

FC90 SERIES MANUAL BOOK

1.Preface

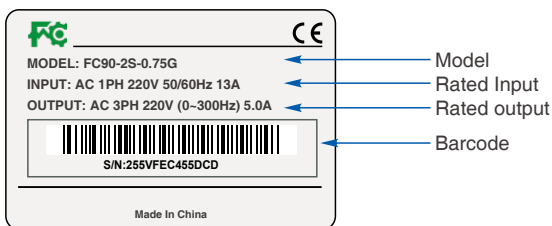
Thank you for choosing FC90 series high-performance, simple frequency inverter.

The actual picture in this operation manual is for convenience of explanation, and may be slightly different from the product. Due to product upgrades, it may also be slightly different. Please refer to the actual product.

Please pay attention to hand over this user manual to the end user, and keep it properly for future inspection and maintenance.

If you have any questions, please contact our company or our agent in time, and we will serve you wholeheartedly.

2.Nameplate



3.Model Description

FC90-2S-0.75G

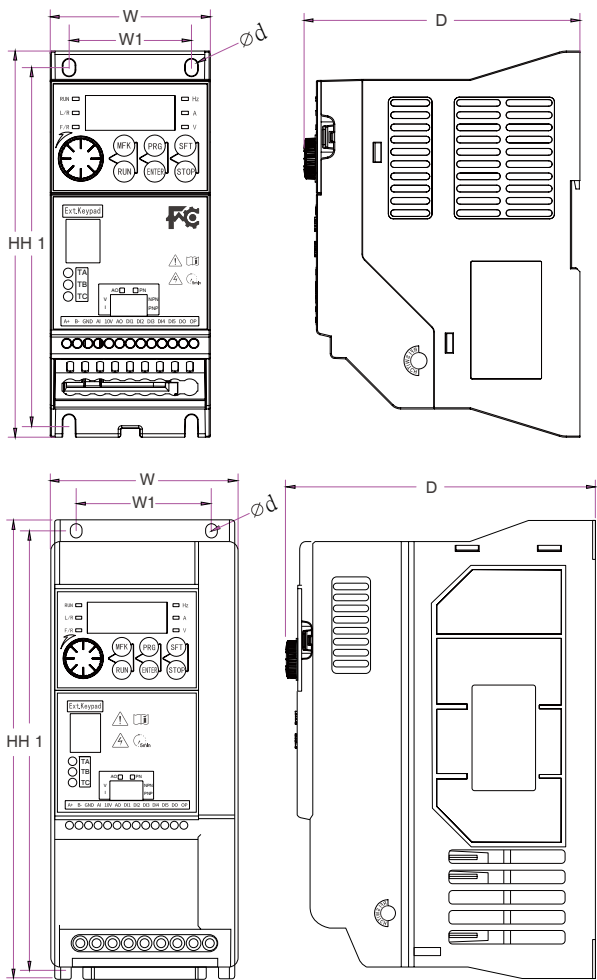
① ② ③

Name	Mark	Description	Detail
AC Drive series	①	FC90	Series Name
Voltage level	②	Voltage level	2S:Single-phase 220V Range:-15% ~20% 4T:Three-phase 380V Range:-15% ~20%
Adaptable power	③	Adaptable motor power(KW)	0.4~5.5KW

4.Model Description

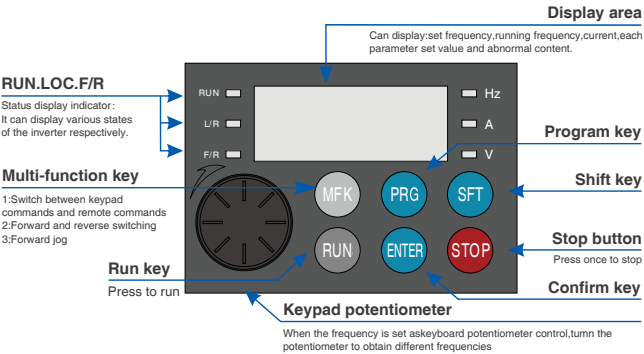
Model	Adaptive Motor (kW)	Input Current (A)	Output Current (A)	Rate Capacity (kVA)
1 Phase Input and 3 Phase Output 220V (-15%~+15% Tolerance)				
FC90-2S-0.4G	0.40	7.00	2.80	1.10
FC90-2S-0.75G	0.75	13.0	5.00	2.00
FC90-2S-1.5G	1.50	20.0	8.00	3.00
FC90-2S-2.2G	2.20	24.0	11.0	4.30
3 Phase Input and 3 Phase Output 380V (-15%~+15% Tolerance)				
FC90-4T-0.75G	0.75	3.40	2.10	1.50
FC90-4T-1.5G	1.50	5.00	3.80	3.00
FC90-4T-2.2G	2.20	5.80	5.10	4.00
FC90-4T-4.0G	4.00	13.0	9.50	6.50
FC90-4T-5.5G	5.50	14.0	13.0	8.50

5.Product outline drawing



W	H	D	W1	H1	kg	ød
FC90-2S-0.4~1.5G FC90-4T-0.75~2.2G						
68mm	164mm	111mm	53mm	151mm	1	M4
FC90-2S-2.2G FC90-4T-4.0~5.5G						
89mm	217mm	146mm	64mm	206mm	2.5	M5.3

6.Keyboard Description



7.Description of the main circuit terminals of the inverter

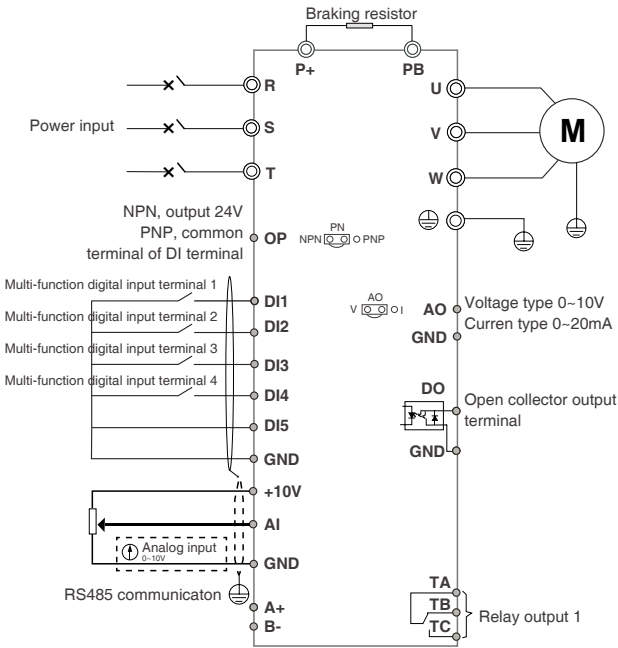
Mark	Name	Description
R、S、T	Power input terminal	R,S : single-phase 220V AC input power supply R,S,T : three-phase 380V AC input power supply
P+、PB	Brake resistor connection terminal	Connect to the braking resistor
U、V、W	VFD output terminal	Connect to a three-phase motor
⊕	Ground terminal	Ground terminal

8.Product Specifications

Electrical Specification	
Input Voltage	Single Phase 200-240V,Three Phase 380~440V. Fluctuate no more than±10%,Imbalance Rate <3%.
Input Frequency	50/60Hz ± 5%
Output Voltage	0V~Input Voltage
Output Frequency	V/F Control: 0~300Hz
Performance	
Overload Capacity	150% rated output current for 1 minute, 180% rated output current for 2 seconds.
Control Method	V/F control
Run Command Setting Method	Operation Panel Setting, External Terminal Setting,Communication Setting.
Speed Setting Method	Digital setting, analog setting, communication setting.
Speed Setting Resolution	Digital setting: 0.01Hz Analog setting: 1% × maximum frequency
Special Feature	
Programmable Input & Output Terminals	Input& Output terminal function can be edited
Process PID Adjustment Function	Built-in process PID module
Simple PLC Function	Built-in simple PLC module, which can realize timing and multi-segment frequency output.
Textile Wobble Function	Built-in textile swing frequency function module
Motor group parameters	Two sets of motor parameters (motor parameter 1 and motor parameter 2), switch between them at will
Protective function	
Automatic Current Limiting Protection	Output current is automatically limited to prevent over-current faults
Overload Pre-Alarm & Alarm	Overload Pre-warning and protection
Output Phase Loss Protection	Output phase loss automatic detection and alarm function
Overvoltage & Overcurrent Stall Control	Automatically limit current and voltage during operation to prevent frequent over-current and over-voltage tripping
Output Short-to-Ground Protection	Effective protection function for output short circuit to ground
Output Phase-to-Phase Short Circuit Protection	Output interphase short circuit effective protection function
Input & Output	
External analog power supply	+10V , load capacity 100mA
Analog Input	AI:Voltage 0~10V
Analog Output	AO:0~10V / 0~20mA(Voltage/current selectable)
Digital Input	DI1~DI5
Digital Output	DO
Relay output	TA/TB/TC: Contact rating 250VAC/3A or 30VDC/1A
MODBUS Communication	A+、 B-
Operation Display	
LED Display	5-digit LED digital Set frequency, output frequency, output voltage, output current, motor speed, output torque, digital terminals, status parameters, programming menu parameters and fault codes etc.
Indicator Light	3 units indicators, 3 status indicators.
Environmental characteristics	
Working Temperature	-10~+40°C, Maximum temperature is 50°C, Air Temperature change is less than 0.5°C/min,40~50°C Derating is required, output current derating 2% for each 1°C.
Storage Environment Temperature	-40~+70°C
Application	Indoor, free from direct sunlight, dust, corrosive gas, flammable gas, oil mist, water vapor, dripping water or salt etc.

Humidity	Less than 95%RH, no condensation
Vibration resistance	3.5m/s ² at 2~9Hz, 10m/s ² at 9~200Hz (IEC60721-3-3).
Protection Degree	IP20
Pollution Level	Class 2 (Dry, non-conductive dust pollution)

9.Wiring of inverter control circuit



Note:

All FC90 series inverters have the same wiring method for the control circuit. The above figure shows the wiring diagram of the three-phase 380V inverter. Terminal ⊕ represents the main circuit terminal, and ○ represents the control circuit terminal

10.Function description of control terminal

Type	Mark	Name	Description
Power supply	10V,GND	Internal 10V power supply	10V reference power supply for analog input, maximum allowable output current 100mA
	OP	Internal 24V power supply	NPN, output 24V PNP, common terminal of DI terminal
Analog Input	AI,GND	Analog Input Terminal 1	AI input voltage range: 0~10V, input impedance 32KΩ
Analog Output	AO,GND	Analog Output 1	Output current range: 0mA~20mA Output voltage/current signal: 0~10V/0~20mA Voltage or current output is determined by jumper selection
Digital Input	DI1-GND	Digital Input 1	Optocoupler isolation, programmable bipolar selectable input signal Input voltage range: 5~30VDC DI1~DI4 input impedance 1kΩ
	DI2-GND	Digital Input 2	
	DI3-GND	Digital Input 3	
	DI4-GND	Digital Input 4	
	DI5-GND	Digital Input 5	
Digital Output	DO-GND	Pulse Output	Output voltage range: 0~30VDC Unipolar open collector output Output current range: 0~50mA
Relay Output	TA-TB	Normally closed terminal	Programmable output, contact capacity: 250VAC/3A or 30VDC/1A
	TA-TC	Normally open terminal	

11.Signal input terminal wiring instructions

Because weak analog voltage signals are particularly susceptible to external interference, shielded cables are generally required, and the wiring distance should be as short as possible, not exceeding 20m. In some occasions where the analog signal is seriously interfered, a filter capacitor or a ferrite magnet should be added on the analog signal source side.

12.Parameter summary table

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
Group C00 Quick Settings Group						
C00.01 C01.01	User password	0~65535	1	0	Real-time changes	1
C00.02 C01.22	Parameters restored to factory values	0: Invalid 1: Restore factory settings 2: Restore motor parameters only	1	0	Downtime Changes	2
C00.03 C01.02	Inverter Model Query	0~255	1	Model confirmation	Monitor only	3
C00.04 C03.05	Motor 1 rated voltage	220V: 0V~240V 400V: 0V~480V	1V	Model confirmation	Downtime Changes	4
C00.05 C03.06	Motor 1 rated Current	Model confirmation	0.1A	Model confirmation	Downtime Changes	5
C00.06 C01.04	Command source control selection	0: Keyboard control 1: Terminal control 2: Communication control	1	0	Downtime Changes	6
C00.07 C01.05	Frequency setting source selection	0: Keyboard digital setting 1: Terminal UP/DOWN setting 2: Analog AI1 setting 3: Reserved 4: Reserved 5: Multi-speed setting 6: MODBUS communication setting 7: PID output setting 8: Advanced combination setting 9: Reserved	1	0	Real-time changes	7
C00.08 C01.06	Advanced combination given target	-C01.09~+C01.09	0.01Hz	-	View only	8
C00.09 C01.09	Maximum operating frequency	0.00Hz~300.0Hz	0.01Hz	50.00Hz	Downtime Changes	9
C00.10 C01.10	Minimum operating frequency	0.00Hz~C01.09	0.01Hz	50.00Hz	Downtime Changes	10
C00.11 C01.12	Acceleration time 1	0.0~6553.5s(m)	0.1	10.0s(m)	Real-time changes	11
C00.12 C01.13	Deceleration time 1	0.0~6553.5s(m)	0.1	10.0s(m)	Real-time changes	12
C00.13 C01.19	Carrier frequency	1~10KHz	1	Model confirmation	Real-time changes	13
C00.14 C07.06	Stop mode selection	0: Deceleration stop 1: Free stop 2: Deceleration stop + DC braking 3: Deceleration stop + Free stop	1	0	Downtime Changes	14
C00.15 C08.07	Communication control command enable	0: invalid 1: valid	1	0	Real-time changes	15
C00.16 C08.08	Communication control commands	0~65535	1	0	Real-time changes	16
C00.17 C09.01	PID Enable	0: invalid 1: valid	1	0	Real-time changes	17
C00.18 C09.02	PID setting source	C00.00~C20.63	0.01	C00.00	Real-time changes	18
C00.19 C09.03	PID feedback source	C00.00~C20.63	0.01	C00.00	Real-time changes	19
C00.20 C09.04	PID output bias source	C00.00~C20.63	0.01	C00.00	Real-time changes	20
C00.21 C09.05	PID Proportional KP	0.000~4.000	0.001	1.000	Real-time changes	21
C00.22 C09.06	PID integral KI	0.000~4.000	0.001	0.500	Real-time changes	22
C00.23 C09.07	PID Differential KD	0.000~4.000	0.001	0.000	Real-time changes	23
C00.24 C09.19	PID setpoint	-100.0%~-+100.0%	0.1%	-	Monitor only	24
C00.25 C09.20	PID feedback value	-100.0%~-+100.0%	0.1%	-	Monitor only	25
C00.26 C09.21	PID error value	-100.0%~-+100.0%	0.1%	-	Monitor only	26
C00.27 C09.22	PID output value	-100.0%~-+100.0%	0.1%	-	Monitor only	27
C00.28 C15.11	Custom word value 1	-100.0%~-100.0%	0.1%	0.0%	Real-time changes	28
C00.29 C20.11	Custom word value 1	Analog input AI display	0.1%	-	Monitor only	29
Group C01 Basic parameter group						
C01.01	User password	0~65535	1	0	Real-time changes	101
C01.02	Inverter Model Query	0~255	1	Model confirmation	Monitor only	102

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C01.03	Motor control mode	0: Open loop V/F control 1: Reserved 2: Reserved	1	0	Downtime Changes	103
C01.04	Command source control selection	0: Keyboard control 1: Terminal control 2: Communication control	1	0	Downtime Changes	104
C01.05	Frequency setting source selection	0: Keyboard digital setting 1: Terminal UP/DOWN setting 2: Analog AI1 setting 3: Reserved 4: Reserved 5: Multi-speed setting 6: MODBUS communication setting 7: PID output setting 8: Advanced combination setting 9: Reserved	1	0	Real-time changes	105
C01.06	Advanced combination given target	-C01.09~+C01.09	0.01Hz	-	View only	106
C01.07	Preset frequency	0: 0.00Hz 1: 50.00Hz 2: Last running frequency 3: Multi-speed 1	1	0	Real-time changes	107
C01.08	Jog operation frequency	0.00Hz~5.00Hz	0.01Hz	5.00Hz	Real-time changes	108
C01.09	Maximum operating frequency	0.00Hz~300.0Hz	0.01Hz	50.00Hz	Downtime Changes	109
C01.10	Minimum operating frequency	0.00Hz~C01.09	0.01Hz	0.00Hz	Downtime Changes	110
C01.11	Reserve	-	-	-	-	111
C01.12	Acceleration time 1	0.0~6553.5s(m)	0.1	10.0s(m)	Real-time changes	112
C01.13	Deceleration time 1	0.0~6553.5s(m)	0.1	10.0s(m)	Real-time changes	113
C01.14	Acceleration and deceleration time unit	0: s (seconds) 1: m (minutes)	1	0	Downtime Changes	114
C01.15	Motor running direction	0: Default direction 1: Reverse direction	1	0	Downtime Changes	115
C01.16	Anti-reverse setting	0: Allow reversal 1: Disable reversal	1	0	Downtime Changes	116
C01.17	Forward and reverse dead time	0.0 s~6553.5s	1	0	Real-time changes	117
C01.18	Output frequency hold	0: not hold 1: hold	1	0	Real-time changes	118
C01.19	Carrier frequency	1~10KHz	1	Model confirmation	Real-time changes	119
C01.20	Carrier frequency automatically adjusts with temperature	0: Invalid 1: Valid	1	1	Real-time changes	120
C01.21	Slip compensation gain	0~1500rpm	1rpm	0rpm	Real-time changes	121
C01.22	Parameters restored to factory values	0: Invalid 1: Restore factory settings 2: Restore motor parameters only	1	0	Downtime Changes	122
Group C02 Keyboard Display Parameters						
C02.21	Keyboard default display parameters	C01.01~C20.63	0.01	C20.02	Real-time changes	201
C02.02	Keyboard Cycle Display Mode	0. The default display is P5.01 selection content 1. The default display is the set frequency in standby mode 2. The default display is the output frequency in operation mode	1	1	Real-time changes	202
C02.03	Parameter display selection	0: Display only the parameters of the shortcut menu 1: Display all the parameters of the menu	1	1	Real-time changes	203
C02.04	Keyboard lock	0. Unlock 1. All keys are locked 2. All keys except RUN and STOP/RESET are LockedNote: Press and hold the ENTER key for 5 seconds to unlock	1	0	Real-time changes	204
C02.05	MF.K key function selection	0. Forward jog 1. Forward/reverse 2. Free stop 3. Reserved	1	0	Real-time changes	205

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C02.06	Reserve	0~2	1	1	Downtime Changes	206
C02.07	Reserve	0~2	1	0	Real-time changes	207
C02.08	Load speed ratio factor	0.1%~1000.0%	0.1%	100%	Real-time changes	208
C02.09	Price per thousand kWh	0.00~9.99 (currency/kWh)	0.01	0	Real-time changes	209
C02.10	Clear energy meter	0: No operation 1: Clear	1	0	Real-time changes	210
C02.11	Main control board software version number	0.00~99.99	0.01	-	View only	211
C02.12	Power board software version number	0.00~99.99	0.01	-	View only	212
C02.13	Keyboard software version number	0.00~99.99	0.01	-	View only	213
C02.14	Reserve	0.00~99.99	0.01	-	View only	214
Group C03 Motor parameter group						
C03.01	Reserve	0~3	1	0	Downtime Changes	301
C03.02	Motor Selection	0: Motor 1 1: Motor 2	1	0	Downtime Changes	302
C03.03	Reserve		-	-	-	303
C03.04	Motor 1 power factor	0.00~1.00	0.01	0.85	Downtime Changes	304
C03.05	Motor 1 rated voltage	220V: 0V~240V 400V: 0V~480V	1V	Model confirmation	Downtime Changes	305
C03.06	Motor 1 Rated current	Model confirmation	0.1A	Model confirmation	Downtime Changes	306
C03.07	Motor 1 Rated frequency	1.00Hz~300.00Hz	0.01Hz	50.00Hz	Downtime Changes	307
C03.08	Motor 1 pole pairs	0~4	1	2	Downtime Changes	308
C03.09	Motor 1 rated speed	0~18000rpm	1rpm	0rpm	Downtime Changes	309
C03.10	Motor 1 stator resistance	0.000Ω ~ 60.000Ω	0.001Ω	0.000Ω	Downtime Changes	310
C03.11	Reserve	-	-	-	-	311
C03.12	Motor 1 leakage inductance	0.00%~50.00%	0.01%	0%	Downtime Changes	312
C03.13	Reserve	-	-	-	-	313
C03.14	Reserve	-	-	-	-	314
C03.15	Reserve	-	-	-	-	315
C03.16	Motor 2 power factor	0.00~1.00	0.01	0.85	Downtime Changes	316
C03.17	Motor 2 rated voltage	220V: 0V~240V 400V: 0V~480V	1V	Model confirmation	Downtime Changes	317
C03.18	Motor 2 rated current	Model confirmation	0.1A	Model confirmation	Downtime Changes	318
C03.19	Motor 2 rated frequency	1.00 Hz~300.0Hz	0.01Hz	50.00Hz	Downtime Changes	319
C03.20	Motor 2 pole pairs	0~4	1	2	Downtime Changes	320
C03.21	Motor 2 rated speed	0~18000rpm	1rpm	0rpm	Downtime Changes	321
C03.22	Motor 2 stator resistance	0.000Ω ~ 60.000Ω	0.001Ω	0.000Ω	Downtime Changes	322
C03.23	Reserve	-	-	-	-	323
C03.24	Reserve	-	-	-	-	324
C03.25	Motor 2 leakage inductance	0.00%~50.00%	0.01%	0%	Downtime Changes	325
Group C04 V/F parameter group						
C04.01	Motor V/F curve setting	0: Multi-point V/F curve 1: 2.0 power curve 2: 1.7 power curve 3: 1.2 power curve	1	0	Real-time changes	401
C04.02	Motor torque boost	0.0%~30.0%(relative to motor rated voltage)	0.1%	Model confirmation	Real-time changes	402
C04.03	Motor torque boost cut-off frequency	0.0%~50.0%(relative to motor rated frequency)	0.1%	50.0%	Real-time changes	403
C04.04	Multi-point V/F frequency value F3	C04.06~Motor rated frequency	0.01Hz	0.00Hz	Downtime Changes	404
C04.05	Multi-point V/F Voltage value V3	C04.07~100.0%(relative to the rated voltage of the motor)	0.1%	0%	Downtime Changes	405

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C04.06	Multi-point V/F frequency value F2	C04.08~C04.04	0.01Hz	0.00Hz	Downtime Changes	406
C04.07	Multi-point V/F Voltage value V2	C04.09~C04.05	0.1%	0%	Downtime Changes	407
C04.08	Multi-point V/F frequency value F1	0.00Hz~C04.06	0.01Hz	0.00Hz	Downtime Changes	408
C04.09	Multi-point V/F Voltage value V1	0.0%~C04.07	0.1%	0%	Downtime Changes	409
C04.10	Motor oscillation suppression factor	0: Invalid 1: Valid	1	0	Downtime Changes	410
C04.11	Automatic energy-saving output	0: Invalid 1: Valid	1	0	Downtime Changes	411
C04.12	Reserve	0~2	1	0	Downtime Changes	412
Group C05 Reserve						
Group C06 Terminal and analog parameter group						
C06.01	Terminal input function level selection	0: DI terminal basic function (0~20) 1: DI terminal advanced function (C00.00~C20.63)	1	0	Real-time changes	601
C06.02	DI1 terminal function selection	0. Running 1. Forward running 2. Reverse running 3. Three-wire type 4. Forward jog 5. Reverse jog 6. Forward/reverse 7. Output up (UP) 8. Output down (DOWN) 9. Inverter disabled 10. Fault reset 11. Command cut to terminal 12. Length count reset 13. Count value reset 14. External fault 15. Multi-speed selection bit 0 16. Multi-speed selection bit 1 17. Multi-speed selection bit 2 18. Multi-speed selection bit 3 19. PLC status reset 20. Reserved	1	1	Downtime Changes	602
C06.03	DI2 terminal function selection		1	2	Downtime Changes	603
C06.04	DI3 terminal function selection		1	4	Downtime Changes	604
C06.05	DI4 terminal function selection		1	5	Downtime Changes	605
C06.06	DI6 terminal function selection		1	10	Downtime Changes	606
C06.07	Reserve		1	9	Downtime Changes	607
C06.08	Reserve		1	15	Downtime Changes	608
C06.09	Reserve		1	16	Downtime Changes	609
C06.10	Reserve		1	17	Downtime Changes	610
C06.11	Reserve		1	18	Downtime Changes	611
C06.12	Relay function level control	0: RLY1, RLY2 basic functions (0~12) 1: RLY1, RLY2 advanced functions (C00.00~C20.63)	1	0	Real-time changes	612
C06.13	Relay function selection	0.Fault output1 Running 2.Frequency reached 3.External fault 4.Undervoltage shutdown 5.Simple PLC completion indication 6.Zero speed running 7.Torque limiting 8.Time reached 9.Overload detection signal 10.PLC cycle operation 11.Brake status display 12.Reverse indication 13.Inverter alarm 14.100% load 15.Sleep 16.Length reached 17.Set count value reached 18.Specified count value reached 19.Frequency setting switched to AI 20.Reserved 21.DI1 terminal status display 22.DI2 terminal status display 23.DI3 terminal status display 24.DI4 terminal status display 25.DI5 terminal status display 26.Reserved 27.Reserved 28.Reserved 29.Reserved 30.Reserved 31.Swing frequency enable indication 32. Brake enable indication 33.PID enable indication 34.PID output hold indication	1	0	Real-time changes	613
C06.14	Reserve		-	-	-	614

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C06.15	DI1 terminal input inversion	0. Not negated 1. Negated	1	0	Real-time changes	615
C06.16	DI2 terminal input inversion	0. Not negated 1. Negated	1	0	Real-time changes	616
C06.17	DI3 terminal input inversion	0. Not negated 1. Negated	1	0	Real-time changes	617
C06.18	DI4 terminal input inversion	0. Not negated 1. Negated	1	0	Real-time changes	618
C06.19	DI5 terminal input inversion	0. Not negated 1. Negated	1	0	Real-time changes	619
C06.20	Reserve	-	-	-	-	620
C06.21	Reserve	-	-	-	-	621
C06.22	Reserve	-	-	-	-	622
C06.23	Reserve	-	-	-	-	623
C06.24	Reserve	-	-	-	-	624
C06.25	Relay output inversion	0. Not negated 1. Negated	1	0	Real-time changes	625
C06.26	Reserve	0. Not negated 1. Negated	1	0	Real-time changes	626
C06.27	DI terminal input drain and source selection	0. (Source) 1. (Drain)	1	0	Downtime Changes	627
C06.28	Three-wire mode control	0. Three-wire mode disabled 1. Three-wire mode 1 2. Three-wire mode 2	1	0	Downtime Changes	628
C06.29	Reserve	-	-	-	-	629
C06.30	Reserve	-	-	-	-	630
C06.31	Reserve	-	-	-	-	631
C06.32	Reserve	-	-	-	-	632
C06.33	Reserve	0.1KHz ~50.0KHz	-	-	-	633
C06.34	Reserve	0~2	-	-	-	634
C06.35	Terminal output function level control	0: Y1, Y2 basic functions (0~8) 1: Reserved	1	0	Real-time changes	635
C06.36	DO function selection	Same as the relay function list above	1	6	Real-time changes	636
C06.37	Reserve		-	-	-	637
C06.38	DO function inversion	0. Not negated 1. Negated	1	0	Real-time changes	638
C06.39	Reserve	0. Not negated 1. Negated	-	-	-	639
C06.40	Reserve	0.1KHz ~50.0KHz	-	-	-	640
C06.41	Reserve	-	-	-	-	641
C06.42	Analog input function level selection	0: Basic functions of C06.44 and C06.49 (0~3) 1: Advanced functions of C06.44 and C06.49 (C00.00~C20.63)	1	0	Real-time changes	642
C06.43	Analog Input AI Mode	0: 0 - 20mA 1: 20 - 0mA 2: 4 - 20mA (disconnection alarm) 3: 20 - 4mA (disconnection alarm) 4: 4 -20mA (disconnection without alarm) 5: 20 - 4mA (disconnection without alarm) 6: 0V~10V	1	6	Downtime Changes	643
C06.44	Analog input AI function selection	0. Analog given frequency 1. Speed limit value (torque operation mode) 2. Torque offset 3. Reserved	1	0	Downtime Changes	644
C06.45	Analog Input AI Bias	-100.0%~100.0%	0.1%	0%	Run Stop	645
C06.46	Analog input AI magnification	0.000 ~20.000	0.001	1	Run Stop	646
C06.47	Analog input AI inversion	0. Not negated 1. Negated	1	0	Run stop	647
C06.48	Analog input AI filter coefficient	0.00s~10.00s	0.01s	0.10s	Run stop	648
C06.49	Reserve	-	-	-	-	649
C06.50	Reserve	-	-	-	-	650
C06.51	Reserve	-	-	-	-	651
C06.52	Reserve	-	-	-	-	652
C06.53	Reserve	-	-	-	-	653
C06.54	Analog output AO function level selection	0: AO basic function (0~11) 1: AO advanced function (C00.00~C20.63)	1	0	Real-time changes	654

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C06.55	Analog output AO function selection	1. Set frequency 2. Torque current 3. Output current	1	0	Real-time changes	655
C06.56	Reserve	4. Motor speed 5. Bus voltage 6. Output voltage 7. AI 8. Reserved 9. Actual length 10. Specified count value 11. Reserved	-	-	-	656
C06.57	Analog AO output magnification	0.000 ~ 20.000	0.001	1	Real-time changes	657
C06.58	Reserve	0.000 ~ 20.000	-	-	-	658
C06.59	Current setting disconnection indication	0: Invalid 1: Valid	1	0	Downtime Changes	659
C06.60	Analog input AI upper limit	0.0%~100.0%	0.1%	100%	Real-time changes	660
C06.61	Analog input AI lower limit	0.0%~P08.20	0.1%	0.0%	Real-time changes	661
C06.62	Reserve	-	-	-	-	662
C06.63	Reserve	-	-	-	-	663
Group C07 Start and stop parameter group						
C07.01	Starting mode selection	0: Direct start 1: Brake first and then start 2: Speed tracking and then start 3: Reserved 4: Reserved	1	0	Downtime Changes	701
C07.02	Starting frequency	0.00 Hz~C01.09	0.01Hz	0.00Hz	Real-time changes	702
C07.03	Starting frequency holding time	0.0s~60.0s	0.1s	0.0s	Real-time changes	703
C07.04	Starting DC braking current	0.0%~300.0%(relative to motor rated current)	0.1%	0%	Real-time changes	704
C07.05	Starting DC braking time	0.0s~60.0s	0.1s	0.0s	Real-time changes	705
C07.06	Stop mode selection	0: Deceleration stop 1: Free stop 2: Deceleration stop + DC braking 3: Deceleration stop stop + Free	1	0	Downtime Changes	706
C07.07	Stop speed	0.00Hz~C01.09	0.01Hz	0.00Hz	Real-time changes	707
C07.08	DC braking start frequency at shutdown	-0.0%~100.0%(relative to the maximum operating frequency)	0.1%	0%	Real-time changes	708
C07.09	DC braking current at shutdown	0.0%~300.0%(relative to motor rated current)	0.1%	0%	Real-time changes	709
C07.10	DC braking time at shutdown	0.00s~60.00s	0.01s	0.00s	Real-time changes	710
C07.11	Dynamic braking enable	0: invalid 1: valid	1	1	Downtime Changes	711
C07.12	Dynamic braking utilization rate	0.0%~100.0%	0.1%	50%	Real-time changes	712
C07.13	Dynamic braking DC voltage value	200V: 350V~390V 400V: 650V~780V	1	200V: 390V 400V: 780V	Downtime Changes	713
C07.14	Power failure restart function enable	0: Invalid 1: Power failure restart function 1 2: Power failure restart function 2	1	0	Downtime Changes	714
C07.15	Power failure restart waiting time	0.0s~60.0s	0.1s	0.0s	Real-time changes	715
C07.16	Acceleration and deceleration modeselection	0: Linear acceleration/ deceleration; 1: S-curve acceleration/ deceleration 1 2: S-curve acceleration/ deceleration 2 3: Special acceleration/ deceleration mode	1	0	Downtime Changes	716
C07.17	S curve start time	0.0%~40.0%	0.1%	20%	Real-time changes	717
C07.18	S curve end time	0.0%~40.0%	0.1%	20%	Real-time changes	718
C07.19	Reserve	-	-	-	-	719
C07.20	Inverter prohibited (operation prohibited)	0: Invalid 1: Valid	1	0	Real-time changes	720

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C07.21	Running	0: Invalid 1: Valid	1	0	Real-time changes	721
C07.22	Three-wire mode enable	0: Invalid 1: Valid	1	0	Real-time changes	722
C07.23	Forward operation	0: Invalid 1: Valid	1	0	Real-time changes	723
C07.24	Reverse operation	0: Invalid 1: Valid	1	0	Real-time changes	724
C07.25	Forward/Reverse	0: Invalid 1: Valid	1	0	Real-time changes	725
C07.26	Forward jog	0: Invalid 1: Valid	1	0	Real-time changes	726
C07.27	Reverse jog	0: Invalid 1: Valid	1	0	Real-time changes	727
C07.28	Reserve	-	-	-	-	728
Group C08 Communication parameter group						
C08.01	Communication protocol selection	0:Modbus 1:Reserve	1	0	Real-time changes	801
C08.02	MODBUS local address	0~247	1	1	Real-time changes	802
C08.03	MODBUS Baud Rate	0. 1200BPS 1. 2400BPS 2. 4800BPS 3. 9600BPS 4. 19200BPS 5. 38400BPS 6. 57600BPS 7. 115200BPS	1	3	Real-time changes	803
C08.04	MODBUS communication data mode	0. No check 8N1,RTU 1. No check 8N 2,RTU2. Odd check 8O1,RTU 3. Even check 8E1,RTU	1	1	Real-time changes	804
C08.05	Local answer delay	0ms~250ms	1ms	2ms	Real-time changes	805
C08.06	Communication timeout fault enable	0: invalid 1: valid	1	0	Real-time changes	806
C08.07	Communication control command enable	0: invalid 1: valid	1	0	Real-time changes	807
C08.08	Communication control commands	0~65535	1	0	Real-time changes	808
Group C09 PID parameter group						
C09.01	PID Enable	0: invalid 1: valid	1	0	Real-time changes	901
C09.02	PID setting source	C00.00~C20.63	0.01	C00.00	Real-time changes	902
C09.03	PID feedback source	C00.00~C20.63	0.01	C00.00	Real-time changes	903
C09.04	PID output bias source	C00.00~C20.63	0.01	C00.00	Real-time changes	904
C09.05	PID Proportional KP	0.000~4.000	0.001	1	Real-time changes	905
C09.06	PID integral KI	0.000~4.000	0.001	0.5	Real-time changes	906
C09.07	PID Differential KD	0.000~4.000	0.001	0.0	Real-time changes	907
C09.08	PID setting inversion	0: Invalid 1: Valid	1	0.0	Real-time changes	908
C09.09	PID feedback inversion	0: Invalid 1: Valid	1	0.0	Real-time changes	909
C09.10	PID setting source conversion time	0.0s ~ 3200.0s	0.1s	0.0s	Real-time changes	910
C09.11	Reserve	-	-	-	-	911
C09.12	PID upper limit	0.0 % ~ 100.0%	0.1%	0%	Real-time changes	912
C09.13	PID lower limit	-100.0% ~+C09.12	0.1%	100%	Real-time changes	913
C09.14	PID output amplification factor	0.000 ~ 4.000	0.001	1	Real-time changes	914
C09.15	PID output target parameter(Not e: PID output value is sent to a certain function code parameter)	C00.00 ~ C20.63	0.01	C00.00	Real-time changes	915
C09.16	PID integral output hold selection	0: Invalid 1: Valid	1	0	Real-time changes	916
C09.17	PID upper and lower limit range selection	0: PID lower limit ≤ PID output display ≤ PID upper limit 1: -PID upper limit ≤ PID error display ≤ PID upper limit	1	0	Real-time changes	917

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C09.18	PID output bias value	-100.0%~+100.0%	0.1%	-	Monitor only	918
C09.19	PID setpoint	-100.0%~+100.0%	0.1%	-	Monitor only	919
C09.20	PID feedback value	-100.0%~+100.0%	0.1%	-	Monitor only	920
C09.21	PID error value	-100.0%~+100.0%	0.1%	-	Monitor only	921
C09.22	PID output value	-100.0%~+100.0%	0.1%	-	Monitor only	922
C09.23	PID output hold status	0: Invalid 1: Valid	1	-	Monitor only	923
C09.24	Sleep Enable	0: Invalid 1: Valid	1	0	Downtime Changes	924
C09.25	Sleep channel selection	C00.00 ~ C20.63	0.01	C20.02	Downtime Changes	925
C09.26	Sleep Threshold	0.00Hz~C01.09 (C09.25 = C20.02) 0.0%~100.0% (C09.25 = other)	0.01Hz 0.1%	0.00Hz 0.0%	Downtime Changes	926
C09.27	Sleep delay time	0.0s~3000.0s	0.1s	30.0s	Downtime Changes	927
C09.28	Wake-up mode	0: The absolute value of the parameter set in the wake-up feedback channel C09.29 is less than the wake-up threshold C09.30 1: The absolute value of the parameter set in the wake-up feedback channel C09.29 is greater than the wake-up threshold C09.30	1	1	Downtime Changes	928
C09.29	Wake-up feedback channel selection	C00.00 ~ C20.63	0.01	C09.20	Downtime Changes	929
C09.30	Wake-up threshold	0.0%~100.0%	0.1%	0%	Downtime Changes	930
C09.31	Wake-up delay time	0.0s~3000.0s	0.1s	0.0s	Downtime Changes	931
C09.32	Reserve	-	-	-	-	932
C09.33	Reserve	-	-	-	-	933
C09.34	Reserve	-	-	-	-	934
Group C10 Protection parameter group						
C10.01	Motor overload protection mode	0: Normal motor protection mode 1: Inverter motor protection mode	1	1	Downtime Changes	1001
C10.02	Motor overload protection factor	0%~(inverter rated current/motor rated current)*100%	1%	100%	Real-time changes	1002
C10.03	Overload pre-alarm selection	0: Invalid 1: Valid	1	1	Downtime Changes	1003
C10.04	Overload warning detection level	80.0%~150.0%	0.1%	130%	Real-time changes	1004
C10.05	Overload pre-alarm detection time	0.0 s~60.0s	0.1s	5.0s	Real-time changes	1005
C10.06	Current limiting factor	0.0%~300.0%(relative to the rated current of the motor)	0.1%	Model confirmation	Real-time changes	1006
C10.07	Current limiting protection mode selection	0: Valid throughout the process 1: Current limiting above base frequency is invalid 2: Rapid increase or decrease current limiting is invalid 3: All of the above are prohibited	1	0	Downtime Changes	1007
C10.08	Overvoltage stall enable	0: Disable 1: Enable Note: It is recommended to install a brake resistor and set	1	1	Downtime Changes	1008
C10.09	Overvoltage stall voltage setting	220V: 350V~370V 400V: 750V~780V	1	220V: 370V 400V: 780V	Downtime Changes	1009
C10.10	Input phase failure delay	0.0s~3000.0s	0.1s	0.1s	Downtime Changes	1010
C10.11	Output phase loss protection selection	0: Phase loss action 1: No action	1	0	Downtime Changes	1011
C10.12	Fault automatic reset times	0: No automatic reset 1~100	1	0	Downtime Changes	1012
C10.13	Fault automatic reset delay	2.0s~20.0s	0.1s	5.0s	Downtime Changes	1013
C10.14	Inverter alarm enable	0: Invalid 1: Valid	1	1	Real-time changes	1014

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C10.15	Terminal external fault enable	0: Invalid 1: Valid	1	0	Real-time changes	1015
C10.16	Terminal fault reset enable	0: Invalid 1: Valid	1	0	Downtime Changes	1016
C10.17	Undervoltage shutdown indication	0: Invalid 1: Valid	1	-	Monitor only	1017
C10.18	Overload detection signal	0: Invalid 1: Valid	1	-	Monitor only	1018
C10.19	Inverter alarm indication	0: Invalid 1: Valid	1	-	Monitor only	1019
C10.20	Normal power-off undervoltage fault prohibition	0: Invalid 1: Valid	1	0	Real-time changes	1020
C10.21	Low DC bus voltage operation	0: Invalid 1: Valid Note: Only valid for 400V models	1	0	Downtime Changes	1021
Group C11 Simple PLC and multi-speed parameter group						
C11.01	Multi speed 1 Note: Communication channel given frequency	-C01.09 ~ +C01.09	0.01Hz	-0.00 Hz	Real-time changes	1101
C11.02	Multi speed 2	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1102
C11.03	Multi speed 3	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1103
C11.04	Multi speed 4	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1104
C11.05	Multi speed 5	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1105
C11.06	Multi speed 6	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1106
C11.07	Multi speed 7	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1107
C11.08	Multi speed 8	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1108
C11.09	Multi speed 9	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1109
C11.10	Multi speed 10	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1110
C11.11	Multi speed 11	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1111
C11.12	Multi speed 12	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1112
C11.13	Multi speed 13	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1113
C11.14	Multi speed 14	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1114
C11.15	Multi speed 15	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1115
C11.16	Multi speed 16	-C01.09 ~ +C01.09	0.01Hz	0.00 Hz	Real-time changes	1116
C11.17	PLC operation mode	0. No action 1. Shutdown after a single cycle 2. Maintain final value after a single cycle 3. Continuous cycle	1	0	Downtime Changes	1117
C11.18	PLC power-off memory selection	0: Invalid 1: Valid	1	1	Downtime Changes	1118
C11.19	PLC restart mode	0. The first stage frequency starts to run 1. The stage frequency at the time of shutdown (or failure) continues to run 2. The operating frequency at the time of shutdown (or failure) continues to run	1	0	Downtime Changes	1119
C11.20	PLC 1st segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1120
C11.21	PLC 1st stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1121
C11.22	PLC 2nd segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1122

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C11.23	PLC 2nd stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1123
C11.24	PLC 3rd segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1124
C11.25	PLC 3rd stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1125
C11.26	PLC 4th segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1126
C11.27	PLC 4th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1127
C11.28	PLC 5th segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1128
C11.29	PLC 5th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1129
C11.30	PLC 6th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1130
C11.31	PLC 6th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1131
C11.32	PLC 7th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1132
C11.33	PLC 7th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1133
C11.34	PLC 8th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1134
C11.35	PLC 8th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1135
C11.36	PLC 9th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1136
C11.37	PLC 9th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1137
C11.38	PLC 10th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1138
C11.39	PLC 10th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1139
C11.40	PLC 11th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1140
C11.41	PLC 11th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1141

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C11.42	PLC 12th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1142
C11.43	PLC 12th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1143
C11.44	PLC 13th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1144
C11.45	PLC 13th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1145
C11.46	PLC 14th segment running time	0.0~ 6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1146
C11.47	PLC 14th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1147
C11.47	PLC 14th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1147
C11.48	PLC 15th segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1148
C11.49	PLC 15th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1149
C11.50	PLC 16th segment running time	0.0~6553.5s	0.1s(h)	0.0s(h)	Real-time changes	1150
C11.51	PLC 16th stage acceleration/ deceleration time selection	0. Acceleration/ deceleration time 1 1. Acceleration/ deceleration time 2 2. Acceleration/ deceleration time 3 3. Acceleration/ deceleration time 4	1	0	Real-time changes	1151
C11.52	PLC run time unitselection	0. s (seconds) 1. H (hours)	1	0	Real-time changes	1152
C11.53	Simple PLC completion instructions	0: PLC operation is not completed 1: PLC operation is completed	1	-	Monitor only	1153
C11.54	PLC cycle operation	0: PLC is not running in a cycle 1: PLC is running in a cycle	1	-	Monitor only	1136
C11.55	PLC memory clear instruction	0: Not cleared 1: Cleared	1	-	Monitor only	1137
Group C12 Auxiliary control parameter group						
C12.01	Jog acceleration time	0.1s~600.0s	0.1s	10.0s	Real-time changes	1201
C12.02	Jog deceleration time	0.1s~600.0s	0.1s	10.0s	Real-time changes	1202
C12.03	Jog and speed tracking restart interval	0.1s~600.0s	0.1s	0.1s	Real-time changes	1203
C12.04	Acceleration time 2	0.0~3600.0	0.1	30	Real-time changes	1204
C12.05	Deceleration time 2	0.0~3600.0	0.1	30	Real-time changes	1205
C12.06	Acceleration time 3	0.0~3600.0	0.1	30	Real-time changes	1206
C12.07	Deceleration time 3	0.0~3600.0	0.1	30	Real-time changes	1207
C12.08	Acceleration time 4	0.0~3600.0	0.1	30	Real-time changes	1208
C12.09	Deceleration time 4	0.0~3600.0	0.1	30	Real-time changes	1209
C12.10	Hop frequency 1	0.00Hz~C01.09	0.01Hz	0.00Hz	Downtime Changes	1210

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C12.11	Hop frequency 2	0.00Hz~C01.09	0.01Hz	0.00Hz	Downtime Changes	1211
C12.12	Hop frequency range	0.00Hz~30.00Hz	0.01Hz	0.00Hz	Downtime Changes	1212
C12.13	Reserve	-	-	-	-	1213
C12.14	Zero speed detection value	0.00Hz~C01.09	0.01Hz	0.50Hz	Real-time changes	1214
C12.15	Frequency arrival detection width	0.00Hz~C01.09	0.01Hz	2.50 Hz	Real-time changes	1215
C12.16	Output frequency detection value DFT setting	0.00Hz~C01.09	0.01Hz	0.00 Hz	Real-time changes	1216
C12.17	Output frequency detection value DFT width	0.00Hz~P01.29	0.01Hz	0.00 Hz	Real-time changes	1217
C12.18	Output frequency detection value DFT status	0: Stop 1: Run	1	-	Monitor only	1218
C12.19	Cooling fan operation mode	0: Fan turns on when starting 1: Turns on automatically with temperature control 2: Turns on continuously after power is turned on	1	0	Real-time changes	1219
C12.20	Inverter status word	0~65535	1	-	Monitor only	1220
C12.21	Set the run time	0s(h)~C12.30	1s(h)	0s(h)	Real-time changes	1221
C12.22	Set running time reached	0: Invalid 1: Valid	1	-	Monitor only	1222
C12.23	Command to cut to terminal	0: Invalid 1: Valid	1	-	Monitor only	1223
C12.24	Continue to run after the keyboard is unplugged	0: Running 1: Stopping	1	0	Downtime changes	1224
C12.25	Whether to restore the default parameters after the keyboard password is removed after power on	0: Do not restore 1: Restore	1	0	Real-time changes	1225
C12.26	Forced DC braking	0: Invalid 1: Valid	1	-	Monitor only	1226
C12.27	Power-off shutdown mode	0: Free stop 1: Deceleration stop	1	0	Downtime changes	1227
C12.28	Accumulated running time reset	0: Invalid 1: Valid	1	0	Real-time changes	1228
C12.29	Set the run time unit	0: hours (h) 1: seconds (s)	1	0	Downtime changes	1229
C12.30	Set a maximum run time	0~60000	1	1000	Downtime changes	1230
Group C13 Reserve						
Group C14 Reserve						
Group C15 Custom variable parameter group						
C15.01	Custom place value 1	0~1	1	0	Real-time changes	1501
C15.02	Custom place value 2	0~1	1	0	Real-time changes	1502
C15.03	Custom place value 3	0~1	1	0	Real-time changes	1503
C15.04	Custom place value 4	0~1	1	0	Real-time changes	1504
C15.05	Custom place value 5	0~1	1	0	Real-time changes	1505
C15.06	Custom place value 6	0~1	1	0	Real-time changes	1506
C15.07	Custom place value 7	0~1	1	0	Real-time changes	1507
C15.08	Custom place value 8	0~1	1	0	Real-time changes	1508
C15.09	Custom place value 9	0~1	1	0	Real-time changes	1509
C15.10	Custom place value 10	0~1	1	0	Real-time changes	1510
C15.11	Custom word value 1	-100.0%~100.0%	0.1%	0%	Real-time changes	1511
C15.12	Custom word value 2	-100.0%~100.0%	0.1%	0%	Real-time changes	1512
C15.13	Custom word value 3	-100.0%~100.0%	0.1%	0%	Real-time changes	1513

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C15.14	Custom word value 4	-100.0%~100.0%	0.1%	0%	Real-time changes	1514
C15.15	Custom word value 5	-100.0%~100.0%	0.1%	0%	Real-time changes	1515
C15.16	Custom word value 6	-300.0%~300.0%	0.1%	0%	Real-time changes	1516
C15.17	Custom word value 7	-300.0%~300.0%	0.1%	0%	Real-time changes	1517
C15.18	Custom word value 8	-300.0%~300.0%	0.1%	0%	Real-time changes	1518
C15.19	Custom word value 9	-300.0%~300.0%	0.1%	0%	Real-time changes	1519
C15.20	Custom word value 10	-300.0%~300.0%	0.1%	0%	Real-time changes	1520
Group C16 Reserve						
Group C17 Brake parameter group						
C17.01	Brake enable	0: Invalid 1: Valid	1	0	Downtime changes	1701
C17.02	Braking current release threshold	0%~200%	1%	50%	Real-time changes	1702
C17.03	Brake application current threshold	0%~200%	1%	10%	Real-time changes	1703
C17.04	Brake release frequency threshold	0.00Hz ~20.00Hz	0.01Hz	1.00Hz	Real-time changes	1704
C17.05	Brake application frequency threshold	0.00Hz ~20.00Hz	0.01Hz	2.00Hz	Real-time changes	1705
C17.06	Running frequency holding time before brake release	0.0s~25.0s	0.1s	1.0s	Real-time changes	1706
C17.07	Running frequency holding time after brake release	0.0s~25.0s	0.1s	1.0s	Real-time changes	1707
C17.08	Brake status display	0: Braking action 1: Braking release	1	-	Monitor only	1708
Group C18 Fault Record Parameter Group						
C18.01	Fault type record 1 (last time)	0~99	1	0	Monitor only	1801
C18.02	Fault type record 2	0~99	1	0	Monitor only	1802
C18.03	Fault type record 3	0~99	1	0	Monitor only	1803
C18.04	Fault type record 4	0~99	1	0	Monitor only	1804
C18.05	Fault type record 5	0~99	1	0	Monitor only	1805
C18.06	Fault type record 6	0~99	1	0	Monitor only	1806
C18.07	Fault type record 7	0~99	1	0	Monitor only	1807
C18.08	Fault type record 8	0~99	1	0	Monitor only	1808
C18.09	Fault type record 9	0~99	1	0	Monitor only	1809
C18.10	Fault type record 10 (Most recent)	0~99	1	0	Monitor only	1810
C18.11	The frequency of the most recent fault	-C01.09~+C01.09	0.01Hz	-	Monitor only	1811
C18.12	Current at the last fault	0.0A~4*motor rated current	0.1A	-	Monitor only	1812
C18.13	Bus voltage at the last fault	Model confirmation	1V	-	Monitor only	1813
C18.14	Input terminal status at the last fault	0~255	1	-	Monitor only	1814
C18.15	Output terminal status at the last fault	0~255	1	-	Monitor only	1815
C18.16	Current fault record	0~99	1	-	Monitor only	1816
Group C19 Swing frequency and fixed length counting parameter group						
C19.01	Swing frequency enable	0: Disable 1: Enable	1	0	Downtime changes	1901
C19.02	Swing center frequency	0.00Hz~C01.09	0.01Hz	0.00Hz	Real-time changes	1902

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C19.03	Swing frequency preset frequency	0.00Hz~C01.09	0.01Hz	0.00Hz	Real-time changes	1903
C19.04	Waiting time for preset frequency of swing frequency	0.0s~3600.0s	0.1s	0.0s	Real-time changes	1904
C19.05	Swing frequency amplitude setting	0.0%~50.0% (relative to the center frequency of the swing frequency)	0.1%	0%	Real-time changes	1905
C19.06	Kick frequency setting	0.0%~50.0% (relative to swing frequency amplitude)	0.1%	0%	Real-time changes	1906
C19.07	Swing frequency cycle	0.1s~1000.0s	0.1s	10.0s	Real-time changes	1907
C19.08	Triangle wave rise time setting	0.0%~100.0% (relative to the swing frequency cycle)	0.1%	50%	Real-time changes	1908
C19.09	Swing frequency pause	0: Invalid 1: Valid	1	0	Real-time changes	1909
C19.10	Number of pulses per unit length	0.1~C19.17	0.1	100.0	Real-time changes	1910
C19.11	Set length	0~C19.16	1	1000	Real-time changes	1911
C19.12	Actual length	0~30000	1	-	Monitor only	1912
C19.13	Length reached	0: Not arrived 1: Arrived	1	-	Monitor only	1913
C19.14	Set the count value	1~C19.18	1	1000	Real-time changes	1914
C19.15	Specifying count value	1~C19.14	1	1000	Real-time changes	1915
C19.16	Set a maximum length	0~30000	1	1000	Downtime changes	1916
C19.17	Upper limit of pulse number per unit length	0.1~3000.0	0.1	100	Downtime changes	1917
C19.18	Set the upper limit of the count value	1~30000	1	1000	Downtime changes	1918
C19.19	Set count value reached	0: Not arrived 1: Arrived	1	-	Monitor only	1919
C19.20	The specified count value has been reached	0: Not arrived 1: Arrived	1	-	Monitor only	1920
C19.21	Length count reset	0: Invalid 1: Valid	1	0	Real-time changes	1921
C19.22	Count value reset	0: Invalid 1: Valid	1	0	Real-time changes	1922
Group C20 Monitoring parameter group						
C20.01	Setting frequency	-C01.09~+C01.09	0.01Hz	-	Monitor only	2001
C20.02	Output frequency	-C01.09~+C01.09	0.01Hz	-	Monitor only	2002
C20.03	Output voltage	0V~Inverter rated voltage	1V	-	Monitor only	2003
C20.04	Bus voltage	200V: 0 to 415V 400V: 0 to 830V	1V	-	Monitor only	2004
C20.05	Output current	0~3*motor rated current	0.1A	-	Monitor only	2005
C20.06	Torque current	±3*motor rated current	0.1A	-	Monitor only	2006
C20.07	Flux current	0~3*motor rated current	0.1A	-	Monitor only	2007
C20.08	Output Output Power	0.0%~300.0%(Relative to the rated power of the motor)	0.1%	-	Monitor only	2008
C20.09	Motor speed	-18000~+18000rpm	1rpm	-	Monitor only	2009
C20.10	Load speed	-18000~+18000rpm	1rpm	-	Monitor only	2010
C20.11	Analog input AI display	0.0%~100.0%	0.1%	-	Monitor only	2011
C20.12	Reserve	-	-	-	Monitor only	2012
C20.13	Analog output AO display	0.0%~100.0%	0.1%	-	Monitor only	2013
C20.14	-	-	-	-	-	2014
C20.15	Analog AI given frequency monitoring	-C01.09~+C01.09	0.01Hz	-	Monitor only	2015

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C20.16	Reserve	-	-	-	Monitor only	2016
C20.17	Keyboard digital given value display	-C01.09~+C01.09	0.01Hz	-	Monitor only	2017
C20.18	Terminal UP/DOWN given value display	-C01.09~+C01.09	0.01Hz	-	Monitor only	2018
C20.19	Multi-speed terminal selection bit 0	0: invalid 1: valid	1	-	Monitor only	2019
C20.20	Multi-speed terminal selection bit 1	0: invalid 1: valid	1	-	Monitor only	2020
C20.21	Multi-speed terminal selection bit 2	0: invalid 1: valid	1	-	Monitor only	2021
C20.22	Multi-speed terminal selection bit 3	0: invalid 1: valid	1	-	Monitor only	2022
C20.23	Current multi-speed value monitoring	1~16	1	-	Monitor only	2023
C20.24	Start-stop command monitoring	0: Stop 1: Run	1	-	Monitor only	2024
C20.25	Frequency arrival status monitoring	0: invalid 1: valid	1	-	Monitor only	2025
C20.26	Zero speed operation	0: invalid 1: valid	1	-	Monitor only	2026
C20.27	Frequency setting is switched to AI	0: invalid 1: valid	1	-	Monitor only	2027
C20.28	Reserve	-	-	-	Monitor only	2028
C20.29	Running time record: year.month	0.000~9.364 years.days	0.001	-	Monitor only	2029
C20.30	Running time record: hours.minutes	0.00~23.59 hours. minutes	0.01	-	Monitor only	2030
C20.31	Energy meter electricity consumption (MWh)	0.0~999.9(MWh)	0.1 (MWh)	-	Monitor only	2031
C20.32	Energy meter power consumption (kWh)	0.0~99.9(kWh)	0.1 (kWh)	-	Monitor only	2032
C20.33	Electricity costs	0~10000 Currency	1	-	Monitor only	2033
C20.34	Radiator temperature	-25℃ ~ 127℃	1℃	-	Monitor only	2034
C20.35	IGBT junction temperature	-25℃ ~200℃	1℃	-	Monitor only	2035
C20.36	Running	0: Invalid 1: Valid	1	0	Monitor only	2036
C20.37	Full load 100%	0: Invalid 1: Valid	1	0	Monitor only	2037
C20.38	Sleeping	0: Invalid 1: Valid	1	0	Monitor only	2038
C20.39	S7 input pulse frequency percentage	-100.0%~100.0%	0.1%	-	Monitor only	2039
C20.40	Reserve	-	-	-	Monitor only	2040
C20.41	DI1 terminal status display	0. Off 1. On	1	0	Monitor only	2041
C20.42	DI2 terminal status display	0. Off 1. On	1	0	Monitor only	2042
C20.43	DI3 terminal status display	0. Off 1. On	1	0	Monitor only	2043
C20.44	DI4 terminal status display	0. Off 1. On	1	0	Monitor only	2044
C20.45	DI5 terminal status display	0. Off 1. On	1	0	Monitor only	2045
C20.46	Reserve	-	-	-	-	2046
C20.47	Reserve	-	-	-	-	2047
C20.48	Reserve	-	-	-	-	2048
C20.49	Reserve	-	-	-	-	2049
C20.50	Reserve	-	-	-	-	2050
C20.51	Relay status display	0. Open 1. Close	1	-	Monitor only	2051
C20.52	Reserve	-	-	-	-	2052
C20.53	DO status display	0. Low level 1. High level	1	-	Monitor only	2053
C20.54	Reserve	-	-	-	-	2054

Code	Name	Setting Range	Minimum Unit	Default Value	Modification Method	DEC
C20.55	Reverse Indication	0: Invalid 1: Valid	1	-	Monitor only	2055
C20.56	Acceleration rate selection bit 0	0: Invalid 1: Valid	1	-	Monitor only	2056
C20.57	Acceleration rate selection bit 1	0: Invalid 1: Valid	1	-	Monitor only	2057
C20.58	Deceleration rate selection bit 0	0: Invalid 1: Valid	1	-	Monitor only	2058
C20.59	Deceleration rate selection bit 1	0: Invalid 1: Valid	1	-	Monitor only	2059
C20.60	Jog operation selection	0: Invalid 1: Valid	1	-	Monitor only	2060
C20.61	Fault output	0: No fault 1: Fault	1	-	Monitor only	2061
C20.63	Acceleration rate selection	1: Acceleration rate 1 is valid 2: Acceleration rate 2 is valid 3: Acceleration rate 3 is valid 4: Acceleration rate 4 is valid	1	-	Monitor only	2062
C20.64	Deceleration rate selection	1: Deceleration rate 1 is valid 2: Deceleration rate 2 is valid 3: Deceleration rate 3 is valid 4: Deceleration rate 4 is valid	1	-	Monitor only	2063
Group C21 Reserve						
C21.01	Reserve	Reserve	-	-	Monitor only	
Group C22 Reserve						
C22.01	Reserve	-	-	-	-	

13.Fault alarm and countermeasures

Fault name	Error code	Cause of issue	Troubleshooting
Standby undervoltage	P0FF	1. The power supply is too low 2. The power supply is turned off in standby mode and the undervoltage indicator is turned off	1. Make sure the power supply voltage is normal 2. Normal power-off process, no need to pay attention
IGBT overcurrent	Er01	1. DSP is subject to strong interference 2. Output short circuit 3. The inverter is started during the rotation of the motor, causing overcurrent 4. Internal fault of the machine	1. Eliminate interference factors 2. Check the output line for short circuit 3. Make sure the motor is stationary before starting 4. Seek manufacturer service
Machine overpressure	Er07	1. Sudden load change 2. High grid voltage 3. Inertial load, too short deceleration time 4. Internal machine failure	1. Avoid sudden load changes 2. Check the grid voltage 3. Increase the deceleration time or install a brake resistor 4. Seek manufacturer service
Running undervoltage	Er09	1. Power outage during operation 2. Low grid voltage 3. Internal buffer relay does not energize 4. Internal machine fault	1. Reset the fault 2. Check the grid voltage 3. Seek manufacturer service 4. Seek manufacturer service
Motor overload	Er10	1. Overload or stall 2. The inverter is too small 3. The grid voltage is too low 4. The VF curve is incorrectly set 5. The motor overload protection factor is incorrectly set	1. Reduce the load and check the motor and mechanical conditions 2. Select a higher power model 3. Check the grid voltage 4. Modify the VF curve or VF torque boost value 5. Check and correctly set the motor overload protection factor
Motor overheating	Er11	1. The motor is blocked or the motor heat dissipation is poor 2. The motor overload protection factor is set incorrectly	1. Check the motor condition 2. Check and correctly set the motor overload protection factor

Fault name	Error code	Cause of issue	Troubleshooting
Input phase loss	Er12	1. The three-phase power input is missing a phase 2. The driver board is abnormal	1. Check whether the input three- phase power supply is missing a phase 2. Seek manufacturer service
Output phase loss	Er13	1. The inverter output to the motor line is abnormal 2. The three-phase output is unbalanced 3. The machine has an internal fault	1. Check whether the three-phase line of the motor is missing a phase 2. Check whether the three-phase winding of the motor is normal 3. Seek manufacturer service
IGBT heat sink overheating	Er14	1. The ambient temperature is too high 2. The fan is damaged 3. The inverter air duct is blocked 4. There is an abnormality inside the machine	1. Find a way to lower the ambient temperature of the machine 2. Replace the fan 3. Clean foreign matter from the inverter air duct 4. Seek manufacturer service
External fault	Er15	1. External multi-function terminal input fault signal action	1. Reset the operation or check whether the external device is abnormal
Communication fail	Er16	1. The host computer is working abnormally 2. The communication line is abnormal 3. The communication line is subject to strong interference 4. The machine has internal fault	1. Check the host computer wiring 2. Check the communication wiring 3. Use communication shielded wire or add anti-interference magnetic ring 4. Seek manufacturer service
Contactor failure	Er17	1. The contactor is abnormal 2. The machine has an internal fault	1. Seek manufacturer service 2. Seek manufacturer service
Current detection fault	Er18	1. Abnormal current sampling circuit 2. Internal fault of the machine	1. Seek manufacturer service 2. Seek manufacturer service
Motor tuning failure	Er19	1. The motor parameters are not set according to the nameplate 2. The stop button has been pressed before parameter identification is completed 3. The motor and inverter capacity do not match	1. Set the motor parameters according to the motor nameplate 2. Wait for the motor parameter identification to be completed 3. Change the matching inverter model.
Short circuit to ground fault	Er23	1. The motor wiring is short-circuited to the ground 2. Internal sparking or inter-turn short circuit in the motor 3. Internal machine fault	1. Check the UVW motor wiring 2. Check for motor short circuit or sparking 3. Seek manufacturer service
Time arrival failure	Er26	1. Set time to arrive	1. Reset the time
Model configuration error	Er28	1. Machine model error 2. Internal machine failure	1. Seek manufacturer service 2. Seek manufacturer service
DSP communication data failed	Er29	1. Internal failure of the machine	1. Seek manufacturer service
DSP communication data error	Er30	1. Internal failure of the machine	1. Seek manufacturer service
Braking unit failure	Er31	1. Braking resistor short circuit 2. Internal machine fault	1. Check the wiring of the brake resistor or the brake resistor value is too small 2. Seek service from the manufacturer.

Fault name	Error code	Cause of issue	Troubleshooting
NTC is broken or short-circuited	Er32	1. The internal NTC is broken or short- circuited	Seek service from the manufacturer.
Rectifier bridge radiator overheating	Er33	1. The ambient temperature is too high 2. The fan is damaged 3. The inverter air duct is blocked 4. There is an abnormality inside the machine	1. Find a way to lower the ambient temperature of the machine 2. Replace the fan 3. Clean foreign matter from the inverter air duct 4. Seek manufacturer service.
IGBT junction temperature is too high	Er34	1. Ambient temperature is too high 2. Fan is damaged 3. Inverter air duct is blocked 4. Carrier frequency is set too high 5. Long-term heavy load 6. Frequent acceleration and deceleration	1. Find a way to lower the ambient temperature of the machine 2. Replace the fan 3. Clean foreign matter in the inverter air duct 4. Reduce the carrier frequency value 5. Reduce the load or replace with a higher power model 6. Delay the acceleration and deceleration time value.
Upload and download abnormalities	Er35	1. Parameter upload and download are abnormal 2. The keyboard does not save parameters and executes parameter download	1. Re-power on and execute 2. Upload parameters first, then download parameters
DSP Failure	Er36	1. Abnormality inside the machine	1. Seek manufacturer service
EEPROM internal abnormality	Er37	1. Internal failure of the machine	1. Power off and try again, or restore to factory settings, and seek manufacturer service
Mainboard program failure	Er38	1. Internal failure of the machine	1. Seek manufacturer services
Mainboard program timeout	Er39	1. Internal failure of the machine	1. Power off and try again, or restore to factory settings, and seek manufacturer service

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