Mini type VFD of CV100 series

Thank you for using CV100 series Variable Frequency Drive made by Kinco Automation.

CV100 satisfies the high performance requirements by using a unique control method to achieve high torque, high accuracy and wide speed-adjusting range. Its anti-tripping function and capabilities of adapting to severe power network, temperature, humidity and dusty environment exceed those of similar product made by other companies, which improves the product's reliability noticeably;Without PG connector, strong speed control, flexible input/output terminal, pulse frequency setting, saving parameters at power outage and stop, frequency setting channel, master and slave frequency control and so on, all these satisfy various of high accuracy and complex drive command, at the same time we provide the OEM customer high integration total solution, it values highly in system cost saving and improving the system reliability.

CV100 can satisfy the customers' requirements on low noise and EMI by using optimized PWM technology and EMC design.

This manual provides information on installation, wiring, parameters setting, trouble-shooting, and daily maintenance. To ensure the correct installation and operation of CV100, please read this manual carefully before starting the drive and keep it in a proper place and to the right person.
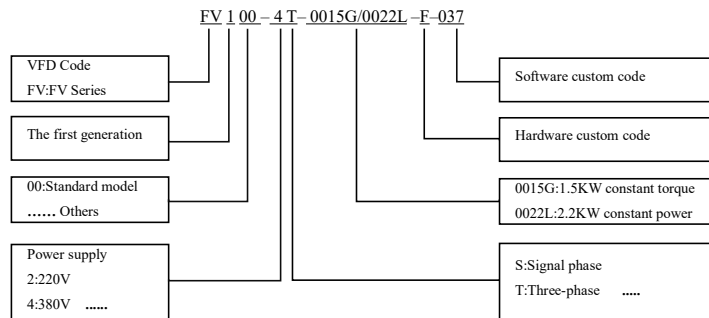
Unpacking Inspection Note

Upon unpacking, please check for:
- Any damage occurred during transportation;
- Check whether the rated values on the nameplate of the drive are in accordance with your order.

Our product is manufactured and packed at factory with great care. If there is any error, please contact us or distributors.

The user manual is subject to change without notifying the customers due to the continuous process of product improvements

You can scan the QR code below to get the latest electronic version of the official website.

USER'S MANUAL

VFD model rule

FV 1 00 – 4 T – 0015G/0022L –E–037

VFD Code FV:FV Series	Software custom code
The first generation	Hardware custom code
00:Standard model ...... Others	0015G:1.5KW constant torque 0022L:2.2KW constant power
Power supply 2:220V 4:380V	S:Signal phase T:Three-phase .....

Production introduction:

General specifications

Item		Description
Input	Rated voltage and frequency	4T:3-phase,380V~440V AC; 50Hz/60Hz 2S:Single-phase,200V~240V;50Hz/60Hz
	Allowable voltage range	4T: 320V~460V AC;2S:180V~260V; Voltage tolerance<3%; Frequency: ±5%
Output	Rated voltage	0~Rated input voltage
	Frequency	0Hz~300Hz(Customized 0Hz~1000Hz)
	Overload capacity	G type: 150% rated current for 1 minute, 180% rated current for 10 seconds; L type: 110% rated current for 1 minute, 150% rated current for 1 second
Control Characteristics	Control mode	V/F control, SVC (Open loop vector control)
	Modulation mode	Space vector PWM modulation
	Starting torque	0.5Hz 150%rated torque (Vector control without PG)
	Frequency accuracy	Digital setting: Max frequency ×±0.01%; Analog setting: Max. frequency ×±0.2%
	Frequency resolution	Digital setting: 0.01Hz; Analog setting: Max frequency×0.1%
	Torque boost	Manual torque boost :0%~30.0%
	V/F pattern	4 patterns: 1 V/F curve mode set by user and 3 kinds of torque-derating modes (2.0 order, 1.7 order and 1.2 order)
	Acc/Dec curve	Linear acceleration/deceleration, Four kinds of acceleration/deceleration time
	Auto current limit	Limit current during the operation automatically to prevent frequent over current trip
Operation panel	LED Display	Display setting frequency, output frequency, output voltage, output current and so on, about 20 parameters.
	Keys lock and function selection	Lock part of keys or all the keys. Define the function of part of keys
Protection function		Open phase protection (optional), over current protection, overvoltage protection, under-voltage protection, overheat protection, over-load protection and so on.

Item		Description
Environment	Operating site	Indoor, installed in the environment free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, steam and drip.
	Altitude	Derated above 1000m, the rated output current shall be decreased by 10% for every rise of 1000m
	Ambient temperature	-10℃~40℃, derated at 40℃~50℃
	Humidity	5%~95%RH, non-condensing
	Vibration	Less than 5.9m/s2 (0.6g)
	Storage temperature	−40℃~+70℃
Structure	Protection class	IP20
	Cooling method	Air cooling, with fan control.
Installation method		Wall-mounted
Efficiency		≥90%

Introduction of CV 100 series:

Model of VFD	Rated capacit (kVA)	Rated input current (A)	Rated output current (A)	Motor power (kW)
CV100-1S-0002G	0.6	6.0	2.5	0.2
CV100-1S-0004G	1.0	9.0	4.0	0.4
CV100-1S-0007G	1.5	18.0	7.5	0.75
CV100-1S-0011G	3.0	25.0	10.0	1.1
CV100-2S-0004G	1.0	5.3	2.5	0.4
CV100-2S-0007G	1.5	8.2	4.0	0.75
CV100-2S-0015G	3.0	14	7.5	1.5
CV100-2S-0022G	4.0	23	10	2.2
CV100-4T-0007G/0015L	1.5	3.4	2.3	0.75
CV100-4T-0015G/0022L	3.0	5.0	3.7	1.5
CV100-4T-0022G/0037L	4.0	5.8	5.5	2.2

External dimension:
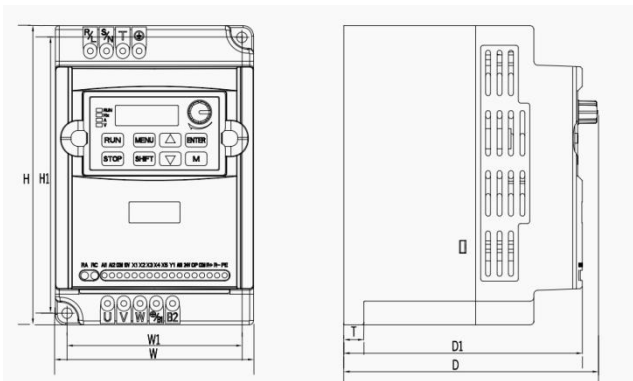
CV100-1S-0002G~ CV100-4T-0022G/0037L

Mechanical parameters

| VFD model (G: Constant torque load; L: Draught fan and water pump load)	External dimension and (mm)							Installation hole(d)	Weight (kg)
	W	H	D	W1	H1	D1	T1		
CV100-1S-0002G	85	142	122	73	130	112	10	5	0.8
CV100-1S-0004G									
CV100-1S-0007G									
CV100-1S-0011G	101	152	127	89	140	117	10	5	1.0
CV100-2S-0004G									
CV100-2S-0007G	85	142	127	73	130	120	10	5	0.8
CV100-2S-0015G									
CV100-2S-0022G	101	152	129	89	140	121	10	5	1
CV100-4T-0007G/0015L									
CV100-4T-0015G/0022L									
CV100-4T-0022G/0037L									

Note:

Wiring:

⚠ Danger

-Wiring can only be done after the drive's AC power is disconnected, all the LEDs on the operation panel are off and waiting for at least 5 minutes. Then, you can remove the panel.

-Wiring job can only be done after confirming the charge indicator on the right bottom is off and the voltage between main circuit power terminals + and - is below DC36V.

-Wire connections can only be done by trained and authorized person

-Check the wiring carefully before connecting emergency stop or safety circuits.

-Check the drive's voltage level before supplying power to it, otherwise human injuries or equipment damage may happen.

⚠ Attention

-Check whether the Variable Speed Drive's rated input voltage is in compliant with the AC supply voltage before using.

-Dielectric strength test of the drive has been done in factory, so you need not do it again.

-Refer to chapter 2 on connected braking resistor or braking kit.

-It is prohibited to connect the AC supply cables to the drive's terminals U, V and W.

-Grounding cables should be copper cables with section area bigger than 3.5mm2, and the grounding resistance should be less than 10Ω.

-There is leakage current inside the drive. The total leakage current is greater than 3.5mA, depending on the usage conditions. To ensure safety, both the drive and the motor should be grounded, and a leakage current protector (RCD) should be installed. It is recommended to choose B type RCD and set the leakage current at 300mA.

-The drive should be connected to the AC supply via a circuit breaker or fuse to provide convenience to input over-current protection and maintenance.

Top of single phase	L	N		PE	
Top of 3-phase	R	S	T	PE	
Bottom	U	V	W	+/B1	B2
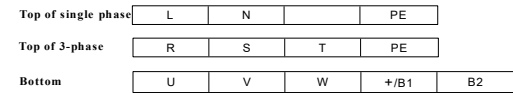
Terminal name	Function description
R,S,T /L,N	3-phase 380VAC /Single phase 220VAC input terminal
+/B1, B2	Braking resistor terminal
U,V,W/ PE	3-phase AC output terminal/ Shield PE terminal
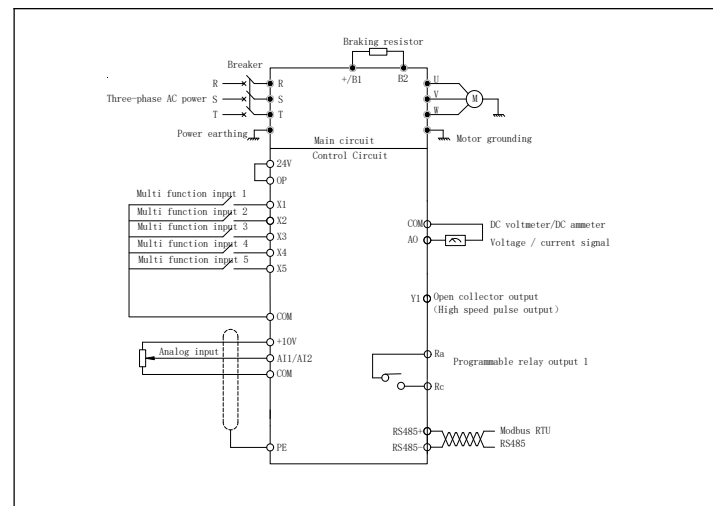
Arrangement of control circuit terminals is as follows:

RA	RC	AI1	AI2	COM	10V	X1	X2	X3	X4	X5	Y1	AO	24V	OP	PE	485+	485-	PE
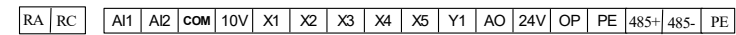
(Analog quantity AI1 and AO can select voltage signal or current signal through function code a6.51, AI2 only supports voltage signal)

Use internal +24V power supply   Use external power supply,take off Short connector
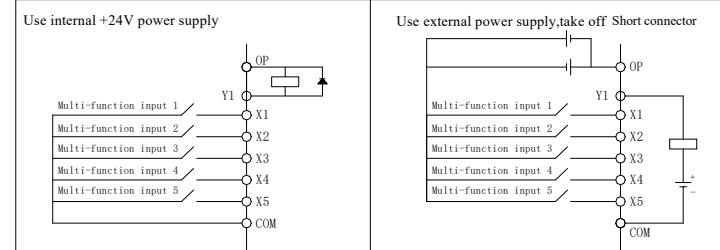
Faults and actions

It lists the possible faults of CV100, the fault code varies from E001 to E050. Once a fault occurs, you may check it against the table and record the detailed phenomena before seeking service from your supplier.

Fault code	Fault categories	Possible reasons for fault	Actions
E001	Over current during acceleration	Acc time is too short	Prolong the Acc time
		Parameters of motor are wrong	Auto-tune the parameters of motor
		Drive power is too small	Select a higher power drive
		V/F curve is not suitable	Check and adjust V/F curve, adjust torque boost
E002	Over current during deceleration	Deceleration time is too short	Prolong the Dec time
		The load generates energy or the load inertial is too big	Connect suitable braking kit
		Drive power is too small	Select a higher power drive
E003	Over-current in constant	Acceleration /Deceleration time is too short	Prolong Acceleration/ Deceleration time
		Sudden change of load or Abnormal load	Check the load

Fault code	Fault categories	Possible reasons for fault	Actions
	speed operation	Low AC supply voltage	Check the AC supply voltage
		Drive power is too small	Select a higher power drive
E004	Over voltage during acceleration	Abnormal AC supply voltage	Check the power supply
		Too short acceleration time	Prolong acceleration time
E005	Over voltage during deceleration	Too short Deceleration time (with reference to generated energy)	Prolong the deceleration time
		The load generates energy or the load inertial is too big	Connect suitable braking kit
E006	Over voltage in constant speed operating process	Acceleration /Deceleration time is too short	Prolong Acceleration/ Deceleration time
		Abnormal AC supply voltage	Check the power supply
		Abnormal change of input voltage	Install input reactor
		Too big load inertia	Connect suitable braking kit
E007	Drive's control power supply over voltage	Abnormal AC supply voltage	Check the AC supply voltage or seek service
E008	Input phase loss	Any of phase R, S and T cannot be detected	Check the wiring and installation Check the AC supply voltage
E009	Output phase loss	Any of Phase U, V and W cannot be detected	Check the drive's output wiring Check the cable and the motor
E010	Protections of IGBT act	Short-circuit among 3-phase output or line-to-ground short circuit	Rewiring, please make sure the insulation of motor is good
		Instantaneous over-current	Refer to E001~E003
		Vent is obstructed or fan does not work	Clean the vent or replace the fan
		Over-temperature	Lower the ambient temperature
		Wires or connectors of control board are loose	Check and rewiring
		Current waveform distorted due to output phase loss	Check the wiring
		Auxiliary power supply is damaged or IGBT driving voltage is too low	Seek service
		Short-circuit of IGBT bridge	Seek service
		Control board is abnormal	Seek service
E011	IGBT module's heatsink overheat	Ambient over-temperature	Lower the ambient temperature
		Vent is obstructed	Clean the vent
		Fan does not work	Replace the fan
		IGBT module is abnormal	Seek service
E012	Rectifier's heatsink overheat	Ambient over-temperature	Lower the ambient temperature
		Vent is obstructed	Clean the vent
		Fan does not work	Replace the fan
E013	Drive overload	Parameters of motor are wrong	Auto-tune the parameters of motor
		Too heavy load	Select the drive with bigger power
		DC injection braking current is too big	Reduce the DC injection braking current and prolong the braking time
		Too short acceleration time	Prolong acceleration time
		Low AC supply voltage	Check the AC supply voltage
		Improper V/F curve	Adjust V/F curve or torque boost value
E014	Motor over-load	Improper motor's overload protection threshold	Modify the motor's overload protection threshold.
		Motor is locked or load suddenly become too big	Check the load
		Common motor has operated with heavy load at low speed for a long time.	Use a special motor if the motor is required to operate for a long time.
		Low AC supply voltage	Check the AC supply voltage
		Improper V/F curve	Set V/F curve and torque boost value correctly
E015	external equipment fails	Terminal used for stopping the drive in emergent status is closed	Disconnect the terminal if the external fault is cleared
E016	EEPROM R/W fault	R/W fault of control parameters	Press STOP/RST to reset, seek service
E017	Communica-tion timeout	The setting time is too shot	Set b3.02 to 0, it means do not detection
E018	Contactor not closed	Low AC supply voltage	Check the AC supply voltage
		Contactor damaged	Replace the contactor in main circuit and seek service
		Soft start resistor is damaged	Replace the soft start resistor and seek service
		Control circuit is damaged	Seek service
		Input phase loss	Check the wiring of R, S, T.

Page 5

Fault code	Fault categories	Possible reasons for fault	Actions
E019	Current detection circuit fails	Wires or connectors of control board are loose	Check and re-wire
		Auxiliary power supply is damaged	Seek service
		Hall sensor is damaged	Seek service
		Amplifying circuit is abnormal	Seek service
E020	System interference	Terrible interference	Press STOP/RST key to reset or add a power filter in front of power supply input
		DSP in control board read/write by mistake	Press STOP/RST key or seek service.
E023	Reserve		
E024	Auto tuning fault	Improper settings of parameters on the nameplate	Set the parameters correctly according to the nameplate
		Prohibiting contra Auto-turning during rollback	Cancel prohibiting rollback
		Overtime of auto-tuning	Check the motor's wiring
			Check the set value of A0.10 (upper limiting frequency), make sure if it is lower than the rated frequency or not
E026	The load of drive is lost	The load is lost or reduced	Check the situation of the load
E027~ E050	Reserved		

List of Parameters:

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		Group A0:Basic operating parameters				
A0.00	User password	0: No password protection. Others: Password protection.	1	0	○	0~FFFF
A0.01	Control mode	0:Vector control without PG 1:Reserve 2: V/F control Note: when choose V/F control, A0.13≠0, b0.13≠0, please cancel current control to make motor running more smoothly. But starting torque will be lower.	1	0	×	0~2
A0.02	Main reference frequency selector	0: Digital setting1: 1: AI1 2: AI2 3: Potentiometer 4: DI Pulse	1	3	○	0~5
A0.03	Set the operating frequency in digital mode	A0.11~A0.10	0.01H	50.00	○	0~3000
A0.04	Methods of inputting operating commands	0: Panel control 1: Terminal control 2: Communication control	1	0	○	0~2
A0.05	Set running direction	0: Forward 1: Reverse	1	0	○	0~1
A0.06	Acc time 1	0.0~6000.0	0.1s	6.0s	○	0~60000
A0.07	Dec time 1	0.0~6000.0	0.1s	6.0s	○	0~60000
A0.08	Max. output frequency	50Hz~300.00Hz	0.01 Hz	50.00	×	0~30000
A0.09	Max. output voltage	0~480	1V	VFD's rated values	×	0~480
A0.10	Upper limit of frequency	A0.11~A0.08	0.01 Hz	50.00	○	0~30000
A0.11	Lower limit of frequency	0.00~A0.10	0.01 Hz	0.00	○	0~30000
A0.12	Basic operating frequency	0.00~300.00Hz	0.01 Hz	50.00	○	0~30000
A0.13	Torque boost	0.0%（Auto）,0.1%~30.0%	0.1%	0.0%	○	0~300
		Group A1:Start and stop parameters				
A1.00	Starting mode	0: Start from the starting frequency 1: Brake first and then start 2: Start on the fly(including direction judgment), start at starting frequency	1	0	×	0~2
A1.01	Starting frequency	0.00~60.00Hz	0.01 Hz	0.00Hz	○	0~6000
A1.02	Holding time of starting frequency	0.00~10.00s	0.01s	0.00s	○	0~1000
A1.03	DC injection braking current at start	0.0%~100.0% drive's rated current	0.1%	0.0%	○	0~1000
A1.04	DC injection braking time at start	0.00（No action） 0.01~30.00s	0.01s	0.00s	○	0~3000
A1.05	Stopping mode	0:Dec-to-stop1:Coast-to-stop 2:Dec-to-stop+DC injection braking	1	0	×	0~2
A1.06	DC injection braking initial frequency at stop	0.00~60.00Hz	0.01 Hz	0.00Hz	○	0~6000
A1.07	Injection braking waiting time at stop	0.00~10.00s	0.01s	0.00s	○	0~1000
A1.08	DC injection braking	0.0%~100.0% drive's rated	0.1%	0.0%	○	0~1000

Page 6

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
	current at stop	current				
A1.09	DC injection braking time at stop	0.0（No action） 0.01~30.00s	0.01s	0.00s	○	0~3000
A1.10	Restart after power failure	0:Disable 1:Enable	1	0	×	0~1
A1.11	Delay time for restart after power failure	0.0~10.0s	0.1s	0.0s	○	0~100
A1.12	Anti-reverse running function	0: Disabled 1:Enable(It will operate at zero frequency when input a reverse command)	1	0	×	0~1
A1.13	Delay time of run reverse/forward	0.00~360.00s	0.01s	0.00s	○	0~36000
A1.14	Switch mode of run reverse/ forward(Reserved)	0: Switch when pass 0Hz 1: Switch when pass starting frequency	1	0	×	0~1
A1.15	Detecting frequency of stop	0.00~150.00Hz	0.01 Hz	0.10Hz	×	0~15000
A1.16	Action voltage of braking unit	650~750V	1	720	×	650~750
A1.17	Dynamic braking	0: Disable1: Enable	1	0	×	0~1
A1.18	Ratio of working time of braking unit to drive's total working time	0.0~100.0%	0.1%	80.0%	○	0~1000
A1.19	Restart mode selection for power failure	0: Current search mode It is only valid in V/F control. If it is not V/F control, it will run mode 1 1: Vector tracing mode It starts in vector control mode. 2: Define by A1.00 It will start according to starting mode set in A1.00.	1	0	×	0~2
		Group A2:Frequency setting				
A2.00	Auxiliary reference frequency selector	0: No auxiliary reference frequency 1: AI12: AI2 5: Output by PID process	1	0	○	0~5
A2.01	Main and auxiliary reference frequency calculation	0: +1: - 2: MAX（Main reference，Auxiliary reference） 3: MIN（Main reference，Auxiliary reference）	1	0	○	0~3
A2.02	UP/DN rate	0.01~99.99Hz/s	0.01	1.00	○	1~9999
A2.03	UP/DN regulating control	Unit's place of LED: 0: Save reference frequency upon power outage 1: Not save reference frequency upon power outage. Ten's place of LED: 0: Hold reference frequency at stop 1: Clear reference frequency at stop Hundred's place of LED: 0:UP/DN integral time valid 1:UP/DN speed value	1	00	○	0~11H
A2.04	Jog operating frequency	0.10~50.00Hz	0.01 Hz	5.00	○	10~5000
A2.05	Interval of Jog operation	0.0~100.0s	0.1s	0.0	○	0~1000
A2.06	Skip frequency 1	0.00~300.00Hz	0.01 Hz	0.00	×	0~30000
A2.07	Range of skip frequency 1	0.00~30.00Hz	0.01 Hz	0.00	×	0~3000
A2.08	Skip frequency 2	0.00~300.00Hz	0.01 Hz	0.00	×	0~30000
A2.09	Range of skip frequency	0.00~30.00Hz	0.01 Hz	0.00	×	0~3000
A2.10	Skip frequency 3	0.00~300.00Hz	0.01 Hz	0.00	×	0~30000
A2.11	Range of skip frequency 3	0.00~30.00Hz	0.01 Hz	0.00	×	0~3000
		Group A3:Setting curve				
A3.00	Reference frequency curve selection	LED unit's place: AI1 curve selection 0:Curve 11:Curve 2 2:Curve 33:Curve 4 LED ten's place: AI2 curve selection 0:Curve 11:Curve 2 2:Curve 33:Curve 4 LED hundred's place: Reserved LED thousand's place: Reserved	1	0000	○	0~3333H
A3.01	Max reference of curve 1	A3.03~110.00%	0.01%	100.00%	○	0~11000
A3.02	Actual value corresponding to the Max reference of curve 1	Reference frequency: 0.0~100.00%Fmax Torque: 0.0~300.00%Te	0.01%	100.00%	○	0~10000
A3.03	Min reference of curve 1	0.0%~A3.01	0.01%	0.00%	○	0~11000
A3.04	Actual value corresponding to the Min reference	The same as A3.02	0.01%	0.00%	○	0~10000

Page 7

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
	of curve 1					
A3.05	Max reference of curve 2	A3.07~110.00%	0.01%	100.00%	○	0~11000
A3.06	Actual value corresponding to the Max reference of curve 2	The same as A3.02	0.01%	100.00%	○	0~10000
A3.07	Min reference of curve 2	0.0%~A3.05	0.01%	0.00%	○	0~11000
A3.08	Actual value corresponding to the Min reference of curve 2	The same as A3.02	0.01%	0.00%	○	0~10000
A3.09	Max reference of curve 3	A3.11~110.00%	0.01%	100.00%	○	0~11000
A3.10	Actual value corresponding to the Max reference of curve 3	The same as A3.02	0.01%	100.00%	○	0~10000
A3.11	Min reference of curve 3	0.0%~A3.09	0.01%	0.00%	○	0~11000
A3.12	Actual value corresponding to the Min reference of curve 3	The same as A3.02	0.01%	0.00%	○	0~10000
A3.13	Max reference of curve 4	A3.15~110.00%	0.01%	100.00%	○	0~11000
A3.14	Actual value corresponding to the Max reference of curve 4	The same as A3.02	0.01%	100.00%	○	0~10000
A3.15	Reference of inflection point 2 of curve 4	A3.17~A3.13	0.01%	100.00%	○	0~11000
A3.16	Actual value corresponding to the Min reference of inflection point 2 of curve 4	The same as A3.02	0.01%	100.00%	○	0~10000
A3.17	Reference of inflection point 1 of curve 4	A3.19~A3.15	0.01%	0.00%	○	0~11000
A3.18	Actual value corresponding to the Min reference of inflection point 1 of curve 4	The same as A3.02	0.01%	0.00%	○	0~10000
A3.19	Min reference of curve 4	0.0%~A3.17	0.01%	0.00%	○	0~11000
A3.20	Actual value corresponding to the Min reference of curve 4	The same as A3.02	0.01%	0.00%	○	0~10000
A3.21	Curve features selection	Unit's place of LED: Curve 1 0: Actual value<0, take 0. 1: Symmetry about the origin 2: Take absolute value. Ten's place of LED:Curve 2 0: Actual value<0, take 0. 1: Symmetry about the origin 2: Take absolute value. Hundred's place of LED:Curve 3 0: Actual value<0, take 0. 1: Symmetry about the origin 2: Take absolute value. Thousand's place of LED: Curve 4 0: Actual value<0, take 0. 1: Symmetry about the origin 2: Take absolute value.	1	0000	○	0~2222H
		Group A4: Acc/Dec parameters				
A4.00	Acc/Dec mode	0: Linear Acc/Dec; 1: S Curve	1	0	×	0~1
A4.01	Acc time 2	0.0~6000.0	0.1s	20.0s	○	0~60000
A4.02	Dec time 2	0.0~6000.0	0.1s	20.0s	○	0~60000
A4.03	Acc time 3	0.0~6000.0	0.1s	20.0s	○	0~60000
A4.04	Dec time 3	0.0~6000.0	0.1s	20.0s	○	0~60000
A4.05	Acc time 4	0.0~6000.0	0.1s	20.0s	○	0~60000
A4.06	Dec time 4	0.0~6000.0	0.1s	20.0s	○	0~60000
A4.07	S curve acceleration starting time	10.0%~50.0%(Acc time) A4.07+ A4.08≤90%	0.1%	20.0%	○	100~500
A4.08	S curve acceleration ending time	10.0%~70.0%(Acc time) A4.07+ A4.08≤90%	0.1%	20.0%	○	100~800
A4.09	S curve deceleration starting time	10.0%~50.0%(Dec time) A4.09+ A4.10≤90%	0.1%	20.0%	○	100~500
A4.10	S curve deceleration ending time	10.0%~70.0%(Dec time) A4.09+ A4.10≤90%	0.1%	20.0%	○	100~800
A4.11	Quick start-stop selctor	0: Disable 1: Quick start,normal stop 2: Normal start,quick stop 3: Quick start,quick stop	1	0	×	0~3
A4.12	Start ACR-P	0.1~200.0	0.1	20.0	○	1~2000
A4.13	Start ACR-I	0.000~10.000s	0.001s	0.200s	○	0~10000
A4.14	Start AVR-P	0.1~200.0	0.1	20.0	○	1~2000

Page 8

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
A4.15	Start AVR-I	0.000~10.000s	0.001s	0.200s	○	0~10000
A4.16	Stop ACR-P	0.1~200.0	0.1	20.0	○	1~2000
A4.17	Stop ACR-I	0.000~10.000s	0.001s	0.200s	○	0~10000
A4.18	Stop AVR-P	0.1~200.0	0.1	20.0	○	1~2000
A4.19	Stop AVR-I	0.000~10.000s	0.001s	0.200s	○	0~10000
A4.20	Over_Commtatation Stop	0: disable 1:enable	1	0	×	0~1
A4.21	ACC/DEC time coefficient	0:ACC/DEC time × 1 1: ACC/DEC time × 0.1	1	0	×	0~1
A4.22	ACC/DEC time 1/2 switch freq.	0.00~300.00Hz Select ACC/DEC time 2 when output freq. is less than A4.11	0.01 Hz	0.00Hz	×	0~30000
A4.23~ A4.40	Reserved	Reserved	1	0	○	0~65535
		Group A5:Control parameters				
A5.00	Speed/torque control mode	0: Speed control mode 1: Reserved	1	0	×	0~1
A5.01	ASR1-P	0.1~200.0	0.1	20.0	○	1~2000
A5.02	ASR1-I	0.000~10.000s	0.001s	0.200s	○	0~10000
A5.03	ASR1 output filter	0~8 (Corresponding to 0~2^8/10ms)	1	0	○	0~8
A5.04	ASR2-P	0.1~200.0	0.1	20.0	○	1~2000
A5.05	ASR2-I	0.000~10.000s	0.001s	0.200s	○	0~10000
A5.06	ASR2 output filter	0~8 (Corresponding to 0~2^8/12.5ms)	1	0	○	0~8
A5.07	ASR1/2 switching frequency	0.0%~100.0%	0.1	10.0%	○	0~1000
A5.10	Driving torque limit	0.0%~+300.0%	0.1%	180.0%	○	0~3000
A5.11	Braking torque limit	0.0%~+300.0%	0.1%	180.0%	○	0~3000
A5.17	ACR-P	1~5000	1	1000	○	1~5000
A5.18	ACR-I	0.5~100.0ms	0.1	8.0	○	5~1000
		Group A6:Control terminals parameters				
A6.00~ A6.04	Multi-function terminal X1~X5	0: No function 1: Forward 2: Reverse 3: Forward jog operation 4: Reverse jog operation 5: 3-wire operation control 6: External RESET signal input 7: External fault signal input 8: External interrupt signal input 9: Drive operation prohibit 10: External stop command 11: DC injection braking command 12: Coast to stop 13: Frequency ramp up (UP) 14: Frequency ramp down (DN) 15: Switch to panel control 16: Switch to terminal control 17: Switch to communication control mode 18: Main reference frequency via AI1 19: Main reference frequency via AI2 27: Preset frequency 1 28: Preset frequency 2 29: Preset frequency 3 30: Preset frequency 4 31: Acc/Dec time 1 32: Acc/Dec time 2 33: Multiple close-loop reference selection 1 34: Multiple close-loop reference selection 2 35: Multiple close-loop reference selection 3 36: Multiple close-loop reference selection 4 37: Forward prohibit 38: Reverse prohibit 39: Acc/Dec prohibit 40: Process close-loop prohibit 42: Main frequency switch to digital setting 43: PLC pause 44: PLC prohibit 45: PLC stop memory clear 46: Swing input 47: Swing reset 48-49:Reserved 50: Timer 1 start 51: Timer 2 start 53: Counter input 54: Counter clear Others: Reserved	1	0	×	0~54
A6.08	Terminal filter	0~500ms	1	10	○	0~500
A6.09	Terminal control mode selection	0:2-wire operating mode 1 1:2-wire operating mode 2 2:3-wire operating mode 1 3:3-wire operation mode 2 4:2-wires operation mode 3	1	0	×	0~3
A6.13	Input terminal's positive and negative logic	Binary setting 0: Positive logic: Terminal Xi is enabled if it is connected to	1	00	○	0~FFH

Page 9

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		corresponding common terminal, and disabled if it is disconnected. 1: Negative logic: Terminal Xi is disabled if it is connected to corresponding common terminal, and enabled is it is disconnected. Unit's place of LED:BIT0~BIT3: X1~X4 Ten's place of LED:BIT0~BIT2: X5				
A6.14	Bi-direction pen-collector output terminal Y1	0: Running signal(RUN) 1: frequency arriving signal(FAR) 2: frequency detection threshold (FDT1) 3: frequency detection threshold (FDT2) 4: overload signal(OL) 5: low voltage signal(LU) 6: external fault signal(EXT) 7: frequency high limit(FHL) 8: frequency low limit(FLL) 9: zero-speed running 10: Terminal X1(Reserved) 11: Terminal X2(Reserved) 12: PLC running step complete signal 13: PLC running cycle complete signal 14: Swing limit 15: Drive ready (RDY) 16: Drive fault 17: Switching signal of host 19: Torque limiting 20: Drive running forward/reverse 21: Timer 1 reach 22: Timer 2 reach 23: Preset counter reach 24: Intermediate counter reach Others: Reserved	1	0	×	0~50
A6.15	Reserved	Reserved	1	1	×	0~50
A6.16	Output functions of relay R1	The same as A6.14	1	16	×	0~24
A6.17	Output functions of relay R2	The same as A6.14	1	15	×	0~50
A6.18	Output delay of Relay R1	0.1~10.0s	0.1s	0.1	○	1~100
A6.19	Output delay of Relay R2	0.1~10.0s	0.1s	0.1	○	1~100
A6.20	Output terminal's positive and negative logic	Binary setting: 0: Terminal is enabled if it is connected to correspond common terminal, and disabled if it is disconnected. 1: Terminal is disabled if it is connected to corresponding common terminal, and enabled if it is disconnected. Unit's place of LED: BIT0: Y1 BIT1: Y2 BIT2: R1 BIT3: R2 Ten's place of LED: BIT0:DO	1	0	×	0~1FH
A6.21	Frequency arriving signal (FAR)	0.00~300.00Hz	0.01 Hz	2.50Hz	○	0~30000
A6.22	FDT1 level	0.00~300.00Hz	0.01 Hz	50.00Hz	○	0~30000
A6.23	FDT1 lag	0.00~300.00Hz	0.01 Hz	1.00Hz	○	0~30000
A6.24	FDT2 level	0.00~300.00Hz	0.01 Hz	25.00Hz	○	0~30000
A6.25	FDT2 lag	0.00~300.00Hz	0.01 Hz	1.00Hz	○	0~30000
A6.26	Virtual terminal setting	Binary setting 0: Disable 1: Enable Unit's place of LED: BIT0~BIT3: X1~X4 Ten's place of LED: BIT0~BIT2: X5~X8	1	00	×	0~FFH
A6.27	Function of terminal D0	0~50: DO as Y terminal; 51~88: DO function 0: Drive running signal (RUN) 1: Frequency arriving signal (FAR) 2: Frequency detection threshold (FDT1) 3: Frequency detection threshold (FDT2) 4: Overload signal 5: Low voltage lock-up signal (LU) 6: External stopping command (EXT)				

Page 10

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		7: High limit of frequency (FHL) 8: Lower limit of frequency (FLL) 9: Zero-speed running 10: X1 terminal(Reserved) 11 X2 terminal(Reserved) 12: PLC running step finish signal 13: PLC running cycle finish signal 14: Swing frequency limit 15: Drive ready (RDY) 16: Drive faulty 17: Switching signal of host 18: Reserved 19: Torque limiting 20: Drive running forward/reverse 21~50: Reserved 51: Output frequency (0~Max. Freq.) 52: Preset frequency (0~ Max. Freq.) 53: Preset frequency (After Acc/Dec) (0~ Max. Freq.) 54: Motor speed (0~Max. speed) 55: Output current (0~2*Iei) 56: Output current(0~2*Iem) 57: Output torque (0~3*Tem) 58: Output power(0~2*Pe) 59: Output voltage(0~1.2*Ve) 60: DC bus voltage(0~800V) 61: AI1 62: AI2 63: AI3 64: DI 65: Pervantage of host (0~4095) 66~88: Reserved				
A6.28	Max. output pulse freq.	0.1~100.0(Max. 100.0k)	0.1 kHz	10.0	○	1~1000
A6.29	Center point of pulse output selection	0: No center point 1: Center point is (A6.26)/2, positive value when output pulse freq. less than center point. 2: Center point is (F14.13)/2, positive value when output pulse freq. larger than center point.	1	0	○	0~2
A6.30	Function of terminal AO1	0: No function 1: Output frequency (0~ Max. output frequency) 2: Preset frequency (0~ Max. output frequency) 3: Preset frequency(After Acc/Dec)(0~ Max.output frequency) 4: Motor speed (0~ Max. speed) 5: Output current (0~2*Iei) 6: Output current (0~2*Iem) 7: Output torque (0~3*Tem) 8: Output power (0~2*Pe) 9: Output voltage (0~1.2*Ve) 10: Bus voltage (0~800V) 11: AI1 12: AI2 13: AI3 14: DI 15: Percentage of host (0~4095) 16~36: Reserved	1	0	○	0~36
A6.31	Functions of terminal AO2	Same as A6.30	1	0	○	0~36
A6.32	Gain of AO1	0.0%~200.0%	0.1%	100.0%	○	0~2000
A6.33	Zero offset calibration of AO1	-100.0%~100.0%	0.1%	0.0	○	0~2000
A6.34	Gain of AO2	0.0%~200.0%	0.1%	100.0%	○	0~2000
A6.35	Zero offset calibration of AO2	-100.0%~100.0%	0.1%	0.0	○	0~2000
A6.36	AI1 filter	0.01~10.00s	0.01s	0.05	○	1~1000
A6.37	AI2 filter	0.01~10.00s	0.01s	0.05	○	1~1000
A6.38	AI3 filter	0.01~10.00s	0.01s	0.05	○	1~1000
A6.39	Analog input zero offset calibration	0~1	1	0	○	0~20000
A6.40	Gain of AI1	0.00%~200%	0.01%	110%	○	0~20000
A6.41	Gain of AI2	0.00%~200%	0.01%	110%	○	0~20000
A6.42	Gain of AI3	0.00%~200%	0.01%	110%	○	0~20000
A6.43~ A6.45	Reserved	Reserved	1	0	○	0~4095
A6.46	Preset value of Timer 1	0.00~10.0s	0.1s	0.0	○	1~100
A6.47	Preset value of Timer 2	0~100s	1s	0	○	1~100

Page 11

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
A6.48	Target value of timer	0~65535	1	100	○	0~65535
A6.49	Median value of timer	0~65535	1	50	○	0~65535
A6.50	Multi-speed terminal switching time	0~500	1	300	○	0~65535
A6.51~	AIO terminal setting	Unit's place of LED: AI1 0:voltage signal , 1: current signal Hundred's place of LED: AO 0:voltage signal , 1: current signal	1	0000	○	0~1111H
A6.52~ A6.60	Reserved	Reserved	1	0	○	0~65535
		Group A8: Fault parameters				
A8.00	Protective action of relay	Unit's place of LED: Action selection for under-voltage fault indication. 0: Disable, 1: Enable Ten's place of LED: Action selection for auto reset interval fault indication. 0: Disable, 1: Enable Hundred's place of LED: Selection for fault locked function. 0: Disable, 1: Enable Thousand's place of LED: Reserved	1	0000	×	0~1111H
A8.01	Fault masking selection 1	Unit's place of LED: Communication fault masking selection Ten's place of LED: Relay faultmasking selection Hundred's place of LED: EEPROMfault masking selection Thousand's place of LED: reserved 0: Disable.Stop when fault happen 1: Disable.Continue operating when fault happen 2: Enable	1	2000	×	0~2222H
A8.02	Fault masking selection 2	Unit's place of LED: Open phase fault masking selection for input Ten's place of LED: Open phase fault masking selection for output	1	00	×	0~22H
A8.03	Motor overload protection mode selection	0: Disabled 1: Common mode (with low speed compensation) 2: Variable frequency motor (without low speed compensation)	1	1	×	0~2
A8.04	Auto reset times	0: No function 1~100: Auto reset times Note: The IGBT protection (E010) and external equipment fault (E015) cannot be reset automatically.	1	0	×	0~100
A8.05	Reset interval	2.0~20.0s/time	0.1s	5.0s	×	20~200
A8.06	Fault locking function selection.	0: Disable. 1: Enable.	1	0	×	0~1
		Group b0: Motor parameters				
b0.00	Rated power	0.4~999.9KW	0.1	0	×	4~9999
b0.01	Rated voltage	0~ rated voltage of drive	1	0	×	0~999
b0.02	Rated current	0.1~999.9A	0.1A	Depend on drive's model	×	1~9999
b0.03	Rated frequency	1.00~1000.0Hz	0.01 Hz	Depend on drive's model	×	100~30000
b0.04	Number of polarities of motor	2~24	1	4	×	2~24
b0.05	Rated speed	0~60000RPM	1RPM	1440RPM	×	0~60000
b0.06	Resistance of stator %R1	0.00%~50.00%	0.01%	Depend on drive's model	×	0~5000
b0.07	Leakage inductance %Xl	0.00%~50.00%	0.01%	Depend on drive's model	×	0~5000
b0.08	Resistance of rotor %R2	0.00%~50.00%	0.01%	Depend on drive's model	×	0~5000
b0.09	Exciting inductance %Xm	0.0%~2000.0%	0.1%	Depend on drive's model	×	0~20000
b0.10	Current without load I0	0.1~999.9A	0.1A	Depend on drive's model	×	1~9999
b0.11	Auto-tuning	0: Auto-tuning is disabled 1: Stationary auto-tuning (Start auto-tuning to a standstill motor) 2: Rotating auto-tuning	1	0	×	0~3
b0.12	Motor's overload protection coefficient	20.0%~110.0%	0.1%	100.0%	×	200~1100
b0.13	Motor's overload	0.0~6000.0	0.1s	0.0s	×	0~

Page 12

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
	protection time	0.0: Calculate the overload according to the internal overload curve				60000
b0.14	Oscillation inhibition coefficient	0~255	1	10	○	0~255
		Group b1: V/F parameters				
b1.00	V/F curve setting	0: V/F curve is defined by user 1: 2-order curve 2: 1.7-order curve 3: 1.2-order curve	1	0	×	0~3
b1.01	V/F frequency value F3	B1.03~A0.08	0.01 Hz	0.00Hz	×	0~30000
b1.02	V/F voltage value V3	B1.04~100.0%	0.1%	0.0%	×	0~1000
b1.03	V/F frequency value F2	B1.05~B1.01	0.01 Hz	0.00Hz	×	0~30000
b1.04	V/F voltage value V2	B1.06~B1.02	0.1%	0.0%	×	0~1000
b1.05	V/F frequency value F1	0.00~B1.03	0.01 Hz	0.00Hz	×	0~30000
b1.06	V/F voltage value V1	0~B1.04	0.1%	0.0%	×	0~1000
b1.07	Cut-off point used for manual torque boost	0.0%~50.0% (Corresponding to A0.12)	0.1%	10.0%	×	0~500
b1.08	AVR function	0: Disable 1: Enable all the time 2: Disabled in Dec process	1	2	×	0~2
		Group b2: Enhanced parameters				
b2.00	Carrier wave frequency	2.0~15.0KHz	0.1	8.0	○	20~150
b2.01	Auto adjusting of CWF	0: Disable 1: Enable	1	1	×	0~1
b2.02	Voltage adjustment selection	Unit's place of LED: Over-voltage at stall Selection 0:Disable(When install brake resistor) 1:Enable Ten's place of LED: Not stop when instantaneous stop function selection 0:Disable 1:Enable(Low voltage compensation) Hundred's place of LED: Overmodulation selection 0:Disable 1: Enable	1	001	×	0~111H
b2.03	Overvoltage point at stall	120.0%~150.0%Udce	0.1%	140.0%	×	1200~1500
b2.04	Droop control	0: Disable, 0.01~10.00Hz	0.01	0.00Hz	○	0~1000
b2.05	Auto current limiting threshold	20.0%~200.0%Ie	0.1%	150.0%	×	200~2000
b2.06	Frequency decrease rate when current limiting	0.00~99.99Hz/s	0.01 Hz/s	10.00 Hz/s	○	0~9999
b2.07	Auto current limiting selection	0:Invalid at constant speed 1:Valid at constant speed Note:It is valid all the time at Acc/Dec	1	1	×	0~1
b2.08	Gain of Slip compensation	0.0~300.0%	0.1%	100.0%	○	0~3000
b2.09	Slip compensation limit	0.0~250.0%	0.1%	200.0%	○	0~2500
b2.10	Slip compensation time constant	0.1~25.0s	0.1s	2.0s	○	0~250
b2.11	auto energy-saving function	0: Disable 1: Enable	1	0	×	0~1
b2.12	Frequency decrease rate at voltage compensation	0.00~99.99Hz/s	0.01 Hz/s	10.00 Hz/s	○	0~9999
b2.13	Zero-frequency Operation threshold	0.00~300.00Hz	0.01 Hz	0.50Hz	○	0~30000
b2.14	Zero-frequency Hysteresis (Reserved)	0.00~300.00Hz	0.01 Hz	0.00Hz	○	0~30000
b2.15	Fan control	0:Auto operation mode 1:Fan operate continuously when power is on Note: Keep running for 3 minutes after the shutdown	1	0	×	0~1
		Group b3: Communication parameter				
b3.00	Communication configuration	Unit's place of LED: Baud rate selection 0:4800BPS1:9600BPS 2:19200BPS3:38400BPS 4:115200BPS5:125000BPS Ten's place of LED: Data format 0:1-8-2-N format,RTU 1:1-8-1-E format,RTU 2:1-8-1-O format, RTU 3~5:Reserved Hundred's place of LED: wiring mode 0:Direct connection via cable (RS232/485)	1	001	×	0~155H

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		1: MODEM (RS232)				
b3.01	Local address	0~127, 0 is the broadcasting address	1	5	×	0~127
b3.02	Time threshold for judging the communication status	0.0~1000.0s	0.1	0.0s	×	0~10000
b3.03	Delay for responding to control PC	0~1000ms	1	5ms	×	0~1000
b3.04~ b3.11	Reserved	Reserved	-	-	-	-
		Group b4:Keyboard parameters				
b4.00	Key-lock function selection	0: The keys on the operation panel are not locked, and all the keys are usable. 1: The keys on the operation panel are locked, and all the keys are unusable. 2: All the keys except for the multi-functional key are unusable. 3: All the keys except for the SHIFT key are unusable. 4:All the keys except for the RUN AND STOP keys are unusable.	1	0	○	0~4
b4.01	Multi-function key definition	0: Jog function 1: Coast-to-stop 2: Quick stop 3: Switch of operating command 4:Switch of forward and reverse(Save after power failure) 5:Switch of forward and reverse (Not save after power failure)	1	4	○	0~5
b4.02	Parameter protection	0: All parameters are allowed modifying; 1: Only A0.03 and b4.02 can be modified; 2: Only b4.02 can be modified.	1	1	○	0~2
b4.03	Parameter initialization	0: No operation 1: Clear fault information in memory 2: Restore to factory settings	1	0	×	0~2
b4.04	Parameter copy	0: No action 1: parameters upload 2: parameters download 3: parameters download (except the parameters related to drive type) Note:Not to upload/download drive's parameters.	1	0	×	0~3
b4.05	Display parameters selection	Binary setting: BIT1:Operating 0: No display, 1: Display Unit's place of LED: BIT0: Output frequency (No display at stop.Display power frequency at energy feedback mode) BIT1:Setting frequency (Flicking.No display at energy feedback mode) BIT2:Output current (No display at stop.Display power frequency at energy feedback mode) BIT3:Output voltage(No display at stop.Display power frequency at energy feedback mode) Ten's place of LED: BIT0: AI1BIT1: AI2 BIT3: DI terminal status Hundred's place of LED: BIT0:Output power (No display at stop and energy feedback mode) BIT1:Output torque (No display at stop and energy feedback mode) BIT2:Analog close-loop feedback(%) (No display at feedback mode) BIT3:Analog close-loop setting (%) (Flicking, no display at feedback mode) Thousand's place of LED: BIT0:Bus voltage BIT1:Speed(R/MIN) (No display at feedback mode) BIT2:Setting speed (R/MIN) (Flicking, no display at feedback mode) Note: If all the BITs are 0,the drive will display setting frequency at stop,display output frequency at	1	1007H	○	0~7FFFH

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		operating and display bus voltage at energy feedback mode.				
b4.06	Linear speed ratio	0.00~99.99	0.01	1.00	○	0~9999
b4.07	Speed ratio	0.000~30.000	0.001	1.000	○	0~30000
b4.08~ b4.09	Reserved	Reserved	1	0	○	0~65535
b4.10	Customer parameter initialization	0~65535 0:Not valid	1	0	×	0~65535
b4.11~ b4.15	Reserved	Reserved	1	0	○	0~65535
b4.16	Standard/high frequency switch	0: Standard (0~300Hz) 1: high frequency (0~3000Hz)	0	0	×	0~1
b4.17~ b4.20	Reserved	Reserved	-	-	-	-
		Group C0:Multi-section parameters				
C0.00~ C0.14	Multi-speed from 1~15	Lower limit of frequency~upper limit of frequency	0.01 Hz	5.00Hz	○	0~30000
		Group C1:Process PID parameters				
C1.00	Close-loop control function	0: Disable 1: Enable	1	0	×	0~1
C1.01	Reference channel selection	0: Digital input1: AI1; 2: AI2;	1	1	○	0~3
C1.02	Feedback channel selection	0: AI1;1: AI2; 2: AI1+AI2;3: AI1-AI2; 4: MIN (AI1, AI2) 5: MAX (AI1, AI2); 6: DI	1	1	○	0~6
C1.03	Digital setting of reference	-10.00V~10.00V	0.01	0.00	○	0~2000
C1.05	Min reference	0.0%~(C1.07) (Ratio of Min reference to base value of10V/20mA)	0.1%	0.0%	○	0~1000
C1.06	Feedback value corresponding to the Min reference	0.0~100.0% (Ratio of Min reference to base value of 10V/20mA)	0.1%	0.0%	○	0~1000
C1.07	Max reference	(C1.05)~100.0% (Ratio of Max reference to base value of 10V/20mA)	0.1%	100.0%	○	0~1000
C1.08	Feedback value corresponding to the Max reference	0.0~100% (Ratio of Max reference to base value of 10V/20mA)	0.1%	100.0%	○	0~1000
C1.09	Proportional gain KP	0.000~10.000	0.001	2.000	○	0~10000
C1.10	Integral gain Ki	0.000~10.000	0.001	0.100	○	0~10000
C1.11	Differential gain Kd	0.000~10.000	0.001	0.100	○	0~10000
C1.12	Sampling cycle T	0.01~50.00s	0.01s	0.50s	○	1~5000
C1.13	Output filter	0.01~10.00s	0.01s	0.05	○	1~1000
C1.14	Error limit	0.0~20.0%(Corresponding to close-loop reference)	0.1%	2.0%	○	0~200
C1.15	Close-loop regulation characteristic	0: Positive 1: Negative	1	0	×	0~1
C1.16	Integral regulation selection	0: Stop integral regulation when the frequency reaches the upper and lower limits 1: Continue the integral regulation when the frequency reaches the upper and lower limits	1	0	×	0~1
C1.17	Preset close-loop frequency	0.00~300.00Hz	0.01 Hz	0.00Hz	○	0~30000
C1.18	Holding time of preset close-loop frequency	0.0~3600.0s	0.1s	0.0s	×	0~36000
C1.19~ C1.33	Preset close-loop reference 1~15	-10.00V ~10.00V	0.01V	0.00V	○	0~2000
C1.34	Close-loop output reversal selection	0: The close-loop output is negative, he drive will operate at zero frequency. 1: The close-loop output is negative and the drive operate reverse.	1	0	○	0~1
C1.35	Sleep function selection	0: Disable 1: Enable.	1	0	○	0~1
C1.36	Sleep level	0.0~100.0%	0.1%	50.0%	○	0~1000
C1.37	Sleep latency	0.0~6000.0s	0.1s	30.0s	○	0~60000
C1.38	Wake-up level	0.0~100.0%	0.1%	50.0%	○	0~1000
		C2: Simple PLC				
C2.00	Simple PLC operation mode selector	Unit's place of LED: PLC operation mode 0: No function 1: Stop after single cycle 2: Keep final states after single cycle 3: Continuous cycle Ten's place of LED: Start mode 0: Start from first step 1: Start from the step before	1	0000	×	0~1123H

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		stop(or alarm). 2: Start from the step and frequency before stop(or alarm) Hundred's place of LED: Storage after power off 0: Disable 1: Save the segment frequency when power off Thousand's place of LED: Time unit selector for each step 0: Second1: Minute				
C2.01	Step 1 setting	Unit's of LED: 0:Multiple frequency N(N:corresponding to current step) 1: Defined by A0.02 2: Multiple closed-loop reference N(N:corresponding to current step) 3: Defined by C1.01 Ten's place of LED: 0: Forward1: Reverse 2: Defined by operation command Hundred's place of LED: 0: Acc/Dec time 1 1: Acc/Dec time 2 2: Acc/Dec time 3 3: Acc/Dec time 4	1	000	○	0~323H
C2.02	Step 1 operating time	0.0~6500.0	0.1	20.0	○	0~65000
C2.03~ C2.30	Step N setting and Step N operating time	Step N setting is same as C2.01 Step N operating time same as C2.02	1 0.1	000 20.0	○ ○	0~323H 0~65000
		Group C3: Swing parameters				
C3.00	Swing function selector	0: Disable 1: Enable	1	0	×	0~1
C3.01	Swing Operation mode	Unit's place of LED: Startup method 0: Auto mode1: By terminal Ten's place of LED: Swing control 0: Reference centre frequency 1: Reference max. frequency Hundred's place of LED: Swing states storage 0: Save after stop 1: Not save after stop Thousand's place of LED: Swing states storage after power failure 0: Save,　1: Not save	1	0000	×	0~1111H
C3.02	Preset swing frequency	0.00Hz~Max. frequency	0.01 Hz	0.00Hz	○	0~100000
C3.03	Waiting time for preset swing frequency	0.0~3600.0s	0.1s	0.0s	○	0~36000
C3.04	Swing amplitude	0.0%~50.0%	0.1%	0.0%	○	0~500
C3.05	Jump frequency	0.0%~50.0%	0.1%	0.0%	○	0~500
C3.06	Swing cycle	0.1~999.9s	0.1s	10.0s	○	1~9999
C3.07	Triangle wave rising time	0.0%~100.0%(Swing cycle)	0.1%	50.0%	○	0~1000
		Group d0:Status display				
d0.00	Main reference frequency	-300.00~300.00Hz	0.01 Hz	0.00	*	0~60000
d0.01	Auxiliary reference frequency	-300.00~300.00Hz	0.01 Hz	0.00	*	0~60000
d0.02	Preset frequency	-300.00~300.00Hz	0.01 Hz	0.00	*	0~60000
d0.03	Frequency after Acc/Dec	-300.00~300.00Hz	0.01 Hz	0.00	*	0~60000
d0.04	Output frequency	-300.00~300.00Hz	0.01 Hz	0.00	*	0~60000
d0.05	Output voltage	0~480V	1V	0	*	0~480
d0.06	Output current	0.0~3Ie	0.1A	0.0	*	0~65535
d0.07	Torque current	-300.0~+300.0%	0.1%	0.0%	*	0~6000
d0.08	Magnetic flux current	0~+100.0%	0.1%	0.0%	*	0~1000
d0.09	Motor power	0.0~200.0%（Corresponding to the motor's rated power)	0.1%	0.0%	*	0~2000
d0.10	Motor estimated frequency	-300.00~300.00Hz	0.01	0.00	*	0~60000
d0.11	Motor actual frequency	-300.00~300.00Hz	0.01	0.00	*	0~60000
d0.12	Bus voltage	0~800V	1V	0	*	0~800
d0.13	Drive operation status	0~FFFH bit0: Run/Stop bit1: Reverse/Forward bit2: Operating at zero frequency bit3: Accelerating bit4: Decelerating bit5: Operating at constant speed bit6: Pre-commutation	1	0	*	0~FFFFH

Function code	Name	Descriptions	Unit	Factory setting	Modif	Setting range
		bit7: Tuning bit8: Over-current limiting bit9: DC over-voltage limiting bit10: Torque limiting bit11: Speed limiting bit12: Drive fault bit13: Speed control bit14: Torque control				
d0.14	Input terminals status	0~FFH, 0: OFF; 1: ON	1	00	*	0~FFH
d0.15	Output terminals status	0~1FH, 0: OFF; 1: ON	1	0	*	0~1FH
d0.16	AI1 input	-10.00~10.00V	0.01V	0.00	*	0~2000
d0.17	AI2 input	-10.00~10.00V	0.01V	0.00	*	0~2000
d0.18	Reserved					
d0.19	Percentage of AI1 after regulation	-100.00%~110.00%	0.01%	0.00	*	0~20000
d0.20	Percentage of AI2 after regulation	-100.00%~110.00%	0.01%	0.00	*	0~20000
d0.21	Reserved	-100.00%~110.00%	0.01%	0.00	*	0~20000
d0.22	AO1 output	0.0~100.0% (Ratio of the full range)	0.1%	0.0%	*	0~1000
d0.24	Process close-loop reference	-100.0~100.0% (Ratio of the full range)	0.1%	0.0%	*	0~2000
d0.25	Process close-loop feedback	-100.0~100.0% (Ratio of the full range)	0.1%	0.05%	*	0~2000
d0.26	Process close-loop error	-100.0~100.0% (Ratio of the full range)	0.1%	0.0%	*	0~2000
d0.27	Process close-loop	-100.0~100.0% (Ratio of the full range)	0.1%	0.0%	*	0~2000
d0.28	Temperature of heatsink 1	0.0~150.0℃	0.1℃	0.0	*	0~1500
d0.29	Temperature of heatsink 2	0.0~150.0℃	0.1℃	0.0	*	0~1500
d0.30	Total conduction time	0~65535 hours	1 hours	0	*	0~65535
d0.31	Total operating time	0~65535 hours	1 hours	0	*	0~65535
d0.32	Total fan's operating time	0~ 65535 hours	1 hours	0	*	0~65535
d0.33	ASR controller output	-300.0~300.0% (Corresponding to drive's rated torque)	0.1%	0.0%	*	0~6000
d0.34	Reference torque	-300.0~300.0%（Corresponding to drive's rated torque)	0.1%	0.0%	*	0~6000
d0.35~ d0.56	Reserved	Reserved	1	0	*	0~65535
		Group d1:Fault record				
d1.00	Fault record 1	0~55	1	0	*	0~50
d1.01	Bus voltage ofthelatestfailure	0~999V	1V	0V	*	0~999
d1.02	Actual current of the latest failure	0.0~999.9A	0.1A	0.0A	*	0~9999
d1.03	Operation frequency of the latest failure	0.00Hz~300.00Hz	0.01 Hz	0.00Hz	*	0~30000
d1.04	Operation status of the latestfailure	0~FFFFH	1	0000	*	0~FFFFH
d1.05	Fault record 2	0~55	1	0	*	0~50
d1.06	Fault record 3	0~55	1	0	*	0~50
		Group d2:Product Identity Parameters				
d2.00	Serial number	0~FFFF	1	100	*	0~65535
d2.01	Software version number	0.00~99.99	1	1.00	*	0~9999
d2.02	Custom-made version number	0~9999	1	0	*	0~9999
d2.03	Load type selection	0:Heavy load G; 1: Light load L; 2~9: Reserved	1	0	-	0~9
d2.04	Rated capacity	Output power , 0~999.9KVA (Dependent on drive's model)	0.1 KVA	Factory setting	*	0~9999
d2.05	Rated voltage	0~999V (Dependent on drive's model)	1V	Factory setting	*	0~999
d2.06	Rated current	0~999.9A (Dependent on drive's model)	0.1A	Factory setting	*	0~9999
d2.07	Software date	0~65535	1	0	*	0~65535
		Group U0:Factory parameters				
U0.00	Factory password	**** Note: Other parameters in this group can't display until entering the right password.	1	Factory setting	—	0~FFFF
		Group P0:Factory parameters				
P0.00~ P0.02	P0.00	P0.00	P0.00	P0.00	*	0~FFFF

Note: ○:Can be modified during operation；
　　×:Cannot be modified during operating；
　　*:Actually detected and cannot be revised；
　　—:Defaulted by factory and cannot be modified.