. Check the motor parameters, the parameters self-learning or manually set the motor parameters
4	The VFD frequent over-voltage or over-current	1. VFD input and output wiring anomaly 2. Acceleration/acceleration/deceleration parameter setting problem 3. The load fluctuation big 4. The VFD power is too small	1. The VFD input and output wiring 2. Reset the acceleration/deceleration parameters 3. Reduce the load of volatility 4. Replace the high level power VFD
5	Frequent current limit on the frequency converter	1.Motor acceleration/deceleration time too fast 2. Power grid voltage is too low 3. VFD power is too small 4. The load inertia torque too large	1. Increase the acceleration/deceleration time 2. Check the input power or power grid voltage 3. Replace the high level power inverter
6	The VFD to frequent overload	1. Power grid voltage is too low 2. Speed is too fast 3. The VFD power is too small or motor is too big 4. Moments after the blackout, restart in the motor rotation	1. Check the input power 2. Increase the acceleration time 3. Choose adapter VFD or motor 4. To ensure that the motor stop running after the restart
7	The VFD to frequent overheating	1. Large carrier frequency 2. Stalling a fan or air duct plug 3. Thermistor damage 4. Working environment temperature is too high	1. Reduce the carrier frequency 2. Replace the fan or fan foreign body 3. Contact the manufacturer 4. Work environment is higher than 40 ℃, please reduce the rated power use
8	Switch terminal failure	1. The VFD parameter error 2. No + 24 v power supply 3. The control board failure 4. The external fault	1. Reset the VFD parameter 2. Check terminal + 24 v power supply 3. Contact the manufacturer
9	DO no high-speed pulse output	1. The VFD parameter error 2. No + 24 v power supply 3. Great resistance	1. Reset the VFD parameter 2. Check the terminal for + 24 v power supply

No.	Common phenomenon	Possible reasons for	The solution
		4. The panel fault	3. Pull up resistors access 4. Contact the manufacturer
10	Abnormal communication	1.The jamming signal big or wrong wiring 2.Communication parameter setting is not correct 3.Control panel fault	1.Communication line and the circular (shielded wire) and grounded 2. Review the communication parameters 3. Contact the manufacturer
11	Closed-loop vector control, the motor speed is far less than the target	1.Encoder failure or a connection error 2.Motor parameter setting is not correct 3.Closed-loop vector control, PG feedback parameter setting is not correct or PG feedback interference	1. Check the encoder and wiring 2. Check the motor parameters, the parameters self-learning or manually set the motor parameters 3. Check the encoder parameters for earthing interference shielding encoder circuit

Chapter 8   Maintenance and maintenance

⚠ warning
◆ Maintenance should be professional.
◆ Before maintenance, must cut off the inverter power supply, maintenance work after power light extinguished.
◆ Maintenance personnel must according to the maintenance of the specified method.
◆ Maintenance personnel need to wear electrostatic ring as far as possible don't direct contact to touch on the PCB components, easy damage of static frequency converter device.
◆ After the completion of the maintenance, all to tighten the screws.

The VFD will be bad parts inside，even if the normal use ,if more than life ,will slao be failure.

So in order to prevent the VFD failure, Ensure the normal order of the VDF, prolong the service life of VFD, need for frequency converter regular maintenance.

8.1 Daily maintenance

Check the project	Check the content
The input power	Confirm whether the input voltage/frequency within the scope of the permit
The motor	Check for abnormal vibration motor, fever, and presence of abnormal noise and the problem of lack of phase line
Panel displays	Panel display is normal
fan	Fan operation is normal, without sundry jam, and so on and so forth
The VDF	Check whether there is any abnormal fever on frequency converter, the presence of abnormal vibration
The surrounding environment	Surrounding environment conform to the requirements of the specification, confirm there is no oil mist, dust and water coagulation in the frequency converter, etc

8.2 Regular inspection

The company regularly check table of frequency VFD as shown below. In general, to once every 3 to 6 months it is advisable to regularly check，But please combined with the actual operation of the machine and working environment，To determine the reasonable inspection frequency. Periodic inspection helps prevent damage of function of variation and the product.

In order to prevent electric shock, Please do not in the state of power on terminal operations.Otherwise there will be a risk of electric shock.

Check before, please cut off all the power of the equipment. Even if cut off the power supply, internal and residual voltage in the capacitor, for main circuit dc voltage drop below 36v, After the lights of charge indicator of VFD go out to check operation After the lights go out to check operation.

Regular inspection table

Check the project	check the content	Fault corresponding strategies	Inspectors	Inspection qualified
The primary loop				
Overall check	Using the megohmmeter check (main circuit terminal and earthing terminal)	Contact service or the company		

Check the project	check the content	Fault corresponding strategies	Inspectors	Inspection qualified
	If there's any discoloration due to overheating or aging components, all parts are in damage or deformation	Contact service or the company		
	Too much dust, oil mist, etc	With dry compressed air to clean (esd)		
The wire	Whether the power cord, motor discoloration, damage and aging due to overheating; Whether line skin breakage, cracks, discoloration, etc	Replace damaged wires		
amphenol connector	Terminals for wear, damage, loose, etc	Tighten the screws or replace terminals		
Braking resistor	Whether discoloration caused by overheating of the insulator	Slight fading is normal; Faded badly, please ensure that the connection is bad or choose more powerful resistance		
Electrolytic capacitor	Whether the capacitance discharge, swelling, discoloration, cracks, etc	Repair or replace damaged parts, serious when replacing the entire frequency converter		
Diode, IGBT, rectifier bridge	Whether is stained with trash and dust, whether because of fever and poor contact	Professional welding or replacement		
Control circuit				
The whole	Whether is stained with too much dust, oil mist, etc	With dry compressed air to clean (esd)		
	If there's any discoloration due to overheating or aging components, all parts are in deformation and damage	Repair or replace damaged parts, serious when replacing the entire frequency converter		
The control panel	Whether Showing is correct、 Whether the panel dirt	With dry compressed air to clean up；When there is a bad situation Showing smudgy or operation key, please contact with the company		
terminal	Terminals for wear, loose, damage, etc	Tighten the screws or replace terminals		

Check the project	check the content	Fault corresponding strategies	Inspectors	Inspection qualified
The wire	Whether line color, damage and aging; Whether line skin breakage, cracks, discoloration, etc	Replace damaged wires		
The cooling system				
fan	Whether there is abnormal sound and vibration of the motor Whether there is any damage or loss of blades	With dry compressed air to clean or replace the cooling fan		
Heat sinks	If stained with trash and dust and dirt	With dry compressed air to remove rubbish and dust		
vent	Inlet, outlet blockage or stained with foreign body	With dry compressed air to remove obstacles and dust		

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