



**SAJI**



8000m Series Compact Inverter  
**User Manual**



Version Code: 8000m-E201216-1MS

## **PRECAUTION**

Never modify the products. Failure to observe this warning can result in electrical shock or personal injury. SAJ is not responsible for any modification of the frequency products made by the user, since that will void your guarantee.

# Contents

Notes for Safe Operation.....	01
Chapter 1 Select the Right Type.....	09
1.1 Description of Model.....	09
1.2 Description of Nameplate.....	09
1.3 Dimensions of Inverter.....	10
1.4 Keypad Tray and RS485 Interface (Optional Parts).....	11
Chapter 2 Wiring.....	13
2.1 Standard Wiring Diagram of 3-phase Inverter, 380V.....	13
2.2 Descriptions of Terminals.....	14
Chapter 3 Operation.....	16
3.1 Keypad Description.....	16
3.2 Operation Process.....	17
Chapter 4 Function Code Table.....	20
Chapter 5 Trouble Shooting.....	48
5.1 Fault and Trouble Shooting.....	48
5.2 Common Faults and Solutions.....	52
Chapter 6 Communication Address.....	54

## Notes for Safe Operation

Read this instruction manual thoroughly before installation, operation, maintenance or inspection of the frequency inverters. In this manual, safe operation are classified as “WARNING” or “CAUTION”.

 <b>WARNING</b>
--

Indicate a potentially dangerous situation which, if not avoided, could result in death or serious injury to personnel.
---

 <b>CAUTION</b>
--

Indicate a potentially dangerous situation which, if not avoided, could result in minor or moderate injury and damage to equipment. It may also be used for warning against unsafe practices.
---

Even items described as ( CAUTION) may result in a vital accident in some situations. Please follow these important notes:

 **NOTE**

These are steps to be taken to ensure proper operation.

### Before Installation

 <b>WARNING</b>
--

Do not install or operate any frequency inverter that is damaged or has missing parts.
--

Choose the motor of insulation class B or above. Otherwise it may cause an electrical shock.
--

## Installation

 WARNING

Install the frequency inverter on nonflammable material like metal. Otherwise it may cause a fire.

 WARNING

Make sure that the mounting environment away from metal dust. Otherwise it may cause damage to the frequency inverter.

 CAUTION

When mount over two inverters in the same cabinet or enclosure, install a fan or other cooling device to keep the temperature inside below 50 °C .

Do not let the conductor head or screws fall into the inside of the inverter. Otherwise it may cause damage to the inverter.

## Wiring

 WARNING

Ensure only qualified personnel to operate. Otherwise it can cause an electrical shock.

Make sure the inverter is isolated from power supply by the circuit breaker. Otherwise it may cause a fire.

Verify that the power supply is turned OFF before start wiring. Otherwise it may cause an electrical shock or fire.

Make sure that the ground terminal is grounded correctly. Otherwise it may cause an electrical shock.

 CAUTION

Never connect the AC power supply to output terminals U, V and W. Otherwise the inverter will be damaged and the guarantee is invalid.

Make sure that wiring conform to EMC requirements and local power safe standard. Make sure to use right wire according to this instruction manual. Otherwise it may cause an accident.

Braking resistor or braking unit cannot be directly connected to DC bus terminals. Otherwise it may cause a fire.

## Before Turn on the AC Power Supply

 WARNING

Make sure that the voltage of inverter conforms to the local power supply voltage. Verify that the wiring of input and output is correct and there is no short-circuit in peripheral circuit. Tighten the terminal screws. Otherwise these may cause damage to the inverter.

Turn on the input AC power only after the front cover is put correctly. Otherwise it may cause an electrical shock.

 CAUTION

Never perform a hi-pot or withstand voltage test of the inverter. Otherwise it may cause damage to the inverter.

Make sure that the optional parts are connected correctly. Otherwise it may cause damage to the inverter.

## When the Power is On

 WARNING

Do not open or remove the front cover when operation. Otherwise it may cause an electrical shock.

Never touch the inverter and optional parts by wet hands. Never touch the connection terminals. Otherwise it may cause an electrical shock.

When the power is on, the inverter will automatically check the power supply circuit. Do not touch U, V, W terminals and motor connection terminals. Otherwise it may cause an electrical shock.

 CAUTION

It is dangerous for the personnel to approach the motor and load during rotation of the motor. Do not change the factory parameters or settings unnecessarily. Otherwise it may cause a damage or injury.

## Operation

 WARNING

When select the function of restart, do not approach the mechanical load. Otherwise it may cause an injury if it restarts suddenly.

Do not touch the heat sink or discharging resistor. Otherwise it may cause harmful burns to the body.

Never change or check signals if not a professional or qualified personnel. Otherwise it may cause damage and injury.

 CAUTION

Make sure nothing fall into the mechanical load or inverter. Otherwise it may cause damage.

Start or stop inverter by corresponding buttons only. Otherwise it may cause damage.

## Maintenance

 WARNING

After the main circuit power supply is OFF, make sure the charge LED is OFF when maintain or inspect. Never maintain or inspect the inverter and mechanical load when the power supply is still ON. Otherwise it may cause damage and injury.

Only qualified or authorized professional personnel can maintain, replace and inspect the inverter. Otherwise it may cause damage and injury.

## Notes for Other Important Operations

### ()CAUTION

#### 1. Check Insulation of the Motor

Check insulation of the motor and wire when the motor is used again after long time idle or for the first time. Disconnect the wire between the motor and the inverter before check insulation. Make sure the insulation resistor is not below 5MΩ.



## **2. Thermal Overload Protection of the Motor**

When the rated capacity of inverter is larger than that of the motor, install thermal overload relay for the motor or regulate the motor protection parameters of the inverter.

## **3. Consider the Bearing Capability of the Load**

The inverter can provide output frequency from 0 Hz to 600 Hz. If the motor needs to work at over 50 Hz, user should consider the bearing capability of the load.

## **4. Avoid Mechanical Resonance Frequency**

Regulate the skip frequency parameter of the inverter to avoid mechanical resonance frequency of the load.

## **5. Prohibition of Installation of Phase Advancing Capacitor**

If a phase advancing capacitor or surge suppressor is connected in order to improve the power factor, it may become overheated and damaged by inverter high harmonic components. Also, the inverter may malfunction because of over current.

## **6. Installation of Magnetic Contactor**

If a magnetic contactor is installed at the power supply side, do not use it to control the start of the inverter. If necessary, the time span should be one hour or above. Otherwise frequent switching may cause the inverter to malfunction.

If a magnetic contactor is installed between the output terminals and motor (output side of the inverter), make sure there is no output of

inverter before switch on and off. Otherwise it may cause damage to the inverter.

### **7. Allowable Voltage Range and Power Supply Phase**

Make sure the inverter works under allowable voltage range. If necessary, use boosting transformer or step-down transformer to change the voltage of power supply. Never change the 3-phase of inverter into 2-phase. Otherwise it will cause damage to the inverter.

### **8. Thunder Stroke Protection**

Even there is protection device to protect the inverter from induction thunder stroke, it's necessary for users in frequent thunder stroke area to install other protective device.

### **9. Altitude and Degradation Use**

At an altitude of 1000m or above, it could be better that use the motor with lower rated capacity. Otherwise the inverter may become overheated because of rare air. For example, in order to control the motor of 4kW rated capacity, it could be better to use 5.5kW inverter.

### **10. Dispose of Scrap Inverter**

The scrap capacitor of main circuit and PCB (printed-circuit board) may explode when it is burned. In order to protect the environment, do not burn waste plastic parts and scrap capacitor.

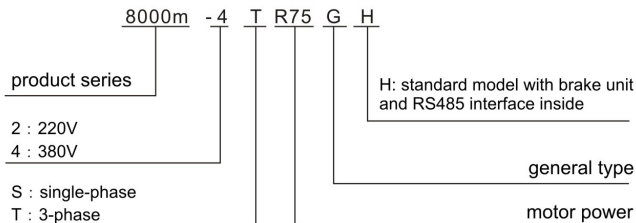
### **11. Choose the Right Matching Inverter for the Motor**

The standard matching motor is 4-pole inductive motor. If not, choose the right matching inverter according to the rated current of the motor.

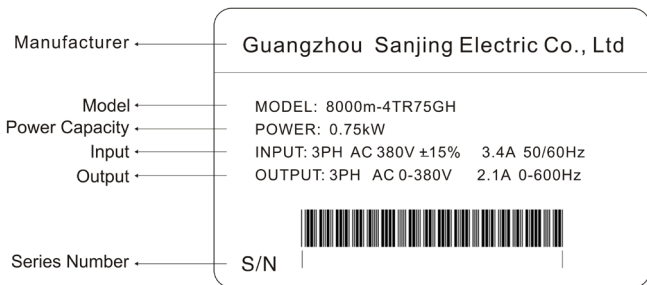
According to the actual working situation of the motor, the factory setting of motor standard parameter can be revised. Otherwise it may cause low efficiency to the unit.

# Chapter 1 Select the Right Type

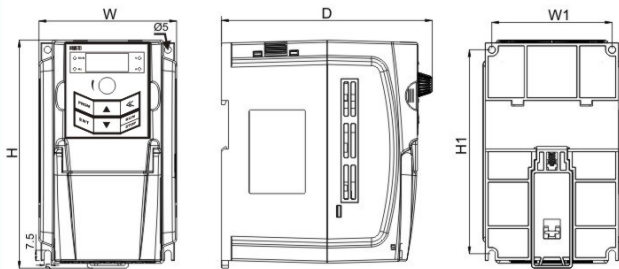
## 1.1 Description of Model



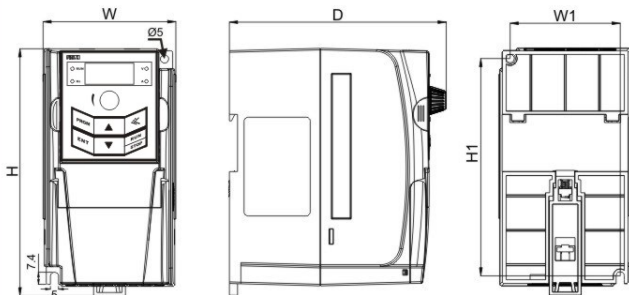
## 1.2 Description of Nameplate



### 1.3 Dimensions of Inverter



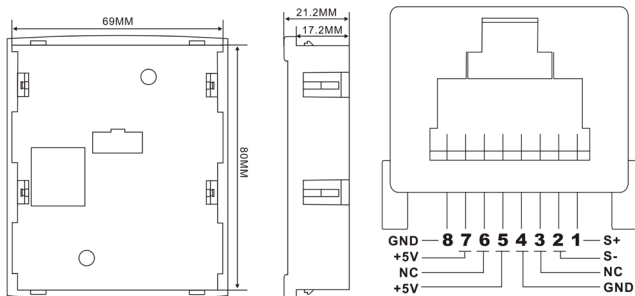
single phase 220V 1.5-2.2kW and 3-phase 380V 0.75kW-2.2kW



single phase 220V 0.4-0.75kW

Voltage Class	Model	Rated Output Power (kW)	Rated Input Current (A)	Rated Output Current (A)	Dimensions (mm)					Diameter of Installation Hole (mm)
					W	W1	H	H1	D	
Single Phase 220V	8000m-2SR4GH	0.4	4.5	2.4	81.3	67.4	151.3	133	132.8	Φ5
	8000m-2SR75GH	0.75	8.2	4.5						
	8000m-2S1R5GH	1.5	14.2	7	99.3	86.8	164.7	147.4	152	
	8000m-2S2R2GH	2.2	23	10						
3-phase 380V	8000m-4TR75GH	0.75	3.4	2.5	99.3	86.8	164.7	147.4	152	
	8000m-4T1R5GH	1.5	5	3.7						
	8000m-4T2R2GH	2.2	5.8	5						

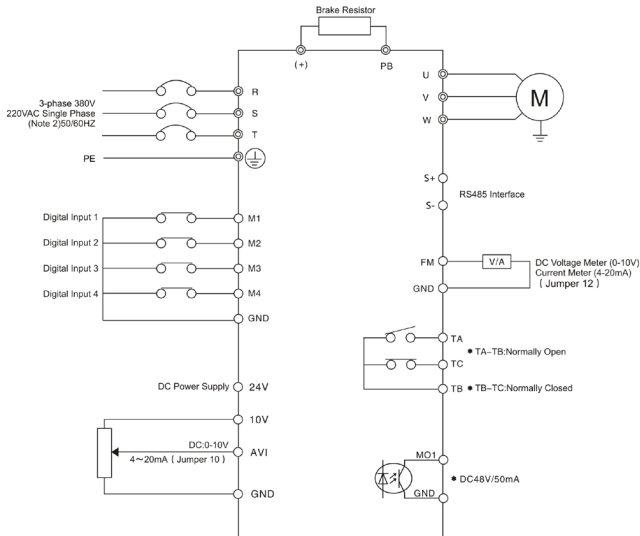
## 1.4 Keypad Tray and RS485 Socket (Optional Parts)



<b>Terminal Symbol</b>	<b>Function</b>	<b>Specifications</b>
S+	Positive pole of differential signal	Standard RS485 interface
S-	Negative pole of differential signal	
+5V	Positive pole of extension power (+5V)	
GND	Negative pole of extension power	

# Chapter 2 Wiring

## 2.1 Standard Wiring Diagram




Note:

1. ◎ refers to main circuit terminals. ○ refers to control-circuit terminals.
2. For 220V single phase inverter, the terminals of main circuit are R and S.







## 2.2 Descriptions of Terminals

### 2.2.1 Main Circuit Terminals

Terminals	Descriptions
R, S and T	AC power input terminals. 3-phase: R, S and T Single phase: R and S
U, V and W	AC power output terminals (used to connect motor)
(+)	DC bus terminal of positive pole
PB	Spare terminal for connecting brake resistor outside
	Grounding terminal

### 2.2.1 functions of jumper

FM	Jumper J2	Note
0-10VDC		Default
4-20mA		

AVI	Jumper J10	Note
0-10VDC		Default
4-20mA		

### 2.2.2 Control Circuit Terminals

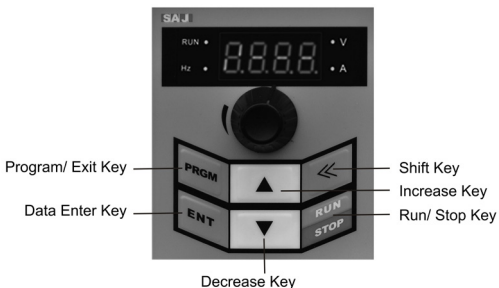
Terminals	Functions	Descriptions
TA/ TB/ TC	Programmable relay output	TA-TB: Normally open. TB-TC: Normally closed Contact capacity: AC 250V/3A/ normal open AC 250V/3A/normal close
M1~M4	Digital input terminals	Do not connect additional power source directly. A digital input is ON when it is connected to GND, and will be OFF when it is opened. Action current is 10mA.
GND	Analog grounding terminal	Zero potential of +10V and +24V
AVI	Analog input terminal	Default: DC voltage 0-10V (Impedance 20kΩ) Option: DC current 4-20mA (Jumper J10)
10V	Analog reference voltage	10V±5%, maxi. Load limit: 20mA.
FM	Analog output terminal	Default: DC voltage 0-10V Option: DC current 4-20mA (Jumper J2)

MO1	Programmable open collector terminal	Load limit: 50mA Voltage limit: 48V
+24V	+24V power supply terminal	For digital input terminal and sensor. Load limit: 200mA. Generally used as power supply of digital terminals and outside sensor.

## Chapter 3 Operation

### 3.1 Keypad Description

#### 3.1.1 Keypad Schematic Diagram



#### 3.1.2 Key Function Description

Symbol	Key Name	Function Description
PRGM	Program/ Exit key	Enter or exit of menu, parameter modification
ENT	Data enter key	Progressively enter menu and confirm parameter.
▲	Increase key	Progressively increase data or function codes.
▼	Decrease key	Progressively decrease data or function codes.
≤	Shift key	Use it to select displayed parameters cyclically during running or stop status. In parameter setting mode, press this key to select the bit to be modified.
RUN/ STOP	Run/ Stop Reset Key	For start, stop and reset operation, depends on control mode setting.

### 3.1.3 Indicator Light Description

Indicator Light Name	Description
RUN	Light on: inverter running status.
Hz	Light of frequency
V	Light of voltage
A	Light of current

## 3.2 Operation Process

### 3.2.1 Parameter Setting

**Three levels of menu are as following:**

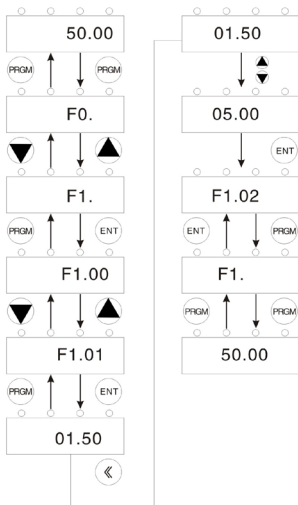
- Function code group (first-class)
- Function code (second-class)
- Setting parameter of function code (third-class)

#### **Remarks:**

Pressing PRGM or ENT can return to the second-class menu from the third-class menu. The difference is: Pressing ENT will save the setting parameters into control board, and return to the second-class menu with shifting to the next function code automatically. While pressing PRGM will directly return to the second-class menu without saving the parameters, and keep staying at the current function code.

**For example:**

change the parameter 00.50Hz of function code F1.01 into 05.00Hz as the following flow chart shows:



Flow Chart of Parameter Setting

Under the third-class menu, if the parameter has no flickering bit, it means that the function code cannot be modified. The possible reasons include:

1. The parameter of this function code can't be modified, such as actually detected parameter, operation records and so on.
2. This function code can't be modified during running status, but can be modified during stop status.

### 3.2.2 Fault Reset

When inverter malfunction occurs, it will display the relative fault information. Use the STOP/ RESET key or terminals (determined by F5 group) to reset the fault. After fault reset, inverter is at stand-by status. If not reset when inverter is at fault status, it will keep operation protection status and cannot run.

### 3.2.3 Password Setting

When F7.00 is set to be non-zero, the parameter will be the user's password. After exit the function code editing status, the password will be effective after one minute. And then press the PRGM key again to try to access the function code editing mode, the inverter panel will display "0.0.0.0". The password must be input correctly to access it. If it is necessary to cancel the password function, set F7.00 to zero.

#### **Notice:**

When the inverter is powered on, system will execute initialization first and inverter panel displays "8000" with four lights on. After initialization, inverter accesses into stand-by status.

## Chapter 4 Function Code Table

### Notice:

“○”: The parameters can be modified at stop or running status.

“●”: The parameters cannot be modified at running status.

“◎”: The parameters which are actual-detecting record value cannot be modified.

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
<b>F0 Group: Basic Parameters</b>					
F0.00	Control mode selection	0: Sensorless vector control 1:V/F control		1	●
F0.01	Control command source	0:Keypad 1:Terminals 2: Communication (RS485)		0	●
F0.02	Keypad & terminal frequency up/down control	0: Valid and saved when power-off 1:Valid and not saved when power-off 2: Invalid 3. Control is valid while running, and is invalid while stop. When stopped or power off, the VFD will not save data		0	○
F0.03	Master frequency setting source X	0: Up/down key 1: Potentiometer of panel 2: AVI terminal 3: Reserved 4: Reserved 5: Reserved		1	●

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F0.03	Master frequency source X	6: Multi-step speed terminals 7: Simple PLC 8: PID 9: RS485 Communication interface		1	●
F0.04	Auxiliary frequency source Y	0: AVI terminal 1: ACI terminal 2: Reserved		1	●
F0.05	Range of auxiliary frequency setting source Y	0: Relative to the maxi. frequency 1: Relative to master frequency setting source X		0	●
F0.06	Reserved				
F0.07	Frequency setting source selection	0:X 1: Y 2: X and Y 3: Maximum value of (X, Y)		0	○
F0.08	Keypad setting frequency	0.00Hz~ F0.10	0.01Hz	50.00 Hz	○
F0.09	Running direction selection	0: Forward 1: Reverse 2: Reverse running prohibited		0	●
F0.10	Maximum output frequency	10.00~600.00Hz	0.01Hz	50.00Hz	●



Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F0.11	Upper limit frequency source selection	0:Keypad setting (F0.12) 1:AVI terminal 2: Reserved 3: Multi-step speed terminals 4: Communication interface		0	○
F0.12	Upper limit frequency	F0.14~ F0.10	0.01Hz	50.00Hz	○
F0.13	Reserved				
F0.14	Lower limit frequency	0.00Hz~ Upper limit frequency F0.12	0.01Hz	0.00Hz	○
F0.15	The function of lower limit frequency	0: Running at lower limit frequency 1: Stop frequency point 2: Sleep frequency point		0	○
F0.16	Carrier frequency setting	1.0~15.0kHz	1kHz	According to model	○
F0.17	PWM mode selection	0:PWM mode 1 1:PWM mode 2 2:PWM mode 3		0	●
F0.18	Acceleration time 1	0.1~3600.0s	0.1s	According to model	○
F0.19	Deceleration time 1	0.1~3600.0s	0.1s	According to model	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F0.20	Default setting	0: No operation 1: Restore to factory setting 2: Fault record clearing		0	●
F0.21	Parameter lock setting	0: Unlock parameter 1: Lock parameter		0	○
F0.22	Acceleration/ deceleration method	0: Linear method 1: Reserved		0	●
F0.23	Reserved				
F0.24	Reserved				
F0.25	Cooling fan running method (only for 4kW and above inverter)	0: Keep running when power on 1: Automatic running		1	○
<b>F1 Group: Start and Stop Parameters</b>					
F1.00	Start mode	0: Start directly 1: DC braking first and then start 2: Speed tracing first and then start		0	●
F1.01	Start frequency	0.00~10.00Hz	0.01Hz	1.50Hz	○
F1.02	Hold time of start frequency	0.0~50.0s	0.1s	0.0s	○
F1.03	DC braking current before start	0.0~150.0%	0.1%	0.0%	○
F1.04	DC braking time before start	0.0~50.0s	0.1s	0.0s	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F1.05	Stop mode	0: Deceleration to stop 1: Coast to stop		0	○
F1.06	Trigging frequency of DC braking at stop	0.00~ F0.10	0.01Hz	0.00Hz	○
F1.07	Waiting time before DC braking at stop	0.0~50.0s	0.1s	0.0s	○
F1.08	DC braking current at stop	0.0~150.0%	0.1%	0.0%	○
F1.09	DC braking time at stop	0.0~50.0s	0.1s	0.0s	○
F1.10	Dead-zone time between FWD and REV	0.0~3600.0s	0.1s	0.0s	○
F1.11	Terminals control option when power on	0: Disabled 1: Enabled		1	○
F1.12 ~ F1.17	Reserved				
F1.18	Wake-up time delay	0.0~3600s	0.1s	0.0s	○
F1.19	Restart option after power-off	0: Disabled 1: Enabled		0	○
F1.20	Waiting time of restart after power-off	0.0~3600s	0.1s	0.0s	○
F1.21	Over modulation option	0: Disabled 1: Enabled		0	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
<b>F2 Group: Motor Parameters</b>					
F2.00	Inverter model	0:General model (G) 1:Pump model (P)		0	●
F2.01	Motor rated power	0.4~7.5kW	0.1kW	Defined by inverter model	●
F2.02	Motor rated frequency	10.00Hz~ F0.10	0.01Hz	50.00Hz	●
F2.03	Motor rated rotation speed	0~36000rpm	1rpm	Defined by inverter model	●
F2.04	Motor rated voltage	0~480V	1V		●
F2.05	Motor rated current	0.8~30A	0.1A		●
F2.06	Motor stator resistance	0.001~65.53Ω	0.001Ω		○
F2.07	Motor rotator resistance	0.001~65.53Ω	0.001Ω		○
F2.08	Motor stator inductance	0.1~6553mH	0.1mH		○
F2.09	Motor rotator mutual inductance	0.1~6553mH	0.1mH		○
F2.10	Motor no-load current	0.1~9.0A	A		○
F2.11	Motor parameters autotuning	0:No autotuning 1: Autotuning completely (without load) 2:Static autotuning (with load)		0	●

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F2.12	Reserved				
<b>F3 Group: Vector Control Parameters</b>					
F3.00	Proportional gain 1 of speed loop	0~100		20	○
F3.01	Integral time 1 of speed loop	0.01~10.00s	0.01s	0.50s	○
F3.02	Low frequency point of switch	0.00Hz~F3.05	0.01Hz	5.00Hz	○
F3.03	Proportional gain 2 of speed loop	0~100	1	25	○
F3.04	Integral time 2 of speed loop	0.01~10.00s	0.01s	1.00s	○
F3.05	High frequency point of switch	F3.02~F0.10	1Hz	10.00Hz	○
F3.06	Coefficient of slip compensation at VC control mode	50~200%	1%	100%	○
F3.07	Upper limit torque	0.0~200.0% (inverter rated current)	0.1%	150.0%	○
F3.08	Reserved				
F3.09	Reserved				
F3.10	Pre-alarm option when overload	0: Not detect 1: Effective during running and keep running after alarm 2: Effective during running and stop after alarm (fault code:E023)		1	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F3.10	Pre-alarm option when overload	3: Effective during constant running and keep running after alarm 4: Effective during constant running and stop after alarm		1	○
F3.11	Detecting level of pre-alarm when overload	1.0~200.0% (referred to inverter rated current)	0.1%	150.0%	○
F3.12	Detecting time of pre-alarm when overload	0~600s	1s	1s	○
<b>F4 Group: V/F Control Parameters</b>					
F4.00	V/F curve selection	0: Linear curve 1: User-defined curve 2: 1.3 square torque-step-down curve 3: 1.7 square torque-step-down curve 4: 2 square torque-step-down curve		0	●
F4.01	Torque boost	0.0 %(auto) 0.1%~30.0%	0.1%	1.0%	○
F4.02	Torque boost cut-off frequency	0.0~50.0% (relative to motor rated frequency)	0.1%	20.0%	●
F4.03	V/F frequency 1	0.00Hz~F4.05	0.01Hz	0.00Hz	●
F4.04	V/F voltage 1	0.0%~100.0%	0.1%	0.0%	●
F4.05	V/F frequency 2	F4.03~F4.07	0.01Hz	25.00Hz	●
F4.06	V/F voltage 2	0.0%~100.0%	0.1%	50.0%	●
F4.07	V/F frequency 3	F4.05~motor rated frequency	0.01Hz	50.00Hz	●

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F4.08	V/F voltage 3	0.0%~100.0%	0.1%	100.0%	●
F4.09	Coefficient of V/F Slip compensation	0.0%~200.0%	0.1%	0.0%	○
F4.10	Energy-saving selection	0:Disabled 1:Enabled automatically		0	○
F4.11	Reserved				
F4.12	Low-frequency threshold of restraining oscillation	0~10		2	○
F4.13	High-frequency threshold of restraining oscillation	0~10		0	○
F4.14	Reserved				
F4.15	Boundary frequency of restraining oscillation	0.00Hz~F0.10 (Maxi. frequency)	0.01Hz	30.00Hz	○
F4.16	Reserved				
F4.17	AVR function selection	0:Invalid 1:Valid all the time 2: Only invalid during deceleration		1	○
<b>F5 Group: Input Terminals Parameters</b>					
F5.00	M1 terminal function	0:Invalid 1:Forward run (FWD) 2:Reverse run (REV)		1	●
F5.01	M2 terminal function	3:3-wire control 4:Forward jog run (FJOG)		2	●

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F5.02	M3 terminal function	5: Reverse jog run (RJOG) 6: Coast to stop 7: Fault reset (RESET) 8: Pause running 9: External fault input N. O. 10: UP Key command 11: DOWN Key command 12: Clear UP/DOWN setting 13: Frequency setting source switch between X and Y 14: Frequency setting source switch between X and (X+ Y) 15: Frequency setting source switch between Y and (X+ Y) 16: Multi-step speed terminal 1 17: Multi-step speed terminal 2 18: Multi-step speed terminal 3 19: Multi-step speed terminal 4 20: Multi-step speed pause 21: Acceleration/ deceleration time selection terminal 1 22: Acceleration/ deceleration time selection terminal 2		7	•



Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F5.03	M4 terminal function	23: Reset simple PLC after pause 24: Simple PLC pause 25: PID pause 26: Swing frequency pause (stop at current frequency) 27: Reset after swing frequency pause (reset to central frequency) 28: Counter reset 29: Reserved 30: Acceleration/ deceleration prohibited 31: Counter triggering 32: Clear UP/DOWN setting temporarily 33: Reserved 34: Counting meter input 35: Counting meter clear up 36: Command source switch 37: Terminal input delay output 38: Reserved		0	●
F5.04 ~ F5.09	Reserved				
F5.10	On/off filter times	1~10		5	○
F5.11	FWD/ REV control mode	0: 2-wire control mode 1 2: 2-wire control mode 2 3: 3-wire control mode 1 4: 3-wire control mode 2		0	●

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F5.12	Frequency change rate when UP/DOWN setting	0.01~50.00Hz/s	0.01Hz/s	0.50Hz/s	○
F5.13	AVI lower limit	0.00V~10.00V	0.01V	0.00V	○
F5.14	AVI lower limit corresponding to setting value	-100.0%~100.0%	0.1%	0.0%	○
F5.15	AVI upper limit	0.00V~10.00V	0.01V	10.00V	○
F5.16	AVI upper limit corresponding to setting value	-100.0%~100.0%	0.1%	100.0%	○
F5.17	AVI input filter time	0.00s~10.00s	0.01s	0.10s	○
F5.18 ~ F5.32	Reserved				
<b>F6 Group: Output Terminals Parameters</b>					
F6.00	MO1 output selection	0:No output 1:Motor forward running 2:Motor reverse running 3:Fault output 4: Frequency detecting level FDT output 5:Frequency reached 6:Running at zero speed 7:Upper limit frequency reached 8:Lower limit frequency reached 9:Frequency setting value less than lower limit frequency		1	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F6.00	MO1 output selection	10:FDT reached 11:Accumulative running time reached 12:PLC cycle completed 13:Pre-alarm when overload 14:User define output 15:Running frequency detection 16:Terminal input delay 17:Inverter stand-by		1	○
F6.01	Reserved			0	○
F6.02	Relay 1 output selection			3	○
F6.03	Reserved			0	○
F6.04	FM output selection	0:Running frequency 1:Setting frequency 2:Running rotation speed 3:Output current 4:Output voltage 5:Reserved 6:Reserved 7:Reserved 8: Analog AVI input value 9: Reserved		0	○
F6.05	FM output lower limit	0.0~100.0%	0.1%	0.0%	○
F6.06	FM lower limit corresponding to output	0.00V~10.00V	0.01V	0.00V	○
F6.07	FM output upper limit	0.0~100.0%	0.1%	100.0%	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F6.08	FM upper limit corresponding to output	0.00V~10.00V	0.01V	10.00V	○
F6.09 ~ F6.13	Reserved				
F6.14	User defined output variability option (EX)	0:Running frequency 1:Setting frequency 2:DC bus voltage 3:Output current 4:Output voltage 5:Sign of start and stop status 6:Sign of control status 7:Counter value 8:Counting meter value 9:Inverter module temperature 10:AVI input value 11:Reserved		0	○
F6.15	Comparison method of user defined output	Units digit: comparison test method 0: Equal (EX==X1) 1: Equal or greater than 2: Equal or less than 3: Interval comparison (X1≤EX≤X2) 4:Units digit test (EX&X1=X2) Tens digit : output method 0 : False value output 1: Real value output		00	○
F6.16	User defined dead interval	0~65535		0	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F6.17	Output comparison value X1	0~65535		0	○
F6.18	Output comparison value X2	0~65535		0	○
<b>F7 Group: Display Interface Parameters</b>					
F7.00	User password	0~9999		0	○
F7.01 ~ F7.03	Reserved				
F7.04	Stop function selection of STOP/RESET key	0:Only valid for keypad setting 1:Valid for both keypad setting and terminals setting 2:Valid for both keypad setting and communication interface setting 3:Valid for all control mode		0	○
F7.05	Reserved				
F7.06	Running status display selection 1	0~0xFFFF BIT0:Running frequency BIT1:Setting frequency BIT2:DC bus voltage BIT3:Output voltage BIT4:Output current BIT5:Running speed BIT6:Linear speed BIT7:Reserved BIT8:Reserved		35	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F7.06	Running status display selection 1	BIT9:PID setting value BIT10:PID feedback value BIT11:Input terminals status BIT12:Output terminals status BIT13:Reserved BIT14:Counter value BIT15:Current step of multi-step speed and PLC		35	○
F7.07	Running status display selection 2	1~0xFFFF BIT0:AVI value BIT1: Reserved BIT2:Reserved BIT3: Motor overload ratio BIT4: Inverter overload ratio BIT5:Running time BIT6:Counting meter value BIT7~BIT15: Reserved		0	○
F7.08	Stop status display selection	0~0xFFFF BIT0: Setting frequency BIT1: DC bus voltage BIT2:Input terminal status BIT3:Output terminal status BIT4:PID setting value BIT5:PID feedback value BIT6:AVI value BIT7:Reserved BIT8:Reserved BIT9: Current step of multi-step speed and PLC		3	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F7.08	Stop status display selection	BIT10:Reserved BIT11:Counting meter value BIT12~BIT15:Reserved		3	○
F7.09	Inverter module temperature	0~100℃	1℃		◎
F7.10	Inverter software version (DSP)				◎
F7.11	Accumulative running time	0~9999h	1hour		◎
F7.12	Inverter software version (MCU)				◎
F7.13	Reserved				
<b>F8 Group: Auxiliary Function Parameters</b>					
F8.00	Jog running frequency	0.00~F0.10	0.01Hz	5.00Hz	○
F8.01	Jog running acceleration time	0.1~3600s	0.1s	Defined by inverter model	○
F8.02	Jog running deceleration time	0.1~3600s	0.1s		○
F8.03	Acceleration time 2	0.1~3600s	0.1s		○
F8.04	Deceleration time 2	0.1~3600s	0.1s		○
F8.05	Acceleration time 3	0.1~3600s	0.1s		○
F8.06	Deceleration time 3	0.1~3600s	0.1s		○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F8.07	Acceleration time 4	0.1~3600s	0.1s	Defined by inverter model	○
F8.08	Deceleration time 4	0.1~3600s	0.1s		○
F8.09	Skip frequency 1	0.00~F0.10	0.01Hz	0.00Hz	○
F8.10	Skip frequency 2	0.00~F0.10	0.01Hz	0.00Hz	○
F8.11	Skip frequency bandwidth	0.00~F0.10	0.01Hz	0.00Hz	○
F8.12	FDT level	0.00~F0.10	0.01Hz	50.00Hz	○
F8.13	FDT lag	0.0~100.0%	0.1%	5.0%	○
F8.14	Detecting range of reached frequency	0.0~100.0% (Maxi. frequency)	0.1%	0.0%	○
F8.15	Braking threshold voltage	115.0~140.0% (standard DC bus voltage)	0.1%	120.0%	○
F8.16	Speed display coefficient	0.1~999.9%	0.1%	100.0%	○
F8.17	Start/stop selection when running time is over	0:Keep running 1:Stop		0	○
F8.18	Running time setting	0~9999h	1h	9999	○
F8.19	Droop control	0.00Hz~10.00Hz	0.01Hz	0.00Hz	○
F8.20	Panel filter time selection	0.00~10.00s	0.01s	0.10s	○



Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F8.21	Output delay time selection	0~9999s	0.1s	0.0s	○
F8.22	Lower limit of frequency detecting	0.00~Maximum frequency	0.01Hz	20.00Hz	○
F8.23	Upper limit of frequency detecting	0.00~Maximum frequency	0.01Hz	40.00Hz	○
F8.24	Reserved				
F8.25	Inverter rated power	0.4~7.5kW	0.1kW	Defined by inverter model	◎
F8.26	Inverter rated current	0.0~17A	0.1A		◎
F8.27	Linear speed display coefficient	0.1~999.9% (linear speed= mechanical speed * F8.27)	0.1%	1.0%	○
F8.28 ~ F8.29	Reserved				
<b>F9 Group: PID parameters</b>					
F9.00	PID setting source	0:Keypad(F9.01) 1:Analog terminal AVI 2:Reserved 3:Communication interface 4:Multi-function digital input terminals		0	○
F9.01	Keypad PID preset	0.0%~100.0%	0.1%	0.0%	●

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F9.02	PID feedback source selection	0:Analog terminal AVI 1:Reserved 2: Reserved 3:Communication interface		0	○
F9.03	PID output characteristic	0: Positive 1: Negative		0	○
F9.04	Proportional gain (Kp)	0.00~100.0	0.01	0.10	○
F9.05	Integral time (Ti)	0.01~10.00s	0.01s	0.10s	○
F9.06	Differential time (Td)	0.00~10.00s	0.01s	0.00s	○
F9.07	Sampling cycle (T)	0.01~100.0s	0.01s	0.10s	○
F9.08	Bias limit of PID control	0.0~100.0%	0.1%	0.0%	○
F9.09	Feedback lost detecting value	0.0~100.0%	0.1%	0.0%	○
F9.10	Feedback lost detecting time	0.0~3600.0s	0.1s	1.0s	○
F9.11	PID sleep function option	0: PID normal working 1: PID sleep		0	○
F9.12	PID sleep detecting delay time	0.0~3600.0s	0.1s	3.0s	○
F9.13	PID wake-up threshold	0.0~100.0%	0.1%	0.0%	○
F9.14	PID wake-up detecting delay time	0.0~3600.0s	0.1s	3.0s	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
F9.15	Lower frequency of PID sleep detecting	0.00Hz~20.00Hz	0.01Hz	10.00Hz	○
F9.16 ~ F9.18	Reserved				
<b>FA Group: Protection and Malfunction Parameters</b>					
FA.00	Motor overload protection	0:Disabled 1:Normal motor with low speed compensation 2:Variable frequency motor without low speed compensation		2	●
FA.01	Motor over load protection	20.0%~120.0% (motor rated current)	0.1%	100.0%	○
FA.02	Threshold of trip-free	70.0%~110.0% (standard bus voltage)	0.1%	80.0%	○
FA.03	Decrease rate of trip-free	0.00Hz~F0.10	0.01Hz	0.00Hz	○
FA.04	Over-voltage stall protection	0:Disabled 1:Enabled		0	○
FA.05	Over-voltage stall protection point	110~150%	1%	120%	○
FA.06	Auto current limiting level	50~200%	1%	160%	○
FA.07	Frequency decrease rate when current limiting	0.00~50.00Hz/s	0.01Hz/s	10.00Hz/s	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
FA.08	Auto current limiting selection	0:Enabled 1: Disabled at constant speed		1	○
FA.09	Fault auto reset times	0~3		0	○
FA.10	Fault auto reset interval	0.1~100.0s	0.1s	1.0s	○
FA.11	Reserved				
FA.12	Reseved				
FA.13	Phase-lack protection of output	0: Disabled 1:Enabled		1	○
FA.14	The second fault before last	0: No fault 1: Inver ter module protection (E001) 2: Over-current when accelerate (E002) 3: Over-current when decelerate (E003)			◎
FA.15	The fault before last	4: Over-current at constant speed (E004) 5: Over-voltage when accelerate (E005) 6: Over-voltage when decelerate (E006) 7: Over-voltage at onstant speed (E007) 8: Hardware overvoltage (E008) 9: Under voltage (E009) 10: Inverter overload (E010)			◎

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
FA.16	The last fault	11: Motor overload (E011) 12: Input Phase Loss (E012) 13: Output Phase Loss (E013)			⊙
FA.17	Running frequency at the last fault	14: Heatsink overheating (E014) 15: External fault (E015)	Hz		⊙
FA.18	Output current at the last fault	16: Communication fault (E016) 17: Reserved 18: Current sensing circuit	A		⊙
FA.19	DC bus voltage at the last fault	fault (E018) 19: Motor autotuning fault (E019) 20: Reserved	V	0.0V	⊙
FA.20	Input terminal status at the last fault	21: Reserved 22: EEPROM fault (E022) 23: Pre-alarm fault when overload (E023)		0	⊙
FA.21	Output terminal status at the last fault	24: PID feedback loss fault (E024) 25: Running time reached (E025) 26: Counting meter reached (FULL)		0	⊙
<b>FB Group: Swing Frequency and Counting Meter Parameters</b>					
FB.00	Swing frequency bandwidth	0.0~100.0% (relative to setting frequency)	0.1%	0.0%	○
FB.01	Skip frequency bandwidth	0.0~50.0% (relative to swing frequency bandwidth)	0.1%	0.0%	○
FB.02	Rising time of swing frequency	0.1~3600.0s	0.1s	5.0s	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
FB.03	Dropping time of swing frequency	0.1~3600.0s	0.1s	5.0s	○
FB.04	Counting meter method	0:Start from zero when power on 1:Start from counting meter of the last time	0.1s	5.0s	○
FB.05	Roller perimeter of counting meter	0~9999cm	1cm	100cm	○
FB.06	Setting value of counting meter	0~9999m	1m	1000m	○
FB.07	Clear meter counting value	0: No operation 1: Clear		0	○
FB.08	Counter value setting	FB.09~9999		0	○
FB.09	Designated counter value	0~FB.08		0	○
FB.10	Reserved				
<b>FC Group: RS485 Communication Parameters</b>					
FC.00	Local address	1~247, 0 refers to the broadcast address		1	○
FC.01	Baud rate selection	0:1200BPS 1:2400BPS 2:4800BPS 3:9600BPS 4:19200BPS 5:38400BPS		3	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
FC.02	Data bit check	0: No check (N, 8, 1) for RTU 1: Even parity check (E, 8, 1) for RTU 2: Odd parity check (O, 8, 1) for RTU 3: No check (N, 8, 2) for RTU 4: Even parity check (E, 8, 2) for RTU 5: Odd parity check (O, 8, 2) for RTU		0	○
FC.03	Communication response delay time	0~200ms	1ms	5ms	○
FC.04	Communication timeout fault time	0.0 (invalid), 0.1~100.0s	0.1s	0.0s	○
FC.05	Dispose of communication timeout fault	0: Alarm and coast to stop 1: No alarm and continue to run 2: No alarm but stop according to F1.05 (only when F0.01= 2) 3: No alarm but stop according to F1.05		1	○
FC.06	Transmission response action	Unit's digit: 0: Response to writing 1: No response to writing Ten's place: 0: Value not saved when power-off 1: Value saved when power-off		0	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
<b>FD Group-Multi-step Speed and Simple PLC Parameters</b>					
FD.00	Simple PLC operation method	0:Stop after operation once time 1:Keep the final value after operation once time 2:Operation in cycles		0	○
FD.01	Memory option of simple PLC when power-off	Retentive Upon Power Off 0: No 1: Yes		0	○
FD.02	Multi- step speed 0	-100~100%	0.1%	0.0%	○
FD.03	0 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.04	Multi- step speed 1	-100~100%	0.1%	0.0%	○
FD.05	1 <sup>st</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.06	Multi- step speed 2	-100~100%	0.1%	0.0%	○
FD.07	2 <sup>nd</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.08	Multi- step speed 3	-100~100%	0.1%	0.0%	○
FD.09	3 <sup>rd</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.10	Multi- step speed 4	-100~100%	0.1%	0.0%	○
FD.11	4 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○



Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
FD.12	Multi- step speed 5	-100~100%	0.1%	0.0%	○
FD.13	5 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.14	Multi- step speed 6	-100~100%	0.1%	0.0%	○
FD.15	6 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.16	Multi- step speed 7	-100~100%	0.1%	0.0%	○
FD.17	7 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.18	Multi- step speed 8	-100~100%	0.1%	0.0%	○
FD.19	8 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.20	Multi- step speed 9	-100~100%	0.1%	0.0%	○
FD.21	9 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.22	Multi- step speed 10	-100~100%	0.1%	0.0%	○
FD.23	10 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.24	Multi- step speed 11	-100~100%	0.1%	0.0%	○
FD.25	11 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.26	Multi- step speed 12	-100~100%	0.1%	0.0%	○

Function Code	Function	Descriptions	Minimum Unit	Factory Setting	Modification Type
FD.27	12 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.28	Multi- step speed 13	-00~100%	0.1%	0.0%	○
FD.29	13 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.30	Multi- step speed 14	-100~100%	0.1%	0.0%	○
FD.31	14 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.32	Multi- step speed 15	-100~100%	0.1%	0.0%	○
FD.33	15 <sup>th</sup> step running time	0.0~6553s(m)	0.1s(m)	0.0s	○
FD.34	Acceleration time of 0 <sup>th</sup> ~7 <sup>th</sup> steps	0~0xFFFF		0	○
FD.35	Acceleration time of 8 <sup>th</sup> ~15 <sup>th</sup> steps	0~0xFFFF		0	○
FD.36	PLC restart method	0: Restart from 1 <sup>st</sup> step 1: Restart from break-off frequency	0	0	○
FD.37	PLC operation time unit	0: second (s) 1: minute (m)		0	○
<b>FE Group: Reserved</b>					
<b>FF Group: Reserved Factory Parameters</b>					

## Chapter 5 Trouble Shooting

### 5.1 Fault and Trouble Shooting

Fault Code	Fault Type	Reason	Solution
E001	IGBT module fault	1: Acceleration time is too short 2: IGBT module damaged 3: Malfunction caused by interference 4: Grounding is not properly	1: Increase acceleration time 2: Ask for support 3: Inspect external equipment and eliminate interference 4: Check grounding wire
E002	Over-current when acceleration	1: Accelerate too fast 2: Input voltage is too low 3: Inverter capacity is too low	1: Increase acceleration time 2: Inspect the input power supply or wiring 3: Select larger capacity inverter
E003	Over-current when deceleration	1: Decelerate too fast 2: Load is too heavy and has large inertia 3: Inverter capacity is too low	1: Increase deceleration time 2: Add suitable braking units 3: Select larger capacity inverter
E004	Over-current at constant running speed	1: Sudden change of load 2: Input voltage is too low 3: Inverter capacity is too low	1: Check the load 2: Inspect the input power supply or wiring 3: Select larger capacity inverter

E005	Over-voltage when acceleration	1: Input voltage abnormal 2: Restart the motor when instantaneous trip-off occurs	1: Inspect input power 2: Avoid prompt restart when trip-off
E006	Over-voltage when deceleration	1: Decelerate too fast 2: Load is too heavy and has large inertia 3: Input voltage abnormal	1: Increase deceleration time 2: Add suitable braking units 3: Inspect input power
E007	Over-voltage at constant running speed	1: Input voltage abnormal 2: Load inertia is too large	1: Install input AC reactor 2: Add suitable braking units
E008	Reserved		
E009	Under voltage of DC bus	Input voltage is too low	Inspect power grid
E010	Inverter overload	1: Accelerate too fast 2: Restart the motor when instantaneous trip-off occurs 3: Input voltage is too low 4: Load is too heavy	1: Increase acceleration time 2: Avoid prompt restart when trip-off 3: Inspect power grid 4: Select larger capacity inverter
E011	Motor overload	1: Input voltage is too low 2: Improper setting of motor rated current 3: Improper motor's overload protection threshold 4: Inverter capacity is too low	1: Inspect voltage of power grid 2: Properly setting of motor rated current 3: Inspect load and boost the torque 4: Select larger capacity inverter

E012	Reserved		
E013	Phase-lack of output side	<ol style="list-style-type: none"> <li>1: There is a broken wire in the output cable</li> <li>2: There is a broken wire in the motor winding.</li> <li>3.: Output terminals are loose</li> </ol>	Check the wiring and installation
E014	Inverter overheat	<ol style="list-style-type: none"> <li>1: Instantaneous over current of inverter</li> <li>2: Output short circuit</li> <li>3: Cooling fans of inverter stop or damaged. Obstruction of ventilation channel</li> <li>4: Ambient temperature is too high</li> <li>5: The cables or terminals are loose</li> <li>6: Power circuit abnormal</li> <li>7: Control PCB board abnormal</li> </ol>	<ol style="list-style-type: none"> <li>1: Refer to over current solutions</li> <li>2: Use the good wire</li> <li>3: Replace cooling fan and clear the ventilation channel</li> <li>4: Decrease the ambient temperature</li> <li>5: Inspect and tighten the wire and terminals</li> <li>6 and 7: Ask for support</li> </ol>
E015	External fault	External fault input terminals take effect	Inspect external equipment
E016	Communication fault	<ol style="list-style-type: none"> <li>1: Improper baud rate setting</li> <li>2: Receive wrong data</li> <li>3: Communication is interrupted for long time</li> </ol>	<ol style="list-style-type: none"> <li>1: Set proper baud rate</li> <li>2: Push STOP/RESET to reset and ask for support</li> <li>3: Check communication devices and cables</li> </ol>
E017	Reserved		

E018	Current detection fault	<p>1: Wires or connectors of control board are loose</p> <p>2: Amplifying circuit abnormal</p> <p>3: Hall sensor is damaged</p> <p>4: Power circuit abnormal</p>	<p>1: Check the wiring and connectors</p> <p>2,3 and 4: Ask for support</p>
E019	Autotuning fault	<p>1: Improper setting of motor rated parameters</p> <p>2: Overtime of autotuning</p> <p>3: Too much error</p>	<p>1: Set rated parameters according to motor nameplate</p> <p>2: Check motor's wiring</p> <p>3: Make motor uncoupled with load and autotune again</p>
E020	Reserved		
E021	Reserved		
E022	EEPROM fault	<p>1: Read/ Write fault of control parameters</p> <p>2: EEPROM damaged</p>	<p>Push STOP/RESET to reset and ask for support</p>
E023	Overload pre-alarm	<p>1: Accelerate too fast</p> <p>2: Restart the motor when instantaneous trip-off occurs</p> <p>3: Input voltage is too low</p> <p>4: Load is too heavy</p>	<p>1: Increase acceleration time</p> <p>2: Avoid prompt restart when trip-off</p> <p>3: Inspect power grid</p> <p>4: Select larger capacity inverter</p> <p>5: Set the suitable parameter of F3.10</p>

E024	PID feedback lost fault	<ol style="list-style-type: none"> <li>1: Sensor disconnect or loose contact</li> <li>2: Detecting time of disconnection is too short</li> <li>3: No feedback signal of system</li> </ol>	<ol style="list-style-type: none"> <li>1: Check sensor installation and connection</li> <li>2: Extend the detecting time of sensor disconnection</li> </ol>
FULL	Counting meter full	<ol style="list-style-type: none"> <li>1: Setting value of counting meter reached</li> <li>2: The value of counting meter gets to 9999m</li> </ol>	Push STOP/RESET key to reset

## 5.2 Common Faults and Solutions

Inverter may have following faults or malfunctions during operation, please refer to the following solutions.

### No display after power on:

- Inspect whether the voltage of power supply is the same as the inverter rated voltage or not with multi-meter. If the power supply has problem, inspect and solve it.
- Inspect whether the three-phase rectify bridge is in good condition or not. If the rectification bridge is burst out, ask for support.

### Power supply air switch trips off when power on:

- Inspect whether the input power supply is grounded or short circuit. Solve this problem.
- Inspect whether the rectify bridge has been burnt or not. If it is damaged, ask for support.

**Motor doesn't run after inverter works:**

- Inspect if there is balanced three-phase output among U, V, W. If yes, then motor could be damaged, or mechanically locked.
- If the output is unbalanced or lost, the inverter drive board or the output module may be damaged, ask for support.

**Inverter displays normally when power on, but switch at the input side trips when running:**

- Inspect whether the output side of inverter is short circuit. If yes, ask for support.
- Inspect whether ground fault exists. If yes, solve it.
- If trip happens occasionally and the distance between motor and inverter is too far, it is recommended to install output AC reactor.
- Inspect whether the output module is burnt or not. If yes, ask for support.



## Chapter 6 Communication Address

F0.00	0
F0.01	1
F0.02	2
F0.03	3
F0.04	4
F0.05	5
F0.06	6
F0.07	7
F0.08	8
F0.09	9
F0.10	10
F0.11	11
F0.12	12
F0.13	13
F0.14	14
F0.15	15
F0.16	16
F0.17	17
F0.18	18
F0.19	19
F0.20	20
F0.21	21
F0.22	22
F0.23	23
F0.24	24
F0.25	25
F1.00	26
F1.01	27
F1.02	28
F1.03	29
F1.04	30
F1.05	31
F1.06	32
F1.07	33
F1.08	34

F1.09	35
F1.10	36
F1.11	37
F1.12	38
F1.13	39
F1.14	40
F1.15	41
F1.16	42
F1.17	43
F1.18	44
F1.19	45
F1.20	46
F1.21	47
F2.00	48
F2.01	49
F2.02	50
F2.03	51
F2.04	52
F2.05	53
F2.06	54
F2.07	55
F2.08	56
F2.09	57
F2.10	58
F2.11	59
F2.12	60
F3.00	61
F3.01	62
F3.02	63
F3.03	64
F3.04	68
F3.05	66
F3.06	67
F3.07	68
F3.08	69

F3.09	70
F3.10	71
F3.11	72
F3.12	73
F4.00	74
F4.01	75
F4.02	76
F4.03	77
F4.04	78
F4.05	79
F4.06	80
F4.07	81
F4.08	82
F4.09	83
F4.10	84
F4.11	85
F4.12	86
F4.13	87
F4.14	88
F4.15	89
F4.16	90
F4.17	91
F5.00	92
F5.01	93
F5.02	94
F5.03	95
F5.04	96
F5.05	97
F5.06	98
F5.07	99
F5.08	100
F5.09	101
F5.10	102
F5.11	103
F5.12	104

F5.13	105
F5.14	106
F5.15	107
F5.16	108
F5.17	109
F5.18	110
F5.19	111
F5.20	112
F5.21	113
F5.22	114
F5.23	115
F5.24	116
F5.25	117
F5.26	118
F5.27	119
F5.28	120
F5.29	121
F5.30	122
F5.31	123
F5.32	124
F6.00	125
F6.01	126
F6.02	127
F6.03	128
F6.04	129
F6.05	130
F6.06	131
F6.07	132
F6.08	133
F6.09	134
F6.10	135
F6.11	136
F6.12	137
F6.13	138
F6.14	139

F6.15	140
F6.16	141
F6.17	142
F6.18	143
F7.00	144
F7.01	145
F7.02	146
F7.03	147
F7.04	148
F7.05	149
F7.06	150
F7.07	151
F7.08	152
F7.09	153
F7.10	154
F7.11	155
F7.12	156
F7.13	157
F8.00	158
F8.01	159
F8.02	160
F8.03	161
F8.04	162
F8.05	163
F8.06	164
F8.07	165
F8.08	166
F8.09	167
F8.10	168
F8.11	169
F8.12	170
F8.13	171
F8.14	172
F8.15	173
F8.16	174
F8.17	175
F8.18	176
F8.19	177

F8.20	178
F8.21	179
F8.22	180
F8.23	181
F8.24	182
F8.25	183
F8.26	184
F8.27	185
F8.28	186
F8.29	187
F9.00	188
F9.01	189
F9.02	190
F9.03	191
F9.04	192
F9.05	193
F9.06	194
F9.07	195
F9.08	196
F9.09	197
F9.10	198
F9.11	199
F9.12	200
F9.13	201
F9.14	202
F9.15	203
F9.16	204
F9.17	205
F9.18	206
FA.00	207
FA.01	208
FA.02	209
FA.03	210
FA.04	211
FA.05	212
FA.06	213
FA.07	214
FA.08	215

FA.09	216
FA.10	217
FA.11	218
FA.12	219
FA.13	220
FA.14	221
FA.15	222
FA.16	223
FA.17	224
FA.18	225
FA.19	226
FA.20	227
FA.21	228
FB.00	229
FB.01	230
FB.02	231
FB.03	232
FB.04	233
FB.05	234
FB.06	235
FB.07	236
FB.08	237
FB.09	238
FB.10	239
FC.00	240
FC.01	241
FC.02	242
FC.03	243
FC.04	244
FC.05	245
FC.06	246
FD.00	247
FD.01	248
FD.02	249
FD.03	250
FD.04	251
FD.05	252
FD.06	253

FD.07	254
FD.08	255
FD.09	256
FD.10	257
FD.11	258
FD.12	259
FD.13	260
FD.14	261
FD.15	262
FD.16	263
FD.17	264
FD.18	265
FD.19	266
FD.20	267
FD.21	268
FD.22	269
FD.23	270
FD.24	271
FD.25	272
FD.26	273
FD.27	274
FD.28	275
FD.29	276
FD.30	277
FD.31	278
FD.32	279
FD.33	280
FD.34	281
FD.35	282
FD.36	283
FD.37	284

**Guangzhou Sanjing Electric CO., LTD.**

TEL: 400-159-0088 [www.saj-electric.com](http://www.saj-electric.com)

ADD: SAJ Innovation Park, No.9, Lizhishan Road, Science City,  
Guangzhou High-tech Zone, Guangdong, P.R.China

**V 1.2**

**Inverter**