Content

The AD300 AC drive is new developed a small size vector control AC drive.It is very good for installing small and narrow size machine.

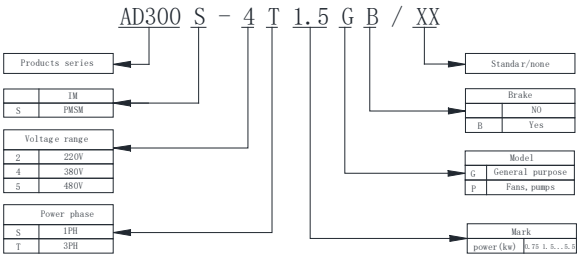
It has following key function.
1. Built in VF, Vector control
2. Independent air duct for good ventilation
3. Built in circuit
4. Short circuit power to the ground does not blow up when switch on.
5. Built in RS485 communication

Perfect performance, multiple function parameters, that can meet lots of application requirement, such as crane, textile, paper-making, wiredrawing, machine tool, packing, food, fan and pump.etc.

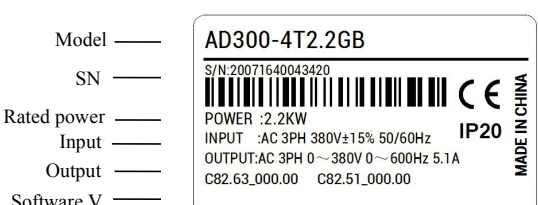
Please take more attention for bellow items:
WARNING – To reduce the risk of injury, do not permit children to use this product unless they are closely
supervised at all times.
WARNING – To reduce the risk of electric shock, replace damaged cord immediately.
WARNING – It must be assured that all grounding connections are properly made and that the resistances do meet local codes or requirements

Chapter 1 Product Introduction

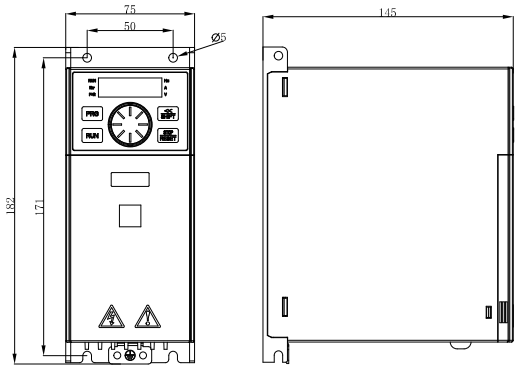
1.1 Model Description



1.2 Nameplate description



1.2 Models number

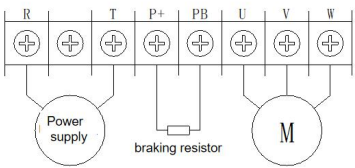


SN	Models	Rate current (A)	Voltage	Rated Power (kw) pumps	Size
220V±15% Input, 0-V（Max input）					
1	AD300-2S-0.75G	4A	220V	0.75	182*145*75
2	AD300-2S-1.5G	7A	220V	1.5	182*145*75
3	AD300-2S-2.2G	9.6A	220V	2.2	182*145*75
380V±15% Input, 0-V（Max input）					
1	AD300-4T-0.75G	2.1A	380	0.75	182*145*75
2	AD300-4T-1.5G	3.8A	380	1.5	182*145*75
3	AD300-4T-2.2G	5.1A	380	2.2	182*145*75
4	AD300-4T-3.0G	7.2A	380	3.0	182*145*75
5	AD300-4T-4.0G	10A	380	4.0	182*145*75
6	AD300-4T-5.5G	13A	380	5.5	182*145*75

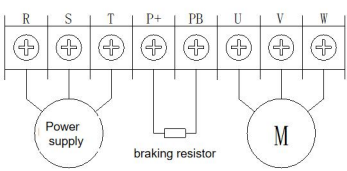
Chapter 2 Product Installation

2.1 Main circuit terminal wiring

2.1.1 Single-phase inverter main circuit terminals



2.1.2 3 phase main circuit loop connection

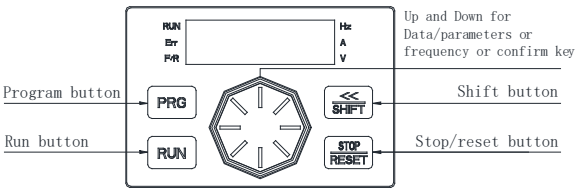


Terminals	Description
R T	Connect single phase power supply
U V W	Connect 3 phase motor
P+, PB	Connect braking resistor
PE	Inverter connect to ground

Note: When the power supply is single-phase input, the power supply is connected to R/T.

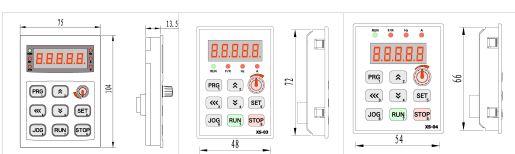
When the power supply is three-phase input, the power supply is connected to R/S/T

2.2 Control panel (keypad) button description



2.3 The size of the external remote control panel (mm)

The 3 following three panels can be configured in option.

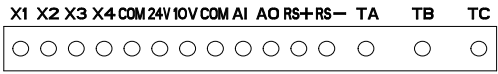


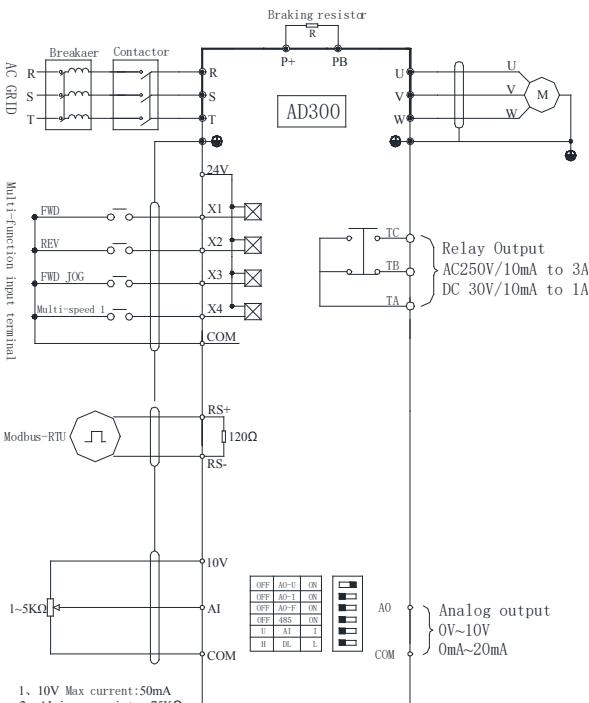
XS-01D ★ XS-03D XS-04D

★There are keypad holder for XS-01 holder, the installation size for holder is 80*121.

2.4 Control terminal circuit loop and connection

2.4.1 .The layout of control terminals and wiring





2.4.2 Control terminal function description

Mark	Terminals	Function description
X1 COM	Multiple function input terminals 1	1. Optocoupler isolation, compatible with bipolar input 2. Input impedance: 2.4KR 3. Voltage range when level input: 9-30V
X2 COM	Multiple function input terminals 2	
X3 COM	Multiple function input terminals 3	
X4 COM	Multiple function input terminals 4	
10V COM	10V voltage power supply	Provide 10V power supply, maximum output current: 50mA Generally used to power up for potentiometer, the resistance range of the potentiometer is 1-5KΩ
24V COM	24V voltage power supply	Provide 24V power supply, maximum output current: 100mA Generally used as external sensor power supply or micro relay power supply
AI COM	Analog input terminal	1. Input signal: DC 0 ~ 10V/0 ~ 20mA /4 ~ 20mA is determined by the dial switch AI position of the keyboard board. 2. Input impedance: voltage signal 75KΩ, current signal: 500Ω
AO COM	Analog output terminal	Determined by the AO position of the DIP switch on the keyboard board. Voltage signal or current signal or frequency signal Voltage signal range: 0 ~ 10V Current signal range: 0 ~ 20mA Frequency signal range: 0 ~ 100KHz
TA TB TC	Relay output	Multifunctional relay output: TA and TC normally open TA and TB normally closed Contact drive capacity: AC250V 3A /DC 30V 1A
RS+ RS-	485	Standard built in RS485

Mark	Terminals	Function description
	communication interface	communication interface

DIP switch defined:

P1: AO-U	Voltage signal	L: OFF	R: ON
P2: AO-I	Current signal	L: OFF	R: ON
P3: AO-F	Frequency output	L: OFF	R: ON
P4: 485	Built resistor	L: OFF	R: ON
P5: AI	Analog input	L: U/voltage	R: I/Current
P6: DL	Reserve	L:Normal	R: burn in mode

* The P6 DIP switch is dedicated to the manufacturer's test. If it is incorrectly dialed to the right, it will cause no display after power on.

Chapter 3 Function Parameter Table

☆": It means that the parameter can be modified when the inverter is running or stopped;
"★": It means that this parameter cannot be modified when the inverter is running;
"●": It means that the parameter cannot be changed under any circumstances and is for reference only

Code	Name	Setting range	Default	PR
P0 Basic function parameters				
P0.00	Control mode selection	0: Open loop sensor less vector control 1: V/F control	1	★
Note: When using the vector control mode, user must to perform motor auto tuning to get motor parameter first. Please refer to motor group parameters and set P2.02 to p2.06 parameters for carrying out motor auto tuning (P2.270) * When P2.01=0/1 (asynchronous motor), the default value of this parameter is 1 (V/F), when P2.01=2 (synchronous motor), the default value of this parameter is 0 (vector).				
P0.01	Running command reference	0: Keypad (operation panel) 1: External terminal 2: RS485 communication	0	☆
P0.02	Memory of digital setting frequency upon power failure	0: Not memorize 1: memorize	1	☆
P0.03	Main frequency reference source X Selection	0: Keypad digital frequency setting, not save after power failure 1: keypad digital frequency setting, memorized frequency after power failure. 2: Analog AI1 (-10v-10v) 3: Analog AI2 (0-10v/4-20mA) 4: Keypad potentiometer 5: PULSE trains frequency reference 6: Simple PLC 7: Multiple step command	1	★

Code	Name	Setting range	Default	PR
		reference 8. Proccess-PID 9: RS485 communication		
P0.04	Maximum frequency	50.00Hz～4000.00Hz	50.00Hz	★
P0.05	Upper limit frequency	P0.06～P0.04	50.00Hz	★
P0.06	Lower limit frequency	0.00Hz～P0.05	0.00Hz	☆
P0.07	Digital frequency reference	0.00Hz～P0.04	50.00Hz	☆
P0.08	Acceleration time 1	0.00s～65000s	default	☆
P0.09	Deceleration time 1	0.00s～65000s	Default	☆
P0.10	Rotation direction	0：Forward； 1：reverse	0	☆
P0.11	Carrier frequency	0.5kHz～16.0kHz	Default	☆
P0.12	Carrier frequency auto adjust select	0：Not auto adjust； 1:Auto adjust	1	☆
P0.13	Parameters restore	0: No operation 1: Restore factory settings except motor parameters 2: Clear records	0	★
P0.14	Auxiliary frequency source Y selection	As same as P0.03 (main frequency source reference)	0	★
P0.15	Auxiliary frequency source selection Y when operation	0: Relative to maximum frequency (P0.04) 1: Relative to main frequency X (P0.03)	0	☆
P0.16	Range of auxiliary frequency source Y selection when operation	0%～150%	100%	☆
P0.17	Frequency source operation (X, Y) selection	Unit’s digit：frequency source selection 0: Main frequency source	00	☆

Code	Name	Setting range	Default	PR
		1: Arithmetic result of main and auxiliary operation (arithmetic relationship operation depends on ten's digit) 2: Switchover between main frequency X source and auxiliary source Y 3: Switchover between main source X and arithmetic operation between of main and auxiliary source. 4: Switchover between auxiliary source and arithmetic operation between of main X and auxiliary source Y Ten's digit : The arithmetic operation relationship between main and auxiliary. 0: main + auxiliary 1: main - auxiliary 2: Biggest one among two 3: Smallest one among two		
P0.18	Running terminals command mode	0: two lines 1 1: two lines 2 2: tree lines 1 3: threes lines 2	0	★
P1 Start/ stop control group				
P1.00	Startup mode	0: Start directly 1: DC brake first and start from starting frequency 2: Start with speed tracking	0	☆
P1.01	Starting frequency	0.00Hz～10.00Hz	0.00Hz	☆
P1.02	Starting frequency holding time	0.0s～100.0s	0.0s	★
P1.03	Startup DC braking current	0%～100%	0%	★

Code	Name	Setting range	Default	PR
P1.04	Startup DC braking time	0.0s～100.0s	0.0s	★
P1.05	Stop mode	0:Deceleration; 1: Free stop	0	☆
P1.06	Initial frequency of stop DC braking	0.00Hz～maximum P0.04	0.00Hz	☆
P1.07	Waiting time of stop DC braking	0.0s～100.0s	0.0s	☆
P1.08	Stop DC braking current	0%～100%	0%	☆
P1.09	Stop DC braking time	0.0s～100.0s	0.0s	☆
P1.10	Brake use ratio	0%～100%	100%	☆
P1.11	Reverse running control	0: allow run in reverse, 1: reverse is forbidden	0	★
P1.12	Jog running frequency	0.00Hz～ maximum frequency	5.00Hz	☆
P1.13	Speed tracking mode	0: speed tracking from stop frequency 1: SOpeed tracking from AC power frequency (50/60hz) 3: Speed tracking from Maximum frequency	0	
P1.14	The speed of speed tracking	1~100	20	
P1.15	The current of speed tracking	50% to 200%	100%	
P1.16	Speed tracking closed loop current KP	0～100	20	☆
P1.17	Speed tracking closed loop current KI	0～100	20	☆
P1.18	Speed tracking closed loop current lower limit	0～100	20	☆
P1.19	Speed tracking voltage rise time	0～10.0s	0.5s	★

Code	Name	Setting range	Default	PR
P1.20	Demagnetization time	0～10.0s	0.5s	★
P2 Motor parameters group				
P2.00	G/P type indicator	0: G type 1: P type	Default	●
P2.01	Motor type selection	0: Ordinary asynchronous motor 1: Variable frequency asynchronous motor 2: Permanent magnet synchronous motor	0	★
P2.02	Motor rated power	0.1kW～1000.0kW	Default	★
P2.03	Motor rated frequency	0.00Hz～maximum frequency	50.00Hz	★
P2.04	Motor rated speed	0rpm～65535rpm	1460rpm	★
P2.05	Motor rated voltage	0V～2000V	Default	★
P2.06	Motor rated current	0.1A～2000A	Default	★
P2.07	Motor Stator resistance	0.001Ω～65.535Ω	Default	★
P2.08	Motor rotor resistance	0.001Ω～65.535Ω	Default	★
P2.09	Motor Motor leakage inductance	0.01mH～655.35mH	Default	★
P2.10	Motor mutual inductance	0.1mH～6553.5mH	Default	★
P2.11	Motor no-load current	0.01A～P2.06	Default	★
P2.12	Synchronous motor stator resistance	0.001Ω～65.535Ω	Default	★

Code	Name	Setting range	Default	PR
P2.13	Synchronous machine D axis inductance	0.01mH～655.35mH	Default	★
P2.14	Synchronous machine Q axis inductance	0.01mH～655.35mH	Default	★
P2.16	Synchronous Back EMF	0.1V～6553.5V	Default	★
P2.19	Encoder type	0：ABZ increase encoder 1：Rotary transformer resolver	0	★
P2.25	Poles of resolver	1～65535	1	★
P2.27	Motor auto tuning	1:Static auto tuning 2:Rotating tuning (complete tuning) 3: Static auto tuning with load 11: Static auto tuning with load for PMSM 12: Rotation tuning with no load for PMSM	0	★

1: Static self-learning
It is suitable for the occasions where the asynchronous motor and the load are not easy to disconnect and complete self-learning is not possible. The motor type and motor nameplate parameters P2.02～P2.06 must be set correctly before performing static self-learning. Static self-learning, the inverter can obtain three parameters P2.07～P2.09.
2: Rotating self-learning
In order to ensure the dynamic control performance of the inverter, please select rotating self-learning. At this time, the motor must be disconnected from the load and keep the motor in the no-load state.
In the process of rotating self-learning, the inverter first performs static learning and then accelerates to 80% of the rated frequency of the motor according to the acceleration time P0.08. After holding for a period of time, it decelerates and stops according to the deceleration time P0.09 and ends the learning.
3: Static load self-learning
Suitable for situations where the load cannot be disconnected.

Code	Name	Setting range	Default	PR
After the rotation self-learning is completed, check the parameter value of P2.11. This value should be 1/3 to 1/2 of the motor rated current (P2.06) value. If it is greater than this value, please manually set the value of P2.11 to a small value. 11: Synchronous machine loaded self-learning When the synchronous motor cannot be disconnected from the load, you have to choose the synchronous motor on-load learning. During this process, the motor runs at 10RPM. Before starting the synchronous motor on-load learning, you need to correctly set the motor type and motor nameplate parameters P2.02～P2 .06. Synchronous motor load learning, the inverter can obtain the initial position angle of the synchronous motor, and at this time the necessary condition for the normal operation of the synchronous motor, so the synchronous motor must be learned before the first use of the installation. Action description: Set the function code to 11, and then press the RUN key, the inverter will start learning with load. 12: Synchronous machine no-load self-learning If the motor can be disconnected from the load, it is recommended to choose the no-load learning of the synchronous motor, so that a better running performance can be obtained than the synchronous motor on-load learning. During the no-load learning process, the inverter first completes the load learning, and then accelerates to the rated motor frequency of P0.07 according to the acceleration time P0.08. After maintaining for a period of time, it decelerates and stops according to the deceleration time P0.09 and ends the learning. Before starting synchronous motor no-load learning, in addition to setting the motor type and motor nameplate parameters P2.02～P2.06, it is also necessary to correctly set the encoder pulse number P2.18, encoder type P2.19, and encoder pole pair number. P2.25. Synchronous motor no-load learning, the inverter can obtain P2.12～P2.16 parameters, as well as encoder related information P2.21, P2.22, P2.23, P2.24, and also obtain vector control current loop PI parameters P3.11～P3.14. Note: Motor self-learning can only be performed in keyboard operation mode (P0.01=0), and self-learning cannot be performed in terminal operation and communication operation modes. After setting the five parameters (P2.01～P2.05), when the inverter is stopped, enter the (P2.27) menu, select the corresponding self-learning mode, press the confirm key, and the panel displays "LEATN", Then press the RUN key, the inverter will perform motor self-learning, and automatically stop after learning.				
P3 Motor vector control group parameters				
P3.00	Speed loop	1～100	30	☆

Code	Name	Setting range	Default	PR
	proportional gain 1			
P3.01	Speed loop integral time 1	0.01s～10.00s	0.50s	☆
P3.02	Switching frequency 1	0.00～P3.05	5.00Hz	☆
P3.03	Speed loop proportional gain 2	1～100	20	☆
P3.04	Speed loop integral time 2	0.01s～10.00s	1.00s	☆
P3.05	Switching frequency 2	P3.02～P0.04	10.00Hz	☆
P3.06	Slip compensation coefficient	50%～200%	100%	☆
P3.07	Speed loop filter time constant	0.000s～0.100s	0.000s	☆
P3.08	Vector control over excitation gain	0～200	64	☆
P3.09	Upper limit of torque source selection in speed control mode	0: set by P3.10 function code 1: AI1 setting 2: AI2 setting 3: Potentiometer of keypad 4: PULSE train setting 5: communication	0	☆
P3.10	Upper limit of torque digital setting in speed control mode	0.0%～200.0%	150.0%	☆
P3.11	M axis current loop Kp	0～60000	2000	☆
P3.12	M-axis current loop Ki	0～60000	1300	☆
P3.13	T axis current loop Kp	0～60000	2000	☆
P3.14	T axis current loop Ki	0～60000	1300	☆
P3.15	Speed loop	0～1	0	☆

Code	Name	Setting range	Default	PR
	integral properties			
P4 V/F Control parameters				
P4.00	VF curve setting	0: Linear V / F curve 1: Multi-point V / F curve 2: Square V / F curve 3: VF separation mode 1 4: VF separation mode 2	0	★
P4.01	Torque boost	0.0%: (auto torque boost) 0.1%～30.0%	0.0%	☆
P4.02	Torque boost cut-off frequency	0.00Hz～maximum	50.00Hz	★
P4.03	VF Slip compensation gain coefficient	0.0%～200.0%	0.0%	☆
P4.04	VF over excitation gain	0～200	64	☆
P4.05	VF vertex point 1 output frequency	0.00Hz～P4.07	0.00Hz	★
P4.06	VF vertex point 1 output voltage proportional	0.0%～100.0%	0.0%	★
P4.07	VF vertex point 2 output frequency	P4.05～P4.09	0.00Hz	★
P4.08	VF vertex point 2 output voltage proportional	0.0%～100.0%	0.0%	★
P4.09	VF vertex point 3 output frequency	P4.07～motor rated frequency	0.00Hz	★
P4.10	VF vertex point 3 output voltage proportional	0.0%～100.0%	0.0%	★
P4.11	The voltage source selection when VF isolated	0: digital reference (P4.13) 1: AI1 reference 2: AI2reference 3: keypad potentiometer reference 4: PULSE train reference (X5)	0	☆

Code	Name	Setting range	Defaul t	P R
P4.12	The voltage source setting when VF isolated	0V～motor rated voltage	0V	☆
P4.13	The voltage ramp up time when VF isolated	0.0s～1000.0s	0.0s	☆
P4.14	Voltage drop time when VF separation	0.0s～1000.0s	0.02	☆
P4.15	Zero speed current setting in vector control	0: Have current when 0 speed, 1: No current	0.0s	☆
P4.16	VF oscillation suppression gain	0～100	0	☆
P4.17	VF oscillation suppression mode	0～4	3	★
P4.18	Overcurrent stall enable	0: Disable 1: Enable	1	★
P4.19	Protection current when over current stall protection	100%～200%	150%	☆
P4.20	Gain of over current stall protection	0～100	20	☆
P4.21	Current compensation coefficient VF double speed over current stall protection	50%～200%	50	☆
P4.22	Over voltage stall protection	0: Not able 1: Enable	1	★
P4.23	Protection voltage when over voltage stall	200～2000	Defaul t	☆
P4.24	ain over voltage	0～100	30	☆
P4.25	Overvoltage stall suppression voltage gain	0～100	30	☆

Code	Name	Setting range	Default	PR
P4.26	Overvoltage stall maximum rise limit frequency	0～50.00Hz	5.00Hz	☆
P4.27	Under voltage stall suppression mode	0: Not enabled 1: enabled 2: Decelerate according to P8.09 deceleration time after power off	0	★
P4.28	Under voltage stall KP	0～100	40	☆
P4.29	Under voltage stall KI	0～100	30	☆
P4.30	VF under voltage stall rise back judgment voltage	80.0%～100.0%	85.0%	★
P4.31	VF under voltage stall rise back judgment voltage time	0.0s～10.0s	0.5	★
P4.32	VF under voltage stall point	60.0%～100.0% (DC bus standard voltage)	80.0%	★
P4.33	VF slip compensation response time	0～100	5	☆
P4.36	VF online torque compensation	0.00～1.50	1.00	☆
P5 Input/ Output terminals				
P5.00	X1 terminals function define	0: No operation 1: forward running (FWD) 2: Reverse running (REV) 3: 3 lines control mode 4: Jog forward (FJOG) 5: Reverse forward (RJOG) 6: Free stop 7: Fault reset (RESET) 8: Normal open input of external fault 9: Terminal UP	1	★
P5.01	X2 terminals function define		2	★
P5.02	X3 terminals function define		4	★
P5.03	X4 terminals function define		12	★
P5.04	X5 terminals function define		13	★
P5.05	X6 terminals		0	★

Code	Name	Setting range	Default	PR
	function define (extension)	10: Terminal DOWN 11: UP/DOWN reset (Terminal, keypad) 12: Multiple step terminals 1 13: Multiple step terminals 2 14: Multiple step terminals 3 15: Multiple step terminals 4 16: Acceleration/ deceleration selection terminals 1 17: Acceleration/ deceleration selection terminals 2 18: Normal close input of external fault 19: Stop by external terminals (only valid for running command by keypad) 20: Frequency reference source switch 21: X5 pulse trains input 22: Switch between main frequency and preset frequency reference 23: Switch between auxiliary frequency and preset frequency reference 24: Running command switch terminal 25: PID pause 26: PID action direction change for reverse 27: PID integral pause 28: PID parameters switch terminal. 29: Counter input 30: Counter reset 31: length counting input 32: length reset 33: Counter enable 34: Swing frequency pause		
P5.06	X7 terminals function define (extension)		0	★
P5.07	X 8 terminals function define (extension)		0	★
P5.08	X 9 terminals function define (extension)		0	★
P5.09	X 10 terminals function define (extension)		0	★

Code	Name	Setting range	Default	PR
		36: Accel/decel. forbidden 37: DC brake command 38: run command switch terminal 2 39: frequency reference activate terminal 40: Motor select terminal 1 41: speed/torque control 2 42: Speed control / torque control switching 43: Run pause 44: User-defined fault 1 45: User-defined fault 2 46: Simple PLC status reset 47: Torque control is prohibited 48: Emergency stop 49: External terminal stops (stops at deceleration time 4, external terminal stops) 50: Deceleration DC braking 52: Reverse is prohibited 53: Prohibition of forward rotation 54: Simple PLC program pause		
P5.10	X terminal filter time	0.000s～1.000s	0.010s	☆
P5.11	Line AI1 minimum setting	-10.00V～P5.13	0.20V	☆
P5.12	Corresponding value of line AI1 minimum setting	-100.0%～+100.0%	0.0%	☆
P5.13	Line AI1 maximum setting	P5.11～+10.00V	10.00V	☆
P5.14	Corresponding value of line AI1 maximum setting	-100.0%～+100.0%	100.0%	☆
P5.15	AI1 filter time	0.00s～10.00s	0.10s	☆
P5.16	Line AI2 minimum setting	0.00V～P5.18	0.20V	☆

Code	Name	Setting range	Default	PR
P5.17	Corresponding value of line AI2 minimum setting	-100.0%～+100.0%	0.0%	☆
P5.18	Line AI2 maximum setting	P5.16～+10.00V	10.00V	☆
P5.19	Corresponding value of line AI2 maximum setting	-100.0%～+100.0%	100.0%	☆
P5.20	AI2 filter time	0.00s～10.00s	0.10s	☆
P5.21	Minimum value reference of potentiometer keypad	0.00V～P5.23	0.20V	☆
P5.22	Corresponding value of minimum value reference of potentiometer keypad	-100.0%～+100.0%	0.0%	☆
P5.23	Maximum value reference of potentiometer keypad	P5.21～+10.00V	10.00V	☆
P5.24	Corresponding value of maximum value reference of potentiometer keypad	-100.0%～+100.0%	100.0%	☆
P5.25	Filter time of potentiometer	0.00s～10.00s	0.10s	☆
P5.26	PULSE minimum input	0.00kHz～P5.28	0.00kHz	☆
P5.27	Corresponding value of PULSE minimum input	-100.0%～100.0%	0.0%	☆
P5.28	PULSE maximum input	P5.26～100.00kHz	50.00kHz	☆
P5.29	P Corresponding value of PULSE maximum input	-100.0%～100.0%	100.0%	☆
P5.30	PULSE filter time	0.00s～10.00s	0.10s	☆

Code	Name	Setting range	Default	PR
P5.32	AI less than minimum input setting selection	Unit's digit: AI1 less than minimum input setting selection 0: Corresponding setting for minimum input 1L 0.0% Ten's digit: AI2 less than minimum input setting selection, as same as above Hundred's digit: potentiometer of keypad less than minimum input selection, as above.	000	☆
P5.33	X1 terminal response delay time	0.0s~3600.0s	0.0s	★
P5.34	X2 terminal response delay time	0.0s~3600.0s	0.0s	★
P5.35	X3 terminal response delay time	0.0s~3600.0s	0.0s	★
P5.36	Input terminal positive/negative logic setting 1	0: Positive logic 1: Negative logic Unit digit: X1 Ten digit: X2 Hundred 's digit: X3 Thousand digit: X4 Ten thousand digit: X5	00000	★
P5.37	Input terminal positive/negative logic setting 7	0: Positive logic 1: Negative logic Unit digit: X1 Ten digit: X2 Hundred 's digit: X3 Thousand digit: X4 Ten thousand digit: X5		
P6 Output terminals group				
P6.00	FM terminal output selection	0: Pulse train output 1: Digital output	0	☆

Code	Name	Setting range	Default	PR
P6.01	FM terminal digital output selection	0: No output 1: Frequency running 2: frequency reach 3: Fault output (free stop fault) 4: Frequency level detect FDT 1 output 5: Frequency level detect FDT 2 output 6: 0 speed running (no output when free stop) 7: 0 speed running 2 (stop with output) 8: upper limit frequency reach 9: lower limit frequency reach 10: frequency reach 1 output 11: frequency reach 2 output 12: power on time reach 13: Running time reach 14: preset timing reach 15: setting counter arrive 16: Programmed counter arrive 17: Length arrive 18: under voltage status output 19: motor overload pre-alarm 20: frequency overload pre-alarm 21: frequency under limit 22: torque under limit 23: standby for running 24: AI1>AI2 25: AI1 input out of upper and lower limit 26: lower frequency arrive (stop with output) 27: this running time arrive 28: warning output (for all	0	☆
P6.02	Local relay output		3	☆
P6.03	Expansion relay output		0	☆
P6.04	DO1 output selection		1	☆
P6.05	Expansion output2		4	☆

Code	Name	Setting range	Default	PR
		faults) 29: Fault output (free stop fault and without output when under voltage) 30: current arrive 1 output 31: current arrive 2 output 32: load missing 34: module temperature reach 35: over current of software output 36: running direction 37: motor overheat pre-alarm 38: PLC circle running finish		
P6.06	FM pulse train output selection	0: running frequency 1: setting frequency 2: current output 3: torque output 4: power output 5: Output voltage 6: PULSE trains input (100.% corresponding to 100.0kHz) 7: AI1 8: AI2 9: Reverse 10: length 11: count value 12: communication setting 13: motor running speed 14: output current (100.0% corresponding to 1000.0A) 15: Output voltage (100.0% corresponding to 1000.0V) 16: output torque (rated torque)	0	☆
P6.07	AO1 output selection		0	☆
P6.08	Expansion AO2 output selection		1	☆
P6.09	FM pulse trains output maximum frequency	0.01kHz～100.00kHz	50.00kHz	☆
P6.10	AO1 zero offset	-100.0%～100.0%	0.0%	☆
P6.11	AO1 gain	-10.00～10.00	1.00	☆
P6.12	Expansion AO2 zero	-100.0%～100.0%	0.0%	☆

Code	Name	Setting range	Default	PR
	offset coefficient			
P6.13	Expansion card AO2 gain	-10.00～10.00	1.00	☆
P6.14	FM digital output ON delay time	0.0s～3600.0s	0.0s	☆
P6.15	Local relay output ON delay time	0.0s～3600.0s	0.0s	☆
P6.16	Expansion relay output ON relay time	0.0s～3600.0s	0.0s	☆
P6.17	DO1 output ON delay time	0.0s～3600.0s	0.0s	☆
P6.18	DO2 output ON delay time	0.0s～3600.0s	0.0s	☆
P6.19	DO output terminal valid status selection	0: positive logic; 1: negative logic unit digit: FM terminal Ten digit: local relay Hundred digit: expansion relay Thousand digit: DO1 Ten thousand digit: DO2	00000	☆
P6.20	FM digital output OFF delay time	0.0s～3600.0s	0.0s	☆
P6.21	Local relay output OFF delay time	0.0s～3600.0s	0.0s	☆
P6.22	Expansion relay output OFF relay time	0.0s～3600.0s	0.0s	☆
P6.23	DO1 output OFF delay time	0.0s～3600.0s	0.0s	☆
P6.24	DO2 output OFF delay time	0.0s～3600.0s	0.0s	☆
P7 Keypad and monitor parameter group				
P7.00	User password	0～65535	0	☆
P7.01	Function code group display selection	Digit: C group monitor display select 0: no display; 1:display	01	☆

Code	Name	Setting range	Default	PR
		Ten digit: H function code display select 0: no display; 1: display		
P7.03	Parameters write protection	0: parameters modify is allowable, 1: parameters modify forbidden	0	☆
P7.04	JOG key function selection	0: JOG key invalid 1: switching between of keypad and remote communication (between terminals and remote communication) 2: switch forward and reverse 3: forward jog 4: reverse jog	3	★
P7.05	STOP key function	0: Stop key is valid only on keypad control mode 1 : Stop key is valid in any control mode	1	☆
P7.06	LED parameters display 1 on running	Unit Digit: Bit0: Running frequency Bit1: Output current Bit2: Output voltage Bit3: Machine speed Ten digit: Bit0: DC bus voltage Bit1: Frequency reference Bit2: Count value Bit3: Length Hundred digit: Bit0: X terminals input status Bit1: DO terminals output status Bit2: AI1 voltage Bit3: AI2 voltage Thousand digit: Bit0: Reserve Bit1: PID reference	003b	☆

Code	Name	Setting range	Default	PR
		Bit2: Power output Bit3: Torque output		
P7.07	LED parameters display 2 on running	Unit digit: Bit0: linear speed Bit1: PID feedback Bit2: PLC circle running Bit3: PLUSE trains input (KHz) Ten digit: Bit0: current power on time Bit1: current running time Bit2: The remaining run time Bit3: main frequency Hundred digit: Bit0: auxiliary frequency Bit1: Encoder feedback speed Bit2: actual feedback speed Bit3: AI1 voltage before correction Hundred unit: Bit0: AI2 voltage before correction Bit1: torque reference value Bit2: PLUSE input frequency Bit3: communication reference	0	☆
P7.08	LED display parameters at stop	Unit digit: Bit0: frequency reference Bit1: DC bus voltage Bit2: AI1 voltage Bit3: AI2 voltage Ten digit: Bit0: Torque reference Bit1: Counter value Bit2: Length value Bit3: machine speed Hundred digit: Bit0: PID reference Bit1: X terminal status Bit2: DO status	3	☆
P7.09	Machine load	0.0001～6.5000	0.300	●

Code	Name	Setting range	Default	PR
	display coefficient			
P7.10	Heat sink of AC Drive temperature	0.0℃～100℃	-	●
P7.12	Accumulative total running time	0h～65535h	-	●
P7.15	Machine load speed display number of decimal point	0: 0 decimal point 1: 1 decimal point 2: 2 decimal point 3: 3 decimal point	0	●
P7.16	Cumulative time of power on time	00000～65535 hour	-	●
P7.16	Cumulative power consumption	00000～65535kwh		
P8 Auxiliary parameters group				
P8.00	The unit of acceleration/deceleration time	0: 1s 1: 0.1s 2: 0.01s	1	★
P8.01	Jog acceleration time	0.0s～6500.0s	20.0s	☆
P8.02	Jog deceleration time	0.0s～6500.0s	20.0s	☆
P8.03	Acceleration time 2	0.0s～6500.0s	20.0s	☆
P8.04	Deceleration time 2	0.0s～6500.0s	20.0s	☆
P8.05	Acceleration time 3	0.0s～6500.0s	20.0s	☆
P8.06	Deceleration time 3	0.0s～6500.0s	20.0s	☆
P8.07	Acceleration time 4	0.0s～6500.0s	20.0s	☆
P8.08	Deceleration time 4	0.0s～6500.0s	20.0s	☆
P8.10	Reference frequency of acceleration/deceleration time	0: maximum frequency (P0.04) 1: frequency reference 2: 100Hz	0	★
P8.11	Jumping frequency	0.00Hz～maximum frequency	0.00Hz	☆

Code	Name	Setting range	Default	PR
	l			
P8.12	Jumping frequency 2	0.00Hz～maximum frequency	0.00Hz	☆
P8.13	Jumping frequency range	0.00Hz～maximum frequency	0.01Hz	☆
P8.14	Frequency selecting is forbidden during acceleration/deceleration	0: invalid 1: valid	0	☆
P8.15	1/2 of acceleration time frequency switch point	0.00Hz～maximum frequency	0.00Hz	☆
P8.16	1/2 of deceleration time frequency switch point	0.00Hz～maximum frequency	0.00Hz	☆
P8.17	Terminal jog function priority selection	0:not priority ; 1:priority	0	☆
P8.18	Upper limit frequency source reference mode	0: P0.05 reference 1: AI1 reference 2: AI2 reference 3: potentiometer of keypad 4: PULSE trains setting 5: communication setting	0	★
P8.19	Upper limit frequency offset	0.00Hz～ maximum P0.04	0.00Hz	☆
P8.20	Auxiliary frequency source offset when superposition	0.00Hz～maximum P0.04	0.00Hz	☆
P8.21	Frequency standard of UP/DOWN during running	0: running frequency 1: frequency reference setting	0	★
P8.22		Unit digit: with keypad control, combination of frequency source selection	0000	☆

Code	Name	Setting range	Defaul t	P R
	Command source, combination of frequency source selection	0: no combination 1: digital setting 2: AI1 3: AI2 4: potentiometer of keypad 5: PULSE trains (X5) 6: multiple step speed 7: Simple PLC 8: PID 9: communication Ten digit: terminal command, combination frequency source selection Hundred digit: RS485 communication command, combination frequency source selection., Thousand digit: auto running, combination frequency source selection		
P8.23	Terminals UP/DOWN charge rate	0.001Hz～65.535Hz	1.00Hz	☆
P8.24	accelerate/ decelerate mode	0：accelerate/ decelerate with straight line; 1：S curve accelerate/ decelerate A	0	★
P8.25	S curve time scale of starting step	0.0%～(100.0%-P8.26)	30.0%	★
P8.26	S curve time scale of close step	0.0%～(100.0%-P8.25)	30.0%	★
P8.27	Forward/ reverse dead zoon time	0.0s～3000.0s	0.0s	☆
P8.28	Frequency less than lower limit frequency stop delay time	0.0～600.0S	0.0S	☆
P8.29	Running mode selection when frequency less than lower limit	0：running as lower limit frequency 1：stop 2：zero speed running	0	☆

Code	Name	Setting range	Default	PR
	frequency			
P8.30	terminal start when power on protection select	0: not protection; 1: protection	0	☆
P8.31	Drop control	0.00Hz～10.00Hz	0.00Hz	☆
P8.32	FDT1 level	0.00Hz～maximum frequency	50.00Hz	☆
P8.33	FDT 1 lag value	0.0%～100.0%	5.0%	☆
P8.34	Frequency arrival detecting range	0.0%～100.0%（maximum）	0.0%	☆
P8.35	FDT2 level	0.00Hz～maximum frequency	50.00Hz	☆
P8.36	FDT2 lag value	0.0%～100.0%	5.0%	☆
P8.37	Any arrival frequency detecting value 1	0.00Hz～maximum frequency	50.00Hz	☆
P8.38	Any frequency arrival detecting range 1	0.0%～100.0%（maximum frequency）	0.0%	☆
P8.39	Any arrival frequency detecting value 2	0.00Hz～maximum frequency	50.00Hz	☆
P8.40	Any frequency arrival detecting range 2	0.0%～100.0%（maximum frequency）	0.0%	☆
P8.41	Reverse			
P8.42	Time of timer setting method	0: P8.43 digital set 1: AI1 reference 2: AI2 reference 3: potentiometer of keypad Range of analog input corresponding to P8.43	0	☆
P8.43	Time value of timer	0.0min～6500.0min	0.0min	☆
P8.44	Zero current detect level	0.0%～300.0%; （100.0% corresponding to motor rated current, stop without output）	5.0%	☆
P8.45	Zero current detect delay time	0.01s～600.00s	0.10s	☆

Code	Name	Setting range	Default	PR
P8.46	over current set point by software	0.0% (no detect) 0.1%~300.0% (motor rated current)	200.0%	☆
P8.47	Over current detect delay time by software	0.00s~600.00s	0.00s	☆
P8.48	Any current arrival 1	0.0%~300.0%(motor rated current)	100.0%	☆
P8.49	Range of any current arrival 1	0.0%~300.0%(motor rated current)	0.0%	☆
P8.50	Any current arrival 2	0.0%~300.0%(motor rated current)	100.0%	☆
P8.51	Range of any current arrival 2	0.0%~300.0%(motor rated current)	0.0%	☆
P8.52	AI1 input voltage lower limit protection	0.00V~P8.53	3.00V	☆
P8.53	AI1 input voltage upper limit protection	P8.52~11.00V	7.00V	☆
P8.54	Cooling fan control	0: Fans working on run 1: Fans working once power on	0	☆
P8.55	Module temperature arrival	0℃~100℃	75℃	☆
P8.56	Current running arrival time	0.0min~6500.0min	0.0min	☆
P8.57	Motor selection	0: motor 1; 1: motor 2	0	★
P9 PID function group				
P9.00	PID reference	0: digital set (P9.01) 1: AI1 2: AI2 3: potentiometer of keypad 4: PULSE trains (X5) 5: communication	0	☆
P9.01	PID reference value set	0.0%~100.0%	50.0%	☆
P9.02	PID feedback value	0: analog AI1 1: analog AI2	0	☆

Code	Name	Setting range	Default	PR
		2: reserve 3: AI1-AI2 4: PULSE train (X5) 5: communication 6: AI1+AI2 7: MAX(|AI1|, |AI2|) 8: MIN(|AI1|, |AI2|)		
P9.03	PID adjust property	0: positive; 1: negative	0	☆
P9.04	PID reference feedback range	0～65535	1000	☆
P9.05	proportional gain P1	0.0～100.0	20.0	☆
P9.06	integral time I1	0.01s～10.00s	2.00s	☆
P9.07	derivative time D1	0.000s～10.000s	0.000s	☆
P9.08	PID inversion cut of frequency for reverse	0.00～maximum frequency	2.00HZ	☆
P9.09	PID limit deviation	0.0%～100.0%	0.0%	☆
P9.10	PID differential amplitude limiting	0.00%～100.00%	0.10%	☆
P9.11	PID reference change time	0.00～650.00s	0.00s	☆
P9.12	PID feedback filter time	0.00～60.00s	0.00s	☆
P9.13	PID output filter time	0.00～60.00s	0.00s	☆
P9.15	proportional gain P2	0.0～100.0	20.0	☆
P9.16	integral time I2	0.01s～10.00s	2.00s	☆
P9.17	derivative time D2	0.000s～10.000s	0.000s	☆
P9.18	PID parameters switchover condition	0: No switch 1: Terminals 2: Switchover according to deviation	0	☆
P9.19	PID parameters switchover deviation 1	0.0%～PA.20	20.0%	☆

Code	Name	Setting range	Default	PR
P9.20	PID parameters switchover deviation 2	PA.19～100.0%	80.0%	☆
P9.21	PID starting value	0.0%～100.0%	0.0%	☆
P9.22	PID starting value holding time	0.00～650.00s	0.00s	☆
P9.23	Positive maximum between twice deviation output	0.00%～100.00%	1.00%	☆
P9.24	Negative maximum between twice deviation output	0.00%～100.00%	1.00%	☆
P9.25	PID integral property	Unit digit: integral separation 0: invalid; 1: valid Ten digit: if stop integral calculating when output reach to limit 0: continue; 1: stop	00	☆
P9.26	PID feedback loss detect value	0.0%: no detect for loss 0.1%～100.0%	0.0%	☆
P9.27	PID feedback loss detect time	0.0s～20.0s	0.0s	☆
P9.28	PID stop calculating	0: stop without calculating, 1: stop and calculating	0	☆
P9.29	wake up frequency	Sleeping frequency (P9.31)～maximum (P0.10)	0.00Hz	☆
P9.30	Wake up delay time	0.0s～6500.0s	0.0s	☆
P9.31	sleeping frequency	0.00Hz～wake frequency (P9.29)	0.00Hz	☆
P9.32	Sleeping delay time	0.0s～6500.0s	0.0s	☆
P9.33	Wake up function define	0: As frequency (P9.29) 1: As percentage (P9.34)	0	☆
P9.34	Wake up value	0.0%～100.0%	0.0%	☆
P9.35	Sleep definition function selection	0: As frequency (P9.31) 1: As percentage (P9.36)	0	☆
P9.36	Sleep threshold	0.0～200.0%	101%	☆

Code	Name	Setting range	Default	PR
PA Multiple step command, PLC running group				
PA.00	Multi-step speed 1	-100.0%～100.0% (100.0% corresponding to P0.04)	5.0%	☆
PA.01	Multi-step speed 2	-100.0%～100.0%	10.0%	☆
PA.02	Multi-step speed 3	-100.0%～100.0%	15.0%	☆
PA.03	Multi-step speed 4	-100.0%～100.0%	20.0%	☆
PA.04	Multi-step speed 5	-100.0%～100.0%	25.0%	☆
PA.05	Multi-step speed 6	-100.0%～100.0%	30.0%	☆
PA.06	Multi-step speed 7	-100.0%～100.0%	35.0%	☆
PA.07	Multi-step speed 8	-100.0%～100.0%	40.0%	☆
PA.08	Multi-step speed 9	-100.0%～100.0%	45.0%	☆
PA.09	Multi-step speed 10	-100.0%～100.0%	50.0%	☆
PA.10	Multi-step speed 11	-100.0%～100.0%	55.0%	☆
PA.11	Multi-step speed 12	-100.0%～100.0%	60.0%	☆
PA.12	Multi-step speed 13	-100.0%～100.0%	65.0%	☆
PA.13	Multi-step speed 14	-100.0%～100.0%	70.0%	☆
PA.14	Multi-step speed 15	-100.0%～100.0%	75.0%	☆
PA.15	Multi-step speed 16	-100.0%～100.0%	80.0%	☆
PA.16	PLC running mode	0：Stop when single circle running finish 1：Keep final value when single circle running finish 2：continue circle running	0	☆
PA.17	PLC running Power-off memory select	Unit digit： 0：no memory when power off； 1：power-off memory Ten digit： 0：no memory when stop； 1: stop memory	00	☆
PA.18	PLC 1st step running time	0.0s(h)～6500.0s(h)	0.0s(h)	☆
PA.19	PLC 1st acceleration/ deceleration time select	0～3	0	☆
PA.20	PLC 2nd step running time	0.0s(h)～6500.0s(h)	0.0s(h)	☆
PA.21	PLC 2nd acceleration/	0～3	0	☆

Code	Name	Setting range	Default	PR
	deceleration time select			
PA.22	PLC 3rd step running time	0.0s(h) ~ 6500.0s(h)	0.0s(h)	☆
PA.23	PLC 3rd acceleration/ deceleration time select	0 ~ 3	0	☆
PA.24	PLC 4th step running time	0.0s(h) ~ 6500.0s(h)	0.0s(h)	☆
PA.25	PLC 4th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.26	PLC 5th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.27	PLC 5th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.28	PLC 6th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.29	PLC 6th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.30	PLC 7th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.31	PLC 7th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.32	PLC 8th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.33	PLC 8th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.34	PLC 9th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆

Code	Name	Setting range	Default	PR
PA.35	PLC 9th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.36	PLC 10th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.37	PLC 10th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.38	PLC 11th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.39	PLC 11th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.40	PLC 12th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.41	PLC 12th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.42	PLC 13th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.43	PLC 13th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.44	PLC 14th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.45	PLC 14th acceleration/ deceleration time select	0 ~ 3	0	☆
PA.46	PLC 15th step running time	0.0s(h) ~ 6553.5s(h)	0.0s(h)	☆
PA.47	PLC 15th acceleration/ deceleration time select	0 ~ 3	0	☆

Code	Name	Setting range	Default	PR
PA.48	PLC 16th step running time	0.0s(h)～6553.5s(h)	0.0s(h)	☆
PA.49	PLC 16th acceleration/ deceleration time select	0～3	0	☆
PA.50	PLC running time unit	0：s（second）； 1：h（hour）	0	☆
PA.51	Multiple step command 1 frequency reference	0：function code PA.00 reference 1：AI1 2：AI2 3: potentiometer keypad 4：PULSE trains 5：PID reference 6：digit reference，UP/DOWN is changeable	0	☆
PA.52	Up/Down save when shut down	0: no save, 1: save		
Pb swing frequency, fixed length , counter				
Pb.00	Swing frequency setting mode	0：corresponding to center frequency 1：corresponding to maximum frequency	0	☆
Pb.01	Swing frequency range	0.0%～100.0%	0.0%	☆
Pb.02	Suddenly jump frequency range	0.0%～50.0%	0.0%	☆
Pb.03	Swing frequency period	0.1s～3000.0s	10.0s	☆
Pb.04	Delta wave rise time of swing frequency	0.1%～100.0%	50.0%	☆
Pb.05	length set	0m～65535m	1000m	☆
Pb.06	Actual length	0m～65535m	0m	☆
Pb.07	Pulse per meter, unit: 0.1	0.1～6553.5	100.0	☆
Pb.08	count value setting	1～65535	1000	☆
Pb.09	Assign of count value	1～65535	1000	☆

Code	Name	Setting range	Default	PR
PC Fault and protection group				
PC.00	Motor overload protection	0：forbidden； 1：allow	1	☆
PC.01	Motor overload protection gain	0.20～10.00	1.00	☆
PC.02	Motor overload pre-alarm coefficient	50%～100%	80%	☆
PC.03	The DC braking if activate value	200～2000	Defaults	
PC.04	Reserve			☆
PC.05	User-defined overload threshold	0.0%～200.0%	200.0%	☆
PC.06	User-defined overload checkout time	0.0s～1000.0s	60.0s	☆
PC.08	Fault automatic reset times	0～20	0	☆
PC.09	Fault DO action selection when fault automatic reset period	0：on action 1：action	0	☆
PC.10	Interval time of fault automatic reset	0.1s～100.0s	1.0s	☆
PC.11	Input power phase missing protection	0：disable 1: enable	1	★
PC.12	Output power phase missing protection	0：disable 1: enable	1	
PC.13	The 1st fault type	0：no fault 1：over current on acceleration (E001) 2：over current on deceleration (E002) 3：over current on fixed speed (E003) 4：over voltage on acceleration (E004) 5：over voltage on deceleration (E005) 6：over voltage on fixed speed	-	●
PC.14	The 2nd fault type		-	●
PC.15	The 3rd (latest one) fault type		-	●

Code	Name	Setting range	Default	PR
		(E006) 7：control power fault (E007) 8：under voltage fault (E008) 9：AC Drive unit fault（E009） 10：input power phase missing (E010) 11：output power phase missing (E011) 12: motor to ground short circuit fault （E012） 13：reserve 14：AC Drive overload E014) 15：motor overload (E015) 16：module overheat (E016) 17：parameters write/read abnormal （E017） 18：external fault (E018) 19：running time arrival E019） 20: power on time arrival（E020） 21：current detect fault (E021） 22 :motor over temperature(E022） 23：contactor abnormal (E023) 24：communication fault (E024) 25：encoder /PG fault（E025） 26：motor auto tuning fault (E026) 27：initial position fault（E027） 28: hardware over current protection（E028） 29: motor over speed （E029） 30: speed deviation is big （E030） 31: reserve 32: Load missing (E032) 33:PID feedback missing (033)		
PC.16	Running frequency on the 3rd fault	-	-	●
PC.17	Current on the 3rd fault	-	-	●
PC.18	DC bus voltage on 3rd fault	-	-	●
PC.19	Input terminal status	-	-	●

Code	Name	Setting range	Default	PR
	on 3rd fault			
PC.20	Output terminal status on 3rd fault	-	-	●
PC.21	Frequency AC Drive status on 3rd fault	-	-	●
PC.22	Time of the 3rd fault (Timing from current time)	-	-	●
PC.23	Time of the 3rd fault (timing from start running)	-	-	●
PC.24	Running frequency on the 2nd fault	-	-	●
PC.25	Current on the 2nd fault	-	-	●
PC.26	DC bus voltage on 2nd fault	-	-	●
PC.27	Input terminal status on 2nd fault	-	-	●
PC.28	Output terminal status on 2nd fault	-	-	●
PC.29	Frequency AC Drive status on 2nd fault	-	-	●
PC.30	Time of the 2nd fault (Timing from current time)	-	-	●
PC.31	Time of the 2nd fault (timing from start running)	-	-	●
PC.32	Running frequency on the 1st fault	-	-	●
PC.33	Current on the 1st fault	-	-	●
PC.34	DC bus voltage on 1st fault	-	-	●
PC.35	Input terminal status on 1st fault	-	-	●
PC.36	Output terminal status on 1st fault	-	-	●
PC.37	Frequency AC Drive	-	-	●

Code	Name	Setting range	Default	PR
	status on 1st fault			
PC.38	Time of the 1st fault (Timing from current time)	-	-	●
PC.39	Time of the 1st fault (timing from start running)	-	-	●
PC.45	Action selection at instantaneous power failure	0: Invalid 1: Decelerate 2: Decelerate to stop		
PC.46	Action pause judging voltage at instantaneous power failure	PC.48～100.0%		
PC.47	Voltage rise again judging time at instantaneous power failure	0.0～100.0S		
PC.48	Action judging voltage at instantaneous power failure	60.0%～100.0%	80.0%	☆
PC.49	Protection of load loss	0:Disable 1: Enable	0	☆
PC.50	Detection level of load loss	0.0～100.0%	10.0%	☆
PC.51	Detection time of load Loss	0.0～60.0S	0.0	☆
PC.52	Over-speed detection value	0.0～50.0% (P0.04 value)	20.0%	☆
PC.53	Over-speed detection time	0.0～60.0S	5.0S	☆
PC.54	Detection value of too large speed deviation	0.0～50.0% (P0.04 value)	20.0%	☆
PC.55	Detection time of too large speed deviation	0.0～60.0S	0.0S	☆
PC.56	Reserve			

Code	Name	Setting range	Default	PR
PC.57	Motor temperature sensor type	0:No temperature sensor 1:PT100 2:PT1000	0	☆
PC.58	Motor overheat protection value	0.0℃～200℃	110℃	☆
PC.59	Motor overheat pre-alarm value	0.0℃～200℃	90℃	☆
PC.60	Reserve			
PC.61	Quick current limit	0: Disable 1: Enable	1	☆
PC.62	Under voltage point setting	100.0～400.0V	Default	☆
PC.63	Over voltage point setting	200.0～1200.0V	Default	☆
Pd communication parameters group				
Pd.01	Selection of communication Baud rate	1：600BPS 2：1200BPS 3：2400BPS 4：4800BPS 5：9600BPS 6：19200BPS 7：38400BPS 8：57600BPS 9：115200BPS	5	☆
Pd.02	Format of data	0: No parity (8.N-2) 1: Even parity (8.E-1) 2: Odd parity (8.O-1) 3: No parity (8.N-1)	0	☆
Pd.03	Local address	1～247； 0 take as for Broadcast address	1	☆
Pd.04	Response delay	0ms～20ms	2	☆
Pd.05	Communication timeout	0.0（invalid ）；0.1s～60.0s	0.0	☆
Pd.06	Data transfer format selection	0：non standard MODBUS Protocol 1：standard MODBUS Protocol	1	☆
Pd.07	Communication reading current resolution	0：0.01A(Less than 55KW) 1：0.1A	0	☆
H0 Torque control parameters group				

Code	Name	Setting range	Default	PR
H0.00	Torque control mode	0:Disable ； 1:Enable	0	★
H0.01	Torque reference selection	0: digital of keypad reference (H0,03) The maximum range corresponding torque upper limit (H0.03) 1：analog AI1 reference 2：analog AI2 reference 3：potentiometer of keypad 4：PULSE trains reference 5：communication 6： minimum between of (AI1,AI2) 7 :maximum between of (AI1,AI2)	0	★
H0.03	torque reference by digital set	-200.0%～200.0%	150.0%	☆
H0.05	Maximum frequency in forward under torque control	0.00Hz～maximum frequency	50.00 Hz	☆
H0.06	Maximum frequency in reverse under torque control	0.00Hz～maximum frequency	50.00 Hz	☆
H0.07	Acceleration time of torque control	0.00s～65000s	0.00s	☆
H0.08	Deceleration time of torque control	0.00s～65000s	0.00s	☆
H3 Multi-point AI curve parameter group				
H1.00	VDI1 Terminal function selection	0～55	0	★
H1.01	VDI2 Terminal function selection	0～55	0	★
H1.02	VDI3 Terminal function selection	0～55	0	★
H1.03	VDI4 Terminal function selection	0～55	0	★
H1.04	VDI5T Terminal function selection	0～55	0	★
H1.05	VDI source of terminal valid state	0～22222	0	★

Code	Name	Setting range	Default	PR
H1.06	VDI Terminal function code setting valid state	0～11111	0	☆
H1.07	AI1 Terminal function selection (as DI)	0～55	0	★
H1.08	AI2 Terminal function selection (as DI)	0～55	0	★
H1.09	AI3 Terminal function selection (as DI)	0～55	0	★
H1.10	AI select as DI valid state	0～111	0	☆
H1.11	Virtual VDO1 output selection	0～42	0	☆
H1.12	Virtual VDO2 output selection	0～42	0	☆
H1.13	Virtual VDO3 output selection	0～42	0	☆
H1.14	Virtual VDO4 output selection	0～42	0	☆
H1.15	Virtual VDO5 output selection	0～42	0	☆
H1.16	VDO1 delay time	0～3600.0s	0	☆
H1.17	VDO2 delay time	0～3600.0s	0	☆
H1.18	VDO3 delay time	0～3600.0s	0	☆
H1.19	VDO4 delay time	0～3600.0s	0	☆
H1.20	VDO5 delay time	0～3600.0s	0	☆
H1.21	VDO Output terminal valid state selection	0～11111	0	☆
H3 Multiple points AI curve parameters group.				
H3.00	AI curve 4 minimum input	-10.00V～H3.02	0.00V	☆
H3.01	AI curve 4 minimum input corresponding value	-100.0%～+100.0%	0.0%	☆
H3.02	AI curve 4 break	H3.00～H3.04	3.00V	☆

Code	Name	Setting range	Default	PR
	point 1 input			
H3.03	AI curve 4 break point 1 input corresponding value	-100.0%～+100.0%	30.00 %	☆
H3.04	AI curve 4 break point 2 input	H3.02～H3.06	6.00V	☆
H3.05	AI curve 4 break point 2 input corresponding value	-100.0%～+100.0%	60.00 %	☆
H3.06	AI curve 4 maximum input	H3.04～+10.00V	10.00 V	☆
H3.07	AI curve 4 maximum input corresponding value	-100.0%～+100.0%	100.0 %	☆
H3.08	AI curve 5 minimum input	-10.00V～H3.10	0.00V	☆
H3.09	AI curve 5 minimum input corresponding value	-100.0%～+100.0%	0.0%	☆
H3.10	AI curve 5 break point 1 input	H3.08～H3.12	3.00V	☆
H3.11	AI curve 5 break point 1 input corresponding value	-100.0%～+100.0%	30.00 %	☆
H3.12	AI curve 5 break point 2 input	H3.10～H3.14	6.00V	☆
H3.13	AI curve 5break point 2 input corresponding value	-100.0%～+100.0%	60.00 %	☆
H3.14	AI curve 5 maximum input	H3.12～+10.00V	10.00 V	☆
H3.15	AI curve 5 maximum input corresponding value	-100.0%～+100.0%	100.0 %	☆
H7 AI, AO Calibration parameter group				
H7.00	AI1 Measured voltage1	-10.000～10.000V	Factory calibration	☆

Code	Name	Setting range	Default	PR
H7.01	AI1 Display voltage 1	-10.000～10.000V	Factory calibration	☆
H7.02	AI1 Measured voltage2	-10.000～10.000V	Factory calibration	☆
H7.03	AI1 Display voltage 2	-10.000～10.000V	Factory calibration	☆
H7.04	AI2 Measured voltage1	-10.000～10.000V	Factory calibration	☆
H7.05	AI2 Display voltage 1	-10.000～10.000V	Factory calibration	☆
H7.06	AI2 Measured voltage 2	-10.000～10.000V	Factory calibration	☆
H7.07	AI2 Display voltage 2	-10.000～10.000V	Factory calibration	☆
H7.08	AI3 Measured voltage 1	-10.000～10.000V	2.000V	☆
H7.09	AI3 Display voltage 1	-10.000～10.000V	2.000V	☆
H7.10	AI3 Measured voltage 2	-10.000～10.000V	8.000V	☆
H7.11	AI3 Display voltage 2	-10.000～10.000V	8.000V	☆
H7.12	AO1 Target voltage 1	-10.000～10.000V	2.000V	☆
H7.13	AO1 Measured voltage 1	-10.000～10.000V	2.000V	☆

Code	Name	Setting range	Default	PR
H7.14	AO1 Target voltage 2	-10.000～10.000V	8.000V	☆
H7.15	AO1 Measured voltage 2	-10.000～10.000V	8.000V	☆
H7.16	AO2 Target voltage 1	-10.000～10.000V	2.000V	☆
H7.17	AO2 Measured voltage 1	-10.000～10.000V	2.000V	☆
H7.18	AO2 Target voltage 2	-10.000～10.000V	8.000V	☆
H7.19	AO2 Measured voltage 2	-10.000～10.000V	8.000V	☆
HC Control optimization parameter group				
HC.00	DPWM Switch upper limit frequency	0.00hz～Max frequency (P0.04)	12.00hz	☆
HC.01	Modulation method	0～1	0	☆
HC.02	Dead zone compensation mode selection	0～2	1	☆
HC.03	Random PWM	0～10	0	☆
HC.04	Energy saving control enable	0～1	0	☆
HC.05	Dead time adjustment	0～200	60	★
HC.06	Maximum voltage output coefficient	100～110	100	☆
HC.07	Weakness coefficient	50～200	100	☆

Chartper 4 Monitoring code group

Code	Name	Min unit	Communication address
C0 Monitoring parameters list			
C0.00	Running frequency (Hz)	0.01Hz	5000H
C0.01	Output current (A)	0.01A	5001H
C0.02	Output voltage (V)	1V	5002H
C0.03	Load speed display	1	5003H
C0.04	Bus voltage (V)	0.1V	5004H
C0.05	Setting frequency (Hz)	0.01Hz	5005H
C0.06	Count value	1	5006H
C0.07	Length value	1	5007H
C0.08	X terminal status	1	5008H
C0.09	DO output status	1	5009H
C0.10	AI1 voltage (V)	0.01V	500AH
C0.11	AI2 voltage (V)	0.01V	500BH
C0.12	Potentiometer of keypad voltage (V)	0.01V	500CH
C0.13	PID setting	1	500DH
C0.14	Output power (kW)	0.1kW	500EH
C0.15	Output torque (%)	0.1%	500FH
C0.16	Line speed	1m/Min	5010H
C0.17	PID feedback	1	5011H
C0.18	PLC stage	1	5012H

Code	Name	Min unit	Communication address
C0.19	PULSE input pulse frequency (Hz)	0.01KHz	5013H
C0.20	Current power-on time	1Min	5014H
C0.21	Current running time	0.1Min	5015H
C0.22	Remaining running time	0.1Min	5016H
C0.23	Main frequency display	0.01Hz	5017H
C0.24	Auxiliary frequency display	0.01Hz	5018H
C0.25	Feedback speed (unit: 0.1Hz)	0.1Hz	5019H
C0.26	Encoder feedback speed	0.01Hz	501AH
C0.27	AI1 voltage before calibration	0.001V	501BH
C0.28	AI2 voltage before correction	0.001V	501CH
C0.29	Torque setpoint	0.1%	501DH
C0.30	PULSE input pulse frequency	1Hz	501EH
C0.31	Communication settings	0.01%	501FH
C0.32	Inverter running status	1	5020H
C0.33	Reserve	1	5021H
CO.34	Motor temperature value	1℃	5022H
CO.35	Reserve	1	5023H
CO.36	Reserve	1	5024H
C0.37	Current motor serial number	0：First motor 1: Second motor	5025H
C0.38	Reserve		5026H

Chapter 5 Fault Diagnosis and Treatment Methods

Fault code description and countermeasures

Fault code	Fault name	Possible cause	Solution
E001	Acceleratin g over current	1. The acceleration time is too short 2. The output of the inverter is grounded or short-circuited 3. There is no parameter identification of the motor in the vector control mode 4. There is sudden load during acceleration 5. Manual torque increase is too large or V/F curve setting is improper 6. Low voltage 7. Partial selection of inverter	1. Increased acceleration time 2.Check the insulation of the motor and the cable. 3. Identify the parameters of the motor 4. Check the load 5. Reduce the torque boost value or modify the V/F curve value 6. Check the power supply voltage or view the bus voltage value 7. Choose a frequency converter with a higher power rating
E002	Deceleratio n overcurrent	1. Deceleration time is too short 2. The output of the inverter is grounded or short-circuited 3. There is no parameter identification of the motor in the vector control mode 4. There is sudden load during deceleration	1. Increase the deceleration time 2.Check the insulation of the motor and the cable. 3. Identify the parameters of the motor 4. Check the load 5. Reduce the torque boost value or modify the V/F curve value 6. Check the power

Fault code	Fault name	Possible cause	Solution
		5. Excessive manual torque rise or improper V/F curve setting 6. Low voltage	supply voltage or view the bus voltage value
E003	Over current during constant speed	1. The output of the inverter is grounded or short-circuited 2. There is no parameter identification of the motor in the vector control mode 3. There is sudden load during operation 4. Low voltage 5. The inverter selection is too small	1.Check the insulation of the motor and the cable. 2. Identify the parameters of the motor 3. Check the load 4. Check the power supply voltage or view the bus voltage 5. Choose a frequency converter with a higher power rating
E004	Acceleration over voltage	1. The input voltage is too high 2. The acceleration time is too short 3. There is an external force that drives the motor to run during acceleration 4. There is no additional braking unit and braking resistor	1. Adjust the voltage to the normal range 2. Increase acceleration time 3. Check the load 4. Install braking unit and braking resistor
E005	Deceleration overvoltage	1. The input voltage is too high 2. The acceleration time is too short 3. There is an external force that drives the motor to run during acceleration 4. No braking unit and braking resistor	1. Adjust the voltage to the normal range 2. Increase acceleration time 3. Check the load 4. Install braking unit and braking resistor

Fault code	Fault name	Possible cause	Solution
E006	Constant speed overvoltage	1. The input voltage is too high 2. There is external force driving the motor during operation	1. Adjust the voltage to normal voltage 2. Adjust the load or install a braking unit and braking resistor
E007	Control power failure	1.The input voltage is not within the specified range 2.The relay does not suck	Adjust the voltage to within the normal range
E008	Undervoltage fault	1.Low input voltage or poor contact 2.The bus voltage is abnormal 3.The relay or contactor does not pull in 4.The control board is abnormal	1. Check the input power voltage 2. Check the bus voltage value 3. Seek technical support or replace the contactor 4. Seek technical support
E009	Inverter unit failure	1. The output of the inverter is short-circuited 2. The wiring between the inverter and the motor is too long 3. The iGBT module is overheated 4. The iGBT module is damaged 5. Drive exception	1.Check the insulation of the motor and cable, disconnect the motor wire to see if the fault remains. 2.Install output reactor 3.Seek technical support 4.Seek technical support
E010	Input phase loss	1. Three-phase input power lack of phase 2. The drive board is abnormal	1.Check the power supply 2.Seek technical support

Fault code	Fault name	Possible cause	Solution
E011	Output phase loss	1.The lead from the inverter to the motor is abnormal 2.Inverter output three-phase unbalanced or lack of phase 3.The drive board is abnormal 4. Module exception	1. Check the motor and cables 2.To seek technical support 3.To seek technical support 4.To seek technical support
E012	Short to ground	1.Motor short circuit to ground 2.Malfunction	1.Check the motor and cable 2.PC.07 is set to 0, the function is closed
E013	Inverter hardware failure	1.Over current issue possibility 2. Over voltage issue possibility	1.Refer to fault treatment of overcurrent 2.Refer to fault treatment of over voltage
E014	Inverter overload	1. The load is too large or the motor is blocked 2. The rated power of inverter selection is too small 3. The motor haven't motor auto tuning	1.Check the load and mechanical conditions 2. Replace the inverter with a higher power rating 3. Change the control mode to V/F (PO.00=1) and restart. Or perform auto auto tuning
E015	Motor overload	1. Whether the protection parameter PC.01 is set properly 2. The load is too large or the motor is blocked 3. The inverter selection is too small	1. Set the parameters correctly 2. Check the load and mechanical conditions 3. Replace the inverter with a higher power rating

Fault code	Fault name	Possible cause	Solution
E016	iGBT Module overheating	1. The ambient temperature is too high 2. The air duct is blocked 3. The fan is damaged 4. The module is overheated and the device is damaged	1. Improve the ambient temperature 2. Clean the air duct 3. Replace the fan 4. Seek technical support
E017	Memory failure	Memory chip is damaged	Seek technical support
E018	External device failure	Input external fault signal through multifunctional digital terminal X	Reset to run
E019	Keep		Please contact the dealer
E020	Keep		Please contact the dealer
E021	Current detection failure	1. Current Hall detection damage 2. Driver board failure	1. Check whether the Hall sensor and the plug wire are loose 2. Seek technical support
E022	Motor overheating fault	1. Motor temperature is too high 2. Motor temperature sensor failure	1. Increase the carrier frequency or heat the motor 2. Check the motor temperature sensor and wiring
E023	Contactor failure	1. The contactor is abnormal 2. The drive board and power supply are abnormal	1. Replace the contactor 2. Seek technical support
E024	communication fail	1. The upper computer is abnormal 2. The communication line is abnormal	1. Check the host computer and connection 2. Check the

Fault code	Fault name	Possible cause	Solution
		3. The communication parameter group is set incorrectly	communication line 3. Set the parameters correctly
E025	Encoder failure	1. Encoder model does not match 2. Encoder connection error 3. The encoder is damaged 4. PG card is abnormal	1. Set the encoder parameters correctly 2. Check the connection 3. Replace the encoder 4. Replace PG card
E026	Motor identificati on failure	1. Improper setting of motor parameters 2. Parameter recognition time is too long	1. Reset the motor parameters 2. Check if the inverter is connected to the motor
E027	Initial position failure	The difference between motor parameters and actual deviation is too large	Reconfirm whether the motor parameters are correct, and focus on whether the rated current is set to small
E028	Fast current limit fault	1. The load is too large or the motor is blocked 2. The inverter selection is too small 3. The motor is not self-learning	1. Check the motor and load 2.perform motor auto tuning. 3.Change the control mode to V/F (PO.00=1) and restart. Or perform motor auto tuning on the motor.
E029	Motor overspeed fault	1.Encoder parameter setting is incorrect 2.No parameter identification 3.The motor overspeed parameter setting is unreasonable	1.Reset the encoder parameters 2.Identify the parameters of the motor 3.Set the parameters reasonably
E030	Excessive speed deviation fault	1.Encoder parameter setting is incorrect 2.No parameter identification	1.Reset the encoder parameters 2.Identify the parameters of the

Fault code	Fault name	Possible cause	Solution
		3.The motor overspeed parameter setting is unreasonable	motor 3. Set the parameters reasonably
E031	Motor switching failure during operation	Switch motor behavior during running	Switch the motor after the inverter stops
E032	Missing load fault	The running current of the inverter is less than the value set by PC.50	The running current of the inverter is less than the value set by PC.50
E033	PID feedback loss failure during operation	PID feedback is less than the set value of P9.26	Check the feedback signal or set the parameters reasonably
E035	User-defined fault 1	Input the signal of user-defined fault 1 through the multi-function terminal X Input user-defined fault 1 signal through virtual function terminal IO	Reset to run
E036	User-defined fault 1	1. Input the signal of user-defined fault 1 through the multi-function terminal X 2. Input the signal of user-defined fault 1 through the virtual function terminal IO	Reset to run
E037	Reserve		