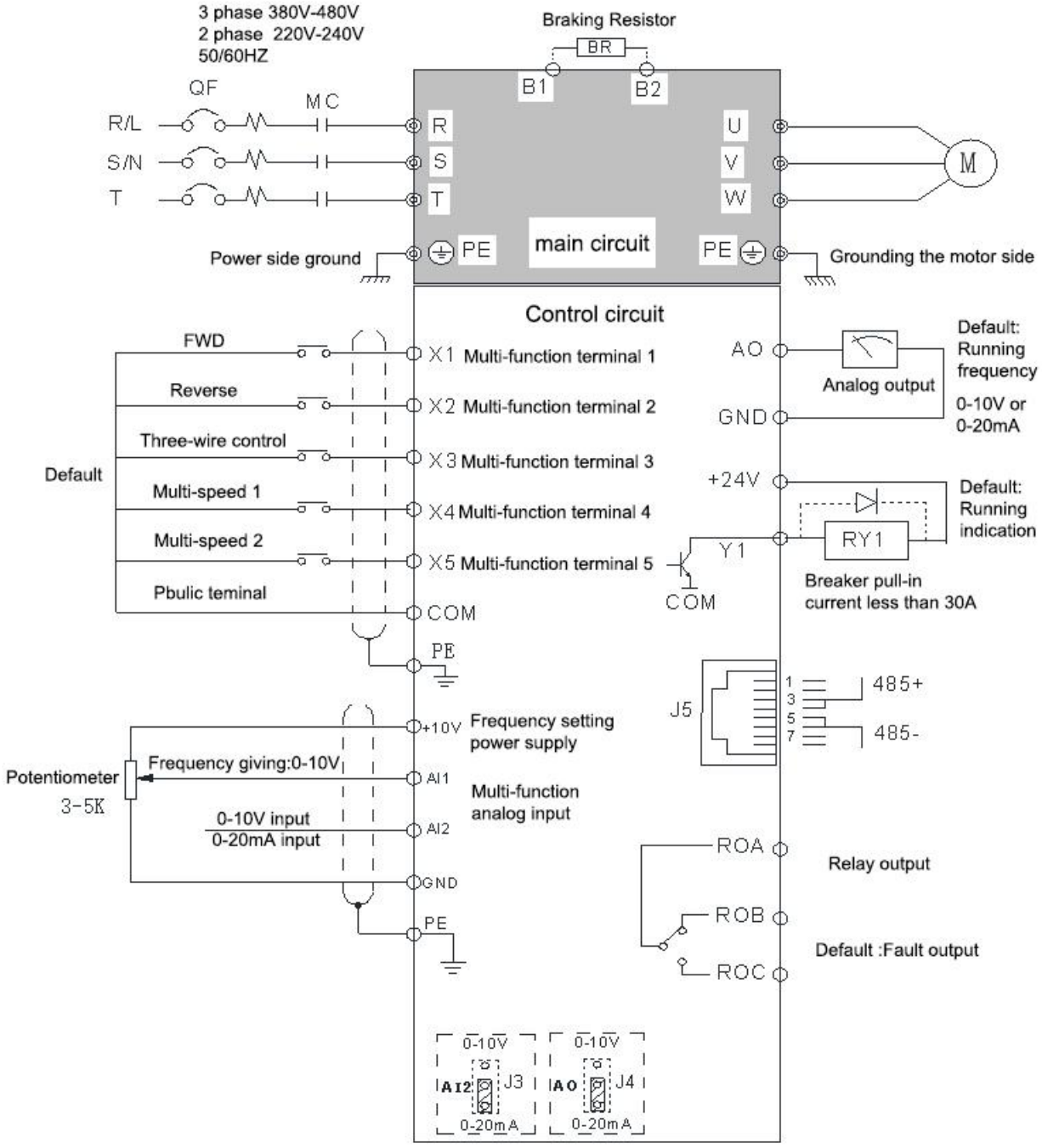
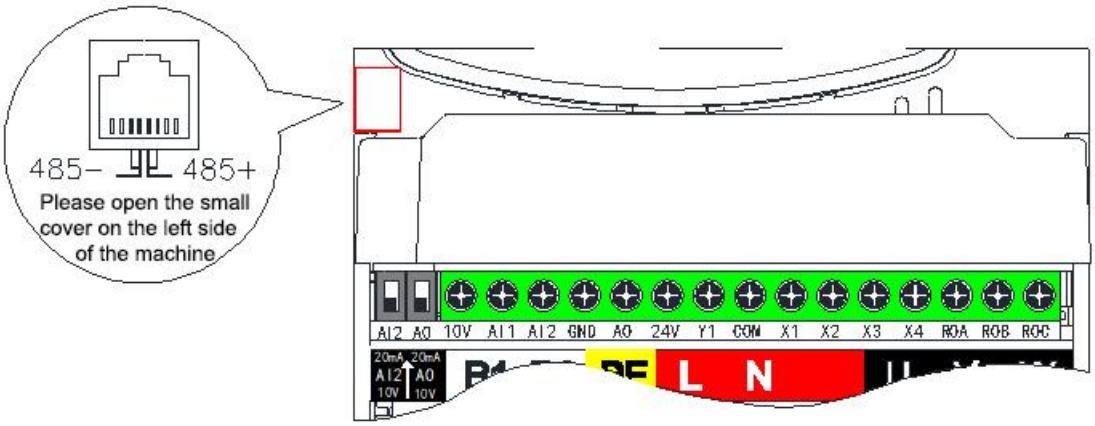
3-1 Standard wiring diagram of the inverter



4-1 Control circuit terminal description



Classification	mark	Terminal name	Terminal description and factory settings
Multi-function input terminal	X1	Multi-function input terminal 1	Factory setting: 1 forward/stop
	X2	Multi-function input terminal 2	Factory setting: 2 reverse/stop
	X3	Multi-function input terminal 3	Factory setting: 3 three-wire control mode
	X4	Multi-function input terminal 4	Factory setting: 4 multi-stage speed one
	COM	Common terminal	Multi-function input common terminal, and corresponding +24V power reference ground
Analog input	AI1	Analog input 1	0~10V input
	AI2	Analog input 2	0~10V/0~20mA input (Dip switch or jumper switch)
	+10V	Power supply for analog quantity setting	+10V DC 10mA (potentiometer 3~5K)
	GND	Analog reference ground	Analog input and output reference ground corresponding to +10V
Multi-function output	Y1	Multi-function output terminal 1	Open collector output. Factory setting: 1 running output ON
	Y2	Multi-function output terminal 2	Open collector output. Factory setting: 2 positive direction running output ON (100 series does not have this terminal)
	ROA	ROA-ROB normally closed ROA-ROC normally open	Relay output Factory setting: inverter fault output
	ROB		
	ROC		
Analog output	AO	Analog output terminal	0~10V/0~20mA output (Dip switch or jumper switch) GND is the reference ground
power supply	+24V	+24V power supply	+24V DC 100mA The corresponding COM is the power ground.
communication	485+	485 signal positive end	Standard MODBUS RS-485 serial communication interface Please use twisted pair or shielded wire
	485-	485 signal negative terminal	

6. Function parameter list

"○": Indicates that this parameter can be changed while the inverter is running or stopped when P0.00=0.

"●": Indicates that this parameter cannot be changed while the inverter is running.

"×": Indicates that this parameter is only the actual detected record value and cannot be changed.

P0 Basic function

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P0-00	Parameter setting mode	0: Allow parameter setting (except with "×") 1: Prohibit parameter setting (except P0-00) 99: restore factory value	0	●	1000
P0-01	Frequency setting method	0: Frequency digital setting (P0-03) 1: Panel potentiometer 2: External AI1 3: External AI2 4: PID adjustment setting 5: Digital setting, UP/DOWN rate press P5-20 to increase or decrease 6: Digital setting, UP/DOWN rate is added or subtracted according to P5-20, and the frequency returns to zero after stopping (not power-off) 7: Communication setting (corresponding to MODBUS communication address 1003) ※Digital setting is suitable for encoder keyboard or speed regulation via keyboard UP/DOWN keys, and the value of P0-03 can also be modified directly. ※AI2 input can be connected to voltage signal (0～10V) or current signal (0～20mA), which can be switched by dial switch or jumper on the control panel.	1	●	1001
	※When the simple PLC program (P8-00) is valid, the PLC program operation has priority. When the multi-stage speed (terminal setting) is valid, the multi-stage speed has priority over (P0-01). The priority order of frequency reference is: simple PLC program>multi-step speed>(P0-01)				
P0-02	Start-stop control method	0: keyboard control 1: External terminal control, keyboard STOP key is invalid 2: External terminal control, keyboard STOP key is valid 3: Controlled by communication command word (corresponding to MODBUS communication address 200)	0	●	1002
P0-03	Frequency digital setting	0.0 Hz ～upper limit frequency (P0-09)	50.0Hz	○	1003
P0-04	Acceleration time 0	0.1s～3600.0s	Depending	○	1004
P0-05	Deceleration time 0	0.1s～3600.0s	Depending	○	1005
P0-06	Running direction setting	0: Default direction 1: Opposite to the default direction	0	●	1006
P0-07	Anti-reverse setting	0: Reverse is allowed 1: Reverse is forbidden	0	●	1007
P0-08	Highest frequency	Upper limit frequency (P0-09)～400.0Hz	60.0 Hz	●	1008
P0-09	Upper limit frequency	Lower limit frequency (P0-10) ~ highest frequency (P0-08)	50.0Hz	●	1009
P0-10	Lower limit frequency	0.0Hz～upper limit frequency (P0-09)	0.0Hz	●	1010
P0-11	Jog frequency	0.0Hz～upper limit frequency (P0-09)	5.0Hz	○	1011
P0-12	Carrier frequency	1～16KHz	Depending	●	1012
P0-13	Carrier frequency adjustment	0: Fixed PWM mode 1: Random PWM mode	0	●	1013
P0-14	Digital setting frequency storage	0: Inverter power-off storage 1: Inverter power-off does not save	0	○	1014
P0-15	MODBUS local address	1～127	1	○	

P1 Keyboard and display parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P1-00	Default display at boot	0: Setting frequency (Hz) 1: Output frequency (Hz) 2: Output current (C) 3: Bus voltage (V) 4: Motor speed (r/min) 5: Output motor rated current percentage (%) 6: IGBT temperature (℃) 7: output voltage (V) 8: output power (KW) 9: count value (times) 10: PI given value 11: PID feedback value 12: Cumulative running time (hours) 13: Input terminal status 14: Output terminal status 15: Inverter capacity (KW) ※ The front of the display is the code, and the back is the specific content, which can be changed with the current status; it can be viewed through the "PRG" key cycle.	0	○	1018
P1-01	Display information settings	0: Display 0～3 information 1: Display 0～7 information 2: Display 0～11 information 3: Display 0～15 information	1	○	1019
P1-02	Speed display coefficient	0.1～60.0	29.0	○	1020
P1-03	JOG/REV function setting	0: Jog running, disconnected to stop 1: Forward/reverse switch, the running direction changes after pressing	0	●	1021

P2 Start-stop mode parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P2-00	Start method	0: Direct start 1: DC braking first and then start	0	●	1025
P2-01	Start frequency	0.0～10.0Hz	0.5 Hz	●	1026
P2-02	Start hold time	0.0～50.0 s	0.0s	●	1027
P2-03	Braking current before starting	0～150.0% (valid when P2-00=1)	50.0%	●	1028
P2-04	Braking time before starting	0～50.0s	0.0s	●	1029
P2-05	Stop mode	0: Free stop 1: Decelerate to stop 2: Decelerate first and then stop by DC braking	1	●	1030
P2-06	Starting frequency of stop braking	0.0～10.0Hz	2.0Hz	●	1031
P2-07	Stop braking current	0～150.0%	50.0%	●	1032
P2-08	Stop braking time	0～50.0s	0.0s	●	1033
P2-09	Forward and reverse dead time	0.0～50.0 s (forward and reverse direction commutation interval time)	0.2s	●	1034
P2-10	Lower limit frequency operation mode	0: Run at lower frequency limit 1: Stop (run signal failure) 2: Standby, the running frequency is 0 (the running signal is valid)	0	●	1035

P3 Motor parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P3-00	Motor rated frequency	P4-05～400.0Hz	50.0Hz	●	1038
P3-01	Motor rated voltage	200～440V	Depending	●	1039
P3-02	Motor rated current	0.1～999.9A	Depending	●	1040
P3-03	Motor rated power	0.1～630.0KW	Depending	●	1041
P3-04	Motor rated speed	1～36000rpm	1440rp	●	1042
P3-05	Motor no-load current	0.1～999.9A	Depending	●	1043
P3-06	Motor stator resistance	0.001～50.000Ω	Depending	●	1044
P3-07	Motor magnetizing inductance	0.1～5000.0mH	Depending	●	1045

P4 V/F control parameter

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P4-00	V/F curve setting	0: Normal V/F 1: 2nd power down V/F 2: 3rd power drop V/F 3: High starting torque V/F 4: Self-setting V/F	0	●	1051
P4-01	V/F intermediate frequency 1	0.0Hz～P4-03	1.0Hz	●	1052
P4-02	V/F Intermediate voltage 1	0～Motor rated voltage (P3-01)	5V	●	1053
P4-03	V/F intermediate frequency 2	P4-01～P4-05	5Hz	●	1054
P4-04	V/F Intermediate voltage 2	0～Motor rated voltage (P3-01)	25V	●	1055
P4-05	V/F intermediate frequency 3	P4-03～rated frequency of motor (P3-00)	25Hz	●	1056
P4-06	V/F Intermediate voltage 3	0～Motor rated voltage (P3-01)	115V	●	1057
P4-07	Torque boost	0.0～15.0%	Depending	●	1058
P4-08	Slip compensation	0.0～10.0Hz	0.0 Hz	●	1059
P4-09	(AVR) adjustment function	0: Invalid 1: Valid for the whole process 2: Only valid for deceleration	0	●	1060
P4-10	Energy-saving operation	0: Invalid 1: Energy-saving operation	0	●	1061

P5 External input function parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P5-00	AI1 lower limit	0～10.00V	0.05V	○	1070
P5-01	AI1 lower limit corresponding setting	0～100.0%	0.0%	○	1071
P5-02	AI1 upper limit	AI1 lower limit ～10.00V	10.00V	○	1072
P5-03	AI1 upper limit corresponding setting	0～100.0%	100.0%	○	1073
P5-04	AI1 input filter time	0.0s～10.0s	0.1s	○	1074
P5-05	AI2 lower limit	0.00V～10.00V ※When connecting 4～20mA externally, please set P5-05=2.0, corresponding to 4mA	0.05V	○	1075
P5-06	AI2 lower limit	0～100.0%	0.0%	○	1076

	corresponding setting				
P5-07	AI2 upper limit	AI2 lower limit ～10.00V	10.00V	○	1077
P5-08	AI2 upper limit corresponding setting	0～100.0%	100.0%	○	1078
P5-09	AI2 input filter time	0.0s～10.0s	0.1s	○	1079
P5-10	Multi-function input terminal X1	0: No function 1: Forward rotation 2: Reverse rotation 3: Three-wire control 4: Multi-stage speed one 5: Multi-stage speed two 6: Multi-stage speed three 7: Jog forward rotation 8: Jog reverse rotation 9: Frequency increase 10: Frequency decrease 11: Acceleration and deceleration time selection one 12: Acceleration and deceleration time selection two 13: acceleration or deceleration pause 14: External fault input 16: Free stop 15: Fault reset 17: External counting input 18: Counter clear reset 19: Start program operation 20: Program operation pause	1	●	1080
P5-11	Multi-function input terminal X2		2	●	1081
P5-12	Multi-function input terminal X3		3	●	1082
P5-13	Multi-function input terminal X4		4	●	1083
P5-14	Multi-function input terminal X5		5	●	1084
P5-15	Multi-function input terminal X6		6	●	1085
P5-16	Multi-function input terminal X7		Reserve	●	1086
P5-17	Multi-function input terminal X8		Reserve	●	1087

※The 8-speed setting can be achieved through the state combination of three multi-function input terminals.

Multi-stage three	Multistage two	Multi-paragraph	Frequency setting	Corresponding parameters	Multi-stage three	Multistage two	Multi-paragraph	Frequency setting	Corresponding parameters
OFF	OFF	OFF	Multi-band frequency 0	P0-01 decision	ON	OFF	OFF	Multi-band frequency 4	P8-04
OFF	OFF	ON	Multi-band frequency 1	P8-01	ON	OFF	ON	Multi-band frequency 5	P8-05
OFF	ON	OFF	Multi-band frequency 2	P8-02	ON	ON	OFF	Multi-band frequency 6	P8-06
OFF	ON	ON	Multi-band frequency 3	P8-03	ON	ON	ON	Multi-band frequency 7	P8-07

P5-18	Terminal operation control mode	0: Two-line control 1 1: Two-line control 2 2: Three-wire control 1 3: Three-wire control 2	0	●	1088
P5-19	Input terminal filter time	2ms～100 ms	10 ms	○	1089
P5-20	UP/DOWN range	0.0～50.0Hz (the amplitude of keyboard or terminal increasing/decreasing)	0.1	○	1090
P5-25	MODBUS communication baud rate	2：1200BPS 3：2400BPS 4：4800BPS 5：9600BPS 6：19200BPS 7：38400BP	5	○	
P5-26	MODBUS data format	0: No parity (8-N-1) 1: No parity (8-N-2) 2: Even parity (8-E-1) 3: Odd parity (8-O-1)	0	○	
P5-27	MODBUS response delay	0 ～ 200ms	20	○	1097
P5-28	Communication abnormal timeout	0.0：No detection 0.1 ～ 60.0s	0.0	○	1098
P5-29	Communication abnormal action selection	0: Continue to run 1: Alarm and stop	0	○	1099

P6 Terminal output function parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P6-00	Y1 output selection	0: No function 1: Inverter running 2: The actual running direction is opposite to the given direction 3: Fault output 4: Ready to run 5: Frequency reach FAR (refer to PA-13) ※With the value of PA-11 as the center, the value of (PA-13) is the upper and lower amplitude, the operating frequency is within this range, and the signal output is ON 6: Frequency level detection FDT (refer to PA-11～PA-13) ※The value of PA-11 is centered, the value of PA-12 is the hysteresis value, the operating frequency acceleration is higher than the value of PA-11, and the deceleration is not lower than the hysteresis value of PA-12 relative to PA-11, the signal output is ON 7: Upper limit frequency reached (P0-09) 8: Lower limit frequency reached (P0-10) 9: Set count arrival (refer to PA-14) 10: The designated count arrives (refer to PA-15) 12: Stop delay output. The output signal is ON immediately after stopping, and the output time is determined by P6-05	1	○	1101
P6-02	Relay output selection		3	○	1103
P6-03	AO output selection	0: Operating frequency (0～upper limit frequency) 1: Output current (0～2 times the rated output current of the inverter) 2: Bus voltage (0～2 times the rated bus voltage of the inverter) 3: Output voltage (0～2 times the rated output voltage of the inverter)	0	○	1104
※The output can be a voltage signal (0～10V) or a current signal (0～20mA), which can be switched by the DIP switch of the control panel.					
P6-04	AO correction factor	0.0～250.0%	100.0%	○	1105
P6-05	Stop delay output time	0～3000.0 s	0	○	1106

P7 PID function control parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P7-00	PID reference source selection	0: Digital setting (P7-01) 1: Panel potentiometer 2: Analog channel AI1 3: Analog channel AI2	0	○	1110
P7-01	PID digital given value	0.00～10.00 V	0.00V	○	1111
P7-02	PID feedback source selection	0: Analog channel AI1 1: Analog channel AI2	0	○	1112
P7-03	PID output characteristic selection	0: PID output is positive characteristic 1: PID output is negative characteristic	0	○	1113
P7-04	Proportional gain P	0.0～10.0	1.0	○	1114
P7-05	Integration time I	0.0～100.0s	1.0s	○	1115
P7-06	Set and feedback deviation tolerance	0.00～2.00(Within tolerance, PID is not calculated)	0.02	○	1116
P7-07	Feedback amount sampling period (T)	0.1～100.0s	0.02s	○	1117
P7-08	Feedback source disconnection detection value	0.00～5.00	0.0	○	1118
P7-09	Feedback source disconnection detection time	0.0～100.0s	10.0s	○	1119

P7-12	Sleep time	0～3000S	600	○	1122
P7-13	Dormant pressure	0～10.00 (Slightly less than the set pressure P7-01)	0	○	1123
P7-14	Sleep frequency	0～50.0Hz (2～3Hz greater than the frequency of maintaining pipeline pressure)	0	○	1124
P7-15	Wake up stress	0～10.00 (need to be less than sleep pressure P7-13)	0	○	1125
※Inverter sleep conditions	The feedback pressure is greater than the set value of the sleep pressure (P7-13); when the running frequency is continuously lower than the set value of the sleep frequency (P7-14) and the duration reaches the set time (P7-12), the inverter starts to sleep.				

P8 Simple PLC mode and multi-speed parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P8-00	Simple PLC mode	0: Simple PLC program operation is invalid 1: The program stops after running for one cycle 2: After running for a week, run at the last frequency 3: The program runs cyclically	0	●	1126
P8-01	First stage speed	Lower limit frequency ~ upper limit frequency	11.0Hz	○	1127
P8-02	Second speed	Lower limit frequency ~ upper limit frequency	12.0Hz	○	1128
P8-03	Third stage speed	Lower limit frequency ~ upper limit frequency	13.0Hz	○	1129
P8-04	Fourth stage speed	Lower limit frequency ~ upper limit frequency	14.0Hz	○	1130
P8-05	Fifth stage speed	Lower limit frequency ~ upper limit frequency	15.0Hz	○	1131
P8-06	Sixth speed	Lower limit frequency ~ upper limit frequency	16.0Hz	○	1132
P8-07	Seventh stage speed	Lower limit frequency ~ upper limit frequency	17.0Hz	○	1133
P8-08	Main frequency running time	0～6400.0 (The corresponding frequency is determined by P0-01)	0.0s	○	1134
P8-09	The first period of time	0～6400.0 (The corresponding frequency is P8-01)	0.0s	○	1135
P8-10	Second period	0～6400.0 (Similar to the same as above, the same below)	0.0s	○	1136
P8-11	The third period	0～6400.0	0.0s	○	1137
P8-12	The fourth period	0～6400.0	0.0s	○	1138
P8-13	Fifth period	0～6400.0	0.0s	○	1139
P8-14	Sixth period	0～6400.0	0.0s	○	1140
P8-15	Seventh period	0～6400.0	0.0s	○	1141
P8-16	Multi-speed time unit	0: second 1: minute 2: hour	0	●	1142
P8-17	The direction of each segment of the program	From 0 to 255, each bit of the binary system represents a block direction. 0 means forward rotation, 1 means reverse rotation; corresponding to binary and then converted to decimal ※Example: The first paragraph is reversed, and the third paragraph is reversed, expressed in binary as: (0000 1010)2=(10)10 ie P8-17=10	0	●	1143
P8-18	Selection of acceleration and deceleration time for each section of the program	0～65535 Use every two digits of the binary system to represent the acceleration and deceleration time corresponding to a block direction BIT 15～0 represents the acceleration and deceleration time corresponding to the 7～0 segment, the algorithm is the same as above ※Binary 00: (P0-04, P0-05) 01: (PA-00, PA-01) 10: (PA-02, PA-03) 11: (PA-04, PA-05)	0	○	1144

P9 Protection function parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
P9-00	Motor overload protection selection	0: No protection 1: Protection	0	●	1147
P9-01	Motor overload protection point	50～120% (100% corresponds to the rated current of the motor P3-02)	110%	●	1148
P9-02	Overvoltage stall protection	0: Prohibit protection 1: Allow protection ※It can be set to 0 when there is a braking resistor	1	●	1149

		connected to improve the braking effect			
P9-03	Stall overvoltage point	110.0～150.0% (100% corresponds to the standard bus voltage of the inverter)	135	●	1150
P9-04	Over-current protection	0: Prohibit protection 1: Allow protection	1	●	1151
P9-05	Stall overcurrent point	100～180% (100% corresponds to the rated current of the inverter)	180	●	1152
P9-06	Input phase loss protection	0: Prohibit protection 1: Allow protection	Reserve	●	1153
P9-07	Output phase loss protection	0: Prohibit protection 1: Allow protection	Reserve	●	1154
P9-08	Recent failure information	0～21 (Refer to fault information and corresponding countermeasures for details)		×	1155
P9-09	Last failure information	0～21 (Refer to fault information and corresponding countermeasures for details)		×	1156
P9-10	The first two failure information	0～21 (Refer to fault information and corresponding countermeasures for details)		×	1157
P9-11	Operating frequency of recent failures			×	1158
P9-12	Output current of recent fault			×	1159
P9-13	Bus voltage of the last fault			×	1160
P9-14	Input status of recent fault			×	1161
P9-15	Latest fault output status			×	1162
P9-16	Fault self-reset function	0: Invalid 1: Auto reset of undervoltage fault (unlimited number of times) 2～20: Number of automatic fault resets	0	●	1163

PA Enhanced function parameters

Function Code	Name	Parameter description	Default	Change	MODBUS address (decimal)
PA-00	Acceleration time 1	0.1～3600.0s	20.0s	○	1165
PA-01	Deceleration time 1	0.1～3600.0s	20.0s	○	1166
PA-02	Acceleration time 2	0.1～3600.0s	20.0s	○	1167
PA-03	Deceleration time 2	0.1～3600.0s	20.0s	○	1168
PA-04	Acceleration time 3	0.1～3600.0s	20.0s	○	1169
PA-05	Deceleration time 3	0.1～3600.0s	20.0s	○	1170
PA-06	Jog acceleration time	0.1～3600.0s	5.0s	○	1171
PA-07	Jog deceleration time	0.1～3600.0s	5.0s	○	1172
PA-08	Hop frequency 1	0.0～Upper limit frequency (P0-09)	0.0Hz	○	1173
PA-09	Hop frequency 2	0.0～Upper limit frequency (P0-09)	0.0Hz	○	1174
PA-10	Hop frequency range	0.0～Upper limit frequency (P0-09)	0.0Hz	○	1175
PA-11	FDT level detection value	0.0～Upper limit frequency (P0-09)	0.0Hz	○	1176
PA-12	FDT hysteresis detection value	0.0～FDT level (PA-11)	0.0Hz	○	1177
PA-13	Frequency reach FAR	0.0～Upper limit frequency (P0-09)	0.0Hz	○	1178
PA-14	Set the count value	1～65535	10	○	1179
PA-15	Specify the number of counts	1～65535 (The designated count value cannot be greater than the set count value)	10	○	1180
PA-16	Overload frequency reduction function	0: invalid 1: valid	1	●	1181
PA-17	DC braking coefficient	110%～150%	130	●	1182
PA-21	Dead zone compensation time	Model determination	Dependin g	●	1186
PA-22	Down frequency current point	100%～300%	210	●	1187

2. Failure information and corresponding countermeasures

Fault display	Code	Fault type	Possible cause of failure	Corresponding countermeasures
LU	3	Undervoltage	Abnormal input power or loose wiring	Check the input power voltage and wiring
OU	4	Overpressure	1. Check the input power supply voltage 2. Decelerate too fast 3. The load inertia is too large	1. Check the input power supply voltage 2. Increase deceleration time 3. Use energy-consumption braking components
OC	6/14	Overcurrent	1. The capacity of the inverter and the motor do not match 2. Low grid voltage 3. Acceleration and deceleration are too fast 4. Large load inertia torque 5. Sudden change or abnormality in load	1. Choose a large-capacity inverter 2. Check the power supply and wiring tightness 3. Increase acceleration and deceleration time 4. Choose appropriate brake components 5. Check and reduce sudden changes in load
OL	5	Inverter overload	1. See the cause of overcurrent OC failure 2. The motor load is too large 3. Improper setting of V/F curve	1. Refer to overcurrent OC countermeasures 2. Reduce motor load 3. Reset the parameters
OL1	15	Motor overload	1. The grid voltage is too low 2. The motor is blocked or the load sudden change is too large 3. The setting of motor rated current, motor overload protection point or V/F curve is incorrect	1. Check the grid voltage 2. Check the motor load 3. Reset the parameters
SC	9	Output short circuit	1. See the cause of overcurrent OC failure 2. Output U-V-W interphase or ground short circuit 3. The control board connection or plug-in is loose 4. The power module or other parts are damaged	1. Refer to overcurrent OC countermeasures 2. Good motor and cable insulation 3. Check that the connectors are well connected 4. Seek service
SPI	7	Input phase loss	Input power R, S, T has phase loss	1. Check the input power and voltage 2. Check and tighten the input wiring
SPO	8	Output phase loss	1. U, V, W phase loss output 2. The three-phase load is severely unsymmetrical	1. Check and tighten the output wiring 2. Check the motor and cable
OH	13	overheat	1. The ambient temperature is too high 2. The air duct is blocked and the fan is damaged 3. The motor load is too large	1. Reduce the ambient temperature 2. Clean the air duct and replace the fan 3. Reduce the load or carrier frequency
PIE	12	PID failure	PID feedback signal is lost for more than a certain time	Check PID feedback signal and connection
EF	11	External fault	External fault input terminal action	Check external device input
EEP	1	EEPROM Fault	1. Parameter read and write error 2. EEPROM is damaged	1. Restore factory value 2. Seek service
NCE	16	The contactor is not closed	1. The grid voltage is too low 2. The contactor is damaged 3. Damage to other circuits	1. Check the grid voltage 2. Replace the main circuit contactor 3. Seek service
OPSE	10	system error	Severe interference and noise	Add filters or seek service
CF	20	Current detection signal failure	1. The current sensor is damaged 2. The signal line is in poor contact 3. Other line faults	1. Replace the current sensor 2. Check the signal line 3. Seek service

CE	21	communication fail	Poor communication or broken communication line	1. Check whether the communication settings are correct 2. Whether the communication line is broken or poorly connected

7、MODBUS communication

- This inverter supports Modbus protocol communication data format as RTU (remote terminal unit) mode. Command code 03 is read data, 06 is write data.
- In the parameter table, all the parameters from P0-00 to PA-26 in sequence correspond to the RAM (not stored after power-off) communication address: 1000～1191 (decimal). For the specific address, please refer to the MODBUS communication address on the right side of the function parameter summary table. If you need to store data in EEPROM (power-down storage), subtract 1000. Example: The RAM address of function code P0-04 is represented as 1004, and in EEPROM, the address is 0004. There is no such difference in related addresses in other non-parameter tables.
- The 100 series inverter only supports reading/writing one data at a time. When communicating with the touch screen, please set the PLC interval address to 1.
- The 200 series inverter has no such restriction.

1. Monitoring parameter address (read only):

MODBUS communication address (decimal)	Data meaning description	MODBUS communication address (decimal)	Data meaning description
220	Set frequency	232	Accumulated running time of inverter
221	Output frequency	233	Display input terminal
222	Output current	234	Display output terminal
223	bus voltage	235	Display inverter rated power
224	Motor speed	236	Display compensation frequency
225	Percentage of current	237	Display compensation voltage
226	IGBT temperature	238	Display phase angle
227	The output voltage	239	Display load factor
228	Output Power	242	Analog AI1 given value
229	Current count value	243	Analog AI2 given value
230	PID given value	244	Keyboard potentiometer set value
231	PID feedback value		

2. Communication control start-stop command address (read and write, valid when P0-02=3)

MODBUS communication address (decimal)	Data meaning description
200	1: Forward running 2: Forward jog 5: Reverse running 6: Reverse jog 8: Stop 16: Free stop 32: Fault reset

3. Communication control operating frequency address (read and write, valid when P0-01=7)

MODBUS communication address (decimal)	Data meaning description
1003	The given value is the given frequency of the inverter

4. Inverter status address (read only)

MODBUS communication address (decimal)	Data meaning description
240	0: Inverter stops 1: Forward running 2: Reverse running 3: Failure

5. Inverter fault address (read only)

MODBUS communication address (decimal)	Data meaning description
241	1: Memory failure 3: Under voltage 4: Over voltage 5: Overload 6: Over current 7: Input phase loss 8: Output phase loss 9: Output short circuit 10: System failure 11: External fault 12: PID fault 13: Overheating 14: Over current 15: Motor overload 16: Contactor is not closed 20: Current detection signal failure 21: Communication failure