210*140mm

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CHZIRI®

ZVF330-M Mini Inverter
Simple User's Manual

ZIRI ELECTRICAL TECHNOLOGY CO.,LTD.

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ZIRI Electrical Technology Co.,Ltd.

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ZVF330 Series Simple User Manual

1. Foreword

Thanks for using ZVF330 Series inverter . The inverter use high quality components, material and adopt the latest DSP control technoloogy . The user manual provide installation ,parameter setting . thourbleshooting ,and other relevant considerations for the users.

In order to ensure proper installation and operation of the inverter. Please read the user manual before installtion . keep it and distribute to the users . For more details . Please visit our website to download the user manual .

The following items for special need to notice:

●Be sure to turn off the power when wiring .

●Electronic components inside the inverter are particularly sensitive to static electricity. So it do not insert foreign objects into the inverter and couldn't touch the main circuit board.

●After cutting off the AC power . before the indicators on the keypads does not light off . which means there have high voltage inside the inverter and is still very dangerous . Do not touch the inner circuit or components .

●Make sure good connection for the ground terminal of the inverter .

●Never connect the output terminal U,V,W to AC power.

2、Product Introduction

2.1 Inspection upon Arrival

This product is guaranteed a high level of quality with strict outgoing inspection,crush proof and shockproof packaging. But this does not preclude damage to the product due to heavy collision or strong extrusion. So it is necessary to unpack the inverter upon arrival and perform these steps:

①Check whether there is a deformed or damaged casing; or any shattered component.

②Check the specific ations label of the inverter and make sure it matches the product part number you've ordered

③Check whether the items in the packing list are in readiness or not If there is any problem with the above-mentioned contents, please contact the supplier or Our Company immediately

2.2 Demonstration of the Model

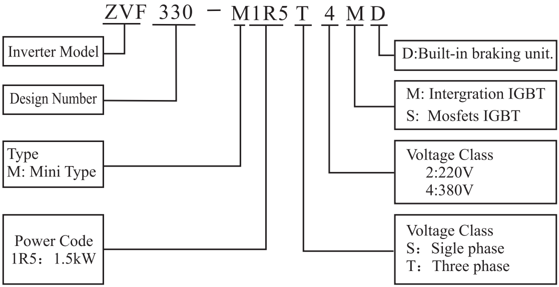

ZVF 330 – M1R5 T 4 M D
Inverter Model
Design Number
Type
M: Mini Type
Power Code
1R5：1.5kW
D:Built-in braking unit.
M: Intergration IGBT
S: Mosfets IGBT
Voltage Class
2:220V
4:380V
Voltage Class
S：Sigle phase
T：Three phase

Fig.2-1 Inverter Model Demonstration

2.3 Specification Label

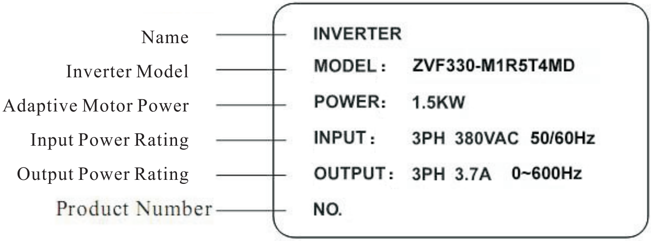

Name
Inverter Model
Adaptive Motor Power
Input Power Rating
Output Power Rating
Product Number
INVERTER
MODEL： ZVF330-M1R5T4MD
POWER: 1.5KW
INPUT： 3PH 380VAC 50/60Hz
OUTPUT： 3PH 3.7A 0~600Hz
NO.

Fig.2-2 Inverter Label

2.4 Type Style

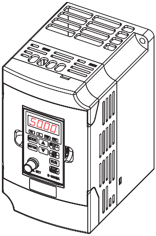


Fig.2-3 Molded Wall-Mounted

2.5 Models and Specifications

Table 2-1 Models and Specifications

Inverter Model (M：Mini Type)	Input Voltage (V)	Rated Output Current (A)	Adaptive Motor Power(kW)
ZVF330-M0R4T2/S2	220	2.4	0.4
ZVF330-M0R7T2/S2	220	4.5	0.75
ZVF330-M1R5T2/S2	220	7.0	1.5
ZVF330-M2R2T2/S2	220	10	2.2
ZVF330-M3R7T2	220	16	3.7
ZVF330-M5R5T2	220	20	5.5
ZVF330-M0R7T4	380	2.5	0.75
ZVF330-M1R5T4	380	3.7	1.5
ZVF330-M2R2T4	380	5.0	2.2
ZVF330-M3R7T4	380	9.0	3.7
ZVF330-M5R5T4	380	13	5.5
ZVF330-M7R5T4	380	17	7.5

3.Inverter Wiring

3.1 Basic Wiring Diagram for Inverter

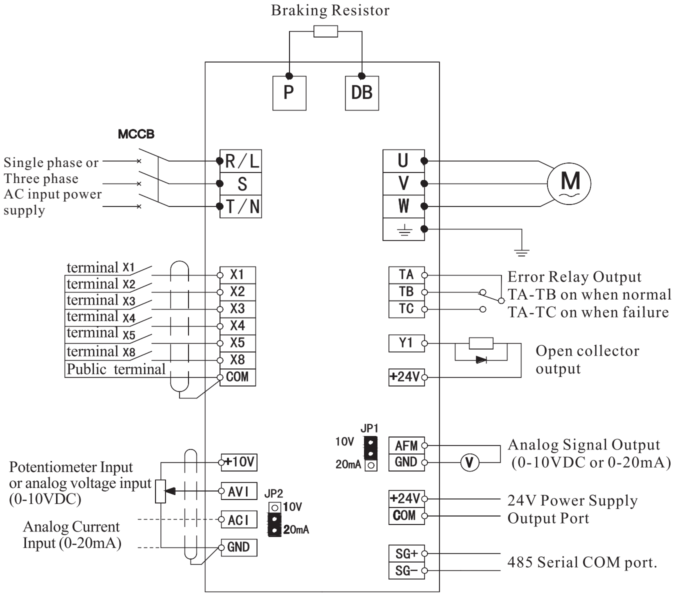

Braking Resistor
P
DB
MCCB
Single phase or Three phase AC input power supply
R/L
S
T/N
U
V
W
M
terminal X1
terminal X2
terminal X3
terminal X4
terminal X5
terminal X8
Public terminal
X1
X2
X3
X4
X5
X8
COM
TA
TB
TC
Error Relay Output
TA-TB on when normal
TA-TC on when failure
Y1
+24V
Open collector output
JP1
10V
20mA
AFM
GND
V
Analog Signal Output (0-10VDC or 0-20mA)
Potentiometer Input or analog voltage input (0-10VDC)
+10V
AVI
JP2
10V
20mA
ACI
GND
Analog Current Input (0-20mA)
+24V
COM
24V Power Supply Output Port
SG+
SG−
485 Serial COM port.

Fig.3-1 Basic Wiring Diagram

TIP

The jumper wire JP2 is used to switch between analog input ACI voltage and current .
The jumper wire JP1 is used to switch between the analog output AFM voltage and current .

3.2 Main Circuit Terminals

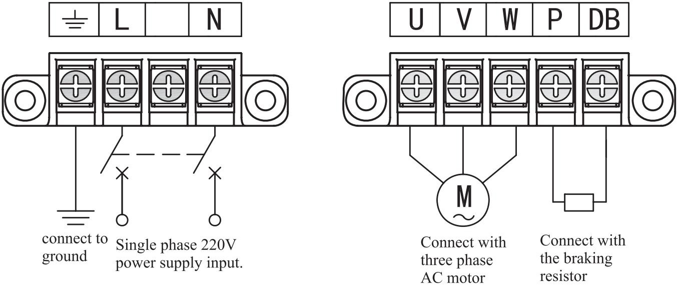

L
N
U
V
W
P
DB
M
connect to ground
Single phase 220V power supply input.
Connect with three phase AC motor
Connect with the braking resistor

Fig.3-2 Diagram 1 for Main Circuit Terminal

Applicable to the model：ZVF330-M0R4S2～M2R2S2

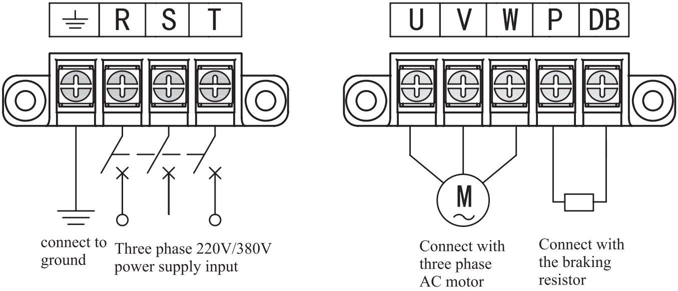

R
S
T
U
V
W
P
DB
M
connect to ground
Three phase 220V/380V power supply input
Connect with three phase AC motor
Connect with the braking resistor

Fig.3-3 Diagram 2 for Main Circuit Terminal

Applicable to the model： ZVF330-M0R4T2～M5R5T2

ZVF330-M0R7T4～M7R5T4

3.3 Description on Control Circuit Terminals

1、Control circuit terminals are shown in the figure 3-4

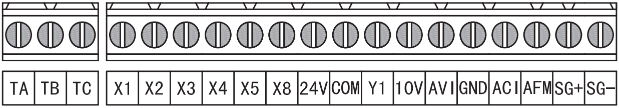


Fig.3-4 Control Circuit Terminal

2、Description on Control Circuit Terminals

Table 3-1 Function Description on Control Circuit Terminal

Type	Terminal Symbol	Function Description	Electrical Specification
Public port	COM	Digital signal public terminal	
Multi-function Input Terminal	X1	Valid only when there is a shortcircuit between Xn (n=1, 2, 3, 4,5, 6,7,8) and COM. The functions can be set by the parameterF5.00~ F5.07separately	INPUT, 0~24 power level, low level valid,5mA
	X2		
	X3		
	X4		
	X5		
	X8		
Multi-function Output Terminal	Y1	Multi-function open collector output is defined ason-off output terminal, whose function is set by the parameter F6.00~F6.01 with reference of COM	OUTPUT,Maximum load CurrentI≤50mA
Analog Input terminal	+10V	External analog preset power supply, connecting GND ,AVI terminal with potentiometer. The frequency can be set as required.	INPUT，10VDC voltage
	AVI	Analog voltage signal input,with reference of GND	INPUT，0～10V DC Voltage
	ACI	Analog current signal input,with reference of GND	INPUT，0～20mA DC Current

Types	Terminal Symbols	Function Description	Electrical Specifications
Public port	GND	Analog signal public port	
Analog Output terminal	AFM	Programmable analog voltage output . Connect with the voltmeter . The corresponding output 0 to the maximum frequency. with reference of GND .	OUTPUT, 0～10V DC Voltage Or 0～20mA DC current
Power Supply Interface	+24V	24VDC Power supply output (control Power supply)	24VDC-100mA
Programmable output terminal	TA	Relay contact output. when normal, TA-TB turns on and TA-TC turns off. when there is action ,TA-TB turns off and TA-TC turns on, This function isset by F6.02	Contact rated value: NO：240VAC-3A NC：240VAC-1A
	TB		
	TC		
Communication Port	SG+	Communication Signal Positive Port	
	SG-	Communication Signal Negative Port	

4.Keypad and its operation

4.1 Keypad Diagram

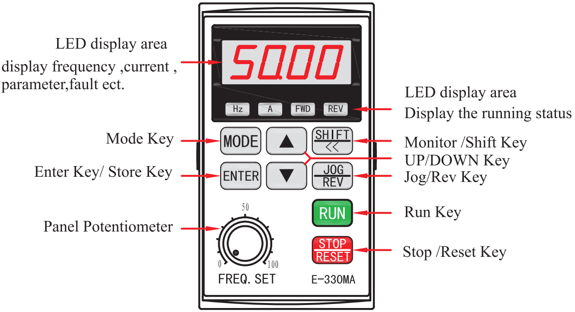
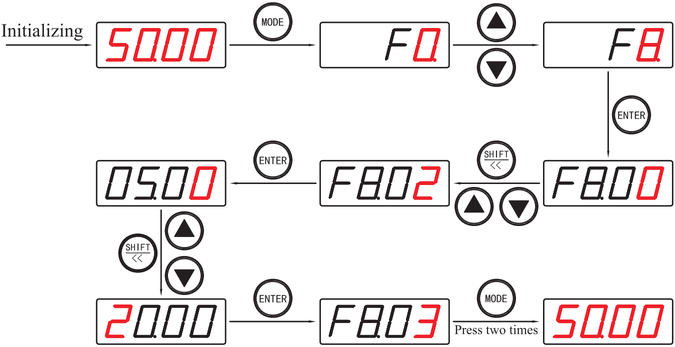

LED display area
display frequency ,current , parameter,fault ect.
5000
Hz
A
FWD
REV
LED display area
Display the running status
Mode Key
MODE
SHIFT <<
Monitor /Shift Key
UP/DOWN Key
Enter Key/ Store Key
ENTER
JOG REV
Jog/Rev Key
RUN
Run Key
Panel Potentiometer
50
0
100
FREQ. SET
STOP RESET
Stop /Reset Key
E-330MA

Fig.4-1 E-330MA operation panel

4.2 User of Operation panel

Modification of parameter value for function(Modify the parameter value for F8.02 JOG function from 5.00hz to 20.00Hz)


Initializing
50.00
MODE
F0
F8
ENTER
F8.00
SHIFT <<
F8.02
ENTER
05.00
SHIFT <<
20.00
ENTER
F8.03
MODE
Press two times
50.00

5.Function Parameters

- The marked "√ " Indicate the setting value of parameter can be modified no matter when the inverter is shut down or running.
- The marked "X" indicates the setting value of parameter can be modified only when the inverter is shut down , and can not be modified when the inverter is running .
- The marked " _" indicates the parameter can be display the parameter can be displayed only and can not be modified .

5.1 F0 Group Basic function

Code	Name	Setting Range	Min.Unit	Factory setting	Running Modification
F0.00	Speed control mode	0：NO PG vector control 1：V/F control 2：Torque control （NO PG Vector Control） 3.Reserve 4.PG vector control	1	1	×
F0.01	Running command channel	0：Keyboad command channel 1：Terminal command channel 2:Communication command channel	1	0	×

5.1 F0 Group Basic Function(Continued)

Code	Name	Setting Range	Min.Unit	Factory setting	Running Modification
F0.02	Keyboard and terminal UP/Down setting	0：Valid , save the parameters when the inverter is powered off 1：Valid .the value can not be saved when the inverter is powered off 2：UP/DOWN setting is invalid 3：Valid during running ,clear when the inverter stops . 4.Valid when F0.03=0.	1	0	√
F0.03	Frequency command selection	0: Keyboard or encoder setting 1: AVI 2: ACI 3: AVI+ ACI 4: keyboard potentiometer setting 5: Water supply PID control setting 6: Remote communication setting 7: External pulse setting 8: AVI(host)±ACI(assit) combination setting 9: Keyboard(host)±ACI(assit) combination setting . 10: Communication(Host) ±ACI (assit)combination setting . 11: Combination 12: Common PID control setting	1	0	√
F0.04	Maximum output frequency .	10.00～600.00Hz	0.01Hz	50.00Hz	×
F0.05	Upper limit frequency	F0.06～F0.04（Max. Frequency）	0.01Hz	50.00Hz	√
F0.06	Lower limit frequency	0.00～F0.05 （Running frequency upper limit）	0.01Hz	0.00Hz	√

5.1 F0 Group Basic Function(Continued)

Code	Name	Setting Range	Min.Unit	Factory setting	Running Modification
F0.07	keypad setting frequency	0.00～F0.04（Max. Frequency）	0.01Hz	50.00Hz	√
F0.08	Acceleration time 1	0.1～3600.0s	0.1s	Depend on the model	√
F0.09	Deceleration time 1	0.1～3600.0s	0.1s	Depend on the model	√
F0.10	Running direction selection	0：Forward (the default running direction) 1：Reverse 2：Forbid reverse	1	0	×
F0.11	Carrier frequency	1.0～15.0kHz	0.1kHz	Depend on the model	√
F0.12	Motor parameters autotuning	0：No action 1：Rotation autotuning 2：Static autotuning	1	0	×
F0.13	Restore parameters	0: No action 1: Restore the default value Restore all parameters FO-Fd to factory setting except F2 group 2: Clear fault records Inverter clear all fault records. 3 Restore the default value to380V/60Hz. 4: Restore the default value to 440V /50Hz. 5: Restore the default value to 440V /60Hz.	1	0	×
F0.14	AVR Fcuntion	0：Disable 1：Enable all the time 2:Disabled during deceleration	1	0	√

5.1 F0 Group Basic Function(Continued)

Code	Name	Setting Range	Min.Unit	Factory setting	Running Modification
F0.15	Combination channel setting	LED Unit's Place: Operand 1 LED Decade: Operand 2 LED Hundreds place: Operand 3 Thousands place： Reserved 0:Keypad Potentiometer 1:Keypad or Encoder 2.Reseve 3:Communication 4:AVI 5:ACI 6: External pulse setting 7: Multi-speed stage	1	- 000	√
F0.16	Combination algorithm Setting	LED Unit's Place: Algorithm 1 LED Decade: Algorithm 2 LED Hundreds、 Thousands place： Reserved. 0：Addition 1：Subtraction 2：The absolute value (Subtraction) 3：Maximized 4: Minimized 5: No calculation If operand is 3.	1	--00	√
F0.17	Parameter Locked	0: Invalid 1: Valid	1	0	×
F0.18	Acc/Dec Mode Selection	0:Linear 1:S Curve	1	0	×
F0.19	Temperature alarm switch	0: Invalid 1: Valid	0	0	√
F0.20	Alarm temperature value				

5.2 F1 Group start and stop control

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F1.00	Start Mode	0：Start directly 1：DC braking and start 2：Speed tracking starting	1	0	×
F1.01	Direct starting frequency	0.00～50.00Hz	0.01Hz	1.50Hz	√
F1.02	Starting frequency maintain time	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	√
F1.05	Stop mode	0：Ramp to stop 1：Coast/Free stop 2: Deceleration stop +Free stop	1	0	√
F1.06	Starting frequency of DC braking at stopping	0.00～F0.04（Max.frequency）	0.01Hz	0.00Hz	√
F1.07	Braking wait time at stopping	0.0～50.0s	0.1s	0.0s	√

5.2 F1 Group start and stop control(Continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F1.08	DC braking current at stopping	0.0～150.0%	0.1%	0.0%	√
F1.09	DC braking time at stopping	0.0～50.0s	0.1s	0.0s	√
F1.10	Dead time of FWD/REV	0.0～3600.0s	0.1s	0.0s	√
F1.11	Terminal running protection selection when power on	0：Command invalid when powered on 1：Command valid when powered on	1	0	√
F1.12	Input/Output terminal polarity selection	0x000～0x7FF	1	0x000	√
F1.13	Power off Restart Mode Selection	0.Disabled 1.Regular Start 2.Start with rotary tracing	1	0	×
F1.14	Power Cut Restart Wait Time	0.0-20.0S	0.1	0.5S	×

5.3 F2 Group Motor parameters

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F2.00	Inverter Type	M Type	1	Depend on model	×
F2.01	Motor rated power	0.4～7.5kW	0.1kW	Depend on model	×
F2.02	Motor rated frequency	0.01～600.00Hz	0.01Hz	50.00Hz	×
F2.03	Motor rated rotate speed	0～36000rpm	1rpm	Depend on model	×
F2.04	Motor rated voltage	0～460V	1V	Depend on model	×
F2.05	Motor rated current	0.1～2000.0A	0.1A	Depend on model	×
F2.06	Motor stator resistance	0.001～65.535Ω	0.001Ω	Depend on model	√
F2.07	Motor rotor resistance	0.001～65.535Ω	0.001Ω	Depend on model	√
F2.08	Motor leackage inductance	0.1～6553.5mH	0.1mH	Depend on model	√
F2.09	Motor mutual inductace	0.1～6553.5mH	0.1mH	Depend on model	√
F2.10	Motor Current without load	0.01～655.35A	0.01A	Depend on model	√

5.4 F3 Group Vector control

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F3.00	Proportional gain 1 of speed loop	0～10000	1	15	√
F3.01	Integration time 1 of speed loop	0.01～100.00s	0.01s	2.00s	√
F3.02	Low switching point frequency	0.00～F3.05	0.01Hz	5.00Hz	√
F3.03	Proportional gain 2 of speed loop	0～10000	1	10	√
F3.04	Integration time 2 of speed loop	0.01～100.00s	0.01s	3.00s	√
F3.05	High switching point frequency	F3.02～F0.04（Max. Frequency）	0.01Hz	10.00Hz	√
F3.06	Slip compensation rate of VC	50～200%	1%	100%	√
F3.07	Torque upper-limit setting	0.0～200.0%（Inverter rated current）	0.1%	150.0%	√
F3.08	Torque dynamic friction coefficient	0.000～1.000	0.001	0.125	√
F3.09	Empty load current compensation coefficients	0.000～9.999	0.001	0.800	√
F3.10	Torque static friction coefficient	0.00-10.00	0.001	2.00	√

5.5 F4 Group V/F Control

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F4.00	V/F Curve Setting	0: Linear V/F Curve 1:Square V/F Curve 2:User Setting V/F Curve 3.1.25power V/F Curve 4.1.7 power V/F Curve 5. 3 power V/F Curve 6. 4 power V/F Curve	1	0	×
F4.01	Torque Boost	0.0%：(auto) 0.1～30.0%	0.1%	0.0%	√
F4.02	Torque boost cutoff	0.0～50.0% （Relative to the rated motor frequency）	0.1%	20.0%	×
F4.03	V/F Slip compensation limit	0.0～100.0%	0.1%	0.0%	√
F4.04	Auto energy saving selection	0：Disable 1：Enabled	1	0	×
F4.05	Reserved				–
F4.06	V/F Frequency Value F1	0-F4.08	0.01Hz	12.5Hz	√
F4.07	V/F Voltage Value V1	0-F4.09	0.01%	25.00%	√
F4.08	V/F Frequency Value F2	F4.06-F4.10	0.01Hz	25.00Hz	√
F4.09	V/F Voltage Value V2	F4.07-F4.11	0.01%	50.00%	√
F4.10	V/F Frequency Value F3	F4.08-F0.05	0.01Hz	37.50Hz	√
F4.11	V/F Voltage Value V3	F4.09-100.00%	0.01%	75.00%	√
F4.12	Low voltage protection selection	0：Enabled 1：Disable	1	0	√

5.6 F5 Group Input terminal

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F5.00	X1 terminal function selection	0：No function 1：Forward running 2：Reverse running 3：3-Wire running control 4：Jog forward control 5：Jog reverse control 6：Coast to stop 7：Reset fault; 8：External fault input 9：Frequency UP command（UP） 10：Frequency DOWN command(DOWN） 11：Clear frequency UP/DOWN 12：Multi-step speed terminal 1 13：Multi-step speed terminal2 14：Multi-step speed terminal 3 15：Multi-step speed terminal 4 16：Acceleration and deceleration time selection 17：PID control pause 18：Traverse frequency pause (stop at the current frequency) 19：Traverse frequency reset (return to the centre frequency). 20：Acceleration and deceleration prohibition 21：Disable torque control 22：Clear frequency acc.and dec. settings 23：DC braking when stopping 24：External pulse input 25：Frequency switch to ACI 26: Frequency switch to AVI 27:Reserved 28: Coast to stop control 29: Running command switch to terminal 30:PLC reset 31: PLC input 32: Count input 33. Frequency switch to the combination 34: Count clear	1	1	×
F5.01	X2 terminal function selection		1	2	×
F5.02	X3 terminal function selection		1	7	×
F5.03	X4 terminal function selection		1	0	×
F5.04	X5 terminal function selection		1	0	×
F5.05	X6 terminal function selection		1	0	×
F5.06	X7 terminal function selection		1	0	×
F5.07	X8 terminal function selection		1	0	×

5.6 F5 Group Input terminal(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F5.08	ON/OFF filter times	1～100	1	5	√
F5.09	Terminal control running mode	0： 2-wire control mode 1 1：2-wire control mode 2 2：3-wire control mode 1 3：3-wire control mode 2	1	0	×
F5.10	UP/DOWN terminal change speed rate	0.01～50.00Hz/s	0.01Hz/s	0.50Hz/s	√
F5.11	AVI lower limit	0.00～10.00V	0.01V	0.00V	√
F5.12	AVI lower limit corresponding setting	-100.0～100.0%	0.1%	0.0%	√
F5.13	AVI upper limit	0.00～10.00V	0.01V	10.00V	√
F5.14	AVI upper limit corresponding setting	-100.0～100.0%	0.1%	100.0%	√
F5.15	AVI input filter time	0.00～10.00s	0.01s	0.10s	√
F5.16	ACI lower limit	0.00～10.00V	0.01V	0.00V	√
F5.17	ACI lower limit corresponding setting	-100.0～100.0%	0.1%	0.0%	√

5.6 F5 Group Input terminal(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F5.18	ACI upper limit	0.00～10.00V	0.01V	10.00V	√
F5.19	ACI upper limit corresponding setting	-100.0～100.0%	0.1%	100.0%	√
F5.20	ACI input filter time	0.00～10.00s	0.01s	0.10s	√
F5.21	Frequency of free stop	0.00~F0.05	0.01Hz	30.00Hz	√
F5.22	pulse input lower limit	0.0～20.0kHz	0.1kHz	0.0kHz	√
F5.23	pulse input lower limit corresponding setting	-100.0～100.0%	0.1%	0.0%	√
F5.24	pulse input upper limit	0.0～20.0kHz	0.1kHz	10.0kHz	√
F5.25	pulse input upper limit corresponding setting	-100.0～100.0%	0.1%	100.0%	√
F5.26	Center voltage hysteresis loop width	0.00～10.00V	0.01V	0.15V	√
F5.27	Cooling Fan control	0:Auto operation : The fan will run when the inverter starts . and will stop when the inverter stops. 1:The cooling fan is running when the inverter energized on .	1	0	×

5.7 F6 Group Output terminal

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F6.00	Y1 output selection	0:No output 1：Forward running 2：Reverse running 3：Fault output 4：Frequency level detection FDT output 5：frequency reached 6：Zero speed running 7：Upper limit frequency reached 8：Lower limit frequency reached 9:Running 10: PLC stage completed 11:PLC cycle completed 12: Overload Pre-alarm 13: Specified count value reached 14:Setting count value reached 15: Reserved 16:Under load output	1	1	√
F6.01	Y2 output selection			2	√
F6.02	Relay output selection			3	√
F6.03	AFM output selection	0：Running frequency 1：Setting frequency 2：Motor speed 3：Output current 4：Output Voltage 5：Output power 6：Output torque 7：Analog AVI input 8：Analog ACI input 9～14：Reserved	1	0	√
F6.04	AFM output lower limit	0.0～100.0%	0.1%	0.0%	√

5.7 F6 Group Output terminal(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F6.05	The lower limit corresponding to the AFM output	0.00～10.00V	0.01V	0.00V	√
F6.06	AFM output upper limit	0.0～100.0%	0.1%	100.0%	√
F6.07	The upper limit corresponding to the AFM output	0.00～10.00V	0.01V	10.00V	√
F6.08	DFM output selection	0～14（same as F6.03）	0	0	√
F6.09	DFM output lower limit	0.0～100.0%	0.1%	0.0%	√
F6.10	The lower limit corresponding to the DFM output	0.0～10.0kHz	0.1kHz	0.0kHz	√
F6.11	DFM output upper limit	0.0～100.0%	0.1%	100.0%	√
F6.12	The lower limit corresponding to the DFM output	0.0～10.0kHz	0.1kHz	10.0kHz	√
F6.13	Y1 delay conduction time	0.1～3600.0s	0.1s	0.0s	√
F6.14	Y1 delay shut off time	0.1～3600.0s	0.1s	0.0s	√

5.7 F6 Group Output terminal(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F6.15	Y2 delay conduction time	0.1～3600.0s	0.1s	0.0s	√
F6.16	Y2 delay shut off time	0.1～3600.0s	0.1s	0.0s	√
F6.17	Relay delay closing time	0.1～3600.0s	0.1s	0.0s	√
F6.18	Relay delay disconnect time	0.1～3600.0s	0.1s	0.0s	√
F6.19	Set the count value	0～9999	1	0	√
F6.20	Specified the count value	0～F6.19	1	0	√
F6.21	The count coefficient	0.01～99.99	0.01	1.00	√
F6.22	Counter working mode selection	LED Unit's Place：Clear mode 0：Auto 1：Manual LED Decade：Count mode 0：Up counter 1：Down counter LED Hundreds、 Thousand place Reserved	1	- - 00	√

5.8 F7 Group Human-machine interface

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F7.00	The user password	0～65535	1	0	√
F7.01	The initial selection when Power on	LED Unit's Place、 Decade: Running status display options 0x00-0x1F LED hundred's place、 Thousand place: Stop status display options 0x00-0x0c	1	0x0000	–
F7.02	Parameter Copy	0:Invalid 1:The parameters will download from the control board to the deypad. 2:The parameters will download from the keypad to the control board (Includes motor parameters) 3:Reserve 4:The parameters will download from the keypad to the control board. (Without motor parameters).			–
F7.03	REV/JOG function selection	0：Jog operation 1：FWD/REV switching 2：Clear UP/DOWN setting 3:Reverse Running 4:Fast search	1	0	×
F7.04	STOP/RESET key stop function selection	0：Valid when keypad control 1：Valid when keypad or terminal control 2：Valid when keypad or communication control 3：Always valid	1	0	√
F7.05	Gauge Range Decimal Place	0-3	1	2	√

5.8 F7 Group Human-machine interface(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F7.06	Running state display parameter selection 1	0~0xFFFF BIT0：Running frequency BIT1：Setting frequency BIT2：DC bus voltage BIT3：Output voltage BIT4：Output current BIT5：running rotation speed BIT6：output power BIT7：output torque BIT8：PID setting BIT9：PID feedback BIT10：Input terminal state BIT11：Output terminal state BIT12：Analog AVI Setting BIT13：Analog ACI Setting BIT14：The current step of multi-step BIT15：Torque setting value	1	0x00FF	√
F7.07	Running state display parameter selection 2	0-0X3 BIT0: Count value BIT1: Linkage proportion coefficient BIT2: PLC average speed BIT3: The Current speed of PLC. BIT4: The current running remaining time of PLC .	1	0x0	√
F7.08	Stop state display parameter selection	1~0x1FFF BIT0: setting frequency BIT1: DC bus voltage BIT2: Input terminal state BIT3: Output terminal state BIT4: PID setting value BIT5: PID feedback value BIT6: Analog AVI value BIT7: Analog ACI value BIT8: The current step of multi-step BIT9: Torque setting value BIT10: Input AC voltage BIT11: Count Value BIT12: Linkage proportion coefficien BIT13: PLC average speed BIT14: The Current speed of PLC BIT15: The current running remaining time of PLC .	1	0x40F	√

5.8 F7 Group Human-machine interface(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F7.09	IGBT module temperature	0～100.0℃	0.1℃		–
F7.10	Software version	0.00～99.9	1.00		–
F7.11	Accumulated running time	0～65535h	1h	0	–
F7.12	Runtime password setting	0～65535	1	0	×
F7.13	Runtime setting	0～65535h	1h	0	×
F7.14	The previous two fault type	0～29 0：No fault （nonE） 1:over current when acceleration （ocA） 2：over current when decleration （ocd） 3：over-current when constant speed running （ocn） 4：Over –voltage when when acceleration（ovA） 5：over-voltage when decleration （ovd） 6：Over-voltage when constant running （ovn） 7：over-voltage when stopping （ovS） 8：DC bus under voltage （Lv）			–

5.8 F7 Group Human-machine interface(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F7.15	The previous fault type	9：Input phase failure （LP） 10：Output short circuit（SC） 11：inverter overheat （OH1） 12：Motor overload（OL1） 13：Inverter overload （OL2） 14：External fault （EF） 15：RS485 communication fault CE-1） 16：Reserved 14：External fault （EF） 15：RS485 communication fault （CE-1） 16：Reserved 17：Current detection fault（ItE） 18：keypad communication fault（CE-4） 19：Autotuning falut （tE） 20：EEPROM fault （EEP） 21：PID feedback fault （PIDE） 22～24：Recerved 25：dCE 26～27：Reserved 28：Output phase failure （SPO） 29：Reserved			–
F7.16	The current fault type				–
F7.17	The current fault running frequency	0.00～600.00Hz	0.01Hz		–
F7.18	The current fault output current	0.1～3000.0A	0.1A		–
F7.19	The current fault DC bus voltage	0～1000V	1V		–
F7.20	The current fault temperature	0-100.00℃	0.1℃		–
F7.21	The current fault input terminal state	0～0xFFFF	1	0	–
F7.22	The current fault output terminal state	0～0xFFFF	1	0	–

5.9 F8 Group-Enhanced function

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F8.00	Acceleration time 2	0.1～3600.0s	0.1s	Depend on the model	√
F8.01	Deceleration time 2	0.1～3600.0s	0.1s	Depend on the model	√
F8.02	Jog running frequency	0.00～F0.04（Max.frequency）	0.01Hz	5.00Hz	√
F8.03	Jog acceleration time	0.1～3600.0s	0.1s	Depend on the model	√
F8.04	Jog deceleration time	0.1～3600.0s	0.1s	Depend on the model	√
F8.05	Skip frequency	0.00～F0.04（Mex.frequency）	0.01Hz	0.00Hz	√
F8.06	Skip frequency bandwidth	0. 00～F0.04（Max.frequency）	0.01Hz	0.00Hz	√
F8.07	Traverse amplitude	0.0～100.0% （Relative to the setting frequency）	0.1%	0.0%	√
F8.08	Jitter frequency bandwidth	0.0～50.0% (Relative to the traverse amplitude)	0.1%	0.0%	√
F8.09	Rise time of traverse	0.1～3600.0s	0.1s	5.0s	√
F8.10	Fall time of traverse	0.1～3600.0s	0.1s	5.0s	√
F8.11	Fault auto reset times	0～9999	0	0	√
F8.12	Fault reset interval time	0.1～100.0s	0.1s	1.0s	√
F8.13	FDT Level	0.00～ F0.04(Max.frequency)	0.01Hz	50.00Hz	√
F8.14	FDT lag	0.0～100.0%（FDT level）	0.1%	5.0%	√
F8.15	Frequency arrival detecting range	0.0～100.0%（Max.frequency）	0.1%	0.0%	√

5.9 F8 Group-Enhanced function(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F8.16	Energy braking threshold voltage	380V Series： 115.0～140.0% （Stardard DC bus voltage）	0.1%	125.0%	√
		220V Series： 115.0～140.0% （Stardard DC bus voltage）	0.1%	115.0%	√
F8.17	Coefficient of rotation speed	0.1～999.9% Actual mechanical speed=120* output frequency *F8.17/Number of poles of motor .	0.1%	100.0%	√
F8.18	Enery braking output starting value	0-100%	1%	0%	√
F8.19	Over load/Under load pre-alarm protection selection	LED bit.overload pre-alarm detection selection 0: No detection 1: Running Detection 2:Constant speed detection LED ten digit. overload pre-alarm action selection 0: No alarm, continue running 1: OL3 alarm, stop running. LED Hundred digit.under load pre-alarm detection selection 0: No detection 1: Under load when Running Detection 2: Under load when Constant speed detection LED Thousand digit .under load pre-alarm action selection 0:No Alarm . Continue running 1: UL4 Alarm .stop running .	1	00	√
F8.20	Overload pre-alram level	0.0～150.0%	0.1%	130.0%	√
F8.21	Overload detection time	0.0～6500.0s	0.1s	5.0s	√
F8.22	The decrease rate of drop control frequency	0.00～15.00%	0.01%	0.00%	√
F8.23	ENA Mode and Fan control	Units digit: 0: ENA OFF. 1: ENA ON Decade: 0: Fan start working 1:Fan couldn't work below 0 ℃	00	00	√
F8.24	The proportional gain of ENA frequency increases	0～100	0.00	0.10	√
F8.25	ENA Integration time	0.01～100	0.01	0.10	√

5.10 F9 Group PID control

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
F9.00	PID given source selection	0：Keypad（set by F9.01） 1：Analog chanel AVI given 2：Analog chanel ACI given 3：Remote communication given 4：Multi-step speed given 5:keyboard direct given	1	0	√
F9.01	Keyboard preset PID given	0.0～F9.16	0.01MPa	0.00MPa	√
F9.02	PID feedback source selection	0：Analog channel AVI feedback 1：Analog channel ACI feedback 2：AVI+ACI feedback 3:Remote communication feedback	1	0	√
F9.03	PID output characteristics selection	0：PID output is positive 1：PID output is negative	1	0	√
F9.04	Proportional gain K（Kp）	0.00～100.00	0.01	1.00	√
F9.05	Integral time Ti（Ti）	0.01～100.00s	0.1s	0.10s	√
F9.06	Differential time Td（Td）	0.00～100.00s	0.1s	0.00s	√
F9.07	Sample cycle T（T）	0.01～100.00s	0.1s	0.10s	√
F9.08	PID control bias limit	0.0～100.0%	0.1%	0.0%	√

5.10 F9 Group PID control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
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	Feedback gain	0～200%	0.1%	100%	√
F9.12	Awakening threshold range	0.0～F9.16	0.01 MPa	0.50 MPa	√
F9.13	Awakening threshold detection time	0.00～360.00s	0.01s	1.00s	√
F9.14	Sleep Frequency	0.00～F0.04 (Maximum output frequency)	0.01	30.00Hz	√
F9.15	Sleep Frequency Detection Time	0.0～360.00s	0.01S	1.00S	√
F9.16	The gauge range	0.00–20.00MPa	0.01 MPa	20.00MPa	√
F9.17	PID preset frequency	0.00～F0.05 （Running frequency upper limit）	0.01Hz	0.00Hz	√
F9.18	Preset frequency maintain time	0.00～360.00s	0.01s	0.00s	√

5.11 FA Multi-step speed control

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.00	PLC Mode	LED Unit's Place：PLC running mode selection 0：invalid 1：single circulation 2：continuous circulation 3：single circulation keep the final value . LED Decade;PLC input selection 0：automatic control 1：Terminal Control LED Hundreds place : PLC breakpoints recovery options 0：Restart from the first stage frequency. 1：Restart from running frequency . which is saved before the sunning is breaking . 2：Restart from setting frequency when running is break. PLC Thousands place: PLC power failure save selection. 0：Non-save after power off 1：save after power off	1	0000	√
FA.01	Multi-step speed 1	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.02	Multi-step speed 2	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.03	Multi-step speed 3	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.04	Multi-step speed 4	F0.06-F0.04	0.01Hz	0.00Hz	√

5.11 FA Multi-step speed control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.05	Multi-step speed 5	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.06	Multi-step speed 6	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.07	Multi-step speed 7	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.08	Multi-step speed 8	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.09	Multi-step speed 9	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.10	Multi-step speed 10	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.11	Multi-step speed 11	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.12	Multi-step speed 12	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.13	Multi-step speed 13	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.14	Multi-step speed 14	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.15	Multi-step speed 15	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.16	Multi-step speed 16	F0.06-F0.04	0.01Hz	0.00Hz	√
FA.17	Unit of PLC Running time	0:Second(s) 1: Minute(min)	1	0	√

5.11 FA Multi-step speed control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.18	Curve selection	0: Mode 1 :Linear Operation 1: Mode 2(No wait time) Gradual Operation	1	0	√
FA.19	Multi-speed direction source selection	0： External Control 1: Control itself	1	0	√
FA.20	PLC Accel/Decel Time 1	0.01～3600.0s	0.1S	20.0S	√
FA.21	PLC Accel/Decel Time 2	0.01～3600.0s	0.1S	20.0S	√
FA.22	PLC Accel/Decel Time 3	0.01～3600.0s	0.1S	20.0S	√
FA.23	PLC Accel/Decel Time 4	0.01～3600.0s	0.1S	20.0S	√
FA.24	PLC Accel/Decel Time 5	0.01～3600.0s	0.1S	20.0S	√
FA.25	PLC Accel/Decel Time 6	0.01～3600.0s	0.1S	20.0S	√
FA.26	PLC Accel/Decel Time 7	0.01～3600.0s	0.1S	20.0S	√
FA.27	PLC Accel/Decel Time 8	0.01～3600.0s	0.1S	20.0S	√
FA.28	Acceleration Selection 1	Unit’s Place: Multi-Speed 1 FA.20-FA.27. Decade ： Multi-Speed 2 FA.20-FA.27 Hundreds place: Multi-Speed 3 FA.20-FA.27 Thousands place： Multi–Speed 4 FA.20–FA.27	1	0x1111	√

5.11 FA Multi-step speed control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.29	Acceleration Selection 2	Unit's Place : Multi-Speed 5 FA.20-FA.27 Decade : Multi-Speed 6 FA.20-FA.27 Hundreds place : Multi-Speed 7 FA.20-FA.27 Thousands place ： Multi-Speed 8 FA.20-FA.27)	1	0x1111	√
FA.30	Acceleration Selection 3	Unit's Place : Multi-Speed 9 FA.20-FA.27 Decade: Multi-Speed10 FA.20-FA.27 Hundreds place : Multi-Speed 11 FA.20-FA.27 Thousands place ： Multi-Speed 12 FA.20-FA.27	1	0x1111	√
FA.31	Acceleration Selection 4	Unit's Place : Multi-Speed 13 FA.20-FA.27 Decade: Multi-Speed 14 FA.20-FA.27 Hundreds place : Multi-Speed 15 FA.20-FA.27 Thousands place ： Multi-Speed 16 FA.20-FA.27	1	0x1111	√
FA.32	Deceleration Selection 1	Unit's Place : Multi-Speed 1 FA.20-FA.27 Decade: Multi-Speed 2 FA.20-FA.27 Hundreds place : Multi-Speed 3 FA.20-FA.27 Thousands place ： Multi-Speed4 FA.20-FA.27	1	0x1111	√

5.11 FA Multi-step speed control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.33	Deceleration Selection 2	Unit's Place : Multi-Speed 5 FA.20-FA.27 Decade: Multi-Speed 6 FA.20-FA.27 Hundreds place : Multi-Speed 7 FA.20-FA.27 Thousands place ： Multi-Speed 8 FA.20-FA.27	1	0x1111	√
FA.34	Deceleration Selection 3	Unit's Place : Multi-Speed 9 FA.20-FA.27 Decade: Multi-Speed 10 FA.20-FA.27 Hundreds place : Multi-Speed 11 FA.20-FA.27 Thousands place ： Multi-Speed12 FA.20-FA.27	1	0x1111	√
FA.35	Deceleration Selection 4	Unit's Place : Multi-Speed 13 FA.20-FA.27 Decade: Multi-Speed 14 FA.20-FA.27 Hundreds place : Multi-Speed 15 FA.20-FA.27 Thousands place ： Multi-Speed 16 FA.20-FA.27	1	0x1111	√
FA.36	Direction Selection 1	Unit's Place : Multi-Speed 1 (0-1) 0:Forward 1:Reverse Decade: Multi-Speed 2 (0-1) 0:Forward 1:Reverse Hundreds place: Multi-Speed 3 (0-1) 0:Forward 1:Reverse Thousands place: Multi-Speed 4 (0-1) 0:Forward 1:Reverse	1	0x0000	√

5.11 FA Multi-step speed control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.37	Direction Selection 2	Unit's Place : Multi-Speed 5 (0-1) 0:Forward 1:Reverse Decade:: Multi-Speed 6 (0-1) 0:Forward 1:Reverse Hundreds place: Multi-Speed 7 (0-1) 0:Forward 1:Reverse Thousands place: Multi-Speed 8 (0-1) 0:Forward 1:Reverse	1	0x0000	√
FA.38	Direction Selection 3	Unit's Place : Multi-Speed 9 (0-1) 0:Forward 1:Reverse Decade:: Multi-Speed 10 (0-1) 0:Forward 1:Reverse Hundreds place: Multi-Speed 11 (0-1) 0:Forward 1:Reverse Thousands place: Multi-Speed 12 (0-1) 0:Forward 1:Reverse	1	0x0000	√
FA.39	Direction Selection 4	Unit's Place : Multi-Speed 13 (0-1) 0:Forward 1:Reverse Decade:: Multi-Speed 14 (0-1) 0:Forward 1:Reverse Hundreds place: Multi-Speed 15 (0-1) 0:Forward 1:Reverse Thousands place: Multi-Speed 16 (0-1) 0:Forward 1:Reverse	1	0x0000	√
FA.40	PLC Running Time 1	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.41	PLC Running Time 2	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.42	PLC Running Time 3	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√

5.11 FA Multi-step speed control(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FA.43	PLC Running Time 4	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.44	PLC Running Time 5	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.45	PLC Running Time 6	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.46	PLC Running Time 7	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.47	PLC Running Time 8	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.48	PLC Running Time 9	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.49	PLC Running Time 10	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.50	PLC Running Time 11	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.51	PLC Running Time 12	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.52	PLC Running Time 13	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.53	PLC Running Time 14	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.54	PLC Running Time 15	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√
FA.55	PLC Running Time 16	0.0-6553.5 S(Min)	0.1S (min)	0.0S (Min)	√

5.12 Fb Protection function

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
Fb.00	Motor overload protection	0：Disable. 1：normal motor （with low speed compensation） 2：variable frequency motor (without low speed compensation)	1	2	×
Fb.01	Motor overload protection current	20.0～120.0% （Motor rated current）	0.1%	100.0%	√
Fb.02	Momentary power drop frequency point	70.0～110.0% （Standard bus voltage ）	0.1%	80.0%	√
Fb.03	Momentary power drop frequency rate of decline	0.00～F0.04 （Max.frequency）	0.01Hz	0.00Hz	√
Fb.04	Over-voltage stall protection	0：Disable 1：Enable	1	1	√
Fb.05	Over-voltage stall protection voltage	110～150%（380V Series ） 110～150%（220V Series ）	1%	120%	√
Fb.06	Auto limiting current threshold	20～200%	1%	G Series:160% P Series:130%	√
Fb.07	Frequency decrease rate when current limiting	0.00～100.00Hz/s	0.01Hz/s	10.00Hz/s	√
Fb.08	Input phase loss protection selection	0：Invalid 1：software detect is valid 2：hardware detect is valid	1	Depends on the model	√
Fb.09	Under load protection current	0-150.0	0.1%	0.0%	√
Fb.10	Under load protection Time	5.0-6500.0	0.1S	5.0s	√

5.13 Fc Group communication parameters

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FC.00	Local address	1～247，0 is broadcast address	1	1	√
FC.01	aud rate selection	0： 1200bps 3：9600bps 1：2400bps 4：19200bps 2：4800bps 5：38400bps	1	4	√
FC.02	Data bit check setting	0：No parity（N，8，1）for RTU 1：Even parity（E，8，1）for RTU 2：Odd parity（O，8，1）for RTU 3：No parity（N，8，2）for RTU 4：Even parity（E，8，2）for RTU 5：Odd parity（O，8，2）for RTU 6：No parity（N，7，1）for ASCII 7：Even parity（E，7，1）for ASCII 8：Odd parity（O，7，1）for ASCII 9：No parity（N，7，2）for ASCII 10：Even parity（E，7，2）for ASCII 11：Odd parity（O，7，2）for ASCII 12：No parity（N，8，1）for ASCII 13：Even parity（E，8，1）for ASCII 14：Odd parity（O，8，1）for ASCII 15：No parity（N，8，2）for ASCII 16：Even parity（E，8，2）for ASCII 17：Odd parity（O，8，2）for ASCII	1	1	√
FC.03	Communication answer delay time	0～200ms	1ms	5ms	√
FC.04	Communication timeout fault time	0.0（Odd parity），0.1～200.0s	0.1s	0.0s	√

5.13 Fc Group communication parameters(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
FC.05	Communication error action	0： Alarm and coast to stop 1：Do not alarm and keep running 2：Do not alarm and stop at the stopping method(only for communication control mode) 3：Do not alarm and stop at the stopping method (for all communication control modes)	1	1	√
FC.06	Response action	0：Response to reading and writing 1：No response to writing	1	0	√
FC.07	Communication parameters address mode	0：group mode 1：Sequential mode	1	0	√
FC.08	Linkage proportion coefficient	0.01～10.00	0.01	1.00	√
FC.09	Linkage proportion source selection	0：Keypad or Encoder Setting （FC.08） 1：Annlog AVI setting 2：Annlog ACI setting 3：Multi-stage setting 4：Keyboard or encoder direct setting	1	0	√

5.14 Fd Group Supplementary function

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
Fd.00	Low-frequency threshold of restraining oscillation	0～500	1	5	√
Fd.01	High-frequency threshold of restraining oscillation	0～500	1	5	√
Fd.02	Amplitude of restraining oscillation	0～100	1	10	√
Fd.03	Threshold high-low frequency of restraining oscillation	0.00～F0.04（Max.frequency）	0.01Hz	12.50Hz	√
Fd.04	Restrain oscillation	0：Enable 1：Diable	1	1	√
Fd.05	PWM Selection	0：PWM mode 1 1：PWM mode 2 2：PWM mode 3	1	0	×
Fd.06	Torque setting mode selection	0：Keypad setting torque (corresponding to Fd.07) 1：1: Analog AVI setting torque (100% compared to 2 times of inverter rated current) 2：2: Analog ACI setting torque (same as 1) 3：3: Analog AVI + ACI setting torque (same） 4：multi-stage torque setting (same 1) 5：Remote communication setting torque .(same as 1)	1	0	√

5.14 Fd Group Supplementary function(continued)

Code	Name	Factory setting	Min.Unit	Factory setting	Running Modification
Fd.07	Keypad torque setting	-200.0～200.0% （the rated current of inverter）	0.1%	50.0%	√
Fd.08	Upper limit frequency source selection	0： Keypad setting upper limit frequency（F0.05） 1：Analog AVI setting upper limit frequency (100% corresponds to the maximum frequency) 2：Analog ACI setting upper limit frequency (same as 1） 3：Multi-step setting of upper limit frequency(same as 1) 4：Remote communication setting upper limit frequency (same as1)	1	0	√
Fd.09	Auto current limiting selection	0： Enabled when constant speed 1：Disabled when constant speed	1	0	√
Fd.10	Lower limit frequency running mode	0： lower limit frequency running 1：zero frequency running and DC braking .	1	0	×
Fd.11	Zero-frequency running braking current	0.0～150.0%	0.1%	0.0%	√

6.Common Fault and Solutions

Table 6-1 common fault and solutions

Fault code	Fault Type	Reason	Solution
ocA	Over-current when acceleration	①Acc time is too short. ②The load inertia is too big. ③The torque increases too fast or V/F curve is abnormal. ④The voltage of the power supply is too low. ⑤The power of inverter is too low. ⑥Restart the rotating motor after sudden power loss.	①Increase Acc time. ②Reduce the load inertia. ③Lower the load lift or adjust V/F curve. ④Check the power of supply line. ⑤Select a bigger capacity inverter. ⑥Set the start mode F1.00 to rotating tracking start
ocd	Over-current when deceleration	①Dec time is too short. ②The inertia of the load inertia is too strong. ③ The power of the inverter is too low.	① Increase dec time. ②Decrease the inertia of the load. ③Select a bigger capacity inverter.
ocn	Over-current when constant speed running	①The input power is abnormal. ②The load is transient. ③The power of the inverter is too low.	①Check the input power ②Decrease the load transients. ③Select a bigger capacity inverter.
ouA	Over-voltage when acceleration	①The input voltage changes abnormally. ②Restart the rotating motor after sudden power loss.	①Check the input power. ②Set the start mode F1.00 to rotating tracking start
oud	Over-voltage when deceleration	①Dec time is too short. ②Energy feedback loads ③The input power is abnormal.	① Increase dec time. ②Select the proper energy-consumption braking components ③ Check the input power.
oun	Over-voltage when constant speed running	①The input power is abnormal. ②Energy feedback loads ③ Voltage detection channel	①Check the input power. ②Install or select the proper energy-consumption braking components ③ Ask for sevice.

Fault code	Fault Type	Reason	Solution
ouS	Over-voltage when stop	①The input power is abnormal.	① Check the input power.
Lu	Under voltage when running	①The input voltage is too low. ②Sudden power loss. ③Input power fault. ④Poor contact of the DC circuit. ⑤Contactor with poor contact.	①Check the input voltage ②Reset the inverter and check the input power. ③Check the input power of the grid. ④Check the main circuit or ask for service. ⑤Check the contactor or ask for service.
LP	Iutput phase loss	① R,S and T phase loss	①Check the input voltage ②Check installtion distribution
SPO	Output phase loss	①U,V and W phase loss or serious asymmetrical three phase of the load	①Check installtion distribution ②Check the motor and cable
SC	IGBT overheat	①There is direct or indirect short circuit between output 3 phase ②Sudden current of the inverter ③ Ambient temperature is too high. ④Air duct jam or fan damage ⑤The DC assistant power supply is damaged. ⑥The control panel is abnormal.	①Check the distribution. ②Refer to the overcurrent solution. ③Low the ambient ④Dredge the wind channel or change the fan. ⑤Ask for service ⑥Ask for service
oH1	Cooler overheat	①Ambient temperature is too high. ②fan damage ③Air duct jam	①Low the ambient ②change the fan. ③Dredge the wind channel
oL1	Motor overload	①The torque increases too fast or V/F curve is abnormal. ②The voltage of the power supply is too low. ③The motor stall or load transients is too strong; ④The setting of motor overload coefficient is improper.	①Lower the value of torque increses or adjust V/F curve. ②Check the power of supply line. ③ Check the load and motor; ④Set the proper coefficient Fb.01.

Fault code	Fault Type	Reason	Solution
oL2	Inverter overload	①The torque increases too fast or V/F curve is abnormal ②Acc. Time is too short. ③The load is too large ④The voltage of the grid is too low	①Lower the value of torque increses or adjust V/F curve ②Increase the Acc. Time ③ Select a large power inverter ④ Check the voltage of the grid
oL3	Inverter overload pre-alarm arrived	① Reaches the overload pre-alarm level, ② Overload pre-alarm value is set improperly	① Check the load ② Set the appropriate Overload pre-alarm value
EF	External fault	①The input terminal of external fault take effect	①Check the external devece
ItE	Current detection fault	①Hoare components is broken or circuit fault ②The DC assistant power fault	①Ask for service ②Ask for service
tE	Autotuning fault	①The motor capacity doesn't comply with the inverter capacity ② The rated parameter of the motor does not set correctly ③The offset between the parameters from autotune and the standard parameter is huge ④Autotune overtime	①Change the inverter mode ②Set the rating parameters according to the nameplate of the motor ③Empty the motor and identify again ④Check the motor wiring and set the parameters
EEP	EEPROM fault	①Error of the write and read of the controlling parameters ②Damage to EEPROM EEPROM	①Ask for service ②Ask for service
PIdE	PID feedback fault	① PID feedback offline PID ②PID feedback source disappear PID	①Check the PID feedback signal wires ②Check PID feedback source
dCE	The main chip fault	①Damage to the main chip	①Seek service

Fault code	Fault Type	Reason	Solution
CE-1	RS485 communication fault	①The baud rate setting is incorrect ②Communication fault ③The communication is off for a long time	①Set proper baud rate ②Check the communication wires. ③Check the communication connection disconnection
CE-4	Keypad communication fault	①The circuit of connecting board and keypad is out of work ②The wires between connecting board and keypad disconnect	①Ask for service ②Check and reconnect it
EAA1	Data upload fault		
EAA2	Data download fault		

7. Outline Dimension& Mounting Dimension

7.1 Inverter outline Dimension& Mounting Dimension

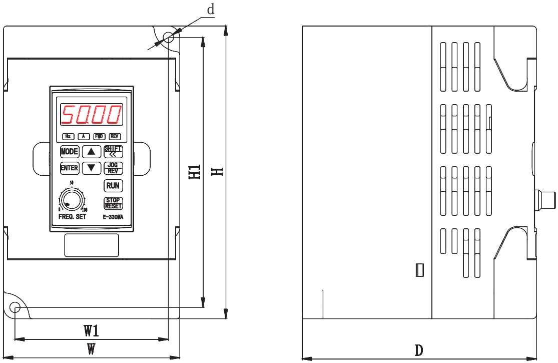

d
50.00
Hz
A
FWD
REV
MODE
SHIFT
ENTER
JOG
REV
RUN
50
0
100
STOP
RESET
FREQ. SET
E-330MA
H1
H
W1
W
D

Fig.7-1 Inverter Outline Dimensional Drawrings

Inverter Model	Power (kW)	Size(MM)						Fig.	Weight (kg)
		H	H1	W	W1	D	d		
ZVF330-M0R4T2/S2	0.4	142	131	85	74	125	Φ5	Fig.7-1	
ZVF330-M0R7T2/S2	0.75								
ZVF330-M1R5T2/S2	1.5	151	140	100	89.5	129	Φ5	Fig.7-1	
ZVF330-M2R2T2/S2	2.2								
ZVF330-M0R7T4	0.75								
ZVF330-M1R5T4	1.5								
ZVF330-M2R2T4	2.2								

7.2 Operator Panel Outline Dimension & Mounting Dimension

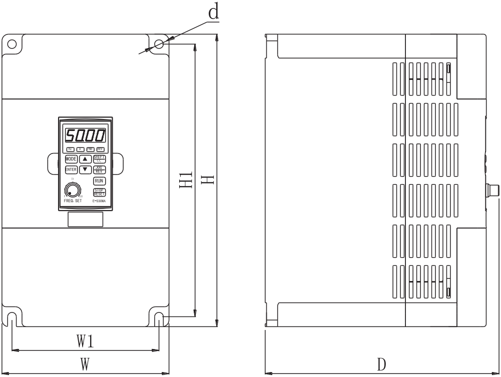

d
50.00
MODE
ENTER
SHIFT
JOG REV
RUN
STOP RESET
FREQ. SET
E-330MA
H1
H
W1
W
D

Fig.7−2 Inverter Outline Dimensional Drawings

Inverter Model	Power (kW)	Dimension(mm)						Fig.	Weight (kg)
		H	H1	W	W1	D	d		
ZVF330-M3R7T4/T2	3.7	220	205	125	110	176	Φ6.5	Fig.7-2	
ZVF330-M5R5T4/T2	5.5								
ZVF330-M7R5T4	7.5								

7.3 Operator Panel Outline Dimension & Mounting Dimension

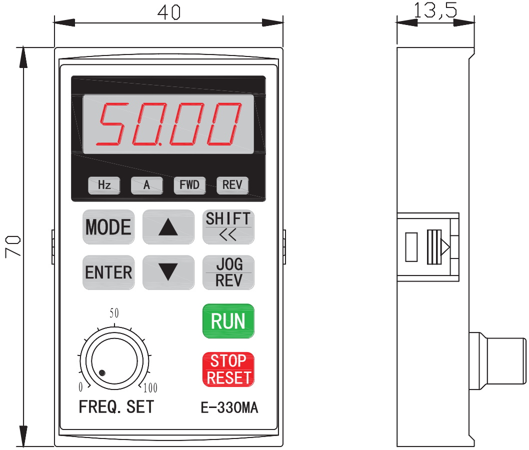

40
13,5
70
50.00
Hz
A
FWD
REV
MODE
SHIFT <<
ENTER
JOG REV
50
0
100
RUN
STOP RESET
FREQ. SET
E-330MA

Fig.7–3 Dimension of E–330 operation panel

TIP

- When E-330 need to install outside of the inverter, it need to add another keypad installation mount .
- Mounting hole size: width 45mm × height 75mm.

8. Quality Warranty

8.1 Inverter Quality warranty

1. In case of a quality failure, the following regulations will be implemented:

- If shipped within one month, the manufacturer shall take responsibility for refund, replacement and repair (except non-standard inverter).

- If shipped within three months, the manufacturer shall take responsibility for replacement and repair.

- If shipped within twelve months, the manufacturer shall take responsibility for repair.

2. If exact shipping date can’t be fixed, the manufacturer shall provide eighteen-months warranty from the date of manufacture. User shall be required to pay for repair service after expiration of warranty period.

- Paid life-long service is available regardless of where and when to use our inverter.

3. In following causes of failure, even within the warranty period, the user is required to pay for repair service:

1) Failure caused by incorrect operation against user manual.
2) Failure caused by using inverter beyond its standard specification requirement.
3) Failure caused by natural disasters such as flood, fire, or abnormal voltage.
4) Failure caused by unauthorized repair and modification.
5) Failure or components ageing caused by improper environment.
6) Payment is not settled as per purchasing agreement.
7) Label, trademark and date of manufacture are not recognizable.
8) Damage caused by improper transport and storage.
9) The details of installation, operation, wiring and maintain can’t be described clearly and truthfully.
10) Refund, replacement and repair service will be provided only when goods is returned to manufacturer and responsibility ownership is confirmed.

4.The manufacturer shall take responsibility only for the above service. If user need more guarantee, please apply for insurance company.

Appendix 4: Inverter User’s Warranty Bill

User’s detail:

Name of Distributor		The date of purchase	
Inverter Model		Serial Number	
Equipment Name		Motor Power	
Date of Installation		Date of Use	

Records of repair

Fault：

Solution：

Date of repair：　　　　The name of reapir worker(Signature)：

Fault：

TIP

- The user should keep this warranty bill.