

300 Series Quick Operation Guides

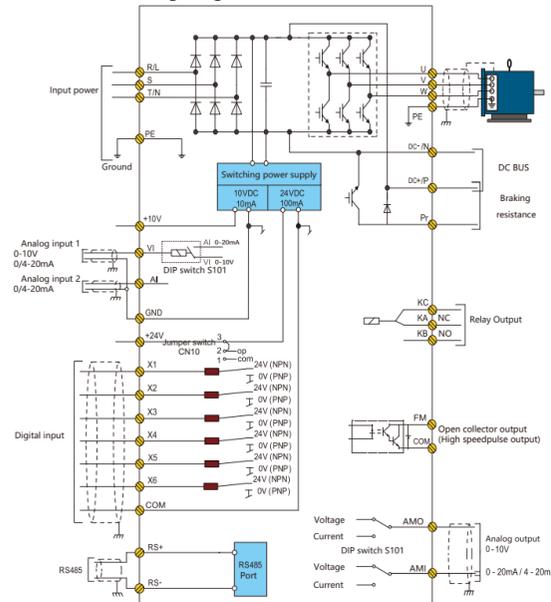
Basic Information

⚠ DANGEROUS

Before installing the converter, please read and understand this instruction book.

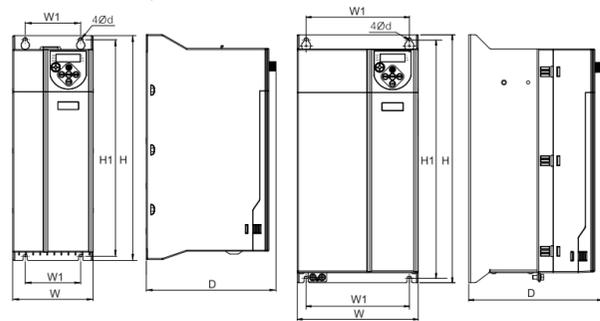
- Before connect the converter, must cut off electricity
- When the power is cut off, frequency converter internal may still be residual energy, before handling the converter electronics, wait for at least 4 minutes, otherwise there is risk of electric shock.
- Forbid change any connector on the converter when power on, in order to avoid the converter damage and casualties.
- Converter earthing terminal, please be sure to properly grounded
- Main circuit terminal wiring must be correct, R/L, S, T/N as power input terminals, forbid mix with U, V, W output terminals, or when power on will causes the damage of converter.
- Please be sure to follow the manual operation, otherwise may cause serious casualties

2. 300 series wiring diagram



3. Appearance and Mounting Dimension

3-1 300 series Shape



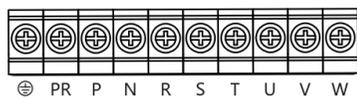
3-2 300 series specifications and dimensions

Product Model	Power (kW)	Output Current (A)	Outline dimension			Installation dimension			Frame(DIM)
			H	W	D	H1	W1	d	
300-R40G1B	0.4	2.3	206	81	104	196	60	4.5	300-1
300-R75G1B	0.75	4							
300-R15G1B	1.5	7							
300-2R2G1B	2.2	9.6							
300-003G1B	3	13							
300-004G1B	4	17	251	101	166	241	81	4.5	300-2
300-011G3B	11	25	324	116	187	312	80	6	300-3
300-015G3B	15	32							
300-18R5G3B	18.5	37							
300-022G3B	22	45							
300-030G3B	30	60							
300-037G3	37	75	430	288	223	414	170	7	300-5
300-045G3	45	90							
300-055G3	55	110							
300-075G3	75	152							
300-090G3	90	187							
300-110G3	110	210	650	379	242	623	270	12	300-7
300-132G3	132	253							
300-160G3	160	304							
300-185G3	185	340							
300-200G3	200	380							
300-220G3	220	426	1050	665	392	1012	515	14	300-10
300-250G3	250	465							
300-287G3	287	520							
300-315G3	315	585							
300-355G3	355	650							
300-400G3	400	725	1100	824	417	1060	600	14	300-11
300-450G3	450	820							
300-500G3	500	950							

Product Model	Power (kW)	Output Current (A)	outline dimension			installation dimension			Frame(DIM)
			H	W	D	H1	W1	d	
300-R40G3B	0.4	1.2	206	81	104	196	60	4.5	300-1
300-R75G3B	0.75	2.1							
300-1R5G3B	1.5	3.8							
300-2R2G3B	2.2	5.1							
300-003G3B	3	7							
300-004G3B	4	9	251	101	166	241	81	4.5	300-2
300-5R5G3B	5.5	13	324	116	187	312	80	6	300-3
300-7R5G3B	7.5	17							
300-011G3B	11	25							
300-015G3B	15	32							
300-18R5G3B	18.5	37							
300-022G3B	22	45	348	170	188	335	145	6	300-4
300-030G3B	30	60							
300-037G3	37	75							
300-045G3	45	90							
300-055G3	55	110							
300-075G3	75	152	580	337	242	553	270	12	300-6
300-090G3	90	187							
300-110G3	110	210							
300-132G3	132	253							
300-160G3	160	304							
300-185G3	185	340	888	570	390	850	380	12	300-9
300-200G3	200	380							
300-220G3	220	426							
300-250G3	250	465							
300-287G3	287	520							
300-315G3	315	585	1050	665	392	1012	515	14	300-10
300-355G3	355	650							
300-400G3	400	725							
300-450G3	450	820							
300-500G3	500	950							

4. VFD control loop connection

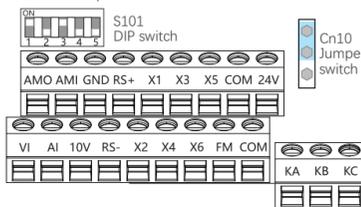
4-1 Schematic diagram of the main circuit terminal of the 300 series



4-2 Description of the 300 Series Main Circuit Terminals

Terminal markings	Terminal function
R, S, T	Power input terminal
U, V, W	Power output, connected to the motor
P, PR	Brake resistor connection terminals
P, N	DC bus output terminals (Connect the brake unit)
P, +	DC reactor connection terminals (remove shorting blocks)
⊕	Grounding terminal

4-3 300 Series Control Loop Terminals



4-4 Description of control circuit terminals

Terminal Name	Specification	Function Description
X1-X6	Digital Input	1. Digital: >DC19V, the terminal function select the PNP, <DC14V, the terminal function select the PNP. 2. Input Voltage range: 0-30V 3. Input Impedance: 3.6KΩ 4. X3 set input pulse range: 0-100KHz
COM	Digital signal ground	Common port for connecting digital signal input
RS+, RS-	RS485 Communication Function	Maximum baud rate 38400bit/s

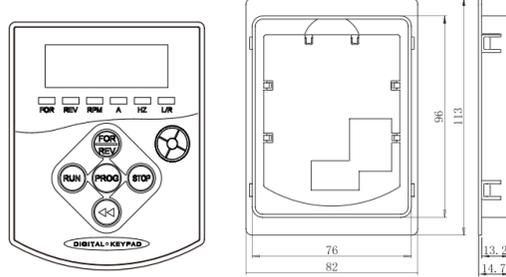
Terminal Name	Specification	Function Description
KA-KB-KC	Relay output	1. Resistive load: 250VAC 3A/30V DC 3A; 2. Inductive load: 250VAC 0.2A/24V DC 0.1 A (cosφ=0.4); 3. KA and KC NC Terminal/KA and KB NO Terminal
+10V	10V Power Supply	Maximum output current 10mA
VI-AI	Analog input terminal	1. Input current: Input Impedance ≤500Ω; 2. Input Voltage: Input Impedance about 10KΩ; Factory can set the input current (0-20mA); Standard configuration: VI optional 0-10V or 0/4-20mA; AI 0/4-20mA only.
AMO/AMI	Analog output terminal	1. Output voltage: Load impedance >500Ω; 2. AMO output range: 0-10V; 0/4-20mA; 3. AMI output range: 0-10V; 0/4-20mA;
GND	Analog signal ground	Common port for connecting analog signal input;
+24V	24V Power Supply	Provide +24V power, maximum output current 100mA
FM	OC output Pulse output	OC current range: 0-50 mA; Pulse output range: 0-100KHz;
CN10	Jumper switch	X1-X6 terminals NPN PNP function selection;
S101	DIP switch	VI/AMO and AMI terminals voltage or current function selection;

5. Operation and Display

5-1 Keyboard tray shape and dimensions

Specification	W	H
300 series opening size of keyboard tray	76	96

5-2 operation pannel



5-3 Instruction of Keys on panel

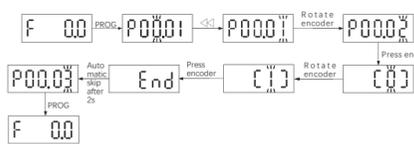
Button	Name	Function
	Run Button	Start frequency converter directly by the button on panel
	Stop Button	Stop frequency converter or Reset when frequency converter break down
	Shift Key	To display digital
	FOR/REV Select Button	Change the direction rotation between FOR and REV
	Menu Button	Enter into Menu and back
	Encoder	1. To adjust rate of converter; 2. To enter into menu or confirm digital;

5-4 Start and Stop by button on panel

- Press the RUN button to start and FOR / REV indicator lighting;
- Adjust output power by rotate shift key;
- Press stop button to stop converter;
- If need to REV, set the program P00-17 as REV operation valid;

5-5 Start and stop by input digital

After power up set program P00.02=1 or 3, digital from digital input or communication function Action Process:



After set program, short circuit digital input X1 and GND to start converter, on the contrary to stop.

6. Failure warning

Warning	Error Code	Error name	Solution
-	E.01	Output short circuit	Check motor connection, motor wire and motor insulation situation
A.02	E.02	Accelerated over current	1. Increase the acceleration time 2. Improve torque by hand 3. Exclude outside faults 4. Exclude outside faults 5. Choose speed tracking start or stop and start 6. Cancel exploding load 7. Choose a bigger power frequency converter
A.03	E.03	Decelerated over current	1. Exclude outside faults 2. Make motor parameter learn self 3. Add speed cut time 4. Cancel exploding load or add braking unit and resistor 5. Add braking unit and resistor
A.04	E.04	Constant over current	1. Exclude outside faults 2. Make motor parameter learn self 3. Cancel exploding load 4. Choose a bigger power frequency converter
A.05	E.05	Accelerated over voltage	1. Check power, adjust voltage to normal range 2. Increase the acceleration time 3. Cancel exploding load 4. Choose a bigger power frequency converter
A.06	E.06	Decelerated over voltage	1. Adjust voltage to normal range 2. Cancel exploding load or add braking unit and resistor 3. Add speed cut time 4. Stop free
A.07	E.07	Constant over voltage	1. Adjust voltage to normal range 2. Cancel exploding load or add braking unit and resistor 3. Choose a bigger power frequency converter
A.09	E.09	Under-voltage	Ensure the normal power grid voltage
A.10	E.10	Converter overload	1. Choose bigger power product 2. Set up correctly according to motor nameplate
A.12	E.12	Input lock of PH	Check connection of input power wire
-	E.13	Motor lock of PH	1. check motor connector 2. check motor
A.14	E.14	IGBT excess temperature	1. clean air duct 2. change fan
-	E.16	Internal Warning	Return to factory maintenance
-	E.19	Motor parameter self learning failure	Set up motor nameplate parameter correctly
-	E.23	Grounded warning	1. motor for short circuit 2. change motor wire or change motor
A.24	E.24	Torque limitation	Set up motor digital correctly or adjust P09.04 digital
A.25	E.25	Current limitation	Set up motor digital correctly or adjust P09.05 digital
A.27	E.27	Eternal warning	Set up terminal digital correctly
A.31	E.31	Feedback warning	Check feedback wire or feedback source
A.45	E.45	Motor Overload	1. Choose bigger power product 2. Set up correctly according to motor nameplate
A.46	E.46	High-voltage warning	Check hydraulic pressure or pressure gauge
A.47	E.47	Low-voltage warning	Check whether leak water or air leak
-	E.48	Total work time to failure	Reset parameter to clean recorded information
-	E.88	Control board and drive board communication abnormal	Return to factory maintenance
-	E.89	Button using forbidden	Set P10.01/P10.02/P10.04 digital according to current situation
E.91	Parameter error	Not according to stipulations set parameters correctly	
E.92	Parameter ultralimit	Not according to stipulations set parameters correctly	
A.95	E.95	Power warning	Check network voltage
A.96	E.96	Wire break warning	Check terminals whether analog connection wire and signal normal
A.97	E.97	Communication control overtime	1. Check master computer program 2. Check communication wire connection 3. Correctly set communication parameter 4. Using shielding line
-	E.98	Reset factory setting	Press STOP button to reset
-	E.99	Open braking resistor to brake	Set P00.72 digital according to current situation
-	E.100	Drive voltage warning	Reserved
-	E.101	Rotor locked	Synchronous motor stalling

The above action not solve warning please ask for technical support

7. Basic function parameter list

Parameter	Value	Description
P00-P11	Function Parameter	
P00	Function Parameter	
P00.01	Control model	0: VF control * 1: Vector control
P00.02	Option of order source	* 0: Order channel of panel 1: Order channel of terminal 2: Order channel of communication 3: Order channel of communication or terminal
P00.03	Main frequency source X option	0: Digital set 2: VI 3: AI (reserved) * 4: Panel coder 5: Input pulse 6: Order of multi-speed 7: Simple PLC 8: PID 9: Communication given
P00.04	Assistant frequency source Y option	* 0: Digital set 2: VI 3: AI (reserved) 4: Panel coder 5: Input pulse 6: Order of multi-speed 7: Simple PLC 8: PID 9: Communication given
P00.05	Option range of assistant frequency source Y	* 0: Relative maximum frequency 1: Relative main frequency source X
P00.06	Range of assistant frequency source	0-200% * 100
P00.07	Biased frequency of assistant frequency source Y	0-P0.10 * 0
P00.08	Option of main frequency operation	Decade: relation of main and assistant source operation * 0: Main+assistance 1: Main - assistance 2: Maximum 3: Minimum Unit: Option of main frequency operation * 0: Main frequency source X 1: Result of main and assistant frequency operation (relations determined by decade) 2: Main frequency source X switch with assistant frequency Y 3: Main frequency source X switch with result of main and assistant frequency operation 4: Assistance frequency Y switch with result of main and assistant frequency operation
P00.09	Preset reference	-100%~100% * 0
P00.10	Maximum frequency	0-655.35Hz * 50
P00.12	Limited frequency	0-P00.10 * 50
P00.14	Floor frequency	0-P00.10 * 0
P00.15	Below floor frequency operation model	* 0: Floor frequency operation 1: Motor stop 2: No speed operation
P00.16	Rotation Direction Selection	* 0: default direction 1: opposite default direction
P00.17	Forbid REV	0: Invalid * 1: Valid

P00.20	Time accuracy	0: 1s * 1: 0.1s 2: 0.01s
P00.22	Speed up time 1	0-65535s * 10
P00.23	Speed cut time 1	0-65535s * 10
P00.25	Speed up time 2	0-65535s * 10
P00.26	Speed cut time 2	0-65535s * 10
P00.28	Speed up time 3	0-65535s * 10
P00.29	Speed cut time 3	0-65535s * 10
P00.31	Speed up time 4	0-65535s * 10
P00.32	Speed cut time 4	0-65535s * 10
P00.33	Speed up time 1and2 switch frequency	0-650.00Hz * 0
P00.34	Speed cut time 1and2 switch frequency	0-650.00Hz * 0
P00.40	UP/DOWN memory option of power down	0-655.35Hz * 50
P01	Motor Parameter	
P01.00	Motor type	* 0: Asynchronous Motor 1: SMT Asynchronous Motor 2: Unsaturated internal synchronous motor 3: Saturated internal synchronous motor
P01.01	Motor Power	Depend on motor digital
P01.02	Motor Voltage	Depend on motor digital
P01.03	Motor Frequency	Depend on motor digital
P01.04	Motor Current	Depend on motor digital
P01.05	Motor Speed	Depend on motor digital
P01.06	Rated Motor Torque	Depend on motor digital
P01.07	Stator Resistance (Rs)	Depend on motor digital
P01.08	Rotor Resistance (Rr)	Depend on motor digital
P01.09	Stator Leakage Reactance	Depend on motor digital
P01.10	Main Reactance (Xh)	Depend on motor digital
P01.11	D-axis Inductance	Depend on motor digital
P01.12	Q-axis Inductance	Depend on motor digital
P01.13	Motor Poles	2-100 * 4
P01.14	Counter electromagnetic force	5-9000 * Depend on motor digital
P01.15	D-axis Inductance Sat	0-655.36 * Depend on motor digital
P01.16	Q-axis Inductance Sat	0-655.36 * Depend on motor digital
P01.17	D-axis Inductance Sat switchover	0-655.36 * 100
P01.18	Q-axis Inductance Sat switchover	0-655.36 * 100
P01.20	System Inertia	0-65.535 * Depend on motor digital
P01.37	Automatic Motor Adaption	* 0: Invalid 1: All parameter learn self 2: Stator resistance learn self
P02	Method of control	
P02.00	V/F Characteristic setting	* 0: Straight line V/F 1: Reserved 2: Reserved 3: Reserved 4: Reserved 5: Reserved 6: Reserved 9: Reserved
P02.01	V/F torsional moment promotion	0-30% * 0
P02.02	V/F torsional moment promotion stop frequency	0-655.35Hz * 50

<p>P02.31 High frequency compensation torques 0-199% * 100</p> <p>P02.32 Slip Compensation -400~399% * 80</p> <p>P02.33 Slip Compensation Time Constant -400~399% * 0.1</p> <p>P02.34 Resonance Dampening 0-3000% * 50</p> <p>P02.35 Resonance Dampening Ttime Constant 0.001-0.05s * 0.005</p> <p>P02.36 Open Magnetisation 0-300% * 100</p> <p>P02.37 Normal Magnetisation Switch point 0-10 * 1</p> <p>P02.38 Open Torque compensation 0-25% * 0</p> <p>P02.40 Synchronous motor low speed compensation 0-120% * 80</p> <p>P02.41 Synchronous motor load compensation 0-500% * 120</p> <p>P02.42 Low speed synchronous motor compensation filtering time 0.01-20s * 0.8</p> <p>P02.43 High speed synchronous motor compensation filtering time 0.01-20s * 0.8</p> <p>P02.44 Synchronous motor current filtering time 0.001-1s * 0.5</p> <p>P02.45 Synchronous motor high-speed compensation -400~400% * 10</p> <p>P02.50 Torque type * 0: Constant torque 1: Djustable torque 3: Optimize torque</p> <p>P02.51 Adjust adjustable torque 40-90% * 90</p> <p>P02.52 Automatic optimum energy consumption minimum flux 40-75% * 66</p>	<p>20: Open pulse 21: Pulse REV 22: Start counterclockwise only 23: Frequency source switch 24: Frequency source switch 32: Order source switch1 33: Order source switch2 34: Outside failure 35: Counter A (plus) 37: Counter A reset 38: Counter B (plus) 40: Counter B reset 41: PID pause 42: PID opposite direction 43: PID Integral to suspend 44: PID parameter switch 45: PLC reset condition 46: Input high-speed pulse(DI3)</p> <p>P03.05 Terminal DI 2 Input Parameter as P03.04 * 2</p> <p>P03.06 Terminal DI3 Input Parameter as P03.04 * 14</p> <p>P03.07 Terminal DI4 Input Parameter as P03.04 * 15</p> <p>P03.08 Terminal DI 5 Input Reserve</p> <p>P03.09 Terminal DI 6 Input Reserve</p> <p>P03.10 Terminal DI 3 Input min frequency 0-99.99kHz * 0.02</p> <p>P03.11 Terminal DI Input max frequency 0.01-100kHz * 50</p> <p>P03.12 Terminal DI 3 Input min corresponding reference/feedback value -200~+200% * 0</p> <p>P03.13 Terminal DI 3 Input max corresponding reference/feedback value -200~+200% * 100</p> <p>P03.14 Terminal DI 3 Filtering time 1-1000ms * 100</p> <p>P03.20 Interrupt signal detection time 1-99s * 10</p> <p>P03.21 Interrupt signal action * 0: Invalid 2: Stop 3: Inching running 4: Running with MAX frequency 5: Stop then warning</p> <p>P03.30 Terminal VI Model * 0: Voltage 1: Current</p> <p>P03.31 Terminal VI Min current 0-9.99V * 0.07</p> <p>P03.32 Terminal VI Max current 0.01-10V * 10</p> <p>P03.33 Terminal AI Minimum 0-19.99mA * 0.14</p> <p>P03.34 Terminal AI Maximum 0.01-20mA * 20</p> <p>P03.35 Terminal VI Min reference/feedback value -200~200% * 0</p> <p>P03.36 Terminal VI Max reference/feedback value -200~200% * 100</p> <p>P03.37 Terminal VI Filtering time 0.001-10s * 0.01</p> <p>P03.38 Terminal VI Zero Dead Band 0-20V/mA * 0</p> <p>P03.40 Terminal AI Model(Reserved) 0: Voltage * 1: Current</p> <p>P03.41 Terminal AI Min voltage 0-9.99V (Reserved)</p> <p>P03.42 Terminal AI Max voltage 0.01-10V (Reserved)</p> <p>P03.43 Terminal AI Minimum 0-19.99mA (Reserved)</p> <p>P03.44 Terminal AI Maximum 0.01-20mA (Reserved)</p>	<p>P03.45 Terminal AI Min reference/feedback value -200~200% (Reserved)</p> <p>P03.46 Terminal AI Max reference/feedback value -200~200% (Reserved)</p> <p>P03.47 Terminal AI Filtering time 0.001-10s (Reserved)</p> <p>P03.48 Terminal AI Zero Dead Band 0-20V/mA (Reserved)</p> <p style="text-align: center;">P04 Output Terminals</p> <p>P04.00 Relay 1 Function 0: Invalid 1: Running * 2: Fault output 3: Frequency horizontal detect FDT1 output 4: Frequency arrived 5: Ospeed running 6: Motor overload protection 7: Converter overload protection 8: Counter A arrived 9: Counter B arrived 10: Length arrived 11: PLC circulation 12: Total power on time arrived 13: Frequency limiting 14: Torque limiting 15: Converter ready 16: All bigger than AI2 17: Limited frequency arrived 18: Floor frequency arrived 19: Under-voltage condition output 20: Communication set 21: Position approaching 22: Completed to Locate 23: 0 Speed Running 2 24: Total power on time arrived 25: Frequency Horizontal Detect FDT 2 Output 26: Frequency 1 Arrived 27: Frequency 2 Arrived 28: Current 1 Arrived 29: Current 2 Arrived 31: VI Output Over Limited 32: Drop Loading 33: REV Running 34: 0 Current 35: Module temperature arrived 36: Output current over limited 37: Still output even floor frequency arrived 38: Failure or warning 39: Over temperature warning 40: Running time arrived 41: Failure no under-voltage 42: High pressure 43: Low pressure 44: Pressure arrived</p> <p>P04.01 The 2 function of Relay (same as above)</p> <p>P04.02 Output function of DO1(Y1) (same as above)</p> <p>P04.03 Output Selection function of FM (same as above)</p> <p>P04.09 DO Logic 0-255, (Reserved)</p> <p>P04.10 Relay 1 On Delay Time 0-600s * 0</p> <p>P04.11 Relay 2 On Delay Time 0-600s, (Reserved)</p> <p>P04.20 Terminal VO Mode 0: 0-20mA(Reserved) 1: 4-20mA(Reserved) * 3: 0-10V</p> <p>P04.21 Terminal VO Analog Output 0: None 10: Output frequency * 11: Reference value 12: Feedback value 13: Motor current 16: Output power 17: Motor Rotational Speed 18: Voltage output 20: Communication control 21: Pulse input</p>	<p>22: Input VI 23: Input AI 26: Busbar voltage 30: Torsional moment output 80: Application control</p> <p>P04.22 Terminal VO Min output proportion 0-200% * 0</p> <p>P04.23 Terminal VO Max output proportion 0-200% * 100</p> <p>P04.24 Terminal VO Minimum output 0-20 (Reserved)</p> <p>P04.25 Terminal VO Maximum output 0.01-20 (Reserved)</p> <p>P04.30 Terminal AO output type 0: Invalid 1: Running 2: Fault output 3: Frequency horizontal detect FDT1 output 4: Frequency arrived 5: Ospeed running 6: Motor overload protection 7: Converter overload protection 8: Counter A arrived 9: Counter B arrived 10: Length arrived 11: PLC circulation 12: Total power on time arrived 13: Frequency limiting 14: Torque limiting 15: Converter ready 16: All bigger than AI2 17: Limited frequency arrived 18: Floor frequency arrived 19: Under-voltage condition output 20: Communication set 21: Position approaching 22: Completed to Locate 23: 0 Speed Running 2 24: Total power on time arrived 25: Frequency Horizontal Detect FDT 2 Output 26: Frequency 1 Arrived 27: Frequency 2 Arrived 28: Current 1 Arrived 29: Current 2 Arrived 31: VI Output Over Limited 32: Drop Loading 33: REV Running 34: 0 Current 35: Module temperature arrived 36: Output current over limited 37: Still output even floor frequency arrived 38: Failure or warning 39: Over temperature warning 40: Running time arrived 41: Failure no under-voltage 42: High pressure 43: Low pressure 44: Pressure arrived</p> <p>P04.61 Minimum output frequency of pulse output 0-99.99k * 0</p> <p>P04.62 Maximum output frequency of pulse output 0.01-100k * 100k</p> <p>P04.63 Minimum output ratio of pulse 0-200% * 0</p> <p>P04.64 Maximum output ratio of pulse 0-200% * 200%</p> <p style="text-align: center;">P05 PID parameter</p> <p>P05.00 PID setting source * 0: Set P05.01 parameter 1: VI 2: AI 3: Panel Coder 4: Pulse Input 5: Communication given 6: Multistage speed 7: P05.01 add Up/Down arrived * 05.01 PID value given -3000~3000 * 3 P05.02 Feedback source of process control * 0: VI 1: AI 2: Coder 3: VI-AI(Reserved) 4: Pulse input DI4 5: Communication given 6: VI+AI(Reserved) 7: VIAI Max(Reserved) 8: VIAI Min(Reserved)</p> <p>P05.03 Positive and negative logic of process PI * 0: Forward 1: Reverse</p> <p>P05.04 PID Feedback basic value given 0.1-6553.5 * 10</p> <p>P05.05 Process PI Proportional Gain 0-1000 * 20</p> <p>P05.06 Process PI Integral Time 0-1000 (Reserved)</p> <p>P05.07 Process PI Differential Time 0.01-655.35s * 2</p> <p>P05.07 Process PI Differential Time 0-10.000s * 0</p> <p>P05.08 PID Reverse stop frequency 0-655.35Hz * 0</p> <p>P05.09 Deviation Limit 0-200% * 0</p> <p>P05.10 Process PID Differential limit 0.1-100 * 0.1</p> <p>P05.11 PID Changing time given 0-650s * 0.1</p> <p>P05.12 PID time of filter feedback 0-60s * 0</p>	<p>P05.13 PID time of filter output 0-60s * 0</p> <p>P05.15 Process PI proportion gain 0-10s (Reserved)</p> <p>P05.16 Process PI Integration time 0.1-655.35 (Reserved)</p> <p>P05.17 Process PI Calculus time 0-10 (Reserved)</p> <p>P05.18 PID parameter switchover condition 0: No switch (Reserved) 1: Switch by DI (Reserved) 2: Deviation switch (Reserved) 3: Frequency switch (Reserved)</p> <p>P05.19 Process PID Parameter Switchover Deviation 1 0-100%(Reserved)</p> <p>P05.20 Process PID Parameter Switchover Deviation 2 0-100%(Reserved)</p> <p>P05.21 PID Starting value 0-10.00 * 0</p> <p>P05.22 PID Time of starting value keeping 0-650.00s * 0</p> <p>P05.23 Output FOR deviation MAX value 0-100% * 1</p> <p>P05.24 Output REV deviation MAX value 0-100% * 1</p> <p>P05.25 PID Integral attribute 00-11 * 0</p> <p>P05.26 PID Detection value of feedback lost 0-100% * 0</p> <p>P05.27 PID Detection time of feedback lost 0-100% * 0</p> <p>P05.28 PID Run out and operation * 0: Run out but no operation 1: Run out and operation</p> <p>P05.29 Wake up pressure 0-6500 * 2</p> <p>P05.30 Wake up delayed time 0-6500s * 0</p> <p>P05.31 Dormant pressure 0-6500 * 4</p> <p>P05.32 Dormant delayed time 0-6500s * 60</p> <p>P05.33 Dormant mode set 0: Forbid dormant * 1: Pressure arrived 2: Frequency arrived 3: Pressure and frequency arrived at same time</p> <p>P05.34 Dormant frequency 0-655.35Hz * 30</p> <p>P05.35 Pressure proportion linkage 0: workable * 1: forbid</p> <p>P05.36 Wake up pressure linkage setting value 0-6500 * 1</p> <p>P05.37 Dormant pressure linkage setting value 0-6500 * 1</p> <p>P05.38 High pressure alarm difference set 0-6500 * 0</p> <p>P05.39 High pressure alarm delay time 0-6500s * 0</p> <p>P05.40 Low pressure alarm difference set 0-6500s * 0</p> <p>P05.41 Low pressure alarm delay time 0-6500s * 0</p>	<p>P06.01 Multistage speed commands1 -100~100% * 0</p> <p>P06.02 Multistage speed commands2 -100~100% * 0</p> <p>P06.03 Multistage speed commands3 -100~100% * 0</p> <p>P06.04 Multistage speed commands4 -100~100% * 0</p> <p>P06.05 Multistage speed commands5 -100~100% * 0</p> <p>P06.06 Multistage speed commands6 -100~100% * 0</p> <p>P06.07 Multistage speed commands7 -100~100% * 0</p> <p>P06.08 Multistage speed commands8 -100~100% * 0</p> <p>P06.09 Multistage speed commands9 -100~100% * 0</p> <p>P06.10 Multistage speed commands10 -100~100% * 0</p> <p>P06.11 Multistage speed commands11 -100~100% * 0</p> <p>P06.12 Multistage speed commands12 -100~100% * 0</p> <p>P06.13 Multistage speed commands13 -100~100% * 0</p> <p>P06.14 Multistage speed commands14 -100~100% * 0</p> <p>P06.15 Multistage speed commands15 -100~100% * 0</p> <p>P06.16 Simple PLC running way 0: Running single time then stop * 1: Running single time then stop and keep final digital 2: Circulating all the time</p> <p>P06.17 Simple PLC option of drop power memory 0-11 * 0</p> <p>P06.18 Simple PLC running time unit * 0: s, Second 1: h, Hour</p> <p>P06.19 Simple PLCO running time 0-6500 * 0</p> <p>P06.20 Simple PLCO variable speed time option 0-3 * 0</p> <p>P06.21 Simple PLC1 running time 0-6500 * 0</p> <p>P06.22 Simple PLC1 variable speed time option 0-3 * 0</p> <p>P06.23 Simple PLC2 running time 0-6500 * 0</p> <p>P06.24 Simple PLC2 variable speed time option 0-3 * 0</p> <p>P06.25 Simple PLC3 running time 0-6500 * 0</p> <p>P06.26 Simple PLC3 variable speed time option 0-3 * 0</p> <p>P06.27 Simple PLC4 running time 0-6500 * 0</p> <p>P06.28 Simple PLC4variable speed time option 0-3 * 0</p> <p>P06.29 Simple PLC5 running time 0-6500 * 0</p> <p>P06.30 Simple PLC5variable speed time option 0-3 * 0</p> <p>P06.31 Simple PLC6 running tim 0-6500 * 0</p> <p>P06.32 Simple PLC6variable speed time option 0-3 * 0</p> <p>P06.33 Simple PLC7 running time 0-6500 * 0</p> <p>P06.34 Simple PLC7variable speed time option 0-3 * 0</p> <p>P06.35 Simple PLC8 running time 0-6500 * 0</p> <p>P06.36 Simple PLC8variable speed time option 0-3 * 0</p>	<p>P06.37 Simple PLC9 running time 0-6500 * 0</p> <p>P06.38 Simple PLC9variable speed time option 0-3 * 0</p> <p>P06.39 Simple PLC10running time 0-6500 * 0</p> <p>P06.40 Simple PLC10variable speed time option 0-3 * 0</p> <p>P06.41 Simple PLC11 running time 0-6500 * 0</p> <p>P06.42 Simple PLC11variable speed time option 0-3 * 0</p> <p>P06.43 Simple PLC12 running time 0-6500 * 0</p> <p>P06.44 Simple PLC12variable speed time option 0-3 * 0</p> <p>P06.45 Simple PLC13 running time 0-6500 * 0</p> <p>P06.46 Simple PLC13variable speed time option 0-3 * 0</p> <p>P06.47 Simple PLC14 running time 0-6500 * 0</p> <p>P06.48 Simple PLC14variable speed time option 0-3 * 0</p> <p>P06.49 Simple PLC15 running time 0-6500 * 0</p> <p>P06.50 Simple PLC15 variable speed time option 0-3 * 0</p> <p>P06.51 Multistage speed 0 given way * 0: P06.00 given 1: Analog AI1 2: Analog AI2(Reserved) 4: Input pulse 5: PID 6: Preset value</p>	<p>P07.37 Message Response * 0: Every time 1: Only response abnormal message 2: No response</p> <p>P07.39 Programme control 0: Parameter do not save when power off * 1: Parameter save when power off</p> <p style="text-align: center;">P08 Assistant Parameter</p> <p>P08.01 Over Modulation Function 90-105.5% * 100</p> <p>P08.02 Deadband Compensation 0-200 * 100</p> <p>P08.07 Max Deadband Compensation 20-1000Hz * 50</p> <p>P08.10 DC Circuit Voltage Compensation * 0: No compensation 1: Compensation1 2: Compensation2</p> <p>P08.20 Switching Frequency 2-16kHz * 5</p> <p>P08.30 Operating mode * 0: Normal operating 2: Reset</p> <p>P08.31 Set password/unlock password 0-65535(Reserved)</p> <p>P08.32 Confirm password 0-65535(Reserved)</p> <p>P08.35 Counter A reach to setting 0-65535 * 0</p> <p>P08.36 Counter B reach to setting 0-65535 * 0</p> <p>P08.37 Save Counter * 0: No Save 1: Save Counter A 2: save Counter B 3: Save Counter A B</p> <p>P08.40 Frequency detected value 1 0-655.35Hz * 50</p> <p>P08.41 Frequency detected value 1 hysteresis of instrument 0-100% * 5</p> <p>P08.42 Frequency reach to detection width 0-100% * 0</p> <p>P08.43 Frequency detected value 2 0-655.35Hz * 50</p> <p>P08.44 Frequency detected value 2 hysteresis of instrument 0-100% * 5</p> <p>P08.45 Any reach frequency detected value 1 0-655.35Hz * 50</p> <p>P08.46 Any reach frequency detected width 1 0-100% * 0</p> <p>P08.47 Any reach frequency detected value 2 0-655.35Hz * 50</p> <p>P08.48 Any reach frequency detected width 2 0-100% * 0</p> <p>P08.49 0 current detection level 0-300% * 5</p> <p>P08.50 0 current detection delayed time 0-600s * 0.1</p> <p>P08.51 Output current over limited 0-300% * 200</p> <p>P08.52 Output current over limited detection delayed 0-600s * 0</p>	<p>P07.38 Message Response * 0: Every time 1: Only response abnormal message 2: No response</p> <p>P07.39 Programme control 0: Parameter do not save when power off * 1: Parameter save when power off</p> <p style="text-align: center;">P08 Assistant Parameter</p> <p>P08.01 Over Modulation Function 90-105.5% * 100</p> <p>P08.02 Deadband Compensation 0-200 * 100</p> <p>P08.07 Max Deadband Compensation 20-1000Hz * 50</p> <p>P08.10 DC Circuit Voltage Compensation * 0: No compensation 1: Compensation1 2: Compensation2</p> <p>P08.20 Switching Frequency 2-16kHz * 5</p> <p>P08.30 Operating mode * 0: Normal operating 2: Reset</p> <p>P08.31 Set password/unlock password 0-65535(Reserved)</p> <p>P08.32 Confirm password 0-65535(Reserved)</p> <p>P08.35 Counter A reach to setting 0-65535 * 0</p> <p>P08.36 Counter B reach to setting 0-65535 * 0</p> <p>P08.37 Save Counter * 0: No Save 1: Save Counter A 2: save Counter B 3: Save Counter A B</p> <p>P08.40 Frequency detected value 1 0-655.35Hz * 50</p> <p>P08.41 Frequency detected value 1 hysteresis of instrument 0-100% * 5</p> <p>P08.42 Frequency reach to detection width 0-100% * 0</p> <p>P08.43 Frequency detected value 2 0-655.35Hz * 50</p> <p>P08.44 Frequency detected value 2 hysteresis of instrument 0-100% * 5</p> <p>P08.45 Any reach frequency detected value 1 0-655.35Hz * 50</p> <p>P08.46 Any reach frequency detected width 1 0-100% * 0</p> <p>P08.47 Any reach frequency detected value 2 0-655.35Hz * 50</p> <p>P08.48 Any reach frequency detected width 2 0-100% * 0</p> <p>P08.49 0 current detection level 0-300% * 5</p> <p>P08.50 0 current detection delayed time 0-600s * 0.1</p> <p>P08.51 Output current over limited 0-300% * 200</p> <p>P08.52 Output current over limited detection delayed 0-600s * 0</p>	<p>P08.53 Any arrived electron flow 1 0-300% * 100</p> <p>P08.54 Width of any arrived electron flow 1 0-300% * 0</p> <p>P08.55 Any arrived electron flow 2 0-300% * 100</p> <p>P08.56 Width of any arrived electron flow 2 0-300% * 0</p> <p>P08.57 Modular temperature display 0-200°C * 75</p> <p>P08.58 Running time from this start 0-6500min * 0</p> <p>P08.59 Accumulated running time 0-6500h * 0</p> <p style="text-align: center;">P09 Malfunction and Protect Parameter</p> <p>P09.00 Limited value prevent over current losing speed 0-300% * 200</p> <p>P09.01 Current controller 1 proportion 0-300% * 100</p> <p>P09.02 Current controller 1integral 0.005-2s * 0.02</p> <p>P09.04 Torque limited when motor on 0-1000% * 150</p> <p>P09.05 Torque limited when generate electricity 0-1000% * 150</p> <p>P09.08 Over current losing speed alarm delayed 0-60s * 60</p> <p>P09.09 Torque reached to limited alarm delayed 0-60s * 60</p> <p>P09.20 Braking function * 0: Invalid 1: Rheostatic brake 2: Alternating braking</p> <p>P09.21 Resistance Brake threshold Depends on the voltage specification</p> <p>P09.24 Overpressure stall threshold Depends on the voltage specification</p> <p>P09.25 Over voltage control * 0: Invalid 2: Model 1 3: Model 2</p> <p>P09.26 Overvoltage control integral coefficient 0.01-0.1s * 0.05</p> <p>P09.27 Overvoltage control proportion coefficient 0-200% * 100</p> <p>P09.28 Alternating braking integral coefficient 1.0-2.0 * 1.4</p> <p>P09.29 Maximum current of alternating braking 0-150% * 100</p> <p>P09.40 Motor phases detection 0: Off * 1: On</p> <p>P09.41 Power imbalance option * 0: Failure stop 1: Warning 2: Invalid 4: Warning mid-sensitivity 5: Failure stop mid-sensitivity 6: Failure stop high-sensitivity</p> <p>P09.42 Voltagenet drop function * 0: Invalid 1: Speed cut 2: Speed cut failure 3: Free revolve stop motor 4: Instantaneous power lost non-stop 5: Instantaneous power lost non-stop failure 6: Failure</p> <p>P09.43 Judge voltage from power grid failure 100-800V (Reserve)</p>	<p>P09.44 Moment non-stop gain when power supply drop 0-500% * 100</p> <p>P09.45 Moment non-stop recovery threshold when power supply drop 0-65535 * 200</p> <p>P09.46 Cocnverter action after voltage failure * 0: Failure locked 1: Speed start</p> <p>P09.50 Motor overload protection option 0: Prohibition * 1: Warning after motor overload * 2: Alarm after motor overload</p> <p>P09.51 Motor Overload Protection Factor 0.2-60 * 1</p> <p>P09.52 Motor Overheating Protection Warning Factor 50-100% * 80</p> <p>P09.58 Synchronous motor stalling protection * 0: Off 1: On</p> <p>P09.59 Time of Synchronous motor stalling protection 0.05-1s * 0.1</p> <p>P09.60 Malfunction warning display 0: Blank 1: Normally display * 2: Power on failure clearance</p> <p>P09.61 Malfunction locked * 0: Unlocked 1: Locked</p> <p>P09.62 Actions when converter breakdown 0: Display fault and Stop motor * 1: Sop motor after warning</p> <p>P09.70 Time of automatic reset * 0: Manual reset 1: Automatic reset1 time 2: Automatic reset 2 times 3: Automatic reset 3 times 4: Automatic reset 4 times 5: Automatic reset 5 times 6: Automatic reset 6 times 7: Automatic reset 7 times 8: Automatic reset 8 times 9: Automatic reset 9 times 10: Automatic reset 10 times 11: Automatic reset 15 times 12: Automatic reset 20 times 13: Automatic reset unlimited times</p> <p>P09.71 automatic reset time 0-600s * 10</p>	<p>P10.01 RUN button 0: Invalid * 1: Valid</p> <p>P10.02 STOP button 0: Invalid * 1: Valid 2: Reset valid</p> <p>P10.04 Parameter locked * 0: Invalid 1: Protect</p> <p>P10.05 Copy parameter 1: Sectional parameter up load 2: All parameter up load 3: Down load parameter (To be on again when the power is cut off the electricity)</p> <p>P10.10 Days of running 0-9999d</p> <p>P10.11 Hours of running 0-60000h</p> <p>P10.12 Total power 0-65535kwh</p> <p>P10.13 Time of electricity on 1: On</p> <p>P10.14 Number of overheating 0-65535</p> <p>P10.15 Number of overvoltage 0-65535</p> <p>P10.16 Number of reset power * 0: No reset 1: Reset</p> <p>P10.17 Hours of reset running * 0: No reset 1: Reset</p> <p>P10.20 Type of first failure Reference Fault Table</p> <p>P10.21 Type of second failure Reference Fault Table</p> <p>P10.22 Type of third failure Reference Fault Table</p> <p>P10.30 First failure frequency ---</p> <p>P10.31 First failure current ---</p> <p>P10.32 First failure voltage ---</p> <p>P10.33 First failure DI ---</p> <p>P10.34 First failure DO ---</p> <p>P10.35 Power on time of first failure ---</p> <p>P10.36 Running time of first failure ---</p> <p>P10.40 Second failure frequency ---</p> <p>P10.41 Second failure current ---</p> <p>P10.42 Second failure voltage ---</p> <p>P10.43 Second failure DI ---</p> <p>P10.44 Second failure DO ---</p> <p>P10.45 Power on time of second failure ---</p> <p>P10.46 Running time of second failure ---</p> <p>P10.50 Third failure frequency ---</p> <p>P10.51 Third failure current ---</p> <p>P10.52 Third failure voltage ---</p> <p>P10.53 Third failure DI ---</p> <p>P10.54 Third failure DO ---</p> <p>P10.55 Power on time of third failure ---</p> <p>P10.56 Running time of third failure ---</p> <p>P10.70 Software version ---</p> <p>P10.71 mainboard Software version ---</p>	<p style="text-align: center;">P11 Digital Monitoring</p> <p>P11.00 Frequency output</p> <p>P11.01 Set digital</p> <p>P11.02 DC voltage</p> <p>P11.03 Motor voltage</p> <p>P11.04 Motor current</p> <p>P11.05 Frequency output</p> <p>P11.06 Torsional moment output %</p> <p>P11.07 DI input condition</p> <p>P11.08 DO output condition</p> <p>P11.09 VI digital input</p> <p>P11.10 AI digital input</p> <p>P11.11 AI digital input 3</p> <p>P11.12 Counter A</p> <p>P11.13 Counter B</p> <p>P11.14 Motor rotational speed</p> <p>P11.15 PID reference value</p> <p>P11.16 Feedback value</p> <p>P11.17 PLC stage</p> <p>P11.18 Pulse frequency input</p> <p>P11.19 Frequency feedback (Hz)</p> <p>P11.20 Rest of running time</p> <p>P11.21 VI voltage before emended</p> <p>P11.22 AI voltage before emended</p> <p>P11.23 AI voltage before emended 3</p> <p>P11.25 Current time of power on</p> <p>P11.26 Total time of power on</p> <p>P11.27 Current running time</p> <p>P11.29 Set communication value</p> <p>P11.30 Coder feedback speed</p> <p>P11.31 display main frequency X</p> <p>P11.32 Display main frequency Y</p> <p>P11.34 Synchronous motor rotor Angle</p> <p>P11.35 converter temperature</p> <p style="text-align: center;">Attention: labeled"*"is tolerant parameter</p> <p>P010、P011 Parameter is subject to frequency converter actually display</p>
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