MISTURA TECHNOLOGIES

ME-100Economical instruction manual

1. Product specifications and specifications

input	Rated voltage,frequency		Three phase (4T Series) 380V; 50 / 60Hz three phase (2t Series) 220V: 50 / 60Hz
	Allowable variation range of voltage		Three phase (4T Series) 320v ~ 460V three phase (2t Series) 190V ~ 250V
output	Voltage		4T series; 0 ~ 380V 2T series; 0 ~ 220V
	frequency		0 ~ 600HZ
	Overload capacity		110% long term 150% 1 minute 180% 5 seconds
control mode			V / F control, simple vector control
Control characteristics	Frequency setting resolution	Analog input	0.1% of maximum output frequency
		Digital setting	0.1HZ
	Frequency accuracy	Analog input	Within 0.2% of maximum output frequency
		Digital input	Set the output frequency within 0.01%
	V/F control	V / F curve (voltage frequency characteristic)	The reference frequency can be set arbitrarily from 5 Hz to 600 Hz, the multi point V / F curve can be set arbitrarily, and a variety offi xed curves such as constant torque, low reduced torque 1, low reduced torque 2 and square torque can also be selected
		Torque lifting	Manual setting: 0.0 ~ 30.0% of rated output Automatic lifting: according to the output current and motor parameters, automatically determine the lifting torque
		Automatic current limiting and voltage limiting	Whether in the process of acceleration, deceleration or stable operation, the stator current and voltage of the motor are automatically detected, and the unique algorithm is used to suppress the current and voltage within the allowable range, so as to minimize the possibility of system fault tripping
Control characteristics	Sensorless vector control	Voltage frequency characteristic	The output voltage frequency ratio is automatically adjusted according to the motor parameters and unique algorithm

		Torque characteristics	Starting torque: 100% rated torque at 5.0hz (VF control) 150% rated torque at 1.5Hz (simple vector control)
		Current and voltage suppression	Full range current closed-loop control, completely avoid current impact, with perfect over-current and over-voltage suppression function
	Under voltage suppression in operation		Especially for the users with low grid voltage and frequent fluctuation of grid voltage, the system can maintain the longest possible operation time according to the unique algorithm and a residual energy allocation strategy even if the voltage is lower than the allowable range
Typical functions	Multi speed operation		7-segment programmable multi-stage speed control, multiple operation modes are optional.
	PID control RS485 communication		Built in PID controller (preset frequency). Standard configuration of RS485 communication function, a variety of communication protocols optional, with linkage synchronization control function
	Frequency setting	Analog input	DC voltage 0 ~ 10V, DC current 0 ~ 20mA (upper and lower limit optional)
		Digital input	Operation panel setting, RS485 interface setting, up / DW terminal control, and various combination settings with analog input
	output signal	Digital output	1 channel OC output and 1 channel fault relay output (TA, TB, TC), up to 14 meaning options
		Analog output	One analog signal output, the output range is 0 ~ 20mA or 0 ~ 10V, which can realize the output of physical quantity such as setting frequency and output frequency
	Automatic stable operation		According to the needs, dynamic voltage stabilization, static voltage stabilization and non voltage stabilization can be selected to obtain the most stable operation effect
	Acceleration and deceleration time setting		0.1s ~ 999.9min continuous setting
	braking	Energy consumption braking	The starting voltage, return differential voltage and energy consumption braking rate can be adjusted continuously
		DC brake	Starting frequency of DC braking at shutdown: 0.00 ~ [f0.05] upper limit frequency Braking time: 0.0 ~ 30.0S; braking current: 0.0% ~ 50.0% of motor rated voltage

	Low noise operation		Carrier frequency 1.0khz ~ 16.0khz can be adjusted continuously to minimize motor noise
	Counter		One internal counter, convenient for system integration
	Operation function		Setting of upper and lower frequency, frequency jump operation, reverse operation limit, slip frequency compensation, RS485 communication, frequency increasing, decreasing control, fault self recovery operation, etc
display	Operation panel display	running state	Output frequency, output current, output voltage, motor speed, set frequency, module temperature, PID setting, feedback, analog input and output, etc
		Alarm content	Output frequency, set frequency, output current, output voltage, DC voltage, module temperature and other operating parameters recorded during the last fault trip
Protection function			Over current, over voltage, under voltage, module failure, electronic thermal relay, overheating, short circuit, internal memory failure, etc
Environmental Science	Ambient temperature		- 10 ℃ ~ + 40 ℃ (if the ambient temperature is between 40 ℃ and 50 ℃, please reduce the rating for use)
	Ambient humidity		5% - 95% RH, no water condensation
	surrounding environment		Indoor (no direct sunlight, corrosion, flammable gas, oil, mist, dust, etc.)
	altitude		Derating for more than 1000m, with 10% derating for every 1000m increase
structure	Protection level		IP20
	Cooling mode		Air cooled with fan control
Installation mode			Wall mounted, cabinet

二、 Installation and wiring of frequency converter

2.1 Installation precautions

Danger

1. Before wiring, make sure the input power is off.
    Risk of electric shock and fire.
2. Please electrical engineering professionals for wiring operations.
    Risk of electric shock and fire.
3. Grounding terminal must be reliably grounded.
  (380V class: special third kind of grounding)
Risk of electric shock and fire.
4. Emergency stop terminal connected, be sure to check the actual be valid.
  There is a risk of injury. (Wiring responsibility borne by the use)
5. Do not touch the output terminal directly. The inverter output terminal is connected directly with the motor. Do not short the output terminals.
Risk of electric shock and short circuit.
6. Before power on, be sure to install the terminal cover. When removing the cover, be sure to disconnect the power supply first.
  Risk of electric shock.
7. Cut off the power, and then wait for 5 to 8 minutes to let the machine basically left the net electricity, before inspection and maintenance.
Electrolytic capacitors on the risk of residual voltage.
8. non-professional and technical personnel, please do not carry out inspection and maintenance work.
  Risk of electric shock.

⚠ **Attention**

1. Please confirm whether the line power supply voltage and inverter's rated input voltage are the same.
Risk of injury and fire.
2. Connect the braking resistor or brake unit according to the diagram.
Danger of fire.
3. It is best to use the specified torque screwdriver and wrench to tighten the terminal.
Danger of fire.
4. Do not connect the input power cable to the output U, V, W master
  Voltage applied to the output terminals can cause internal damage to the inverter
5. Do not disassemble the front cover, wiring only need to remove terminal cover.
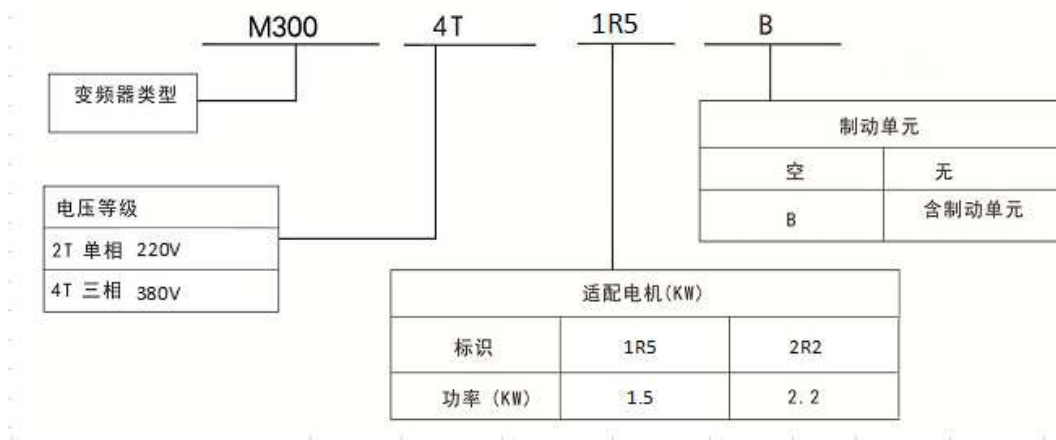 It may damage the inverter.

2.2 Outline drawing.

Keyboard support size

正面　　　　　　　側面　　　　　　　反面
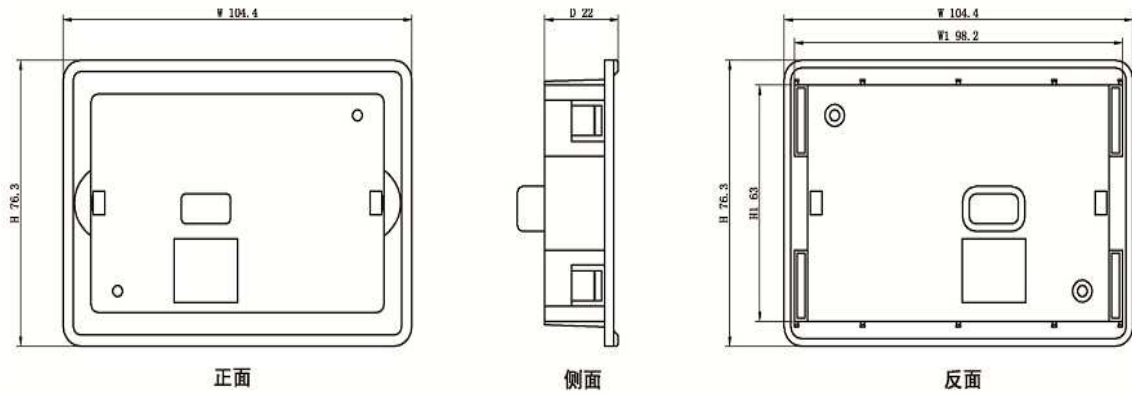
Overall dimensions		The size of hole		The thickness of the
W	H	W1	H1	D
104.4	76.3	98.2	67.5	22

变频器型号说明

制动单元	
空	无
B	含制动单元

电压等级	
2T 单相 220V	
4T 三相 380V	

适配电机(KW)		
标识	1R5	2R2
功率（KW）	1.5	2.2

b.Overall dimension

① 0.75KW-2.2KW/220V　1.5KW-4.0KW/380V
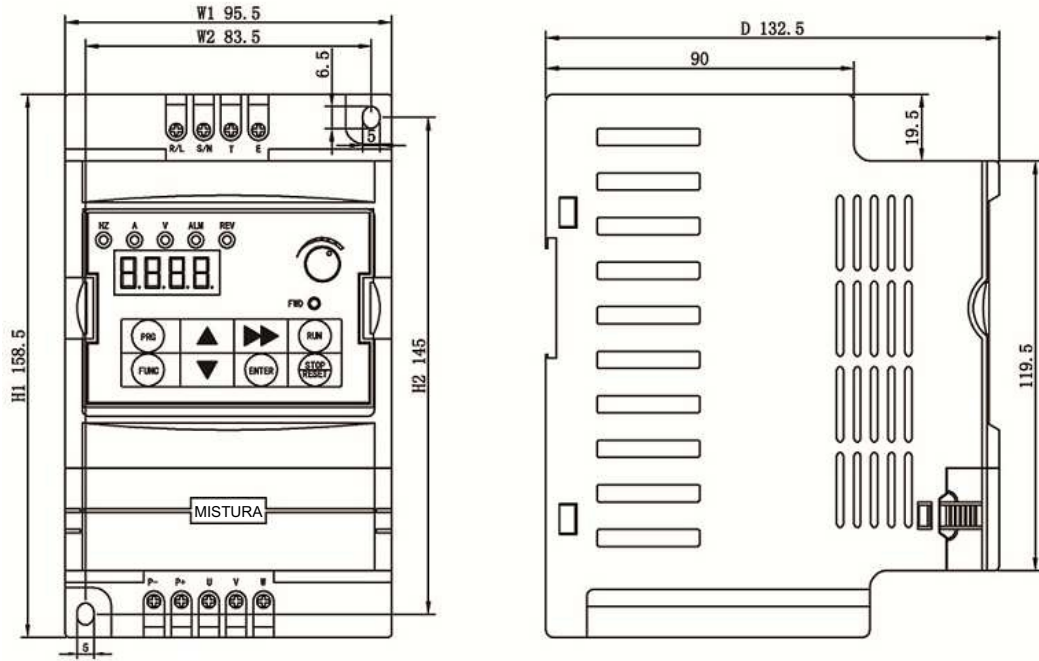
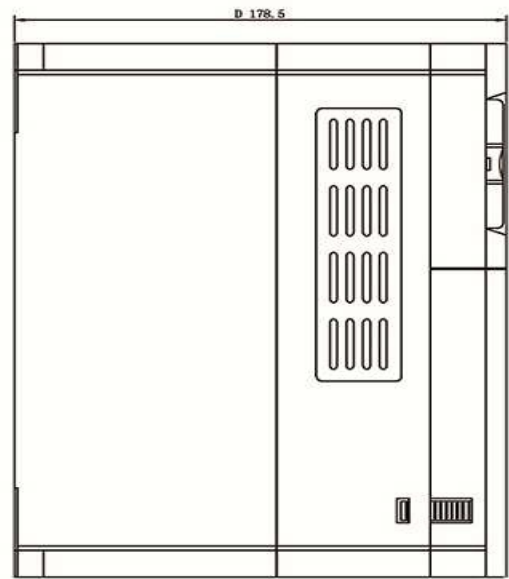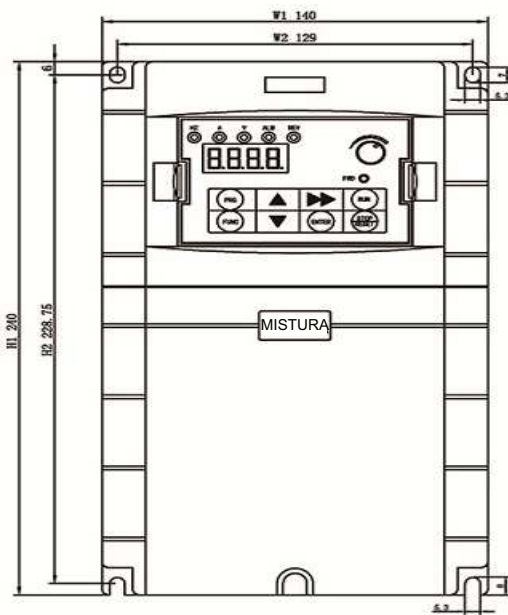| Voltage grade	specifications	power (kW)	Overall dimensions (mm)			Installation dimensions (mm)			Packing size (mm)			The net weight (kg)
			W1	H1	D	W2	H2	φ	long	wide	height	
220VSingle phase	ME-100-2SR75G/1.5P	0.75	95.5	158.5	132.5	83.5	145	4.5	195	132	172	1.23
	ME-100-2S01R5G/2.2P	1.5										
	ME-100-2S02R2G/4P	2.2										
380Vthree-phase	ME-100-4S01R5G/2.2P	1.5	95.5	158.5	132.5	83.5	145	4.5	195	132	172	1.25
	ME-100-4T02R2G/4P	2.2										
	ME-100-4T0004G/5.5P	4.0										

②5.5kw-7.5kw

Voltage grade	specifications	power (kW)	Overall dimensions (mm)			Installation dimensions (mm)			Packing size (mm)			The net weight (kg)
			W1	H1	D	W2	H2	φ	long	wide	height	
380V 3phase	ME-100-4T05R5G/ 7.5P	5.5	140	240	178.5	129	228.7	5	300	210	250	2.2
	ME-100-4T07R5G/ 11P	7.5										

2.3 Basic operation wiring

Inverter wiring part, divided into main circuit and control. The user can lift the cover of the output / input terminal, at this time, the main terminal and the control circuit terminal can be seen. The user must connect the correctly according to the following figure.

Breaking resistance

3-Phase power

QF (Circuit breaker)

R
S
T

M300
Inverter

P+   PB

3-Phase induction
motor

U
V
W

M
~

G

Multifunctional
terminal
input

X1
X2
X3
X4
X5
GND

TA
TB
TC

Programmable relay
factory setting as
fault indication

+12V
Y

Open-circuit collector
output

Analog input

ACI— (DC 0-10V/DO(4-20mA))
GND

AO
GND

+
−

Analog output

10V

Potentiometer
adjustment

GND
AV1— (DC 0-10V)
+10V

+485
−485

Communication

2.4   Main circuit terminal wiring

1.5kw-7.5kw
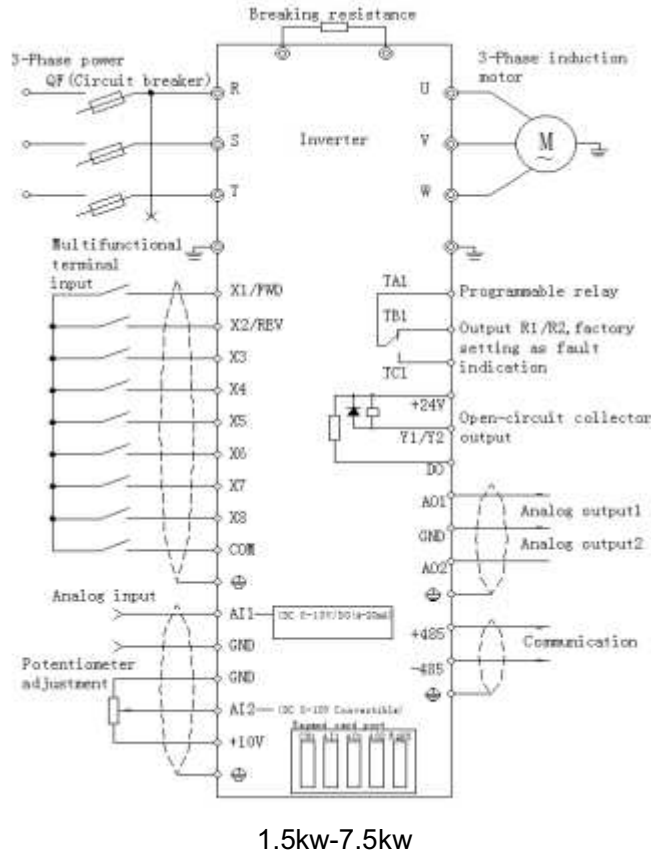
2.5Wiring precautions

1   When changing the motor, the inverter input power must be cut off

2   When the inverter stops output, it can switch the motor to the power frequency power.

3   To minimize the effects of electromagnetic interference, absorbers should be considered when using electromagnetic contactors and relays that are close to the drive.

4   Do not connect the AC input power to the inverter output terminal U, V, W.

5   The external control line of the inverter needs to be isolated

6   Input command signal connection in addition to shielding, should be a separate alignment, the best away from the main circuit wiring.

7   When the carrier frequency is less than 4KHz, the maximum distance between the inverter and the motor should be within 50m. When the frequency is greater than 4KHz, the distance should be reduced properly. The wiring is best in the metal pipe.

8   When the inverter is equipped with peripheral equipment (filters, etc.), first measure the insulation resistance of the inverter to ground with a 1000-volt megohm meter to ensure that it is not lower than 4 megohms.

9   In the inverter U, V, W output can not be installed capacitor or RC absorption device.

10   If the inverter needs to be started frequently, do not power off. You must use the COM / RUN terminal of the control terminal to start and stop the operation to avoid damage to the rectifier bridge.

11   To prevent accidents, ground terminal G must be grounded (impedance should be 100Ω or less), otherwise there will be leakage situation

12   When the main circuit wiring, wire diameter specification, please wire in accordance with the relevant provisions of national electrical regulation

3.Communication protocol

1、RTU Mode and Format

When the controller communicates on the Modbus bus in RTU mode, each 8-bit byte in the message is divided into two 4-bit hexadecimal characters. The main advantage of this mode is the density of characters transmitted at the same baud rate. Higher than ASCII mode, each message must be transmitted continuously.

1 Format of each byte in RTU mode

Encoding system: 8-bit binary, hexadecimal 0-9, A-F.

Data bits: 1 start bit, 8 data bits (lowest first send), stop bits, and parity bits can be selected. (Refer to RTU data frame as sequence diagram)

Error check area: Cyclic Redundancy Check (CRC).

2 RTU data frame bitmap

With parity

Start	1	2	3	4	5	6	7	8	Par	Stop

No parity

Start	1	2	3	4	5	6	7	8	Stop

2、Read and write function code description：

Function code	Functional specifications
03	Read the register
06	Write the register

3、Parameter address description of communication protocol

Functional specifications	Address definition	Data meaning state	R/W
Communication control command	2000H	0001H：downtime	W
		0012H：Running forward	
		0013H：Forward turning point operation	
		0022H：Reverse run	
		0023H：Reverse inching run	
Communication set frequency address	2001H	The communication set frequency range is -10000 ~ 10000. Note: The communication set frequency is the percentage relative to the maximum frequency and the range is -100.00% ~ 100.00%).	W
Communication control command	2002H	0001H：External fault input	W
		0002H：Failure reset	
Read the run/stop parameters	2102H	Set frequency (two decimal places)	R
	2103H	Output frequency (two decimal places)	R
	2104H	Output current (decimal bit)	R

	2105H	Bus voltage (decimal bit)	R
	2106H	Output voltage (decimal bit)	R
	210DH	Output voltage (decimal bit)	R
	210EH	PID feedback value (two decimal places)	R
	210FH	PID setting value (two decimal places)	R
	2101H	Bit0：run Bit1：downtime Bit2：Point move Bit3: forward Bit4: reverse Bit5 ~ Bit7: Reserved Bit8: communication given Bit9: Analog signal input Bit10: Communication run command channel Bit11: Parameter locking Bit12: running Bit13: A bit of a command Bit14 - Bit15: Reserved	R
Read the trouble code description	2100H	00: Nothing abnormal 01: Module failure 02: Over voltage 03: Temperature failure 04: Inverter overload 05: Motor overload 06: External failure 07 ~ 09: Reserved 10: Acceleration in overcurrent 11: Slow down in overcurrent 12: Constant speed medium overcurrent 13: keep 14: undervoltage	R

4、03 Read function mode

Inquiry information frame format(Send the frame)：

Address	01H
Function	03H
Starting data address	21H
	02H

Data(2Byte)	00H
	02H
CRC CHK Low	6FH
CRC CHK High	F7H

This section of data analysis

01H is the address off requency converter

03H is read function code

2102H is the starting address

0002H refers to the number of read addresses, and 2102H 08H 21

F76FH is a 16-bit CRC efficacy code

Response information frame format(Returns the frame) :

Address	01H
Function	03H
DataNum*2	04H
Data1[2Byte]	17H
	70H
Data2[2Byte]	00H
	00H
CRC CHK Low	FEH
CRC CHK High	5CH

This section of data analysis

01H is the address off requency converter

03H is read function code

04H is the product of reading term *2

1770H is for reading 2102H (set frequency) data

0000H reads 2103H (output frequency)

5CFEH is a 16-bit CRC check code

5、 06HWrite function mode

Inquiry information frame format(Send the frame) :

Address	01H
Function	06H
Starting data address	20H
	00H
Data(2Byte)	00H
	01H
CRC CHK Low	43H
CRC CHK High	CAH

This section of data analysis

01H is the address off requency converter

06H is function code

2000H is the address of the control command

0001H is the stop command

43CAH is a 16-bit CRC code

Response information frame format（Returns the frame）:

Address	01H
Function	06H
Starting data address	20H
	00H
Number of Data(Byte)	00H
	01H
CRC CHK Low	43H
CRC CHK High	CAH

This section of data analysis: returns the same input data directly.

4. Exception handling

During the operation of the inverter, common abnormal phenomena and countermeasures are shown in Table 4-1

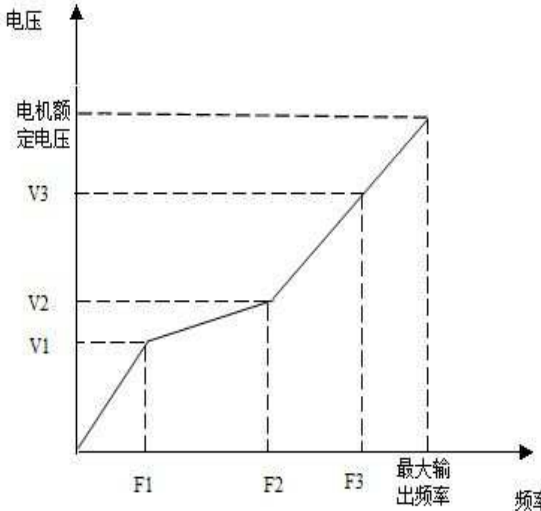| Anomalies		Possible causes and countermeasures
Motor does not turn	Keyboard no display	Check whether the power is off, whether the input power is and whether the input power line is connected wrongly.
	No keyboard is displayed, but the internal charge indicator is on	Check whether there is any problem with the keyboard-related wirin sockets, etc., and measure the power supply voltage to each co device to confirm whether the switching power supply is working properly. If the switching power supply is not working properly, check the switching power supply inlet (+, -) socket is connected the starter is damaged or if the regulator is normal.
	Motor has a buzz	The motor is too heavy to try to reduce the load
	No abnormalities found	Check whether it is in the trip state or not reset after the trip is in the state of power-off and restart, whether the keyboard is reset enters the program running state, multi-speed operation state, specific running state or non-operation state, you can try to restore the The method of value.
		Confirm whether the operation instruction is given
		Check whether the operating frequency is set to 0
The motor can't smooth acceleration and deceleration		Add deceleration time setting is not appropriate, increase dec time
		The current limit value is set too small to increase the limit
		Overvoltage protection during deceleration increases decel ion time
		Incorrect carrier frequency setting, overload or oscillation

	The load is too heavy and the moment is not enough. Increase the torque boost value in V/F mode. Ifi t still can not meet the requirement, you can use the automatic torque boost mode (this is the default mode of A880). At this time, note that the motor parameters must be consistent with the actual value, if you still can not To meet the requirement, it is recommended to use magnetic flux vector control instead. At the time, it is still necessary to pay attention to whether the motor parameters are consistent with the actual values, and it is better not to auto tune th parameters.	
	The motor power does not match the inverter power. Please set this parameter to the actual value	
	One dragged more than one motor. Please change the torque boost mode to manual lift mode	
Although the motor can rotate but not speed	The frequency upper and lower limit settings are not suitable	
	The frequency setting is too low or the frequency gain setting is small	
	Check whether the speed control method used is consistent with the set frequency setting.	
	Check if the load is too heavy, over-voltage stall or over-current	
Motor speed change during operation	Loads fluctuate frequently, minimizing changes	
	The frequency converter and the rated value of the motor do not match. Please set the motor parameter to actual value	
	The frequency setting potentiometer is in poor contact or the frequency given signal fluctuates. Change to a digital frequency reference or increase the filter time constant of the analog input signal	
The motor rotates in the opposite direction	Adjust the phase sequence of output terminals U, V, W	
	Set the running direction (F0.21=1) to reverse	
	The direction uncertainty caused by the output phase loss, check the motor wiring immediately	

Table 4-1 Common Abnormalities and Countermeasures

5. Parameters that

○—A parameter that can be modified in any state　　×—An unmodifiable parameter in the run state　◆—Actual test parameters cannot be modified　◇—The manufacturer's parameters shall be modified only by the manufacturer, and the user shall not modify them

F0-Basic operating parameters					
Function code	name	content	Set the range	The factory set up	change
F0.00	Frequency converter power specification	Display current power	0.10 ~ 99.99KW	Models set	◆
F0.01	Master controller software version	Displays the current software version number	1.00 ~ 99.99	1.00	◆
F0.02	Run command	0: Panel runs command channel 1: The terminal runs command channel	0 ~ 2	0	○

	channel selection	2: Communication operation command channel			
F0.03	Frequency setting selection	0: Panel potentiometer 1: number given 1, operate panel ▲, ▼ key to adjust 2: the number is given 2, terminal UP/DOWN adjustment 3: AVI simulation is given (0 ~ 10V) 4: combination is given 5: ACI given (0 ~ 20mA) 6: Communication given 7: Pulse setting Note: Select the combination for timing, and select the given combination mode in F1.15.	0 ~ 7	0	○
F0.04	Maximum output frequency	The maximum output frequency is the highest frequency allowed by the converter, which is the benchmark set for acceleration and deceleration.	MAX{ 50.0【F0.05】}~ 999.9Hz	50.0Hz	×
F0.05	Upper limit frequency	The operating frequency shall not exceed this frequency	MAX{0.1 【F0.06】~ 【F0.04】	50.0Hz	×
F0.06	The lower frequency	The operating frequency must not be lower than this frequency	0.0 ~ Upper limit frequency	0.0Hz	×
F0.07	The lower frequency reaches the processing	0: Zero speed operation 1: operation at lower frequency 2: stop	0 ~ 2	0	×
F0.08	Operation frequency digital setting	The set value is the initial value given by the frequency number	0.0 ~ Upper limit frequency	10.0Hz	○
F0.09	Digital frequency control	LED units: Power off storage 0: storage 1: No storage LED ten: stop and hold 0: keep 1: Not kept LED hundreds: UP/DOWN negative frequency adjustment 0: invalid 1: effective LED thousands: PID, PLC frequency overlay selection 0: invalid 1：F0.03+PID 2：F0.03+PLC	0000 ~ 2111	0000	○

F0.10	To speed up the time	The time required for the converter to accelerate from zero frequency to the maximum output frequency	0.1 ~ 999.9S 0.4 ~ 4.0KW 7.5S 5.5 ~ 7.5KW 15.0S	Models set	○
F0.11	Deceleration time	The time required for the converter to slow down from the maximum output frequency to zero frequency			
F0.12	Direction setting	0: forward turn 1: Reverse 2: Do not reverse	0 ~ 2	0	○
F0.13	V/F curve setting	0: Linear curve 1: The square curve 2: Multi-point VF curve	0 ~ 2	0	×
F0.14	Torque lift	Manual torque lift, ifl arge torque is required, set to 0.0; This value is set as a percentage of the rated voltage of the motor. 0.0: Vector control	0.0 ~ 30.0%	Models set	○
F0.15	Torque lifting cutoff frequency	This setting is the lifting cutoff frequency point of manual torque lifting	0.0 ~ 50.0Hz	15.0Hz	×
F0.16	Carrier frequency setting	In the case of quiet operation, the carrier frequency can be appropriately increased to meet the requirements, but increasing the carrier frequency will increase the heat output of the converter.	2.0 ~ 16.0KHz 0.4 ~ 3.0KW 4.0KHz 4.0 ~ 7.5KW 3.0KHz	Models set	×
F0.17	V/F frequency, F1		Frequency value: 0.1 ~ F2	12.5Hz	×
F0.18	V/F voltage V1		Voltage values from 0.0 to V2	25.0%	×
F0.19	V/F frequency value F2		Frequency value F1 ~ frequency value F3	25.0Hz	×
F0.20	V/F voltage value V2		Voltage value V1 ~ voltage value V3	50.0%	×
F0.21	V/F frequency F3		Frequency value F2 ~ rated frequency of motor [F4.03]	37.5Hz	×
F0.22	V/F voltage value V3		Voltage V2 ~ 100.0% *Uoute(Motor rated voltage [F4.00])	75.0%	×

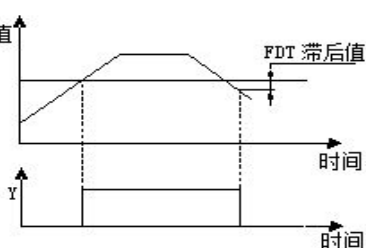| Functi on code	Name	Set the range	The smallest unit of	The factory set up	cha nge
F0.23	The user password	Set any number that is not zero and wait 3 minutes or power out before it takes effect.	0 ~ 9999	0	○

F1 Auxiliary operating parameters

Functi on code	Name	Set the range	The smallest unit of	The factory set up	cha nge
F1.00	Starting way	LED bits: Starting mode 0: Starting from starting frequency 1: Dc braking and starting LED from starting frequency 10: Power failure or abnormal starting mode 0: invalid 1: starting from starting frequency LED hundreds: Reserved LED thousands: reserved	0000 ~ 0011	00	×
F1.01	Start frequency		0.0 ~ 50.0Hz	1.0Hz	○
F1.02	Starting DC brake voltage		0.0 ~ 50.0％× Motor rated voltage	0.0%	○
F1.03	Starting DC braking time		0.0 ~ 30.0s	0.0s	○
F1.04	Stop way	0: Deceleration stop 1: free stop	0 ~ 1	0	×
F1.05	Stop dc braking starting frequency		0.0 ~ Upper limit frequency	0.0Hz	○
F1.06	Stop dc brake voltage		0.0 ~ 50.0％× Motor rated voltage	0.0%	○
F1.07	Stop dc braking time		0.0 ~ 30.0s	0.0s	×

F1.08	Stop DC braking wait time		0.00 ~ 99.99s	0.00s	×
F1.09	Setting of positive rotation inching frequency	Set fixed point moving forward and backward rotation frequency	0.0 ~ 50.0Hz	10.0Hz	○
F1.10	Reverse inching frequency setting				
F1.11	Inching acceleration time	Set fixed point moving acceleration and deceleration time	0.1 ~ 999.9S 0.4 ~ 4.0KW 10.0S 5.5 ~ 7.5KW 15.0S	Models set	○
F1.12	Inching deceleration time				
F1.13	Hopping frequency	By setting the jumping frequency and range, the frequency converter can avoid the mechanical vibration point of the load.	0.0 ~ Upper limit frequency	0.0Hz	○
F1.14	Jump range		0.0 ~ 10.0Hz	0.0Hz	○
F1.15	A given mode off requency combination	0: Potentiometer + digital frequency 1 1 Potentiometer + digital frequency 2 2: potentiometer +AVI 3: Digital frequency 1+AVI 4: Digital frequency 2+AVI 5: Digital frequency 1+ multi-speed 6: Digital frequency 2+ multi-speed 7: Potentiometer + multistage speed	0 ~ 7	0	×
F1.16	Programmable operation control (simple PLC operation)	LED ones: PLC enabled control 0: invalid 1: Effective LED tens place: Operation mode selection 0: Single cycle 1: Continuous cycle 2. Keep the final VALUE of LED hundreds after single cycle: Starting mode 0: Restart from the first segment 1: Start at the stop (fault) moment 2: Start starting from the stage and frequency of stop (failure) time LED thousands: power off storage option 0: no storage 1: storage	0000 ~ 1221	0000	×
F1.17	Multistage velocity frequency 1	Set section speed 1 frequency	- Upper limit frequency ~ upper limit frequency	5.0Hz	○
F1.18	Multistage velocity frequency 2	Set section speed 2 frequency	- Upper limit frequency ~ upper limit frequency	10.0Hz	○
F1.19	Multistage velocity frequency 3	Set section speed 3 frequency	- Upper limit frequency ~ upper limit frequency	15.0Hz	○
F1.20	Multistage speed	Set the segment speed to 4 frequencies	- Upper limit frequency ~ upper	20.0Hz	○

	frequency 4		limit frequency		
F1.21	Multistage speed frequency 5	Set the segment speed to 5 frequencies	- Upper limit frequency ~ upper limit frequency	25.0Hz	○
F1.22	Multistage speed frequency 6	Set the segment speed to 6 frequencies	- Upper limit frequency ~ upper limit frequency	37.5Hz	○
F1.23	Multistage speed frequency 7	Set the segment speed to 7 frequencies	- Upper limit frequency ~ upper limit frequency	50.0Hz	○
F1.24	Phase 1 running time	Set the running time of section speed 1 (the unit is selected by [F1.35], and the default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.25	Phase 2 running time	Set section speed 2 running time (unit selected by [F1.35], default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.26	Phase 3 running time	Set section speed 3 running time (unit selected by [F1.35], default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.27	Phase 4 running time	Set section speed 4 running time (unit selected by [F1.35], default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.28	Phase 5 running time	Set section speed 5 running time (unit selected by [F1.35], default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.29	Phase 6 running time	Set section speed 6 running time (unit selected by [F1.35], default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.30	Phase 7 running time	Set the section speed to 7 running time (the unit is selected by [F1.35] and the default is seconds)	0.0 ~ 999.9s	10.0s	○
F1.31	Stage acceleration and deceleration time selection 1	LED ones: Stage 1 acceleration and deceleration time 0 ~ 1 LED tens place: The acceleration and deceleration time of stage 2 is 0 ~ 1 Leds, one hundred: The acceleration and deceleration time of stage 3 is 0 ~ 1 LED thousands: Stage 4 acceleration and deceleration time 0 ~ 1	0000 ~ 1111	0000	○
F1.32	Stage acceleration and deceleration time selection 2	LED ones: Stage 5 acceleration and deceleration time 0 ~ 1 LED tens place: Stage 6 Acceleration and deceleration time 0 ~ 1 Leds, one hundred: Stage 7 Acceleration and deceleration time 0 ~ 1 LED thousands: reserved	000 ~ 111	000	○
F1.33	Acceleration time 2	Set acceleration and deceleration time 2	0.1 ~ 999.9s 0.4 ~ 4.0KW 10.0s	10.0s	○
F1.34	Deceleration time 2		5.5 ~ 7.5KW 15.0s		
F1.35	Time unit selection	LED bits: unit of time for process PID LED ten place: simple PLC time unit LED hundreds: Conventional acceleration and deceleration time units LED thousands: reserved 0: The unit is 1 second 1: The unit is one point 1: The unit is 0.1 second	000 ~ 211	000	×

F2-Analog and digital input and output parameters					
Functio n code	name	Set the range	The smallest unit of	The factory set up	cha nge
F2.00	AVI input lower limit voltage	Set AVI upper and lower voltages	0.00 ~【F2.01】	0.00V	○
F2.01	AVI input upper limit voltage		【F2.01】~ 10.00V	10.00V	○
F2.02	The lower limit of AVI is set accordingly	Set AVI upper and lower limits, which correspond to the percentage of upper frequency [F0.05].	-100.0% ~ 100.0%	0.0%	○
F2.03	AVI upper limit is set accordingly			100.0%	○
F2.04	ACI input lower limit current	Set the upper and lower limits of ACI input current	0.00 ~【F2.05】	0.00mA	○
F2.05	ACI input upper current		【F2.04】~ 20.00mA	20.00mA	○
F2.06	The lower limit of ACI is set accordingly	Set the corresponding setting of the upper and lower limits of ACI, which corresponds to the percentage of the upper frequency [F0.05].	-100.0% ~ 100.0%	0.0%	○
F2.07	Correspondi ng setting of ACI upper limit			100.0%	○
F2.08	Analog input signal filtering time constant	This parameter is used for filtering AVI, ACI, and panel potentiometer input signals to eliminate interference effects.	0.1 ~ 5.0s	0.1s	○
F2.09	Limit of buffeting deviation for analog input	When the analog input signal fluctuates frequently near a given value, the frequency fluctuation caused by such fluctuation can be suppressed by setting F2.09.	0.00 ~ 0.10V	0.00V	○
F2.10	AO analog output terminal function selection	0: Output frequency 1: Output current 2: Motor speed 3: Output voltage 4: AVI 5: ACI	0 ~ 5	0	○
F2.11	AO output limit	Set AFM output upper and lower limits	0.00 ~ 10.00V/ 0.00 ~ 20.00mA	0.00V	○
F2.12	AO output upper limit			10.00V	○
F2.13	Input terminal X1 function	0: Idle control end 1: Forward turning inching control 2: Reverse inching control 3: Forward control (FWD) 4: Reverse Control (REV) 5: Three-wire operation control 6: Free stop	0 ~ 27	3	×

F2.14	Input terminal X2 function	control 7: External STOP signal input (STOP) 8: External reset signal Input (RST) 9: External fault normally open Input 10: Frequency increment instruction (UP)	0 ~ 27	4	×
F2.15	Input terminal X3 function	11: Frequency descending instruction (DOWN) 13: Multi-segment speed choice S1 14: Multistage speed selection S2 15: Multistage speed selection S3 16: Run command channel force for Terminal 17: Run command channel force for communication 18: Stop the direct current braking instruction	0 ~ 27	0	×
F2.16	Input terminal X4 function		0 ~ 27	0	×
F2.17	Input terminal X5 function	19: Change the frequency to AVI 20: Frequency switched to digital frequency 1 21: Frequency switched to digital frequency 2 22: Pulse frequency input (valid for M5 only) 23: Counter reset signal 24: Counter trigger signal 25: Timer reset signal 26: Timer trigger signal 27: Acceleration and deceleration time selection	0 ~ 27	22	×
F2.18	FWD/REV terminal control mode	0: Two-wire control mode 1 1: Two-wire control mode 2 2: Three-wire control mode 1 3: Three-wire control mode 2	0 ~ 3	0	×
F2.19	Terminal function detection and selection when power on	0: The terminal running command is invalid when powered on 1: the terminal running command is effective when powered on	0 ~ 1	0	×
F2.20	R output setting	0: idle 1: the converter is ready for operation 2: The frequency converter is in operation 3: the frequency converter is in zero speed operation 4: External fault shutdown 5: Converter failure 6: Frequency/speed	0 ~ 14	5	○

F2.21	Y open collector output	arrival signal (FAR) 7: Frequency/speed level detection signal (FDT) 8: Output frequency reaches the upper limit 9: Output frequency reaches the lower limit 10: Inverter overload warning alarm 11: timer overflow signal 12: The counter detects the signal 13: Counter reset signal 14: Auxiliary motor	0 ~ 14	0	○
F2.22	R closing delay	The delay between a change in relay R state and a change in output	0.0 ~ 255.0s	0.0s	×
F2.23	R break delay				
F2.24	Frequency reaches FAR detection amplitude	The output frequency is within the positive and negative detection width of the set frequency, and the terminal outputs a valid signal (low level).	0.0Hz ~ 15.0Hz	5.0Hz	○
F2.25	Level setting of FDT		0.0Hz ~ Upper limit frequency	10.0Hz	○
F2.26	FDT lag value		0.0 ~ 30.0Hz	1.0Hz	○
F2.27	UP/DOWN terminal modification rate	This function code is the frequency modification rate when the UP/DOWN terminal sets the frequency, that is, the frequency change amount when the UP/DOWN terminal is short-connected with the COM terminal for one second.	0.1Hz ~ 99.9Hz/s	.0Hz/s 1	○
F2.28	Setting of input terminal pulse triggering mode (M1 ~ M5)	0: Represents the level trigger mode 1: Means the pulse triggering mode	0 ~ 1FH	0	○
F2.29	Effective logic setting ofi nput terminal (M1 ~ M5)	0: represents positive logic, that is, Mi terminal is connected to the common end effectively, while disconnect is invalid 1: represents the anti-logic, that is, the connection between Mi terminal and common terminal is invalid, and the	0 ~ 1FH	0	○

For F2.25 / F2.26 cell: the image shows a diagram with labels FDT 水平设定值, FDT 滞后值, 时间, 时间, Y.

function	name	Set range of	The smallest unit of	factory set up	change
		disconnect is effective			
F2.30	M1 filtering coefficient	Used to set the sensitivity of the input terminal. If the digital input terminal is easy to be interfered and cause wrong action, this parameter can be increased to enhance the anti-interference ability, but too much setting will lead to the decrease of the sensitivity of the input terminal. 1: Represents the unit of scanning time of 2MS	0 ~ 9999	5	○
F2.31	M2 filter factor		0 ~ 9999	5	○
F2.32	M3 filtering coefficient		0 ~ 9999	5	○
F2.33	M4 filtering coefficient		0 ~ 9999	5	○
F2.34	M5 filtering coefficient		0 ~ 9999	5	○
F3-PID parameter					
function	name	Set range of	The smallest unit of	factory set up	change

F3.00	PID function setting	LED bits: PID regulating characteristic 0: invalid 1: Positive effects When the feedback signal is larger than the PID, the output frequency of the converter is required to decrease (that is, the feedback signal is reduced). 2: Negative effects When the feedback signal is greater than the PID feed quantity, the output frequency of the converter is required to increase (that is, reduce the feedback signal). LED 10: PID for quantitative input channel 0: Keyboard potentiometer The PID is given by a potentiometer on the operation panel. 1: Given number PID is given by number and set by function code F3.01. 2: Pressure set (MPa, Kg) Pressure is given by setting F3.01 and F3.18. LED hundreds: PID feedback input channel 0: AVI 1: ACI LED thousands: PID sleep selection 0: invalid 1: Normal dormancy In this way, specific parameters such as F3.10 ~ F3.13 should be set. 2: Disturbance dormancy The parameter setting is the same as that when the sleep mode is selected as 0. If the PID feedback value is within the range of the set value of F3.14, the disturbed sleep will be entered after the sleep delay is maintained. Wake up immediately when the feedback value is less than the wake threshold (PID polarity is positive).	0000～2122	1010	×
F3.01	Set quantitative Numbers	The operation keyboard is used to set the quantitative value of PID control. This	0.0～100.0%	0.0%	○

		function is effective only when the PID is given with a given channel selection number (F3.00 is 1 or 2 in ten places). This parameter is the same as the unit of F3.18 if F3.00 has 2 tens place and is used as the pressure given.			
F3.02	Feedback channel gain	When the level of the feedback channel is inconsistent with that of the set channel, this function can be used to adjust the gain of the feedback channel signal.	0.01～10.00	1.00	○
F3.03	Proportional gain P	The speed of PID adjustment is set by the two parameters of proportional gain and integral time. For fast adjustment, the proportional gain and integral time should be increased, while for slow adjustment, the proportional gain and integral time should be decreased. In general, the differential time is not set.	0.01～5.00	2.00	○
F3.04	Integration time Ti		0.1～50.0s	1.0s	○
F3.05	Differential time Td		0.1～10.0s	0.0s	○
F3.06	Sampling period T	The larger the sampling period is, the slower the response will be, but the better the suppression effect on the interference signal will be. In general, it is not necessary to set.	0.1～10.0s	0.0s	○
F3.07	Deviation limits	The deviation limit is the ratio of the absolute value of the deviation of the system feedback quantity and the deviation of the given quantity to the given quantity. When the feedback quantity is within the deviation limit, the PID adjustment does not operate.	0.0～20.0%	0.0%	○
F3.08	Closed-loop preset frequency	Frequency and running time of the converter before the PID is put into operation	0.0～上限频率	0.0Hz	○
F3.09	Preset frequency retention time		0.0～999.9s	0.0s	×
F3.10	Wake threshold coefficient	If the actual feedback value is greater than the set value and the frequency output of the frequency converter reaches the lower limit, the converter will go to sleep after the delay waiting time defined by F3.12 (i.e., running at zero speed).	0.0～150.0%	100.0%	○

		This value is the percentage of the PID set value.			
F3.11	Wake threshold coefficient	If the actual feedback value is less than the set value, the converter will get out of sleep and start to work after passing the delay waiting time defined by F3.13. This value is the percentage of the PID set value.	0.0 ~ 150.0%	90.0%	○
F3.12	Sleep delay time	Set a sleep delay	0.0 ~ 999.9s	100.0s	○
F3.13	Wake delay time	Set the wake delay time	0.0 ~ 999.9s	1.0s	○
F3.14	Deviation of feedback during sleep from setting stress	This function parameter is only valid for disturbed sleep mode	0.0 ~ 10.0%	0.5%	○
F3.15	Delay time of detonation detection	Set the delay time of tube burst detection	0.0 ~ 130.0s	30.0S	○
F3.16	High pressure test threshold	When the feedback pressure is greater than or equal to this set value, the detonation failure "EPA0" shall be reported after F3.15 tube detonation delay. When the feedback pressure is less than this set value, the detonation failure "EPA0" shall be automatically reset. This threshold is a percentage of the given pressure.	0.0 ~ 200.0%	150.0%	○
F3.17	Low pressure test threshold	When the feedback pressure is less than this set value, the detonation failure "EPA0" shall be reported after F3.15 tube detonation delay. When the feedback pressure is greater than or equal to this set value, the detonation failure "EPA0" shall be automatically reset. This threshold is a percentage of the given pressure.	0.0 ~ 200.0%	50.0%	○
F3.18	Sensor range	Set the maximum range of the sensor	0.00 ~ 99.99 (MPa、Kg)	10.00MPa	○
F4-Communication parameters					

Function code	The name of the	Set the range	The smallest unit	The factory set up	change
F4.00	Motor rated voltage	Motor parameter setting	0 ~ 500V : 380V 0 ~ 250V : 220V	Models set	×
F4.01	Motor rated current		0.1 ~ 999.9A	Models set	×
F4.02	Motor rated speed		0 ~ 60000Krpm	Models set	×
F4.03	Motor rated frequency		1.0 ~ 999.9Hz	50.0Hz	×
F4.04	Motor stator resistance	Set motor stator resistance	0.001 ~ 20.000Ω	Models set	○
F4.05	No load current of motor	Set no-load current of motor	0.1 ~ 【F4.01】	Models set	×
F4.06	AVR function	0: invalid 1: All the way 2: Only slow down will not work	0 ~ 2	0	×
F4.07	Cooling fan control	0: Automatic control mode 1: The energizing process runs all the time	0 ~ 1	0	○
F4.08	Fault automatic reset times	When the number of barrier reset is set to 0, there is no automatic reset function and it can only be reset manually. 10 means the number of times is unlimited, that is, countless times.	0 ~ 10	0	×
F4.09	Fault automatic reset interval	Set the time interval between automatic fault reset	0.5 ~ 25.0s	3.0s	×
F4.10	Energy consumption brake starting voltage	If the dc side voltage inside the converter is higher than the starting voltage of energy consumption brake, the internal brake unit action. If there is a brake resistance, the voltage energy inside the converter will be released through the brake resistance, so that the DC voltage fell back.	330 ~ 380/660 ~800V	350/780V	○
F4.11	Energy consumption brake action ratio		10 ~ 100%	100%	○

F5 The protection function provides parameters

Function code	name	Set the range	the smallest unit	The factory set up	change
F5.00	Protection Settings	LED units: Motor Overload protection Option 0: Invalid 1: effective LED tens place: PID feedback disconnected protection 0: Invalid 1: Protection action and free stop LED hundreds: 485 communication failure processing 0: protection action and free stop 1: Alarm but maintain the status quo; 2: alarm and stop the LED thousands in the way set: Oscillation suppression selection 0: invalid 1: effective	0000 ~ 1211	0001	×
F5.01	Motor overload protection factor	The motor overload protection coefficient is the percentage of the motor rated current value to the converter rated output current value.	30% ~ 110%	100%	×

F5.02	Undervoltage protection level	This code specifies the lower limit voltage allowed by the DC bus when the converter is working normally.	50 ~ 280/50 ~ 480V	180/360V	×
F5.03	Deceleration voltage limiting factor	This parameter is used to adjust the ability off requency converter to suppress overvoltage during deceleration.	0：Shut down , 1 ~ 255	1	×
F5.04	Overpressure limit level	The overvoltage limit level defines the operating voltage for overvoltage stall protection	350 ~ 400/660 ~ 850V	375/790V	×
F5.05	Accelerating current limiting coefficient	This parameter is used to regulate the ability of the converter to suppress overcurrent during acceleration.	0：Shut down ,1 ~ 99	10	×
F5.06	Constant velocity current limiting coefficient	This parameter is used to adjust the ability off requency converter to suppress overcurrent in constant speed process.	0：Shut down ,1 ~ 10	0	×
F5.07	Current limiter level	The current limiter level defines the current threshold for automatic flow limiter operation, which is set as a percentage of the frequency converter rated current.	50％ ~ 250％	180%	×
F5.08	Feedback line break detection value	This value is the percentage given by PID to quantification. When the PID feedback value is smaller than the feedback broken line detection value continuously, the frequency converter will make corresponding protection action according to the setting of F5.00, which is invalid when F5.08=0.0%.	0.0 ~ 100.0%	0.0％	×
F5.09	Feedback disconnection detection time	The delay time before the protective action after the feedback disconnection occurs.	0.1 ~ 999.9S	10.0s	×
F5.10	Frequency converter overload forecast alarm level	The current threshold of the inverter overload warning is set as a percentage of the inverter's rated current.	0 ~ 150％	120％	○
F5.11	Frequency converter overload forecast alarm delay	The output current of the converter is larger than the level amplitude of overload warning (F5.10) continuously, and the delay time between output overload warning signal.	0.0 ~ 15.0s	5.0s	×
F5.12	Inching priority enablement	0: Invalid 1: Inching priority is highest when the converter is running	0 ~ 1	0	×
F5.13	Oscillation inhibition coefficient	In case of motor shock, it is required to set F5.00 to be effective, turn on the shock suppression function, and then adjust by setting the shock suppression coefficient. In general, the amplitude of shock is large, increase the shock suppression coefficient F5.13, and F5.14 ~ F5.16 are not set. In case of special occasions, F5.13 ~ F5.16 should be used together.	0 ~ 200	30	○
F5.14	Amplitude suppression coefficient		0 ~ 12	5	○
F5.15	Oscillation suppression lower frequency		0.0 ~【F5.16】	5.0Hz	○
F5.16	Oscillation suppression upper frequency		【F5.15】~【F0.05】	45.0Hz	○

F5.17	Wave - by - wave current limiting selection	LED bits: Select 0 in acceleration: Invalid 1: effective LED ten place: Decelerate select 0: invalid 1: valid LED hundreds: select in constant speed 0: Invalid 1: Valid LED thousands: reserved	000 ~ 111	011	×
F6-Communication parameters					
F6.00	The machine address	Set the local address, 0 for broadcast address.	0 ~ 247	1	×
F6.01	MODBUS communication configuration	LED bits: Baud rate selection 0:9 600 BPS "200 BPS Instant 400 BPS LED tens place: Data format 0: No calibration 1: Parity 2: Odd check LED hundreds: Communication response mode 0: Normal response 1: Only respond to slave address 2: No response 3: Slave machine does not respond to the free stop instruction of host machine in broadcast mode LED thousands: reserved	0000 ~ 0322	0000	×
F6.02	Communication timeout checkout time	If the machine does not receive the correct data signal within the time interval defined by this function code, then the machine thinks that the communication is out of order, and the inverter will decide whether to protect or maintain the current operation according to the setting of communication failure mode. When this value is set to 0.0, the RS485 communication timeout is not checked out.	0.1 ~ 100.0s	10.0s	×
F6.03	Local response delay	This function code defines the intermediate time interval between receiving the data frame of the frequency converter and sending the response data frame to the upward machine. If the response time is less than the system processing time, the system processing time shall be the criterion。	0 ~ 200ms	5ms	×
F6.04	Proportional coupling coefficient	This function code is used to set the frequency converter as the weight coefficient off requency instruction received from the machine through the RS485 interface. The actual operating frequency of the machine is equal to the value of this function code multiplied by	0.01 ~ 10.00	1.00	○

		the frequency setting instruction value received through the RS485 interface. In the continuous control, this function code can set the ratio off requency of multiple frequency converters.			

F7-Supplementary functional parameter

Funct ion code	The name of the	Set the range	The smallest unit of	The factory set up	cha nge
F7.00	Counting and timing mode	LED bits: Count to reach processing 0: Weekly count, stop output 1: Weekly count, continue output 2: Loop count, stop output 3: Loop count, continue output LED tens place: reserved LED hundreds: scheduled arrival processing 0: Stop the output at a certain time every week 1: Weekly timing, continue output 2: Stop the output when the cycle is fixed 3: Cyclic timing, continue output LED thousands: reserved	000 ~ 303	103	×
F7.01	Counter reset value setting	Set the counter reset value	【F7.02】 ~ 9999	1	○
F7.02	Counter detection value setting	Set the counter detection value	0 ~ 【F7.01】	1	○
F7.03	Timing time setting	Set timing time	0 ~ 9999s	0s	○
F7.04	External pulse M5 input lower limit frequency	Set the input upper and lower frequencies of the external pulse M5	0.00 ~ 【F7.14】	0.00KHz	○
F7.05	External pulse M5 input upper frequency		【F7.13】 ~ 99.99KHz	20.00KHz	○
F7.06	The lower limit of the external pulse M5 is set accordingly	Set the upper and lower limits of the external pulse M5 corresponding Settings, which are the percentage relative to the maximum output frequency.	-100.0% ~ 100.0%	0.0%	○
F7.07	The upper limit of the external pulse M5 is set accordingly		-100.0% ~ 100.0%	100.0%	○

F8Manage and display parameters

Functi on code	name	Set the range	The smallest unit of	The factory set up	chan ge
F8.00	Selection of operation monitoring parameter items	For example, iff 8.00 = 2, that is, the output voltage (d-02) is selected, then the default display item of the main monitoring interface is the current output voltage value.	0 ~ 26	0	○

F8.01	Parameter selection of shutdown monitoring	For example, iff 8.01 = 3, that is, bus voltage (d-03) is selected, then the default display item of main monitoring interface is current bus voltage value.	0 ~ 26	1	○
F8.02	Display coefficient of motor speed	It is used to correct the display error of speed scale and has no effect on the actual speed.	0.01 ~ 99.99	1.00	○
F8.03	Parameter initialization	0: no operation The frequency converter is in normal parameter reading and writing state. Function code setting value. Whether it can be changed depends on the setting state of the user password and the current working state of the frequency converter. 1: Restore factory settings All user parameters are restored to factory settings according to the model. 2: Clear fault record Clear the contents off ault records (D-19 ~ d-24). After the operation is completed, this function code will clear 0 automatically.	0 ~ 2	0	×
F8.04	Jog key setting	0：JOG 1：forward and reverse switching 2： clear▲/▼frequency setting 3：Reverse operation (at this time, the default run key is forward)	0 ~ 3	0	×
F8.05	Slip compensation selection	0: invalid 1: valid The speed of asynchronous motor will decrease after it is loaded. Slip compensation can make the motor speed close to its synchronous speed, so that the motor speed control accuracy is higher.	0 ~ 1	0	×
Solar parameters(F8.06-12)					
F8.06	Frequency reduction factor of instantaneous power failure	Setting the frequency reduction factor of instantaneous power failure	0: Instant stop is invalid 1~100	0	○
F8.07	Frequency reduction point of instantaneous power failure	Setting the frequency reduction point of instantaneous power failure	200V:180~330V 250V 380V:300~550V 450V	Model setting	×
F8.08	MPPT low operating voltage	If the bus voltage(d-03) is higher than the set value of MPPT high operating voltage(F8.09), running at maximum frequency;	0V~【F1.00】	Model setting	○
F8.09	MPPT high operating voltage	Ifi t is lower than the set value of MPPT high operating voltage, Operate at the frequency obtained from (bus voltage / MPPT high point operating voltage) * maximum frequency; If the bus voltage reaches the low operating voltage of MPPT(F8.08), operate at the lowest operating frequency	【F1.01】~1000V	Model setting	○

F8.10	Proportion of no-load current corresponding to detection current	If the frequency converter operates above the minimum frequency and the output current is less than the value(F4.05 * F8.10), the inverter will report fault E-24	0.0~300%	0.0	○
F8.11	Minimum running frequency		0.00~999.9Hz	0.0	○
F8.12	Detection time		0~250s	10	○

Group F9 - manufacturer parameters

Function code	name	Setting range	Minimum unit	factory setting	change
F9.00	code	1 ~ 9999	1	****	◇

Group D - monitoring parameter group

Function code	name	range	Minimum unit	factory setting	change
d-00	Output frequency (Hz)	0.0 ~ 999.9Hz	0.1Hz	0.0Hz	◆
d-01	Set frequency (Hz)	0.0 ~ 999.9Hz	0.1Hz	0.0Hz	◆
d-02	Output voltage (V)	0 ~ 999V	1V	0V	◆
d-03	Bus voltage (V)	0 ~ 999V	1V	0V	◆
d-04	Output current (A)	0.0 ~ 999.9A	0.1A	0.0A	◆
d-05	Motor Speed (Krpm)	0 ~ 60000Krpm	1Krpm	setting	◆
d-06	Analog input AVI(V)	0.00 ~ 10.00V	0.01V	0.00V	◆
d-07	Analog input ACI(mA)	0.00 ~ 20.00mA	0.01mA	0.00mA	◆
d-08	Analog lose AO (V/mA)	0.00 ~ 10.00V/0.00 ~ 20.00mA	0.01V/0.01mA	0.00V/mA	◆
d-09	keep	-	-	0	◆
d-10	Pulse input frequency (KHz)	0.00 ~ 99.99KHz	0.01KHz	0.00KHz	◆
d-11	PID pressure feedback value	0.00 ~ 10.00V/0.00 ~ 99.99(MPa、Kg)	0.01V/(MPa、Kg)	0.00V/(MPa、Kg)	◆
d-12	Current count value	0 ~ 9999s	1s	0s	◆
d-13	Current fixed time value (s)	0 ~ 9999s	1s	0s	◆
d-14	Input terminal status (M1-M5)	0 ~ 1FH	1H	0H	◆
d-15	Output relay status (R)	0 ~ 1H	1H	0H	◆
d-16	Module temperature (℃)	0.0 ~ 132.3℃	0.1℃	0.0	◆
d-17	Software Upgrade Date (year)	2010 ~ 2026	1	2017	◆

d-18	Software Upgrade Date (month, day)	0 ~ 1231	1	0914	◆
d-19	Second failure code	0 ~ 19	1	0	◆
d-20	Most recent failure code	0 ~ 19	1	0	◆
d-21	Output frequency at last failure (Hz)	0.0 ~ 999.9Hz	0.1Hz	0.0Hz	◆
d-22	Output current at last failure (A)	0.0 ~ 999.9A	0.1A	0.0V	◆
d-23	Bus voltage at last failure (V)	0 ~ 999V	1V	0V	◆
d-24	Module temperature at the time of the last failure℃)	0.0 ~ 132.3℃	0.1℃	0.0℃	◆
d-25	Cumulative time ofi nverter operation (H)	0 ~ 9999h	1h	0h	◆
d-26	Inverter status	0 ~ FFFFH Bit0: operation / shutdown Bit1: reverse / forward Bit2: inching Bit3: DC braking Bit4: reserved Bit5: over voltage limit Bit6: constant speed frequency reduction Bit7: over current limit Bit8 ~ 9:00 - zero speed / 01 - acceleration / 10 - deceleration / 11 - uniform speed Bit10: overload warning Bit11: reserved Bit12 ~ 13 operation command channel: 00 panel / 01 terminal / 10 reserved Bit14 ~ 15 bus voltage state: 00 - normal / 01 - low voltage protection / 10 - over voltage protection	1H	0H	◆

Group E - fault codes

Fault code	name	Possible causes off ailure	Troubleshooting	Code name
E0C1	Overflow during acceleration	Acceleration time is too short (including tuning process)	Extend Acceleration time	1
		Restart the rotating motor	Set to start after DC braking or speed tracking start	
		Inverter power is too small	Select a power inverter	
E0C2	Overcurrent during deceleration	Deceleration time is too short (including tuning process)	Extend deceleration time	2
		Inverter power is too small	Select a power inverter	
E0C3	Overflow in constant speed	The grid voltage is low	Check input power	3
		Abrupt or abnormal load	Check load or reduce load mutation	

		Inverter power is too small	Select a power inverter	
EHU1	Overpressure in accelerated operation	Abnormal input voltage (including tuning process)	Check input power	4
		Restart the rotating motor	Set to start after DC braking or speed tracking start	
EHU2	Overpressure in deceleration operation	Deceleration time is too short (including tuning process)	Extend deceleration time	5
		Abnormal input voltage	Check input power	
EHU3	Over voltage in constant speed operation	Abnormal input voltage	Check the input power supply	6
EHU4	Over voltage during shutdown	Abnormal input voltage	Check the supply voltage	7
ELU0	Under voltage in operation	The input voltage is abnormal or the relay is not closed	Check the power supply voltage or seek service from the manufacturer	8
ESC1	Power module failure	Inverter output short circuit or ground	Check motor wiring	9
		Inverter instantaneous overcurrent	See Overflow Countermeasures	
		Abnormal control board or serious interference	Seek service from manufacturers	
		Power device damage	Seek service from manufacturers	
E-OH	Radiator overheating	Excessive ambient temperature	Reduce the ambient temperatu	10
		Broken fan	Replace fan	
		Air duct blockage	Ventilation	
EOL1	Frequency converter overload	Improper setting of V / F curve or torque increase	Adjust V / F curve and torque increase	11
		The grid voltage is too low	Check the grid voltage	
		Acceleration time is too short	Extended acceleration time	
		The motor is overloaded	Choose a higher power frequency converter	
EOL2	motor overload	Improper setting of V / F curve or torque increase	Adjust V / F curve and torque increase	12
		The grid voltage is too low	Check the grid voltage	
		Motor stalling or excessive load mutation	Check the load	
		The motor overload protection coefficient is not set correctly	Setting motor overload protection coefficient correctly	
E-EF	External equipment failure	External device fault input terminal closed	Disconnect the fault input terminal of external equipment and clear the fault (pay attention to check the cause)	13
EPID	PID feedback disconnection	PID feedback circuit loose	Check feedback connection	14
		The feedback value is less than the broken wire detection value	Adjust test input threshold	
E485	RS485 communication failure	The baud rate does not match with the host computer	Adjust baud rate	15
		RS485 channel interference	Check whether the communication line is shielded and whether the wiring is reasonable. If necessary, the filter capacitor should be connected in parallel	
		Communication timeout	retry	

ECCF	Current detection fault	Current sampling circuit fault	Seek service from manufacturers	16
		Auxiliary power failure		
EEEP	EEPROM read / write error	EEPROM fault	Seek service from manufacturers	17
EPAO	Tube burst failure	The feedback pressure is less than or equal to the low pressure detection threshold	Check the feedback connection or adjust the high and low pressure threshold value	18
EPOF	Communication failure of Dual CPU	CPU communication failure	Seek service from manufacturers	19

六、Certificate of approval

This product is approved to leave the factory after being ins   pected to meet the quality standard.
Printing certificate