Preface

Thank you for using GT100 series inverter manufactured by Shenzhen EasyDrive Electric Co., Ltd.

This series inverter is a general-purpose frequency converter based on flux vector algorithm control. It has a series of practical functions such as motor parameter self-identification, big torque at low frequency , wobble frequency control, droop control, simple PLC, fixed length control and flexible frequency set mode, and can achieve a variety of frequency combinations setting and RS485 communication.

Before using the inverter, the inverter user and the relevant technicians shall read the User Manual carefully to ensure the correct installation and operation of the inverter and its optimal performance.

The User Manual is subject to change without prior notice. The new edition shall prevail.

High performance general vector frequency inverter

User Manual

Edition Code：   V1.3

Chapter 1　Product specifications and ordering instructions

1.1 frequency inverter series model.

The frequency inverter has two voltage levels of 220V and 380V, and the power range of the adaptor is 380V: 0.75 kW ~ 4kW. 220V: 0.75 kW to 2.2 kW. The model of this series inverter is shown in table 1-1.

Table 1-1 type of inverter.

Frequency inverter model. (G: constant torque load)		（kVA）Rated capacity (kVA)	Rated output current (A)	Adaptation motor (kW)
Single-phase 220 v	GT100-2S0007G	0.75	4.5	0.75
	GT100-2S0015G	1.5	7.1	1.5
	GT100-2S0022G	2.2	9.8	2.2
380 v three-phase	GT100-4T0007G	0.75	2.3	0.75
	GT100-4T0015G	1.5	3.7	1.5
	GT100-4T0022G	2.2	5.0	2.2
	GT100-4T0040G	4.0	8.8	4.0

▭If you need 220V voltage rating, please consult the manufacturer before ordering.

1.2 product appearance and installation dimensions.
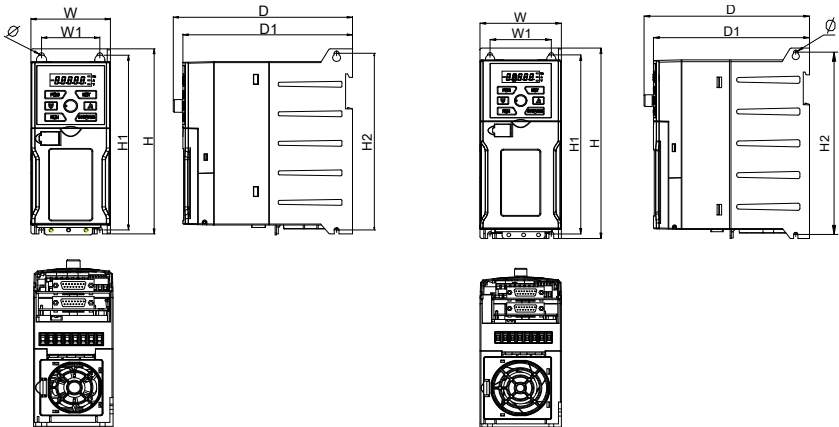
(a) A specification size　　　（b）B specification size

Table 1-2 the shape of the inverter and the installation serial size (unit: mm)

Specificaction	W	W1	H	H1	H2	D	D1	Mounting holes straight Diameter (Φ)	Refer to figure
GT100-4T0007G	75	55	188	177.5	179.5	169	160	4.5	(a)
GT100-2S0007G									
GT100-4T0015G									
GT100-2S0015G									
GT100-4T0022G									
GT100-2S0022G	85	64	210	198.5	201	172.8	163	4.5	(b)
GT100-4T0040G									

1.3 options

1.3.1 remote control keyboard.
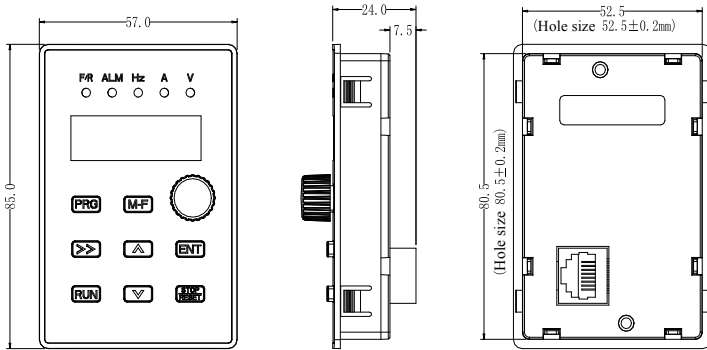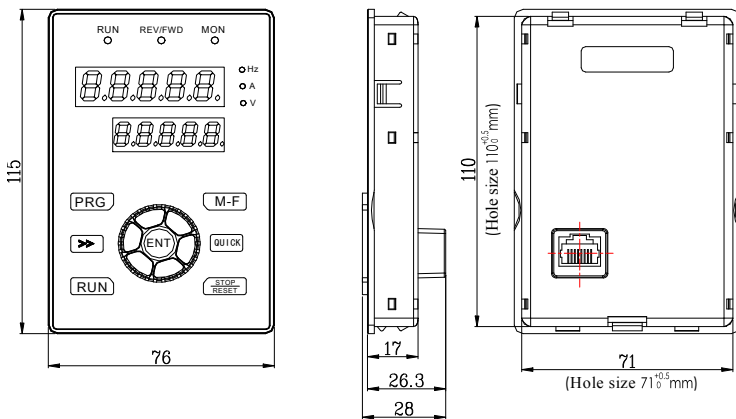

Figure 1-1 remote control keyboard 1（GT100-LKD）

Figure 1-2 remote control keyboard 2（GT200-LKD）

Note: the standard keyboard network line is 2m and 5m. If you need other network cable, please order separately.

1.4 brake resistance

The braking resistance of energy consumption should be selected according to table 1-3 and 1-4. The wiring installation of the brake resistance is shown in Figure. 1-3.
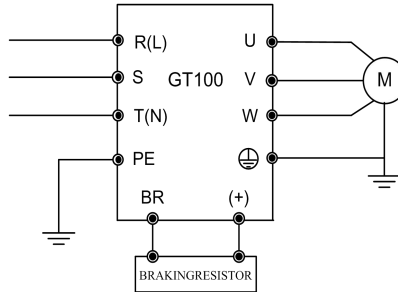

Figure 1-3 the wiring diagram of the inverter and the brake assembly.

Note:

1. The power drop coefficient of braking resistance should not exceed 30%, otherwise there is a risk of fire;

2. The wiring length of the brake resistance should be less than 5m, and the braking resistance will increase the temperature in the process of energy consumption braking, and the safety protection and ventilation should be paid attention to during installation.

The braking resistance and power are selected according to the actual situation. The greater the inertia of the system, the shorter the deceleration time is, and the more frequent the braking, the larger the power needs of the braking resistance and the smaller the resistance. Table 1-3 and 1-4 are recommended according to the general application situation (brake usage FC.01 is 10%).

Table 1-3 braking resistance selection table (380 v voltage grade)

specifications	Applicable motor power（kW）	Brake resistance recommendation Resistance (Ω)	Brake resistance recommendation Power (Ω)
GT100-4T0007G	0.75	≥500	100
GT100-4T0015G	1.5	≥300	200
GT100-4T0022G	2.2	≥200	200
GT100-4T0040G	4.0	≥100	400

Table 1-4 brake resistance selection table (220V voltage rating)

specifications	Applicable motor power（kW）	Brake resistance recommendation Resistance (Ω)	Brake resistance recommendation Power (Ω)
GT100-2S0007G	0.75	≥150	100
GT100-2S0015G	1.5	≥100	200
GT100-2S0022G	2.2	≥75	300

Chapter 2 Installation and wiring of frequency inverter.

2.1 installation environment of the inverter.

2.1.1 installation environment requirements.

(1) install in a well-ventilated indoor environment, and the ambient temperature requires that in the range of −10℃ ～ 40℃, if the temperature exceeds 40, the external forced cooling or reduction should be used.

(2) avoid the site of direct sunlight, dust, floating fibers and metal powders.

(3) it is strictly prohibited to install in places with corrosive or explosive gases.

(4) humidity requirement is less than 90%RH, no condensation of water droplets.

(5) installation in a flat fixed vibration less than 5.9 m/s².

(6) keep away from electromagnetic interference sources and other electronic devices that are sensitive to electromagnetic interference.

2.1.2 installation direction and space.

(1) in general, vertical installation should be carried out.

(2) the minimum requirements of installation interval and distance are shown in Figure. 2-1.

(3) when the multi-frequency inverter is installed up and down, the middle application guide baffle is shown in Figure. 2-2.

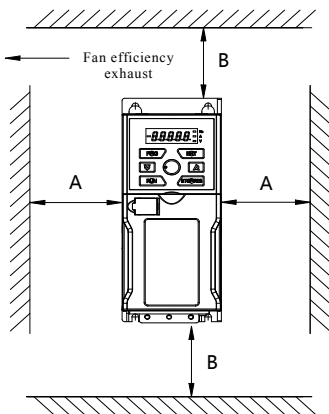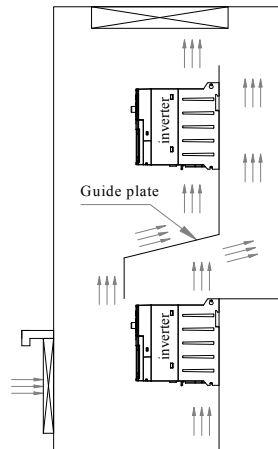Figure 2-1 the interval distance frequency inverter.

Figure 2-2. Installation diagram of multiple diagram of the installation.

2.1.3 mechanical installation methods and procedures.

1. Forward wall installation
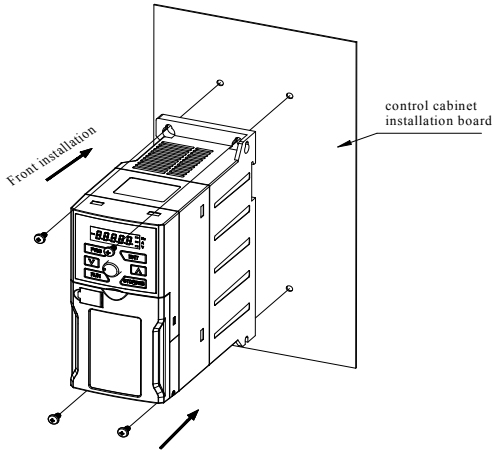
2-3 schematic diagram of wall mounting of plastic structure.

2. side wall installation
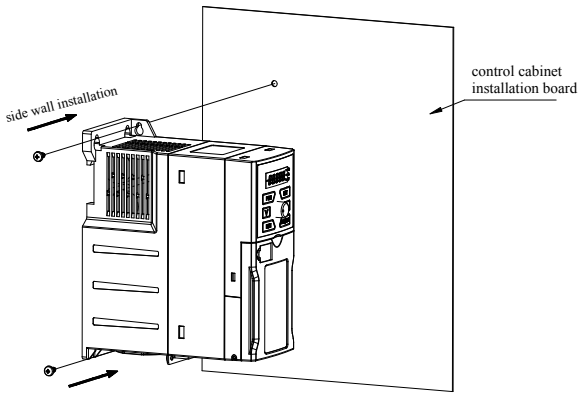
2-4 schematic diagram of wall mounting of plastic structure.

3. DIN-rail installation
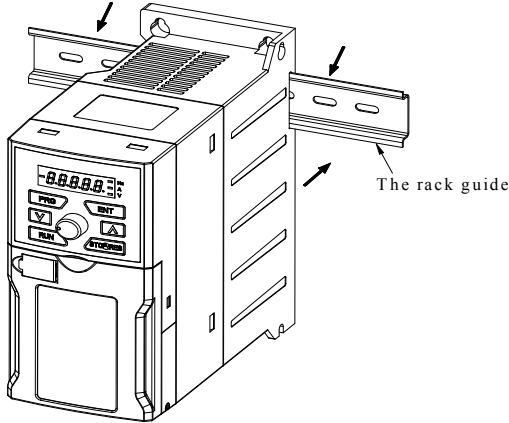
2-5 schematic diagram of embedded installation of plastic structure.

2.2 frequency inverter panel disassembly and installation

2.2.1 plastic machine box inverter panel remove and install

◆ Install cover board

According to figure 2-6, the guide bar in the bottom of the cover plate is aimed at the guide slot of the main body, which is to be aligned in one direction, and then push the cover plate in two directions until the "click" is heard.
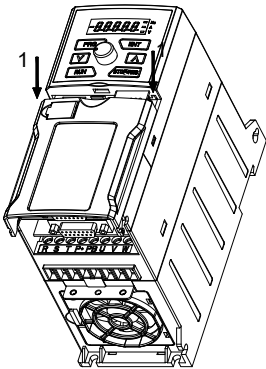
Figure 2-6 removal of cover plate.   Figure. 2-7 mounting of cover plate.
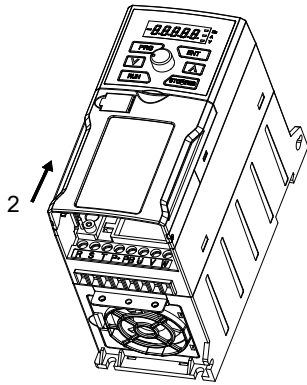
In which, the opening and closing of the RJ45 cover on the cover plate is shown in figure 2-8. First, pull the cover in the first direction and then rotate it in the second direction.
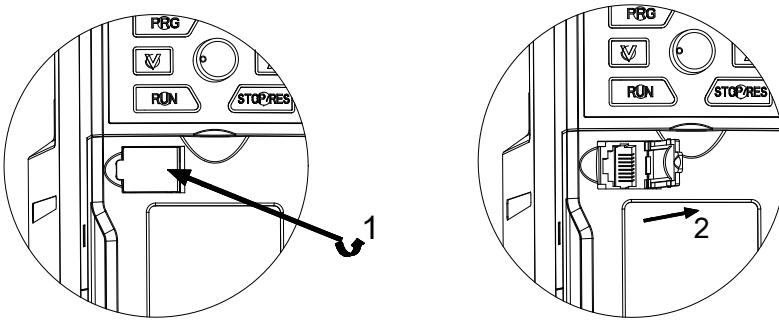
Figure. 2-8 the opening and closing of RJ45 cover.

2.2.2 remove and install of the operation panel.

◆ Remove the cover board

Press in figure. 2-9, press with your finger in the direction of 1, and then pull out the main body of the machine box and pull out the cover in 2 directions.
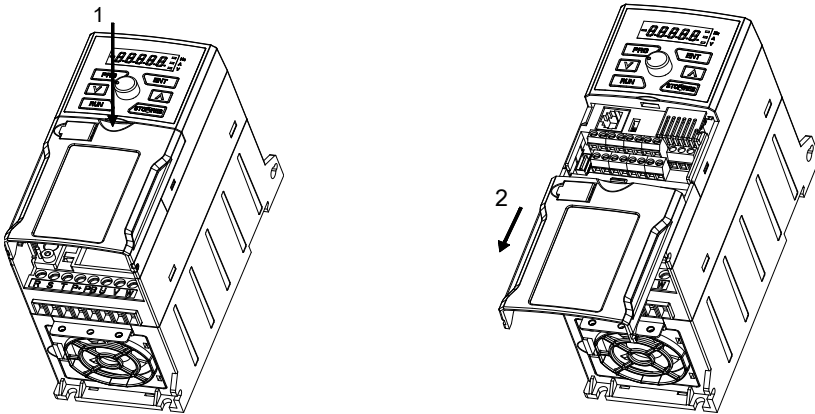
Figure 2-9 removal of cover plate.

2.3 wiring of main circuit terminals.
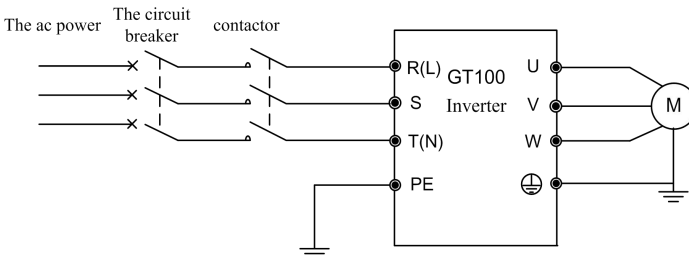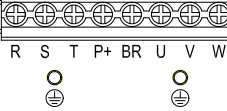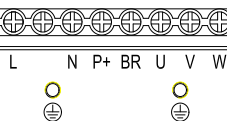
Figure 2-10 basic wiring of main circuit.

2.3.1 wiring of main circuit terminals.

(1) the input and output terminals of the main circuit are shown in table 2-1.

Applicable model	Main circuit terminal	Terminal name	Function explanation
GT100-4T0007G GT100-4T0015G GT100-4T0022G GT100-4T0040G	R S T P+ BR U V W	R、S、T	Three phase 380V input terminal
		U、V、W	Three phase output terminal
		P+、BR	Brake resistor wiring termianl
		⏚	Motor grounding terminal.
GT100-2S0007G GT100-2S0015G GT100-2S0022G	L N P+ BR U V W	U、V、W	Three phase output terminal
		L、N	Single phase input terminal
		P+、BR	Brake resistor wiring terminal
		⏚	Motor grounding terminal

(2) table 2-2 main loop cable diameter, incoming line protection circuit breaker QF or fuse selection is as follows:

Model	The circuit breaker（A）	Fuse（A）	Recommend input/output power lines.（mm^2）	Control line（mm^2）
GT100-4T0007G	10	10	1.5	1
GT100-2S0007G	10	10	1.5	1
GT100-4T0015G	10	10	1.5	1
GT100-2S0015G	20	16	1.5	1
GT100-4T0022G	16	10	2.5	1
GT100-2S0022G	32	20	2.5	1
GT100-4T0040G	20	16	2.5	1

2.4 control circuit configuration and wiring.

2.4.1 the control loop terminal is arranged as follows:
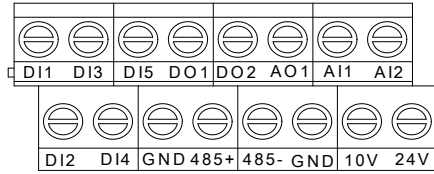
Figure 2-11 sequence diagram of terminal of control panel.

2.4.2 CN3 terminal function description, as shown in table 2-3.

Table 2-3 control terminal function table.

category	Terminal number	Name	Terminal function instruction	specification
commun ication	485+	RS485 communication interface.	RS485 differential signal positive terminal.	Standard RS485 communication interface, please use twisted pair or shielded wire.
	485-		RS485 differential signal negative terminal.	
Multi-fu nction output terminal.	DO1	Open collector. The output terminals	It can be defined as the output terminals of switches with multiple functions, see the terminal function parameter F6.11, and the output terminal function introduction.	Digital terminal output. Working voltage: 24V. Maximum output current: 50mA.
Multi-fu nction output terminal.	DO2	Open collector terminal (high speed pulse output can be selected.)	It can be defined as the output terminals of switches with multiple functions, see the terminal function parameters F6.12,F6.20, F6.33 output terminal function introduction.	Digital terminal output. Working voltage: 24V. Maximum output current: 50mA. Maximum output frequency: 50KHZ.
analog The input	AI1	Analog quantity input AI1.	Accept analog current, voltage input.	The input voltage range: $0 \sim 10$ V (Ω input impedance: 101 k) Resolution: 1/1000
	AI2	Analog quantity input AI2.	Accept analog current, voltage input.	Input current range: 0 to 20 ma (165 Ω input impedance:) Resolution: 1/1000

Analog output	AO1	Analog output	Provide analog voltage output for 12 physical quantities (see F6.24/F6.25 for details)	Voltage output range: $0 \sim 10V$. Current output range: $0 \sim 20mA$.
Multi-function input terminal	DI1	Multi-function input terminal1	It can be defined as the switch quantity input terminal of various functions. See chapter 6 terminal function parameter (switch input and output) input terminal function introduction. (see F6.00-6.04)	The terminal can set forward and reverse function; Input impedance: 58.5K;
	DI2	Multi-function input terminal2		
	DI3	Multi-function input terminal3		
	DI4	Multi-function input terminal4		
	DI5	Multi-function input terminal5		
The power supply	10V	+ 10V power supply	External supply +10V power supply.	Maximum output current :30mA.
	+24V	+ 24Vpower supply	Digital signal power supply	Maximum output current :200mA.
	GND	Power supply public terminal	Reference ground for power supply.	
Relay output terminal.	TA，TB，TC；	Programmable relay output.	Normal TA-TB is normally closed, TA-TC is often open; TA-TB is normally open at the time of movement, and ta-tc is usually closed.	NO：5A　250VAC NC：3A　250VAC Electric shock rating:

2.4.3 the wiring of analog input terminal.

AI1 and AI2 terminals receive analog signal input, and select input voltage ($0 \sim 10V$) or input current ($0 \sim 20mA$) through function code F5.12. The terminal line method is shown in figure 2-12:

0~10Vor 0~20mA   Inverter
input

AI2

GND
PE（Cable clip of case）

Grounding of shielded
wire near terminal
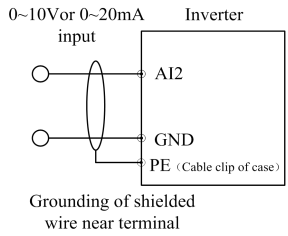
Figure 2-12 simulation input terminal wiring diagram.

2.4.4 wiring of communication terminal.

Controlled by PLC or PC host, frequency inverter from the machine, through the RS485 together, which can realize single host from machine communications or single host from machine communications, with the increase of connection number, communication system becomes more easily disturbed, Suggestions as follows wiring (see appendix communication protocol) :
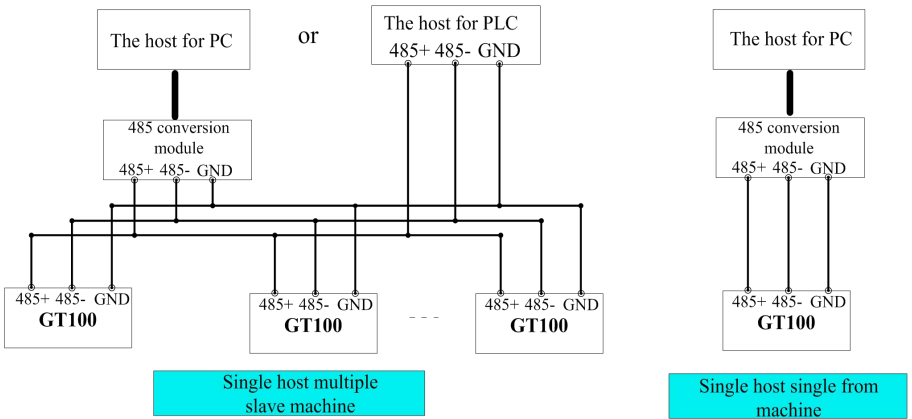
Figure 2-13 wiring diagram of communication terminal.

2.4.5 connection mode of inverter control circuit.

Braking resistor

The circuit breaker   contactor

L1   L2   L3

R   S   T   PE

GT100

BR   U   V   W

the motor

M

GND — Analog quantity reference ground
AO1 — Analog output 1

Multi-function terminal 1   DI1   DO1 — Open collector output
Multi-function terminal 2   DI2   DO2 — Open collector output (optional
Multi-function terminal 3   DI3   high speed pulse output)
Multi-function terminal 4   DI4   GND — The reference ground
Multi-function terminal 5   DI5   TA
                           GND   TB
                                  TC   Programmable relay output

0-10V Voltage given   10V   +24V — power supply available to users.
                      AI1
                      AI2
                      GND   485+
0-20mAC urrent given   485- — RS485 communication port

∗ Main loop terminal
⊙ Control loop terminal

Figure 2-14 basic running wiring diagram.

Applicable models: GT100-4T0040G/GT100-2S0022G and below.

📖 Note：
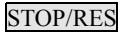
Analog output AO1 can output voltage, output current, AO1 defaults to 0 ~ 10V output voltage, by setting the parameter F6.29 choose output current, are set in the parameter F6.24 corresponding output physical output.

Chapter 3 Frequency Inverter's operation and instruction

3.1 Button function description

The frequency converter operation panel is provided with 6 keys, each function definition of the key is shown in table3-1.

Table 3-1 operation panel function table

Keys	Name	Icon	Function explanation
PRG	Edit/Exit Key	PRG	Entry or exit programming status
ENT	Confirm key	ENT	Enter menu or data confirmation
RUN	Operation key	RUN	In the keyboard operation mode, the button control inverter operation
STOP/RES	Stop/ reset key	STOP/RES	When the frequency inverter is in the normal operation condition, if the frequency inverter operates the instruction channel to set the keyboard to stop in effective way, press this key, frequency inverter will stop according to the set way. When the inverter is in fault state, press the key to reset the inverter and return to normal shutdown state.
▲	Increase	▲	Data and function code increase(When press long time,the data will move position to right)
▼	Decrease	▼	Data and function code decrease(When press long time,the data will move position to left)

3.2   Keyboard operation Instruction

Operating keypad can perform various operation to the inverter, as the following:

3.2.1   Monitor parameters checking

Monitor parameters display switching

Press UP key or Down key, display F0.07 status monitor parameter, at the same time the corresponding indicator light is on. Such displaying setting frequency, its unit "Hz" corresponding diode (Hz) light. Monitor parameters setting please refers to F0.07 parameter instruction.

3.2.2   Function code parameter setting

The inverter function parameter system includes function code   F0～FF and monitor parameter U0 group. Each function group includes some function code.Function code adopt this remark method (function code group number+function code number). For example "F5.08",it mea

Example 1: Modify forward jogging frequency setting from 5Hz to 10Hz (F2.20 Change 5.00Hz to 10.00Hz)

1) press the PRG key to enter the program, LED digital tube display parameter "-F0-", press

the ▲ key to change LED digital tube display "-F2-".

 2 Press ENT you can see digital tube display function parameter"F2.00"

 3) according to the ▲ key to the LED digital tube display F2.20.

 4) press the ENT key, will see F2.20 corresponding data (5.00), at the same time, its unit frequency corresponding light-emitting diode (Hz) light.

 5) press up key, flashing displacement to the top 5,press ▲ five times ,change to 10.00.

 6) press the ENT key to save the value of F2.20 and automatically display the next function code (F2.21).

 7) press the PRG key to exit the programming state.

3.2.3 Jogging function operation

Use operation panel to carry out inverter jogging running function:

1) Press 3times PRG to enter jogging running , digital tube display function parameter "JOG-"

2）Long press UP key ,forward jogging run

3）Long press Down key ,reverse jogging run

3.2.4 Combination key operation

Combination key operation is valid only when displaying monitor parameter :

1）PRG key + ▼key :When you press PRG key , at the same time press ▼ key, lock operation panel, exact locking choice and range please refer to the function code FC.31 hundred setting.

2）PRG key + ▲ key :When you press PRG key , at the same time press ▼ key, unlock operation panel,

Remark: Except combination key operation ,forbid pressing two keys at the same time.

Chapter 4 Function Parameters

4.1 Symbol Description：

×—means that the parameter cannot be modified during the operation process

○—means that the parameter can be modified during the operation process

●—shows actually detected parameter which cannot be modified

*—shows manufacturer retention parameter which is forbidden to modify

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
System management parameter F0 group					
F0.00	Parameter write protection	0：All the data is allowed to be modified; 1：Forbidden to modify except for direct setting frequency and this function code; 2：Forbidden to modify except for this function code	1	0	○
F0.01	Multifunction key selection	0：JOG function 1：Remote switchover function(Don't save when power-off) 2：Forward/reverse switch(Don't save when stop) 3：Clearing the increment of UP/DOWN frequency setting	1	1	○
F0.02	Parameter initialization	0：No operation 1：Clear fault memory information (U0.26～U0.36) 2：Recover to factory setting (F0 group, and F3.00-F3.12, except FF)	1	0	×
F0.03	Parameter copy	0：No movement 1：Parameter upload 2：Parameter download 3：Parameter download(exclude related models)	1	0	*
F0.04	User code	0：No password Others：password protection	1	0	*
F0.05	Reserved				*
F0.06	Reserved				*

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F0.07	Quick parameters group display selection	LED units digit：first parameter display selection 0:Output frequency （before compensation） 1:Output frequency （after compensation） 2: Setting frequency 3: Output current 4: Output voltage 5: Bus voltage 6: AI1 7: AI2 8: Analog closed loop feedback 9: Analog closed loop setting LED tens digit：second parameter display selection 0~9: ditto LED hundreds digit：third parameter display selection 0~9: ditto LED thousands digit：fourth parameter display selection 0~9: ditto	0	0x5320	○
Basic operation parameter F1 group					
F1.00	Control mode	0：Reservedl 1：V/F control	1	1	×
F1.01	Run command channel selection	0：Operation panel run command channel 1：Terminal run command channel 2：Serial port run command channel	1	0	○
F1.02	Frequency given channel selection	0：Digital given 1, operation panel ▲ ▼ regulating 1：Digital given 2, terminal UP/DN regulating 2：Digital given 3, serial port given 3：AI1 given 4：AI2 given 5：Terminal pulse given 6：Keypad potentiometer 7：Reserved	1	0	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F1.03	Numerical frequency control	LED units digit： 　0：Setting frequency power down storage 　1：Setting frequency power down no storage LED tens digit： 　0：Stop setting frequency keeping 　1：Stop setting frequency recovery	1	00	○
F1.04	Reserved				*
F1.05	Reserved				*
F1.06	Maximum output frequency	F1.09~550.00Hz	0.01Hz	50.00Hz	×
F1.07	Running frequency digit setting	Upper limiting frequency～ lower limiting frequency	0.01Hz	50.00Hz	○
F1.08	Reserved				×
F1.09	Upper limiting frequency	Lower limiting frequency～ maximum frequency	0.01Hz	50.00Hz	○
F1.10	Lower limiting frequency	0.00～upper limiting frequency	0.01Hz	0.00Hz	○
F1.11	Acceleration time 1	0.1～600.0 Note： default unit second; refer to FC.09 for units of acceleration and deceleration time selection	0.01s	6.00s	○
F1.12	Deceleration time 1				
F1.13	Reserved				*
F1.14	Reserved				*
F1.15	Reserved			0	*
F1.16	Reserved			0	*
F1.17	V/F curve setting	0:Liner V/F 1：User setting V/F curve (confirmed by F1.18～F1.23 function code) 2：Reduced torque characteristic curve 1(2.0 hypo-power) 3：Reduced torque characteristic curve 2(1.7 hypo-power) 4：Reduced torque characteristic curve 3(1.2 hypo-power)	1	0	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F1.18	V/F frequency value F1	0.00～F1.20	0.01Hz	12.50Hz	×
F1.19	V/F voltage value V1	0~F1.21	0.1%	25.0%	×
F1.20	V/F frequency value F2	F1.18~F0.22	0.01Hz	25.00Hz	×
F1.21	V/F voltage value V2	F1.19~ F1.23	0.1%	50.0%	×
F1.22	V/F frequency value F3	F1.20~F3.04	0.01Hz	37.50Hz	×
F1.23	V/F voltage value V3	F1.21～100.0%	0.1%	75.0%	×
F1.24	Running direction setting	0：Foreward 1：Reversal	1	0	○
F1.25	Carrier frequency setting	3~15kHz	1kHz	4kHz	○
F1.26	Reserved	-	-	-	*
F1.27	Reserved	-	-	-	*
On-off control F2 group					
F2.00	Start operation	LED digits： 0：Start from start frequency 1：Brake first and then start from start frequency 2：Rotate speed tracking (including direction judgment) and then start; start from start frequency when rotate speed is 0. LED ten digits：Revolving speed tracking way 0：Start from stop frequency 1：Start from maximum frequency	1	00	×
F2.01	Start frequency	0.20～60.00Hz	0.01Hz	0.50Hz	○
F2.02	Start frequency retention time	0.0～10.0s	0.1s	0.0s	○
F2.03	Start DC braking current	0.0~150.0% frequency inverter rated currency	0.1%	80.0%	○
F2.04	Start DC braking time	0.0 (no action) 0.1~30.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F2.05	Acceleration and deceleration mode selection	0：Straight line acceleration and deceleration 1：Reserved	1	0	×
F2.06	Reserved				*
F2.07	Reserved				*
F2.08	Stop mode	0：Decelerate to stop 1：Coast to stop 2：Deceleration stop+DC braking	1	0	×
F2.09	Stop DC braking start frequency	0.00～60.00Hz	0.01Hz	0.00Hz	○
F2.10	Stop DC braking waiting time	0.00～10.00s	0.01s	0.00s	○
F2.11	Stop DC braking current	0.0～150.0% frequency converter rated current	0.1%	80.0%	○
F2.12	Stop DC braking time	0.0 (no action) 0.1～60.0s	0.1s	0.0s	○
F2.13	Stop DC braking coefficient	1~100%	1%	20%	*
F2.14	Acceleration time 2				○
F2.15	Deceleration time 2				○
F2.16	Acceleration time 3	0.01～600 Note：default unit second; refer to FC.09 for units of acceleration and deceleration time selection	0.01s	6.00s	○
F2.17	Deceleration time 3				○
F2.18	Acceleration time 4				○
F2.19	Deceleration time 4				○
F2.20	Jog operation frequency	0.10～50.00Hz	0.01Hz	5.00Hz	○
F2.21	Jog interval time	0.0～100.0s	0.1s	0.0s	○
F2.22	Jog acceleration time	0.01～60.00s	0.01	6.00s	○
F2.23	Jog deceleration time				○
F2.24	Skip frequency 1	0.00～550.0Hz	0.01Hz	0.00Hz	×
F2.25	Skip frequency 1 range	0.00～30.00Hz	0.01Hz	0.00Hz	×
F2.26	Skip frequency 2	0.00～550.0Hz	0.01Hz	0.00Hz	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F2.27	Skip frequency 2 range	0.00～30.00Hz	0.01Hz	0.00Hz	×
F2.28	Skip frequency 3	0.00～550.0Hz	0.01Hz	0.00Hz	×
F2.29	Skip frequency 3 range	0.00～30.00Hz	0.01Hz	0.00Hz	×
F2.30	Anti-reverse selection	0：Reverse allowed 1：Reverse prohibited	1	0	×
F2.31	Forward and reverse dead time	0.00～360.00s	0.01s	0.01s	×
F2.32	Zero frequency operation allows selection	0：Zero frequency allows operation 1：zero frequency forbid operration	1	0	×
Motor parameter F3 group					
F3.00	Motor poles	2～14	2	4	×
F3.01	Rated power	0.4～999.9kW	0.1kW	Models determined	×
F3.02	Rated current	0.01～99.99A	0.01A		×
F3.03	Rated speed	1rpm~9999rpm	1rpm	1470rpm	×
F3.04	Rated frequency	1.00～550.00Hz	0.01Hz	50.00Hz	○
F3.05	Rated voltage	1~480V	1 V		×
F3.06	No-loading current I0	0.1～99.99A	0.01A		×
F3.07	Stator resistance R1	0.000~50.000Ω	0.001Ω	Models determined	○
F3.08	leakage inductive reactanceX	0.0~999.9mH	0.1mH		○
F3.09	Rotor resistance R2	0.000~50.000Ω	0.001Ω		○
F3.10	Mutual inductance resistance Xm	0.0~999.9mH	0.1mH		○
F3.11	Parameter self-tuning	0：No movement 1：Movement(Motor static) 2：Movement(Motor running)	1	0	×
F3.12	Motor stability factor	0~255	1	3	○
F3.13	Torsion rising setting	0.1%~30.0%	0.1%	10.0%	○
F3.14	Torsion rising cutoff point	0.00~F3.04	0.01Hz	50.00Hz	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F3.18	Torsion rising gain2	0~500	1	10	○
F3.19	Torsion rising integral time2	1~1000	1	500	○
F3.20	Auto torsion rising limit	0~100.0%	1%	30%	×
Swing frequency parameter F4 group					
F4.00	Velocity filtering time	0.1~20.0ms	0.1	1.0ms	○
F4.01	Speed ring (ASR) proportional gain	0~10.00	0.01	2.00	○
F4.02	Speed ring (ASR) integral time	0.01~10.00	0.01	0.2	○
F4.06	Vector motor stability factor	0~50	1	10	○
F4.07	Weak magnetic automatic gain	20.0~500.0	0.1%	100	○
F4.08	Vector torque limitation	2~200.0	0.1%	200	*
F4.09	Vector torque increases	0.0~400.0	0.1%	200	*
F4.10	Velocity filtering coefficient	0.0~20.0	0.1	1.0	*
F4.11	Cut-off frequency	0~100	0	18	*
F4.12	Current loop proportional gain	0.01~10.00	0.01	0.20	*
F4.13	Current loop integral time	0.01~10.00	0.01	0.20	*
Analog quantity terminal parameter F5 group					
F5.00	Frequency given curve selection	LED units digit： AI1 frequency curve selection 　0：Curve 1 　1：Curve 2 LED tens digit： AI2 frequency curve selection 　0：Curve 1 　1：Curve 2 LED hundreds digit： Pulse frequency curve selection 　0：Curve 1 　1：Curve 2 LED thousands digit：Reserved	1	0000	○
F5.01	Given channel gain	0.00～9.99	0.01	1.00	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F5.02	Given smoothing constant	0.01～50.00s	0.01s	0.50s	○
F5.03	Maximum input pulse frequency	0.1～50.0kHz	0.1kHz	10.0kHz	○
F5.04	Curve 1 minimum given	0.0%～F5.06 (Specific value between minimum given value 1 and reference value 10V/20mA/F5.03)	0.1%	0.1%	○
F5.05	Curve 1 minimum given corresponding frequency	0.00～F1.06	1	0.00Hz	○
F5.06	Curve 1 maximum given	F5.04～100.0% (Specific value between maximum given value 1 and reference value 10V/20mA/F5.03)	0.1%	100.0%	○
F5.07	Curve 1 maximum given corresponding frequency	0.00～F1.06	1	50.00Hz	○
F5.08	Curve 2 minimum given	0.0%～F5.10 (Specific value between minimum given value 2 and reference value 10V/20mA/F5.03)	0.1%	0.1%	○
F5.09	Curve 2 minimum given corresponding frequency	0.00～F1.06	1	0.00Hz	○
F5.10	Curve 2 maximum given	F5.08～100.0% (Specific value between maximum given value and reference value 10V/20mA/F5.03)	0.1%	100.0%	○
F5.11	Curve 2 maximum given corresponding frequency	0.00～F1.06	1	50.00Hz	○
F5.12	Analog input voltage current type selection	LED digit：AI1 input type selection 　0：Voltage 　1：Current LED ten digit：AI2 input type selection 　0：Voltage 　1：Current LED hundreds digit：Reserved	1	000	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F5.13	Reserved	-	-	0	*
F5.14	Reserved	-	-	0	*
Digital quantity terminal parameter F6 group					
F6.00	Multifunction input terminal DI1 Function selection	0：No function 1：Multistage frequency terminal 1 2：Multistage frequency terminal 2 3：Multistage frequency terminal 3 4：Acceleration and deceleration time terminal 1 5：Acceleration and deceleration time terminal 2		36	
F6.01	Multifunction input terminal DI2 Function selection	6：External fault normally open input 7：External fault normally close input 8：External reset (STOP/RESET) input 9：External Forward jog control 10：External reverse jog control 11：Free stop input (FRS)	1	37	×
F6.02	Multifunction input terminal DI3 Function selection	12：Freq. increasing command (UP) 13：Freq. decreasing command (DOWN) 14：Simple PLC Suspend running command 15：Acceleration and deceleration forbidden command 16：Three-wire operation control		8	
F6.03	Multifunction input terminal DI4 Function selection	17：External interruption normally open contact input 18：External interruption normally close contact input 19：Stop DC braking input command DB 20：Ineffective closed loop 21：PLC failure 22：Frequency source selection 1		1	

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F6.04	Multifunction input terminal DI5 Function selection	23: Frequency source selection 2 24: Frequency source selection 3 25: Frequency switch to AI2 26: Reserved 27: Command switch to terminal 28: Command source selection 1 29: Command source selection 2 30: Multistage closed-loop given terminal 1		2	
F6.05	Multifunction input terminal DI6 Function selection	31: Multistage closed-loop given terminal 2 32: Multistage closed-loop given terminal 3 33: Reserved 34: Reserved 35: External stop command (Effective to all the control modes, stop according to the current stop mode)		3	
F6.06	Multifunction input terminal DI7 Function selection	36: FWD terminal function 37: REV terminal function 38: Frequency inverter running prohibited 39: Length reset 40: Auxiliary given frequency reset 41: PLC halt memory clear away 42: Counter reset signal input		9	
F6.07	Multifunction input terminal DI8 Function selection	43: Counter trigger signal input 44: Length counting input（only for DI5 setting） 45: Pulse frequency input（only for DI5 setting） 46: Single phase speed measurement input（only for DI5 setting） 47: Reserved		0	
F6.08	Expansion card multifunctional input terminal DI9 function selection	48: Reserved 49: Multiple frequency terminals 4 50: Multistage closed-loop given terminal 4 51: Frequency Source switching 52: Deceleration stop command input		0	

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F6.09	FWD/REV operation mode setting	0：Two-wire control mode 1 1：Two-wire control mode 2 2：Three-wire operation control 1－self-hold function (additional any terminal among DI1～DI10) 3：Three-wire operation control 2－self-hold function (additional any terminal among DI1～DI10)	1	0	×
F6.10	UP/DN rate	0.01～99.99Hz/s	0.01 Hz/s	1.00Hz/s	○
F6.11	Open collector output terminal DO1	0：Inverter running indication (RUN) 1：Frequency arrival signal (FAR) 2：Frequency level detection signal (FDT1) 3：Frequency level detection signal (FDT2) 4：Overload detection signal (OL) 5：Stop for undervoltage block (LU) 6：External fault halt (EXT) 7：Frequency upper limit (FHL) 8：Frequency lower limit (FLL) 9：Frequency converter zero-speed running 10：Simple PLC stage running completion instruction 11：PLC circulation completion	1	0	×
F6.12	Open collector output terminal DO2	indication 12：Reach setting count value 13：Reach specified count value 14：Setting length arrival indication 15：Frequency converter running preparation completed (RDY) 16：Frequency converter fault 17：Upper computer switching signal 18：Reserved 19：Reach setting accumulated running time **Note**：The following functions are inapplicable to DO1 and relay output. 20：Output frequency before slip reimbursement (0~F1.06	1	1	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F6.13	Relay output function selection(TA/TB/TC)	maximum runing frequency) 21：Output frequency after slip reimbursement (0~F1.06 maximum runing frequency) 22：Setting frequency (0~F1.06 maximum runing frequency) 23：Output current（0～2*Iei） 24：Output current（0～2*Iem） 25：Output torque（0～2*Tem） 26：Output voltage（0～1.2*Ve） 27：Bus voltage（0～800V） 28：AI1（0～10V/0～20mA） 29：AI2（0～10V/0～20mA） 30：Output power（0～2*Pe） 31：Upper computer percentage（0～1000） 32：Reserved	1	16	×
F6.14	FDT1 level	0.00～550.0Hz	0.01Hz	50.00Hz	○
F6.15	FDT1 lag	0.00～550.0Hz	0.01Hz	1.00Hz	○
F6.16	FDT2 level	0.00～550.0Hz	0.01Hz	25.00Hz	○
F6.17	FDT2 lag	0.00～550.0Hz	0.01Hz	1.00Hz	○
F6.18	Frequency reaches (FAR) detection width	0.00～550.0Hz	0.01Hz	2.50Hz	○
F6.19	Reserved	-	-	0	○
F6.20	DO2 maximum output pulse frequency	0.1～50.0kHz	0.1kHz	10.0kHz	○
F6.21	Counter reset value setting (Setting count value reached given value)	F6.22～9999	1	0	○
F6.22	Counter detection value setting (Setting count value reached given value)	0～F6.21	1	0	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify

F6.23	Terminal positive and negative logic	Binary system setting
		0：Breakover effective
		1：Disconnect effective
		LED units digit：
		   BIT0～BIT3：DI1～DI4
		LED tens digit：
		   BIT0～BIT3：DI5～DI8(Reserved)
		LED hundreds digit：
		  BIT0～BIT1：Reserved、Reserved
		   BIT2：DO1
		LED thousands digit：Reserved
			1	0000	○

F6.24	AO1 output function selection	0：Output frequency before slip reimbursement (0~maximum) 1：Output frequency after slip reimbursement (0~maximum) 2：Setting frequency (0~maximum) 3：Output current（0～2*Iei） 4：Output current（0～2*Iem） 5：Output torque（0～2*Tem）	1	0	○
F6.25	Reserved	6：Output voltage（0～1.2*Ve） 7：Bus voltage（0～800V） 8：AI1（0～10V/0～20mA） 9：AI2（0～10V/0～20mA） 10：Output power（0～2*Pe） 11：Upper computer percentage（0～1000） 12：Reserved	1	3	○

F6.26	Analog output range selection	LED units digit：AO1 bias selection
		   0：0～10V or 0～20mA
		   1：2～10V or 4～20mA
		LED tens digit：Reserved
			1	00	○

F6.27	AO1 output gain	0.0～200.0%	0.1%	100.0%	○
F6.28	Reserved	-	-	-	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F6.29	Analog output voltage current type selection	LED digit：AO1 output type selection 0：Voltage 1：Current LED ten digit：Reserved	1	00	○
F6.30	Common IO filtering time	0.000~10.000s	0.001s	0.002s	○
F6.31	Pulse input filtering time	0.00~10.00s	0.01s	0.10s	○
F6.32	DI power selection	0：Internal power supply 1：External power supply	0	0	○
F6.33	DO2 pulse duty factor	0~100	1	50	○
F6.34	Reserved	-	-	-	○
F6.35	Reserved	-	-	-	○
Human-computer interface F7 group					
F7.00	Overvoltage stall point	380V Model：120.0～150.0%Ude 220V Model：100.0～130.0%Ude	0.1	Models determined	×
F7.01	Overvoltage control voltage	0.00~10.00v	0.01V	10.00V	×
F7.02	Overvoltage stall gain Kp	0~100	1	6	×
F7.03	Overvoltage stall integral time	0~1000	1	100	×
F7.04	Over current stall level	20.0%～200.0%	0.1%	150.0%	×
F7.05	Over current stall action selection	0：Constant speed ineffective 1：Constant speed effective Note：Acceleration and deceleration is always effective	1	1	×
F7.06	Over current stall gain Kp	0~100	1	6	×
F7.07	Over current stall integral time	1~1000	1	100	×
F7.08	Rotational speed tracking gain KP	0~100	1	10	×
F7.09	rotational speed tracking integral time	1~1000	1	50	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F7.10	Rotational speed tracking acceleration	0.1~60.0S	0.1s	6.0s	×
F7.11	Rotational speed tracking judging threshold	1~100%	1%	10%	×
F7.12	Instantaneous stop/no stop function selection	0：No action 1：decelerated 2：Ramp to stop	1	0	×
F7.13	Instantaneous stop action suspended judgment voltage	80.0-100.0%	0.1%	90%	○
F7.14	Instantaneous stop voltage recovery judgment time	0.00-100.00s	0.01s	0.50s	○
F7.15	Instantaneous stop action judgment voltage	60.0-100.10%	0.1%	80%	○
F7.16	Instantaneous stop gain Kp	0-1000	1	5	○
F7.17	Instantaneous stop Integral time	0-1000	1	100	○
F7.18	Instantaneous stop decreasing time setting	0-300.0s	0.1s	20.0s	○
PID control parameter F8 group					
F8.00	Closed loop running control selection	0：No action 1：Action	1	0	×
F8.01	Given channel selection	0：Number given; （Refer to F8.06 when F8.02=6; refer to F8.05 in other conditions） 1：AI1； 2：AI2； 3：Reserved Note：For speed closed loop, analog given 10V for synchronous speed of maximum frequency F1.06	1	0	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F8.02	Feedback channel selection	0：AI1； 1：AI2； 2：AI1+AI2； 3：AI1-AI2； 4：MIN（AI1，AI2）； 5：MAX（AI1，AI2）； 6：Pulse 7：Reserved ；	1	0	○
F8.03	Given channel smoothing	0.001～50.000s	0.01s	0.50s	○
F8.04	Feedback channel smoothing	0.001～50.000s	0.01s	0.50s	○
F8.05	Given quantity number setting	0.00V～10.00V	0.01V	0.00V	○
F8.06	Speed closed loop given	0～3900 rpm	1 rpm	0 rpm	○
F8.07	Pulse encoder every revolution	1～20000	1	1024	○
F8.08	Minimum given quantity	0.0%～(F8.10) (The percentage of minimum given quantity and reference value 10V;20mA)	0.1%	0.0%	○
F8.09	Corresponding feedback quantity of minimum given quantity	0.0～100.0% (The percentage of corresponding feedback quantity of minimum given quantity and reference value 10V;20mA)	0.1%	20.0%	○
F8.10	Maximum given quantity	(F8.08)～100.0% (The percentage of maximum given quantity and reference value 10V;20mA)	0.1%	100.0%	○
F8.11	Corresponding feedback quantity of maximum given quantity	0.0～100% (The percentage of corresponding feedback quantity of maximum given quantity and reference value 10V;20mA)	0.1%	100.0%	○
F8.12	Proportional gain KP	0.000～9.999	0.001	2.000	○
F8.13	Integral gain Ki	0.000～9.999	0.001	0.100	○
F8.14	Sampling period	0.01～50.000s	0.01s	0.10s	○
F8.15	Deviation extremity	0.0～20.0% （Corresponding closed loop given value）	0.1%	2.0%	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F8.16	Closed loop regulating characteristic	0：Direct action 1：Reaction Note：Relation between given speed and rotate speed	1	0	×
F8.17	Reserved	-	-	0	*
F8.18	Closed loop preset frequency	0.00～550.0Hz	0.01Hz	0.00Hz	○
F8.19	Closed loop preset frequency hold time	0.0～3600s	0.1s	0.0s	×
F8.20	Multistage closed loop given 1	0.00～10.00V	0.01V	0.00V	○
F8.21	Multistage closed loop given 2	0.00～10.00V	0.01V	0.00V	○
F8.22	Multistage closed loop given 3	0.00～10.00V	0.01V	0.00V	○
F8.23	Multistage closed loop given 4	0.00～10.00V	0.01V	0.00V	○
F8.24	Multistage closed loop given 5	0.00～10.00V	0.01V	0.00V	○
F8.25	Multistage closed loop given 6	0.00～10.00V	0.01V	0.00V	○
F8.26	Multistage closed loop given 7	0.00～10.00V	0.01V	0.00V	○
F8.27	Multistage closed loop given 8	0.00～10.00V	0.01V	0.00V	○
F8.28	Multistage closed loop given 9	0.00～10.00V	0.01V	0.00V	○
F8.29	Multistage closed loop given 10	0.00～10.00V	0.01V	0.00V	○
F8.30	Multistage closed loop given 11	0.00～10.00V	0.01V	0.00V	○
F8.31	Multistage closed loop given 12	0.00～10.00V	0.01V	0.00V	○
F8.32	Multistage closed loop given 13	0.00～10.00V	0.01V	0.00V	○
F8.33	Multistage closed loop given 14	0.00～10.00V	0.01V	0.00V	○
F8.34	Multistage closed loop given 15	0.00～10.00V	0.01V	0.00V	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F8.35	Closed-loop output polarity selection	Digit： 0：Cosed-loop output is negative value, zero frequency run 1：Cosed-loop output is negative value, reverse, But if F2.30 is set to forbid reverse, inverter will run at 0 frequency.	1	0	○
F8.36	Closed-loop feedback lost movement selection	0： no closed-loop feedback loss detection 1： closed-loop feedback loss detection, stop while detection, display fault E20	1	0	○
F8.37	Process closed loop feedback loss detection value	0.0~100% The maximum output frequency is 100%	0.1%	10%	○
F8.38	Process closed loop feedback loss detection time	0.0s~20.0s	0.1s	1.0s	○
F8.39	Sleeping threshold	0.00V~10.00V	0.01V	10.00V	○
F8.40	Wakeing threshold	0.00V~10.00V	0.01V	0.00V	○
F8.41	Sleeping time	0.1s~600.0s	0.1s	300.0s	○
F8.42	Waking time	0.1s~600.0s	0.1s	300.0s	○
F8.43	Closed-loop acceleration and deceleration limit	2.0%~100.0%(Relative to maximum closed loop feedback)	0.1%	100%	○
Multistage speed control parameter F9 group					

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.00	Simple PLC running mode selection	LED units digit：PLC running mode 　　0：No action 　　1：Stop after single loop 　　2：Keep final value after single loop 　　3：Continuous loop LED tens digit：　start mode 　　0：Rerun from the first stage 　　1：Continue to run from the stage of halt (or fault) 　　2：Continue to run from the stage, frequency of halt (or fault) LED hundreds digit：　power down storage 　　0：No storage 　　1：Store the stage and frequency of power down moment LED thousands digit：　stage time unit selection 　　0：second 　　1：minute	1	0000	×
F9.01	Multistage frequency 1	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	5.00Hz	○
F9.02	Multistage frequency 2	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	10.00Hz	○
F9.03	Multistage frequency 3	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	20.00Hz	○
F9.04	Multistage frequency 4	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	30.00Hz	○
F9.05	Multistage frequency 5	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	40.00Hz	○
F9.06	Multistage frequency 6	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	45.00Hz	○
F9.07	Multistage frequency 7	F1.10(lower limit frequency)～F1.09(upper limit frequency)	0.01Hz	50.00Hz	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.08	Stage 1 setting	LED units digit： 　0：Multistage frequency 1(F9.01) 　1：Determined by F1.02 function code 　2：Multistage closed loop given 1(F8.20) 　3：Determined by F8.01 function code LED tens digit： 　0：Foreward 　1：Reversal 　2：Determined by run command LED hundreds digit： 　0：Acceleration and deceleration time 1 　1：Acceleration and deceleration time 2 　2：Acceleration and deceleration time 3 　3：Acceleration and deceleration time 4	1	000	○
F9.09	Stage 1 running time	0.0～6500.0s	0.1s	20.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.10	Stage 2 setting	LED units digit： 　　0：Multistage frequency 2(F9.02) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 2(F8.21) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.11	Stage 2 running time	0.0～6500.0s	0.1s	20.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify

F9.12	Stage 3 setting	LED units digit：
		    0：Multistage frequency 3(F9.03)
		    1：Determined by F1.02 function code
		    2：Multistage closed loop given 3(F8.22)
		    3：Determined by F8.01 function code
		LED tens digit：
		    0：Foreward
		    1：Reversal
		    2：Determined by run command
		LED hundreds digit：
		    0：Acceleration and deceleration time 1
		    1：Acceleration and deceleration time 2
		    2：Acceleration and deceleration time 3
		    3：Acceleration and deceleration time 4
			1	000	○

F9.13	Stage 3 running time	0.0～6500.0s	0.1s	20.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.14	Stage 4 setting	LED units digit： 　　0：Multistage frequency 4(F9.04) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 4(F8.23) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.15	Stage 4 running time	0.0～6500.0s	0.1s	20.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.16	Stage 5 setting	LED units digit： 　　0：Multistage frequency 4(F9.04) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 4(F8.23) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.17	Stage 5 running time	0.0～6500.0s	0.1s	20.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.18	Stage 6 setting	LED units digit： 　0：Multistage frequency 4(F9.04) 　1：Determined by F1.02 function code 　2：Multistage closed loop given 4(F8.23) 　3：Determined by F8.01 function code LED tens digit： 　0：Foreward 　1：Reversal 　2：Determined by run command LED hundreds digit： 　0：Acceleration and deceleration time 1 　1：Acceleration and deceleration time 2 　2：Acceleration and deceleration time 3 　3：Acceleration and deceleration time 4	1	000	○
F9.19	Stage 6 running time	0.0～6500s	0.1s	20.0s	○
F9.20	Stage 7 setting	LED units digit： 　0：Multistage frequency 4(F9.04) 　1：Determined by F1.02 function code 　2：Multistage closed loop given 4(F8.23) 　3：Determined by F8.01 function code LED tens digit： 　0：Foreward 　1：Reversal 　2：Determined by run command LED hundreds digit： 　0：Acceleration and deceleration time 1 　1：Acceleration and deceleration time 2 　2：Acceleration and deceleration time 3 　3：Acceleration and deceleration time 4	1	000	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.21	Stage 7 running time	0.0～6500.0s	0.1s	20.0s	○
F9.22	Multistage frequency8	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	40.00Hz	○
F9.23	Multistage frequency9	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	45.00Hz	○
F9.24	Multistage frequency10	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	50.00Hz	○
F9.25	Multistage frequency11	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	50.00Hz	○
F9.26	Multistage frequency12	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	50.00Hz	○
F9.27	Multistage frequency13	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	50.00Hz	○
F9.28	Multistage frequency14	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	50.00Hz	○
F9.29	Multistage frequency15	F1.10(Lowest frequency)~F1.09(Highest frequency)	0.01Hz	50.00Hz	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.30	Stage 8 setting	LED units digit： 　　0：Multistage frequency 4(F9.23) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 4(F8.27) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.31	Stage 8 running time	0.0～6500.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.32	Stage 9setting	LED units digit： 　0：Multistage frequency 4(F9.24) 　1：Determined by F1.02 function code 　2：Multistage closed loop given 4(F8.28) 　3：Determined by F8.01 function code LED tens digit： 　0：Foreward 　1：Reversal 　2：Determined by run command LED hundreds digit： 　0：Acceleration and deceleration time 1 　1：Acceleration and deceleration time 2 　2：Acceleration and deceleration time 3 　3：Acceleration and deceleration time 4	1	000	○
F9.33	Stage 9 running time	0.0～6500.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify

F9.34	Stage 10 setting	LED units digit：
		    0：Multistage frequency 4(F9.25)
		    1：Determined by F1.02 function code
		    2：Multistage closed loop given 4(F8.29)
		    3：Determined by F8.01 function code
		LED tens digit：
		    0：Foreward
		    1：Reversal
		    2：Determined by run command
		LED hundreds digit：
		    0：Acceleration and deceleration time 1
		    1：Acceleration and deceleration time 2
		    2：Acceleration and deceleration time 3
		    3：Acceleration and deceleration time 4
			1	000	○

F9.35	Stage 10 running time	0.0～6500.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.36	Stage 11 setting	LED units digit： 　　0：Multistage frequency 4(F9.26) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 4(F8.30) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.37	Stage 11 running time	0.0～6500.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.38	Stage 12 setting	LED units digit： 　　0：Multistage frequency 4(F9.26) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 4(F8.31) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.39	Stage 12 running time	0.0～6500.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.40	Stage 13 setting	LED units digit： 　0：Multistage frequency 4(F9.27) 　1：Determined by F1.02 function code 　2：Multistage closed loop given 4(F8.32) 　3：Determined by F8.01 function code LED tens digit： 　0：Foreward 　1：Reversal 　2：Determined by run command LED hundreds digit： 　0：Acceleration and deceleration time 1 　1：Acceleration and deceleration time 2 　2：Acceleration and deceleration time 3 　3：Acceleration and deceleration time 4	1	000	○
F9.41	Stage 13 running time	0.0～6500s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify

F9.42	Stage 14 setting	LED units digit：
		    0：Multistage frequency 4(F9.28)
		    1：Determined by F1.02 function code
		    2：Multistage closed loop given 4(F8.33)
		    3：Determined by F8.01 function code
		LED tens digit：
		    0：Foreward
		    1：Reversal
		    2：Determined by run command
		LED hundreds digit：
		    0：Acceleration and deceleration time 1
		    1：Acceleration and deceleration time 2
		    2：Acceleration and deceleration time 3
		    3：Acceleration and deceleration time 4
			1	000	○

F9.43	Stage 14 running time	0.0～6500.0s	0.1s	0.0s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
F9.44	Stage 15 setting	LED units digit： 　　0：Multistage frequency 4(F9.29) 　　1：Determined by F1.02 function code 　　2：Multistage closed loop given 4(F8.34) 　　3：Determined by F8.01 function code LED tens digit： 　　0：Foreward 　　1：Reversal 　　2：Determined by run command LED hundreds digit： 　　0：Acceleration and deceleration time 1 　　1：Acceleration and deceleration time 2 　　2：Acceleration and deceleration time 3 　　3：Acceleration and deceleration time 4	1	000	○
F9.45	Stage 15 running time	0.0～6500.0s	0.1s	0.0s	○
Protection function parameter FA group					
FA.00	Reserved	-	-	-	*
FA.01	Reserved	-	-	-	*
FA.02	Reserved	-	-	-	*
FA.03	Reserved	-	-	-	*
FA.04	DC bus under voltage protection point	0-999V	1V	Models determined	*
FA.05	Reserved	-	-	-	*
FA.06	Reserved	-	-	-	*
FA.07	Reserved	-	-	-	*
FA.08	Reserved	-	-	-	*
FA.09	Automatic reset times	0～10,0 shows no automatic reset function Note：　Module protection and external device fault has no reset function.	1	0	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FA.10	Automatic reset interval time	2.0～20.0s	0.1s	5.0s	×
FA.11	Overload pre-alarm detection setting	LED units digit：Action selection 　　0：Detecting all the time 　　1：Detect only in constant speed LED tens digit：Alarming selection 　　0：No alarming, continue to run 　　1：Alarm, halt LED hundreds digit：Detection quantity selection 　　0：Relative to motor rated current（E008） 　　1：Relative to frequency converter rated current（E009）	1	000	×
FA.12	Overload pre-alarm detection level	20.0%～200.0%	0.1%	130.0%	×
FA.13	Overload pre-alarm detection time	0.0～60.0s	0.1s	5.0s	×
FA.14	Protective action selection 1	LED units digit：Under-voltage fault indication action selection 　0：No action 　1：Action (regard under-voltage as fault) LED tens digit:Rectifier over-heat protection selection: 　0：Alarming and free stop 　1：No alarming and continue to run LED hundreds digit: Reserved LED thousands digit：Reserved	1	0000	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FA.15	Protective action selection 2	LED units digit：communication abnormal action selection 0：Alarming and free halt 1：No alarming and continue to run 2：No alarming and stop according to stop mode(Only in serial port control mode) 3：No alarming and stop according to stop mode(In all control modes) LED tens digit：Contactor abnormal action selection 0：Alarming and free halt 1：No alarming and continue to run LED hundreds digit：EEPROM abnormal action selection 0：Alarming and free halt 1：No alarming and continue to run	1	0001	×
Serial port communication parameter FB group					
Fb.00	Local address	0-247,0 is broadcast address	1	1	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
Fb.01	Communication configuration	LED units digit：Baud rate selection 　　0：1200BPS 　　1：2400BPS 　　2：4800BPS 　　3：9600BPS 　　4：19200BPS 　　5：38400BPS LED tens digit：data format 　　0：1-8-2-N format, RTU 　　1：1-8-1-E format, RTU 　　2：1-8-1-O format, RTU 　　3：1-7-2-N format, ASCII 　　4：1-7-1-E format, ASCII 　　5：1-7-1-O format, ASCII 　　6：1-8-1-N format,RTU LED hundreds digit：analog input terminal 　　0：Ineffective 　　1：Effective 　　LED hundreds digit：Communication protection selection 　　0：No storage 　　1：Storage	1	0003	×
Fb.02	Network port 485C baud rate configuration	0：1200BPS 1：2400BPS 2：4800BPS 3：9600BPS 4：19200BPS 5：38400BPS Remark:Data format is fixed as 1-8-2-n,RTU format.When use extend keyboard, the baud rate must be set to 19200BPS.	1	4	×
Fb.03	Local response delay	0～1000ms	1ms	5ms	×
Fb.04	Communication overtime detection time	0.0～1000s	0.1s	0.0s	×
Fb.05	Host routing	00~11	0	11	×

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
Fb.06	Linkage ratio setting	0.01~10.00	0.01	1.00	○
Advanced function parameter FC group					
FC.00	Energy consumption braking threshold	380-800V	1	Models Determined	×
FC.01	Braking usage rate	0~100%	1%	50%	×
FC.02	AVR function	0：No action 1：Action all the time 2：No action only in deceleration	1	2	×
FC.03	Automatic energy saving running	0：No action 1：Action	1	0	○
FC.04	Slip compensation gain	0-1000	1	0	○
FC.05	Slip compensation filtering time	0.1~20.0ms	0.1ms	1.0ms	○
FC.06	Self learning Acceleration and deceleration	0.1-6.0s	0.1s	2.0s	×
FC.07	Self learning current	1-100%	1%	25%	○
FC.08	Cooling fan control	0：Automatic running Note：Run for 3 minutes after stop 1：Fan always running when power on	1	0	×
FC.09	Acceleration and deceleration time unit	0：（second） 1：（minute）	0	0	×
FC.10	Droop control	0.00~10.00Hz	0.01Hz	0.00Hz	○
FC.11	Deceleration coefficient	50.0%~10-180.0%	0.1%	100.0%	○
FC.12	Zero frequency running threshold value	0.00~550.00Hz	0.01Hz	0.00Hz	○
FC.13	Zero frequency return difference	0.00~550.00Hz	0.01Hz	0.00Hz	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FC.14	Setting length	0.000（Fixed length halt function ineffective）～65.535(km)	0.001 (km)	0.000 (km)	○
FC.15	Actual length	0.000～65.535(km) （power down storage）	0.001 (km)	0.000 (km)	○
FC.16	Length multiplying power	0.001～30.000	0.001	1.000	○
FC.17	Length correction coefficient	0.001～1.000	0.001	1.000	○
FC.18	Measurement axis perimeter	0.01～100.00(cm)	0.01 (cm)	10.00(cm)	○
FC.19	Axis pulse per turn	1～9999	1	1	○
FC.20	Setting running time	0～Max timing 65.535kh	0.001kh	0	○
FC.21	Dead-time compensation coefficient	0～20	1	2	×
FC.22	Power failure restart function selection	0：No action 1：Action	1	0	×
FC0.23	Power failure restart waiting time	0.0～10.0S	0.1s	0.5s	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FC.24	Run command channel binding frequency given channel	LED units digit：Frequency channel selection when keyboard is started or stopped 　　0：No binding 　　1：Keyboard ▲ ▼ given 　　2：Terminal UP/DN given 　　3：Serial port given 　　4：AI1 analog given 　　5：AI2 analog given 　　6：Terminal pulse given 　　7：Keyboard potentiometerb given 　　8：Reserved LED tens digit：Frequency channel selection when terminal is started or stopped 　　0：No binding 　　1：Keyboard ▲ ▼ given 　　2：Terminal UP/DN given 　　3：Serial port given 　　4：AI1 analog given 　　5：AI2 analog given 　　6：Terminal pulse given 　　7：Keyboard potentiometerb given 　　8：Reserved LED hundreds digit：Frequency channel selection when serial port is started or stopped 　　0：No binding 　　1：Keyboard ▲ ▼ given 　　2：Terminal UP/DN given 　　3：Serial port given 　　4：AI1 analog given 　　5：AI2 analog given 　　6：Terminal pulse given 　　7：Keyboard potentiometerb given 　　8：Reserved	1	000	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FC.25	Auxiliary given channel	0：No action; 1：Keyboard ▲ ▼ given (given by FC.27 directly); 2：Terminal UP/DN given (given by FC.27 directly); 3：Serial port given (given by FC.27 directly); 4：AI1; 5：AI2; 6：PULSE; 7：-AI1; 8：-AI2; 9：-PULSE 10：AI1-5; 11：AI2-5; 12：PULSE-1/2*F1.03 13：Keyboard potentiometerb given 14：Reserved Note：Ineffective when it is the same as main given channel; frequency of item 4-9、item14 uses parameters confirmed in F5.00	1	0	○
FC.26	Analog auxiliary given coefficient	0.00～9.99（only for FC.25=4～12）	0.01	1.00	○
FC.27	Digital auxiliary frequency	0.00～550.0Hz	0.01	0.00Hz	○

FC.28	Digital auxiliary frequency control	LED units digit：Storage control
		    0：Power down storage
		    1：Power down no storage
		 LED tens digit：
		    0：halt holding
		    1：halt reset
		 Note：Only effective to FC.25=1,2,3
			1	000	○

FC.29	Reserved	-	-	0	*
FC.30	Reserved	-	-	0	*

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FC.31	Operation panel key function and lock selection	LED units digit： STOP/RESET key function selection 　　0：Ineffective in non-panel control mode 　　1：Stop according to stop mode in non-panel mode 　　2：E015 free halt in non-panel mode LED tens digit： M-FUNC key function selection 　　0：Ineffective 　　1：Effective in halt status 　　2：Effective in both halt and running LED hundreds digit：Keyboard lock function 　　0：No lock 　　1：All lock 　　2：All lock except for ▢ STOP/RESET key 　　3：All lock except for ▶▶ key 　　4：All lock except for RUN and STOP/RESET key	1	000	×
FC.32	Reserved	-	-	0	*

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
FC.33	Frequency source overlay selection	Digit：Frequency source selection 0：The main frequency source 1：Primary and secondary operation results (the results are determined by the tens digit) 2：The main frequency source switching with the auxiliary frequency source 3：The main frequency source switching with Primary and secondary operation results 4：The auxiliary frequency source switching with Primary and secondary operation results Ten digit：Frequency source & Primary and secondary operation results relationships 0：Main+Auxiliary 1：Main-Auxiliary 2：Maximum value of the two 3：Minimum value of the two 4：|Main-Auxiliary| 5：(Main*Auxiliary)/F1.06	0	0	○
Additional function parameter FD group					
Fd.00	DO1 output open delay	0.0～600.0s	0.1s	0	○
Fd.01	DO1 output closed delay	0.0～600.0s	0.1s	0	○
Fd.02	DO2 output open delay	0.0～600.0s	0.1s	0	○
Fd.03	DO2 output closed delay	0.0～600.0s	0.1s	0	○
Fd.04	Relay output open delay	0.0～600.0s	0.1s	0	○
Fd.05	Relay output closed delay	0.0～600.0s	0.1s	0	○

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
Fd.06	Closed loop max value corresponding pressure	0.0~200.0MPa	0.1MPa	100.0MPa	○
Monitoring parameter U0 group					
U0.00	Output frequency （before compensation）	-	-	-	*
U0.01	Output frequency （after compensation）	-	-	-	*
U0.02	Setting frequency	-	-	-	*
U0.03	Output current	-	-	-	*
U0.04	Running rotate speed	-	-	-	*
U0.05	Setting rotate speed	-	-	-	*
U0.06	Running line speed	-	-	-	*
U0.07	Setting line speed	-	-	-	*
U0.08	Output power	-	-	-	*
U0.09	Output torque	-	-	-	*
U0.10	Output voltage	-	-	-	*
U0.11	Bus voltage	-	-	-	*
U0.12	AI1	-	-	-	*
U0.13	AI2	-	-	-	*
U0.14	Analog closed loop feedback	-	-	-	*
U0.15	Analog closed loop setting	-	-	-	*
U0.16	External count value	-	-	-	*
U0.17	Terminal status	-	-	-	*
U0.18	Actual length	-	-	-	*

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
U0.19	Setting length	-	-	-	*
U0.20	Pulse frequency display	-	-	-	*
U0.21	Inverter rated capacity	-	-	-	*
U0.22	Inverter rated voltage	-	-	-	*
U0.23	Inverter rated current	-	-	-	*
U0.24	Closed loop pressure display	-	-	-	*
U0.25	IGBT temperature	-	-	-	*
U0.26	First failure type		1	0	*
U0.27	Second failure type		1	0	*
U0.28	Third failure type(The last)		1	0	*
U0.29	Bus voltage during last failure	0~999V	1V	0V	*
U0.30	Output current during last failure	0.00~99.99A	0.01A	0.00A	*
U0.31	Output frequency during last failure	0.00Hz~550.00Hz	0.01Hz	0.00Hz	*
U0.32	IGBT temperature during last failure	0.0~100.0℃	0.1	0℃	*
U0.33	Bus voltage during second failure	0~999V	1V	0V	*
U0.34	Output current during second failure	0.00~99.99A	0.01A	0.00A	*
U0.35	Output frequency during second failure	0.00Hz~550.00Hz	0.01Hz	0.00Hz	*

Function code	Name & Definition	Set Range	Minimum Unit	Factory Default	Modify
U0.36	IGBT temperature during second failure	0.0~100.0℃	0.1	0℃	*
U0.37	Accumulated running time	-	-	-	*
U0.38	Software version	-	-	-	*

The fault code table

Fault code	Fault type	Fault code	Fault type
E001	Over current during accelerating operation	E015	External fault
E002	Over current during decelerating operation	E016	485 communication fault
E003	Over current during constant state operation	E017	Fault of current detection circuit
E004	Over voltage during accelerating operation	E018	Self-tuning bad
E005	Over voltage during decelerating operation	E019	EEPROM read&write fault
E006	Over voltage during constant state operation	E020	Closed-loop feedback loss
E007	Reserved	E021	Reserved
E008	Motor overload	E022	Reserved
E009	Frequency inverter overload	E023	Operation panel parameter copy fault
E010	Power module protection	E024	Reserved
E011	Input missing phase	E025	Reserved
E012	Output missing phase	E026	Buffer anomaly
E013	Rectification module radiator overheating	E027	Analog input AI1 fault
E014	Inverter module radiator overheating	E028	Analog input AI2 fault

Warranty Agreement

1. Warranty scope only includes the frequency inverter body.

2. For normal use, the drives fail or be damaged within 18 months, the company is responsible for the warranty; more than 18 months, will charge a reasonable maintenance costs.

3. Warranty period starting time is the date of manufacture.

4. Within 18 months, some maintenance fees should be charged in the following situations:

   ● Do not follow the operating manual steps to cause the   damage to the inverter。

   ● Damaging the inverter because of fires, water, abnormal voltage and etc..

   ● Wiring error causes the damage to the drive.

   ● Damaging the inverter because of using non-normal functions .

5. Related services fees are according to the actual costs. If the fees are written in the contract , the contract prevails.

6. Please keep this card and show it to the maintenance supporter when the frequency inverter is repaired

7. If the problems happen, please contact directly with the supplier, or with our company.

Inverter warranty

User's Company:		
Address:	Contact:	
Phone:	Fax:	
Zip:	Contact:	
Machine series number:		
Power:	Machine series:	
Contract Number:	Purchase Date:	
Service company:		
Service Date:		
Repairer:	Phone:	
Contact:	Phone:	
User opinions and reviews: □Good □Better □General □Poor		
Other comments：		
User's Signature：		
Company re-visitrecord:	day month year	

Certificate Of Quality

Checker:_____

This product is approved to leane the factory after inspection