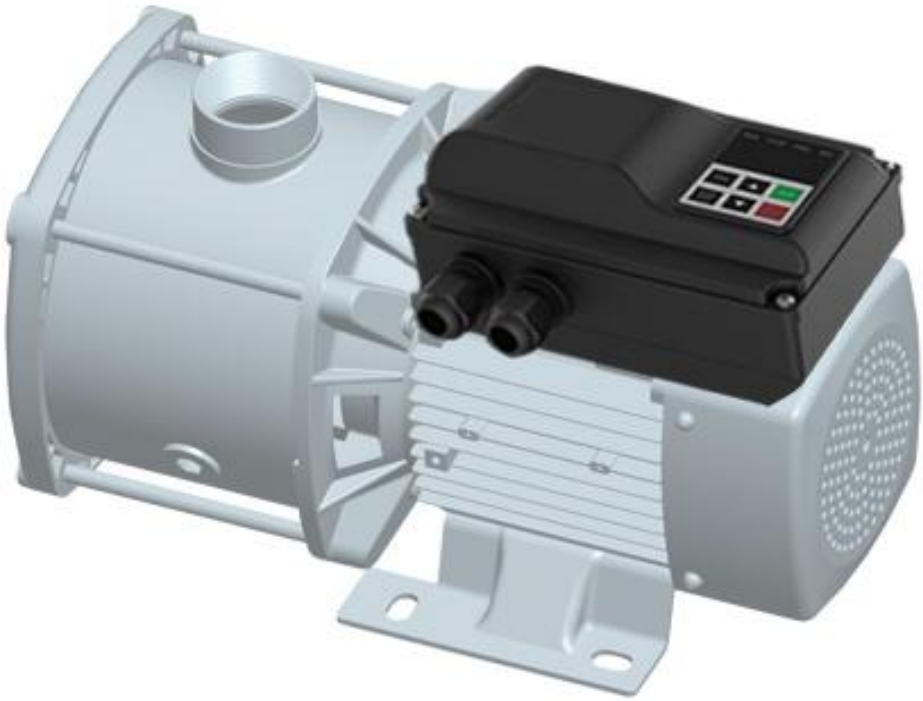
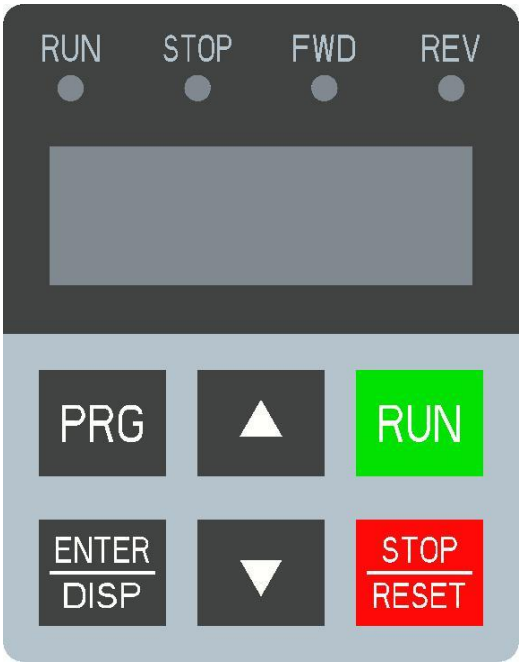
User Manual of Variable Speed ASW



Characteristic Function:

Characteristic function	Parameter	display code
PID constant pressure water supply	Constant voltage control	
PID sleep	1）when the pressure arrives, the operating frequency is less than the sleep frequency P611 and the duration is longer than the sleep time P612. the "SLP" is displayed in dormant state when the frequency is reduced to 0. 2）when the operating frequency is larger than the sleep frequency P611 and the frequency operates stably, the frequency converter can be recognized intelligently and it will also enter into the sleep state.the related parameter P652~P655. 3)when the operating frequency is greater than P656, do not judge sleep.	SLP
PID wake	In sleep, the feedback pressure is less than the P613 of the set pressure, the inverter wakes and the PID begins to work.	
Pressure wire break alarm	When pressure sensor disconnects, the inverter will report trouble by displaying "20". Please refer to P621.	20
Anhydrous alarm	If the pressure is lower than P641 and the duration time is longer than P644, the failure code "LL" is reported to be low pressure failure and stop.（ Fault code "LL", if P641=0, this fault will not be detected	LL
Low Pressure Alarm	During operation, if the pressure is lower than P606 and lasts for P643, a "low pressure fault" will be reported and the machine will shut down with the fault code "LP". If P643=0, this fault will not be detected.	LP
high Pressure Alarm	If the pressure is greater than P605, a "high pressure fault" will be reported and the machine will shut down, with the fault code "HP". If P605=P614, this fault will not be detected. After the pressure returns to normal, the fault will be reset after a delay of P642s.	HP
power on automatic operation	P102=3, power on delay 4s and automatic operation	
antifreeze function	I In hibernation, if the duration is longer than P649, it will run at the frequency of P651 for P650 time and then stop, then after P649, it will run again for P650 time, and so on. The PF key on the keyboard can switch the antifreeze on and off.	

1. keyboard description



1: indicator light instruction

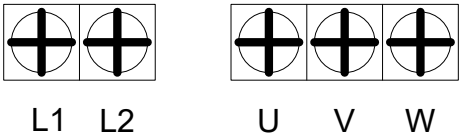
Indicator light name	function declaration
FWD	forward indicator light
REV	reverse indicator light
RUN	operation indicator light
STOP	stop indicator light

2: key instruction

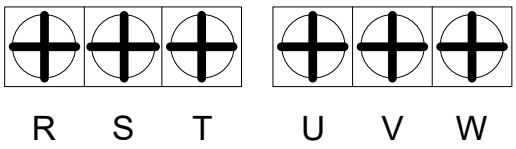
key name	function declaration
PRG	programming key: menu entry or exit
ENTER DISP	confirmation key or shift key: the short press is a shift key,the long press is a confirmation key.
△	increment key: increment of data or function code
▽	decrement key: decrement of data or functional code
RUN	run key: it is used for running operation when keyboard controls start and stop.
STOP RESET	stop / reset key: when run, press this key to stop running; when failure, press this key to reset the failure.

C: Basic wiring

1: Main loop terminal, Single phase input 220V



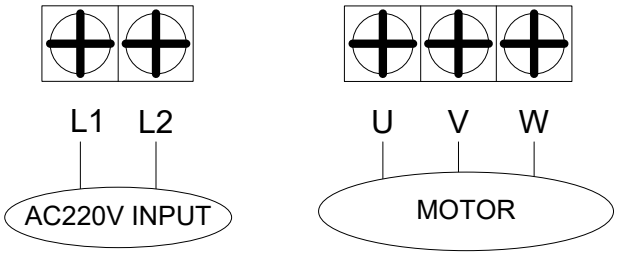
Main loop terminal, 3 phase input 380V



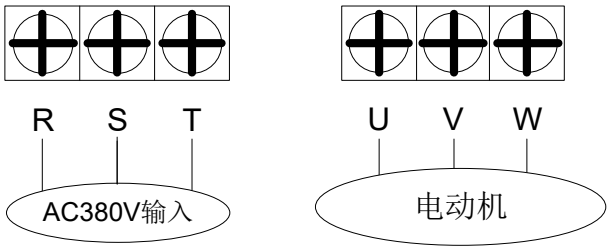
Main loop terminal instructions

Item	Terminal description
L1、L2	single-phase power input
R, S, T	3 phase power input
U、V、W	connect motor

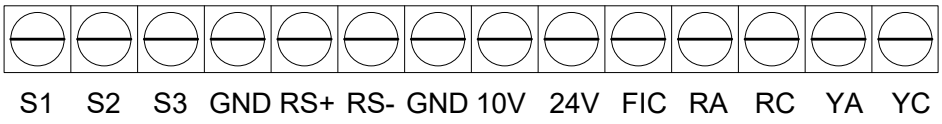
Main circuit wiring diagram of 220V



Main circuit wiring diagram of 380V



2: Control loop terminal



Control loop terminal instructions

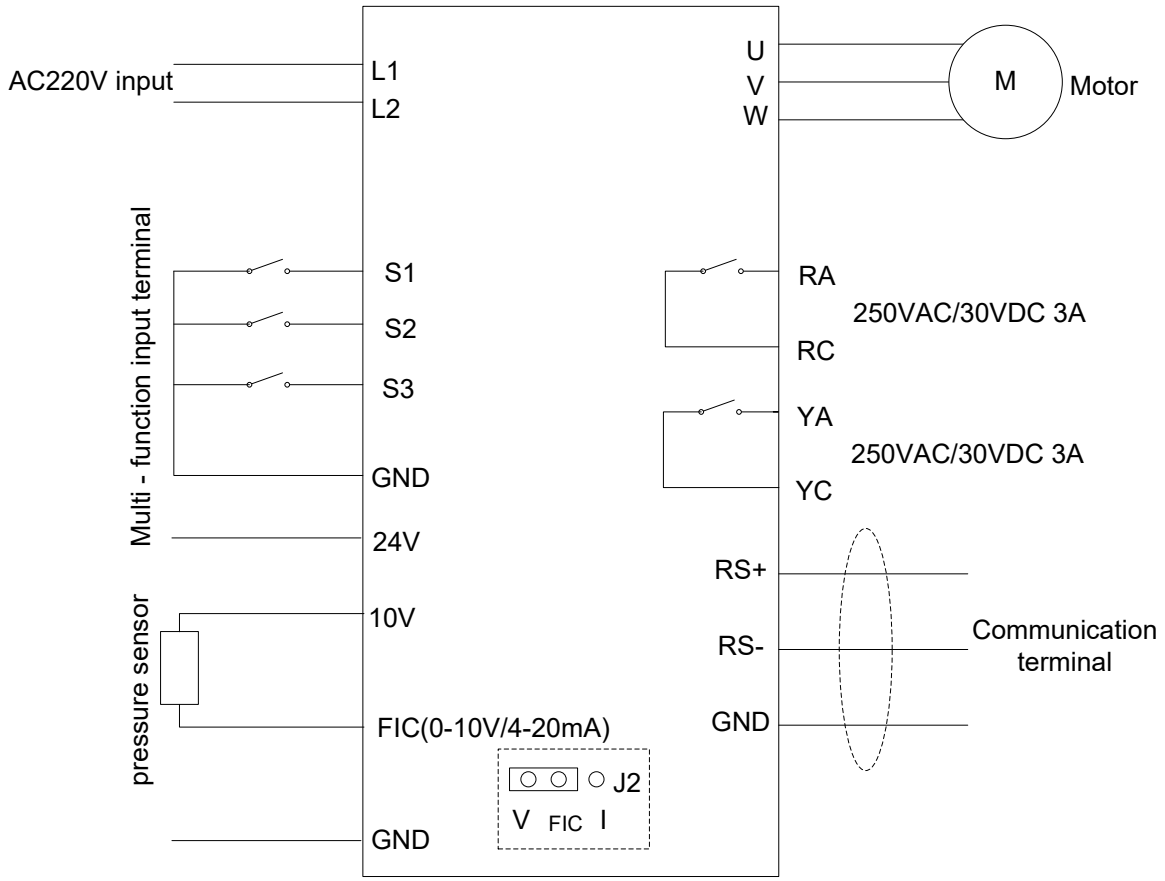
Terminal name	Function definition description	Remarks
S1	multi - function input terminal	multifunctional input terminals S1 and S3 which can be set by parameter setting when the terminal and GND are closed.
S2	multi - function input terminal	
S3	multi - function input terminal	
24V	24V auxiliary power supply	
10V	frequency setting power supply	
FIC	analog input terminal	0~10V/0~20mA

GND	common port	
RS+	RS485 communication positive	
RS-	RS485 communication negative	
RA、RC	relay output contact	normally open
YA、YC	relay output contact	normally open

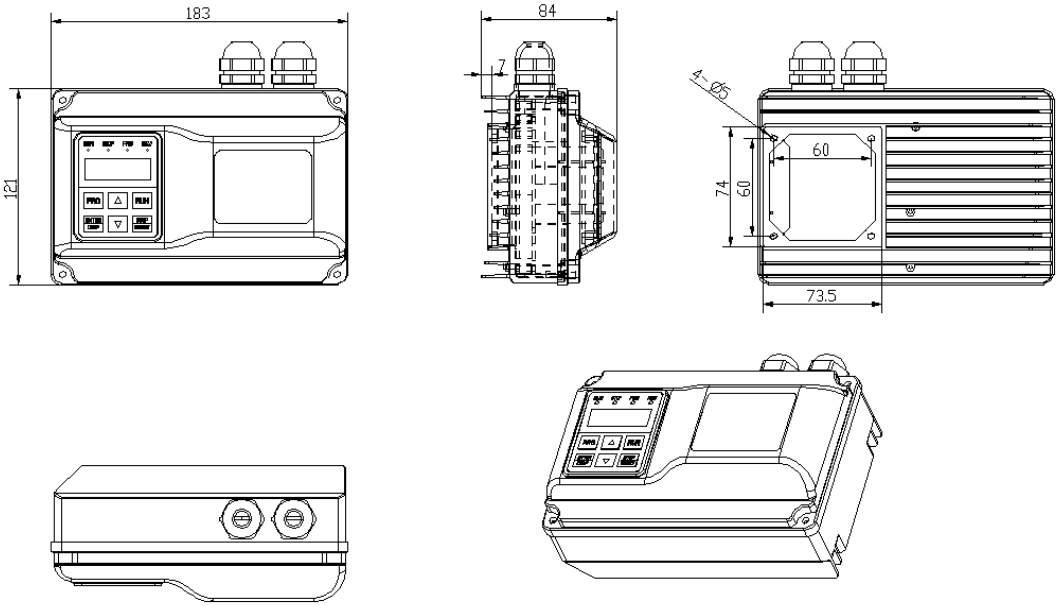
Control board switching switch instructions

switching switch name	switching switch instruction
J2	FIC and V, short connection is to be voltage input; FIC and I,short connection is to be current input.

3: Basic wiring diagram



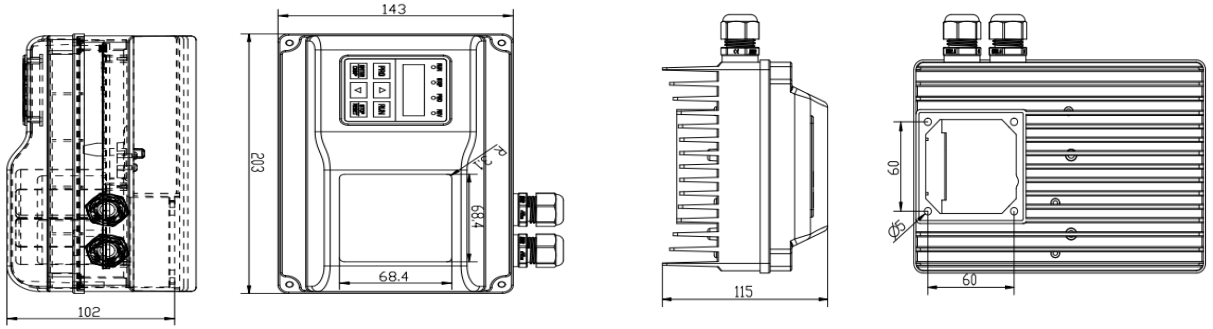
D: Shape and installation dimension



E: AC Drive Series Model, Frame S1

Item no.	Voltage	Adapt motor （KW）	Main circuit diameter (mm^2)	Air circuit breaker,A	Electromagnetic contactor,A	Rated input current,A	Rated output current,A	Max. output frequency, Hz
ASW-00R7G2S1	1PH 220V 50/60Hz	0.75	0.75	16	12	7.2	4.5	999.9
ASW-01R5G2S1		1.5	1.5	25	18	10	7	999.9
ASW-02R2G2S1		2.2	2.5	32	25	16	10	999.9
ASW-00R7G4S1	3PH 380V 50/60Hz	0.75	0.75	6	9	3.8	2.5	999.9
ASW-01R5G4S1		1.5	0.75	10	9	5	3.	999.9
ASW-02R2G4S1		2.2	0.75	10	9	5.8	5	999.9

Frame S3



Item no.	Voltage	Adapt motor （KW）	Main circuit diameter (mm^2)	Air circuit breaker,A	Electromagnetic contactor,A	Rated input current,A	Rated output current,A	Max. output frequency, Hz
ASW-00R7G2S3	1PH 220V	0.75	0.75	16	12	7.2	4.5	999.9
ASW-01R5G2S3		1.5	1.5	25	18	10	7	999.9

ASW-02R2G2S3	50/60Hz	2.2	2.5	32	25	16	10	999.9
ASW-00R7G4S3	3PH	0.75	0.75	6	9	3.8	2.5	999.9
ASW-01R5G4S3	380V	1.5	0.75	10	9	5	3.7	999.9
ASW-02R2G4S3	50/60Hz	2.2	0.75	10	9	5.8	5	999.9
ASW-03R7G4S3		3.7	1.5	16	12	10	9	999.9

F: commonly used parameters (other parameters, please reference to NL1000 inverter specifications.)
“☆”: This indicates that the set value of the parameter can be changed whether the inverter is in the stopped or running state;
“★”: This indicates that the set value of the parameter cannot be changed when the inverter is in the running state;
“●”: This indicates that the value of this parameter is the actual measured record value and cannot be changed;
“ * ”: This indicates that this parameter is a "manufacturer parameter", which can only be set by the manufacturer and is prohibited for users to operate;

Function Code	Parameter Name	Setting Range	Factory value	Property
Group P0: Standard Function Parameters				
P000	Display selection setting	0:Set frequency；1: Running frequency；2:Output current；3:Rotate speed； 4:Bus voltage；5:Output voltage；6:Reserved； 7: Display PID set PID feedback；15：Pulse count	0	☆
P001	Set frequency	Unit: 0.1Hz,		●
P002	Output frequency	Unit: 0.1Hz		●
P003	Output current	Unit: 0.01A		●
P004	Rotate speed	Unit: RMP		●
P005	DC Bus voltage	Unit: 0.1V		●
P006	Inverter temperature	Unit: 1 ℃		●
P007	PID Display	Unit: 0.01		●
P008	Power-on time	Inverter accumulative power-on time, unit: Hour		●
P009	Output voltage	Inverter running output voltage, Unit:1V		●
P010	Fault record 1			●

P011	Fault record 2	0:No fault 2:Over-current during acceleration 3:Over-current during deceleration 4:Over-current at constant speed 5:Over-voltage during acceleration 6: Over-voltage during deceleration 7: Over-voltage at constant speed 8: Snubber resistor overload 9: Undervoltage 10: Inverter overload 11: Motor overload 14:Module overheat 16:Communication fault 24: Lower water supply pressure 27: High water supply pressure 28: No water warning 29: Power-on time reached 31: PID feedback lost during running		●
P012	Fault record 3			●
P013	Reserved			●
P014	Set frequency upon latest fault	Unit: 0.1Hz,		●
P015	Output frequency upon latest fault	Unit: 0.1Hz,		●
P016	Output current upon latest fault	Unit: 0.0A,		●
P017	DC voltage upon latest fault	Unit: 0.1V,		●
P018	Reserved			●
P020	Output power	Unit: 0.1KW		●
P021	Input terminals	Bit0-S1; Bit1-S2; Bit2-S3;		●
P022	Output terminals	Bit0: 1- YA/ YC action; 0-YA /YC no action Bit1: 1- RA/ RC action; 0- RA/ RC no action		●
P023	FIC voltage	0.00~10.00V		●

P027	Fault status	0:No fault 2:Over-current during acceleration 3:Over-current during deceleration 4:Over-current at constant speed 5:Over-voltage during acceleration 6: Over-voltage during deceleration 7: Over-voltage at constant speed 8: Snubber resistor overload 9: Undervoltage 10: Inverter overload 11: Motor overload 14:Module overheat 15: External equipment fault 16:Communication fault 24: Lower water supply pressure 27: High water supply pressure 28: No water warning 29: Power-on time reached 31: PID feedback lost during running		●
P028	Running status	0 :Stop；1 Forward ；2：Reserved		●

Function code	Parameter name	Setting Range	Factory value	Property
P100	Digital frequency setting	0.0~P105	0.0 Hz	☆
P101	Main frequency source X selection	0：Digital setting frequency（can modify the UP/DOWN, power lost memory） 1： FIC analog input 2: Reserved 3： Reserved 4：UP/DOWN mode（power lost memory） 5：RS485 communication frequency setting 6：Multi-reference 7：Simple PLC 8：PID	3	★
P102	Running setting selection	0：Keypad 1: I O Terminal 2: Communication 3: Power-on running (attention, be careful！)	0	★
P104	Reverse effective setting	0: Reverse prohibited 1: Reverse	1	☆
P105	Maximum operate frequency	Minimum operate frequency~999.9Hz	50.0 Hz	☆
P106	Minimum operate frequency	0.00~Maximum operate frequency	0.0 Hz	☆
P107	Acceleration time 1	0~6000.0S	Changing	☆

P108	Deceleration time 1	0~6000.0S	Changing	☆
P109	VF maximum voltage	VF intermediate voltage~500.0V	Changing(220.0)	★
P110	VF base frequency	VF intermediate voltage~Maximum operate frequency	50.0Hz	★
P111	VF intermediate voltage	VF Minimum voltage~VF maximum voltage	Changing	★
P112	VF intermediate frequency	VF Minimum frequency ~ VF base frequency	2.5 Hz	★
P113	VF minimum voltage	0~ VF intermediate voltage	Changing	★
P114	VF minimum frequency	0~ VF intermediate frequency	1.2 Hz	★
P115	Carrier frequency	1.0K~ 15.0K	Changing	☆
P116	Reserved	Reserved		
P117	Parameter Initialization	8: Initialization factory default	0	★
P118	Parameter lock	1: parameter lock 0: parameter unlock	0	★
P119	Running direction	0: Same direction；1 Reverse direction	0	☆
P120	Auxiliary frequency source Y selection	0：Digital setting frequency（UP/DOWN can modify the UP/DOWN, power lost memory） 1：FIC analog input 2: Reserved 3：Reserved 4：UP/DOWN mode（power lost memory） 5：Rs485 communication frequency setting 6：Multi-reference 7：Simple PLC 8：PID		★
P121	Frequency source selection	Unit's digit ：Frequency source selection 0：Main Frequency source X 1：X and Y operation results (operation relationship determined by ten's digit) 2：Switchover between X and Y 3：Switchover between X and "X and Y operation" 4：Switchover between Y and "X and Y operation" Ten's digit (X and Y operation) 0：X+Y 1：X-Y 2：Both the maximum 3：Both the minimum	0	☆

P122	Auxiliary frequency source Y range selection	0：Relative to the maximum frequency 1：Relative to the main frequency source X	0	☆
P123	Auxiliary frequency source superposition Y range	0%～150%	100%	☆
P124	Frequency offset of auxiliary frequency source for X and Y operation	0.0Hz~maximum frequencyP1.05	0.0Hz	☆
P125	Base frequency for UP/DOWN modification during running	0：Running frequency 1：Set frequency	1	★
P126	Upper limit frequency	Frequency lower limit P1.06 ~ maximum frequency P1.05	50.0 Hz	☆
P127	Acceleration/ Deceleration time base frequency	0:Maximum frequency（P0.12） 1:Set frequency 2:100Hz	0	★

Function code	Parameter name	Setting range	Factory value	Property
P2 Group				
P200	Start mode	0：Normally start	0	☆
P201	Stop mode	0：Deceleration to stop 1：Free Stop	0	☆
P202	Start frequency	0.0~50.0 Hz	0.5 Hz	☆
P203	Stop frequency	0.0~50.0Hz	0.5 Hz	☆
P204	Output voltage of Startup DC braking	0~10.0% rated motor voltage	0.0%	★
P205	Startup DC braking time	0.0~100.0S	0.0	☆
P206	Output voltage of stop DC braking	0~10.0% rated motor voltage	0.0%	☆
P207	Stop DC braking time	0.0~100.0S	0.0	☆
F2.08	Torque boost	0~20.0%	Changing	☆
F2.09	Rated motor voltage	0~500.0V	380.0V	☆
F2.10	Rated motor current	0.1-999.9A (inverter>30kw) 0.01-99.99A (inverter<=30kw)	Changing	☆
F2.11	Motor no load current ratio	0-100%	50%	☆
F2.12	Rated motor speed	0~6000r/min	1460	☆
F2.13	Number of electrodes	0~20	4	☆
F2.14	Rated motor slip	0~10.00 Hz	2.50 Hz	☆
F2.15	Rated motor frequency	0-400.00 Hz	50.00 Hz	☆

Function code	Parameter name	Setting range	Factory value	Property
P3 Group				
P300	FIC minimum input	0.00V~P304（when select current，4mA corresponding to 1V）	0.00V	☆
P301	FIC maximum input	P303~10.00V（when select current，20mA corresponding to 5V）	10.00V	☆
P302	FIC input filter time	0.00~10.00S0.00~10.00S	0.10S	☆
P310	Analog low-end frequency	0~999.9HZ	0.0Hz	☆
P311	Analog low-end direction	0/1： Forward / Reverse	0	☆
P312	Analog high-end frequency	0~999.9HZ	50.0Hz	☆
P313	Analog high-end direction	0/1：Forward / Reserve	0	☆
P314	Reserved			
P315	S1	0：No function 1: Inching; 2：Inching forward; 3：Inching reverse 4：Forward/ Reserve; 5: Running 6：Forward running（FWD）; 7： Reverse running（REV） 8：Stop(Three-wire operation control); 9： Multi-Reference terminal 1 10：Multi-Reference terminal 2; 11：Multi-Reference terminal 3 12：Multi-Reference terminal 4; 13：Terminal 1 for acceleration/ deceleration time selection; 14：Terminal 2 for acceleration/ deceleration time selection 15：Terminal UP; 16：Terminal DOWN 17：Free stop; 18：Fault reset（RESET） 19：PID enter running; 20：PLC enter running 21：Timer 1 start signal 22：Timer 2 start signal 23：Counter pulse signal 24：Counter reset signal 25: Running pause 26: Switchover between frequency source x and y	6	★
P316	S2		7	★
P317	S3		18	★

P323	YA,YC	0：No output 1：Inverter running 2：Frequency reached 3：Fault output（fault stop） 4：Zero speed running (available in stop) 5：Frequency reached 1 6：Frequency reached 2 7：Accelerating 8：Decelerating 9：Under voltage status output 10：Timer 1 reached 11：Timer 2 reached 12：PLC cycle finished 13：Reserved 14：PID up limit 15：PID lower limit 16：4~20mA disconnect 17：Motor overload pre-warning 18：Inverter overload pre-warning 27：Setting count pulse value reached 28：Designated count pulse value reached 29: Constant pressure water supply work frequency relay output 30: Running READY	1	☆
P324	Reserved			
P325	RA,RC		3	☆
P3.28	Switch filter time	0.000s～1.000s	0.010s	☆
P3.29	Terminal command mode	0：Two-line mode 1 1：Two-line mode 2 2：Three-line mode 1 3：Three-line mode 2	0	★
P3.30	Terminal UP/DOWN rate	0.01Hz/s～99.99Hz/s	1.00Hz/s	☆
P3.31	Output terminal valid mode selection	0：Positive logic 1：Negative logic Unit’s digit：YA-YC Ten’s digit：RA- RC	H.000	☆
P3.32	S1 delay time	0.0s～999.9s	0.0s	☆
P3.33	S2 delay time	0.0s～999.9s	0.0s	☆
P3.34	S3 delay time	0.0s～999.9s	0.0s	☆

P3.35	Terminal valid mode selection 1	0：High level valid；1：Low level valid Unit's digit：S1 Ten's digit：S2 Hundred's digit：S3 Thousand's digit：Reserved	0000	★
Function code	Parameter name	Setting range	Factory value	Property
P4 Group				
F4.00	JOG frequency setting	0.0~Maximum operate frequency	5.0Hz	☆
F4.01	Acceleration time 2	0~999.9S	10.0s	☆
F4.02	Deceleration time 2	0~999.9S	10.0s	☆
F4.03	Acceleration time 3	0~999.9S	10.0s	☆
F4.04	Deceleration time 3	0~999.9S	10.0s	☆
F4.05	Acceleration time 4/JOG deceleration time	0~999.9S	2.0s	☆
F4.06	Deceleration time 4/JOG deceleration time	0~999.9S	2.0s	☆
P407	Setting counter value	0~9999	100	☆
P408	Designated counter value	0~9999	50	☆
P409	Acceleration torque limit level	50~200%	150%	☆
P410	Over-current stall suppression gain	0~100%	20%	☆
P411	Deceleration overvoltage prevention selection	0：Invalid；1：Valid	1	☆
P412	VF overexcitation gain	0~100%	10	☆
P413	Overvoltage stall suppression gain	0~200%	50%	☆
P414	Brake tube action voltage	220V level：370.0V	Changing	☆
P415	Reserved			☆

P416	Startup protection selection	0：Yes， 1：No P416=0 When FWD input and GND connect, after power off then power on, inverter won't run.	1	☆
P417	Instantaneous power off action selection	0:Invalid；1:Deceleration ；2: Deceleration to stop	0	☆
P420	Fault reset times	0～20	0	☆
P421	Fault reset interval time	0.1s～100.0s	1.0s	☆
P422	Reserved		0	☆
P423	Over current detection level	0~200.0% (Current continue work at P424(time)， and>P423， alarm motor overload fault "OL1")	0.0%	☆
P424	Over current detection time	0~999.9S	10.0S	☆
P425	Frequency setting of frequency 1 reached（FDT1）	0.0Hz～Maximum frequency	0.0Hz	☆
P426	Frequency setting of frequency 2 reached（FDT2）	0.0Hz～Maximum frequency	0.0Hz	☆
P427	Timer 1 setting	0.0S~999.9S	10.0S	☆
P428	Timer 2 setting	0.0S~999.9S	20.0S	☆
P430	Frequency detection hysteresis （ FDT1 ）	0.0%～100.0%（FDT1or FDT2) level）	5.0%	☆
P431	Jump frequency 1	0.00Hz～Maximum frequency	0.00Hz	☆
P432	Jump frequency 2	0.00Hz～Maximum frequency	0.00Hz	☆
P433	Frequency jump amplitude	0.00Hz～Maximum frequency	0.00Hz	☆
Function code	Parameter name	Setting range	Factory value	Property
P500	PLC stop, Retentive upon power failure selection	Unit's digit：Retentive upon stop selection 0：No 1：Yes Ten's digit：Retentive upon power failure selection 0：No 1：Yes	00	☆

P501	PLC operate mode	0: If P101=7，PLC open，otherwise PLC is close 1: PLC open		
P502	Simple PLC running mode	0 or 1：Stop after the inverter runs one cycle 2 or 3：Repeat after the inverter runs one cycle 4：Keep final values after the inverter runs one cycle	0	☆
P503	Multi-speed frequency 1	0.0~Maximum operation frequency	5.0 Hz	☆
P504	Multi-speed frequency 2	0.0~Maximum operation frequency	10.0 Hz	☆
P505	Multi-speed frequency 3	0.0~Maximum operation frequency	20.0 Hz	☆
P506	Multi-speed frequency 4	0.0~Maximum operation frequency	25.0 Hz	☆
P507	Multi-speed frequency 5	0.0~Maximum operation frequency	30.0 Hz	☆
P508	Multi-speed frequency 6	0.0~Maximum operation frequency	35.0 Hz	☆
P509	Multi-speed frequency 7	0.0~Maximum operation frequency	40.0 Hz	☆
P510	Multi-speed frequency 8	0.0~Maximum operation frequency	45.0 Hz	☆
P511	Multi-speed frequency 9	0.0~Maximum operation frequency	50.0 Hz	☆
P512	Multi-speed frequency 10	0.0~Maximum operation frequency	10.0 Hz	☆
P513	Multi-speed frequency 11	0.0~Maximum operation frequency	10.0 Hz	☆
P514	Multi-speed frequency 12	0.0~Maximum operation frequency	10.0 Hz	☆
P515	Multi-speed frequency 13	0.0~Maximum operation frequency	10.0 Hz	☆
P516	Multi-speed frequency 14	0.0~Maximum operation frequency	10.0 Hz	☆
P517	Multi-speed frequency 15	0.0~Maximum operation frequency	10.0 Hz	☆
P518	PLC running time 1	00s（h）～9999 s（h）	100s（h）	☆
P518	PLC running time 2	00s（h）～9999 s（h）	100s（h）	☆
P520	PLC running time 3	00s（h）～9999 s（h）	100s（h）	☆
P521	PLC running time 4	00s（h）～9999 s（h）	100s（h）	☆
P522	PLC running time 5	00s（h）～9999 s（h）	100s（h）	☆

P523	PLC running time 6	00s（h）～9999 s（h）	0s（h）	☆
P524	PLC running time 7	00s（h）～9999 s（h）	0s（h）	☆
P525	PLC running time 8	00s（h）～9999 s（h）	0s（h）	☆
P526	PLC running time 9	00s（h）～9999 s（h）	0s（h）	☆
P527	PLC running time 10	00s（h）～9999 s（h）	0s（h）	☆
P528	PLC running time 11	00s（h）～9999 s（h）	0s（h）	☆
P529	PLC running time 12	00s（h）～9999 s（h）	0s（h）	☆
P530	PLC running time 13	00s（h）～9999 s（h）	0s（h）	☆
P531	PLC running time 14	00s（h）～9999 s（h）	0s（h）	☆
P532	PLC running time 15	00s（h）～9999 s（h）	0s（h）	☆
P533	PLC running direction lower	0～9999	0	☆
P534	Reserved		0	☆
P535	Reserved			☆
P536	PLC running direction higher	0～6	0	☆
P537	PLC running time Unit	0：s(mins） 1：h（hours）	0	☆
P538	Multi-speed 1 selection	0：P5.03	0	☆
P539	Selection of acceleration and deceleration time for PLC reference 1	0～3	0	☆
P540	Selection of acceleration and deceleration time for PLC reference 2	0～3	0	☆
P541	Selection of acceleration and deceleration time for PLC reference 3	0～3	0	☆
P542	Selection of acceleration and deceleration time for PLC reference 4	0～3	0	☆

P543	Selection of acceleration and deceleration time for PLC reference 5	0～3	0	☆
P544	Selection of acceleration and deceleration time for PLC reference 6	0～3	0	☆
P545	Selection of acceleration and deceleration time for PLC reference 7	0～3	0	☆
P546	Selection of acceleration and deceleration time for PLC reference 8	0～3	0	☆
P547	Selection of acceleration and deceleration time for PLC reference 9	0～3	0	☆
P548	Selection of acceleration and deceleration time for PLC reference 10	0～3	0	☆
P549	Selection of acceleration and deceleration time for PLC reference 11	0～3	0	☆
P550	Selection of acceleration and deceleration time for PLC reference 12	0～3	0	☆
P551	Selection of acceleration and deceleration time for PLC reference 13	0～3	0	☆
P552	Selection of acceleration and deceleration time for PLC reference 14	0～3	0	☆
P553	Selection of acceleration and deceleration time for PLC reference 15	0～3	0	☆
P554	Swing frequency setting mode	0：Relative to the central frequency 1：Relative to maximum frequency	0	☆
P555	Swing frequency amplitude	0.0%～100.0%	0.0%	☆
P556	Jump frequency amplitude	0.0%～50.0%	0.0%	☆
P557	Swing frequency cycle	0.1s～999.9s	10.0s	☆
P558	Triangular wave rising time coefficient	0.1%～100.0%	50.0%	☆

Function code	Parameter name	Setting range	Factory value	Property
P600	PID operation mode	0：if P101=8，PID is valid；otherwise, it is invalid. 1：PID valid 2：PID running under conditional	0	☆
P601	PID running mode	0：Negative feedback mode；1:Positive feedback mode	0	☆
P602	PID target selection	0: Digital setting, P6.04 1: FIC as target value 2: Reserved	0	☆
P603	PID feedback selection	0: FIC as feedback 1: Reserved	0	☆
P604	PID value setting	0.0Bar ~ P614	2.50Bar	☆
P605	PID up limit	P6.06~P614	10.00Bar	☆
P606	PID lower limit	0.0Bar~P6.05	0.00Bar	☆
P607	PID-P	0.0~600.0%	100.0%	☆
P608	PID-I	0.0~10.00S	2.00S	☆
P609	PID-D	0.0~9.999S	0.000S	☆
P610	Twice the maximum output of the reverse bias	0.00%～100.00%	2.00%	☆
P611	Sleeping frequency	0.00~Maximum frequency If sleeping frequency = 0，it don’t sleep	25.0HZ	☆
P612	Sleeping time	0.00~6000S	10S	☆
P613	Wake up percentage	0.0~ 100.0% of target value	90.0%	☆
P614	Range	0.00~50.00bar	10.00bar	☆
P615	PID display digits	1~4	4	☆
P616	PID display decimal point	0~4	2	☆
P617	PID upper limit frequency	0.00~Maximum frequency	48.0Hz	☆
P618	PID lower limit frequency	0.00~Maximum frequency	20.0 Hz	☆

P619	PID detection time	0.0~999.9	20.0S	☆
P620	PID Deviation limit	0.0~ 100.0% of Range P614	0.1%	☆
P621	PID feedback loss alarm mode	0: No alarm； 1：Alarm but no stop, code“20”, the inverter should stay at the last frequency before the signal was interrupted. . 2：Alarm and stop：code “20”，the inverter should stop.	0	☆
P622	Detection value of PID feedback loss	Range：0-10.00V (if select 4~20mA, <2mA is disconnect； Set P622=2mA*250 Ω=0.50V)	0.50V	☆
P623	Detection time of PID feedback loss	0.0s～20.0s	1.0s	☆
P624	PID reverse cutoff frequency	0.00～Maximum frequency	0.00Hz	☆
P625	PID differential limit	0.00%～99.99%	0.10%	☆
P626	PID setting change time	0.00～99.99s	0.00s	☆
P627	PID feedback filter time	0.00～60.00s	0.00s	☆
P628	PID output filter time	0.00～60.00S	0.00s	☆
P629	Reserved			
P630	PID Proportional gain P2	0.0~600.0%	200.0%	☆
P631	PID Proportional gain I2	0.0~10.00S	0.50S	☆
P632	PID Proportional gain D2	0.0~9.999S	0.000S	☆
P633	PID parameter switchover condition	0: No switching 1: Switching via S terminal 2: Automatic switching based on deviation	0	☆
P634	PID parameter switchover deviation 1	0.0%～PA.20	5.0%	☆
P635	PID parameter switchover deviation 2	PA.19～100.0%	10.0%	☆
P636	PID initial value	0.0%～100.0%	0.0%	☆
P637	PID initial value holding time	0.00～99.99s	0.00s	☆
P638	Reserved			☆

P639	PID integral property	Unit's digit：Integral separated 0：Invalid 1：Valid Ten's digit：Whether to stop integral operation when the output reaches 0：Continue integral operation 1：Stop integral operation	00	☆
P640	PID stop operation	0：No PID operation at stop；1：PID operation at stop	0	☆
P641	Short of water pressure detection value	0.00 bar ~ P604 (If set as 0.00bar，it don't detect）	0.50bar	☆
P642	After high/low pressure alarm, delay P642, Reset high pressure fault	1) After high pressure alarm, when the pressure return to normal, delay P642, auto reset high pressure fault. 2) After low pressure alarm, delay P642, auto reset low pressure fault. If P642=0, after high/low pressure warning, if won't reset, range 0~9999S	10S	☆
P643	Low pressure alarm detection time	Range 0~9999S During running pressure < P606， hold P643, if will alarm "low pressure fault" and stop, fault code "LP"; if set P643=0, it won't detect low pressure fault	10S	☆
P644	Short of water warning detection time	0~9999S	100S	☆
P645	Auto running delay setting when power on	0: Invalid 1: Valid	0	☆
P646	First 10 times of auto reset for short of water,	0~9999s	600S	☆
P647	After 10 times of auto reset for short of water pressure, interval time	0~1000mins	60 分	☆
P648	Anti-freeze：	1-valid，0- invalid	0	☆
P649	Anti-freeze waiting time while sleeping	0~9999s	900s	☆
P650	Anti-freeze running time while sleeping	0~9999s	30s	☆
P651	Anti-freeze running frequency while sleeping	0~50.0Hz	15.0Hz	☆

P652	Sleep determination: Only when the frequency changes to <P652/S will the sleep determination	0~10.0Hz	0.5Hz	☆
P653	Sleep determination: pressure allowed for frequency reduction	0.0~10.0%	0.60%	☆
P654	Sleep determination: frequency reduction per second	0~10.0Hz	0.3Hz	☆
P655	Sleep determination:times of frequency reduction	0~1000	10 times	☆
P656	Sleep determination:frequency>P6.56, no sleep	0~Maximum frequency P1.05	42.0Hz	☆
P657	Pid simple time	0~1000 ms	4ms	☆
Function code	Parameter name	Setting range	Factory value	Property
P700	Baud rate	0: 4800BPS; 1: 9600BPS; 2: 19200; 3: 38400;	1	☆
P701	Data format	0：No check（8-N-1）for ASC 1：Even parity check（8-E-1）for ASC 2：Odd Parity check（8-O-1） for ASC 3：No check（8-N-1） for RTU 4：Even parity check（8-E-1） for RTU 5：Odd Parity check（8-O-1） for RTU	3	☆
P702	Local address	1～247，0: Broadcast address	1	☆
P703	Communication error	0: No alarm 1：Alarm，display Co 2：Display Co， and stop	0	☆
P704	Communication timeout	0.0（Invalid），0.1s～60.0s	0.0	☆
Function code	Parameter name	Setting range	Factory value	Property
P800	User password	0：Lock 1：Unlock	1	☆
P802	Model selection	1: P type	Changing	☆
P803	Over voltage protection level setting	400V (220V level);	Changing	☆
P804	Lower voltage protection level setting	150V (220V level);	Changing	☆

P805	Temperature alarm value		Changing	☆
P807	Communication frequency decimal point setting	0：1 decimal place ：500 means 50.0HZ; 1：2 decimal places：5000 means 50.0HZ	0	☆
P812	Digital setting frequency stop memory selection	0:Memory；1:Don’t memory	0	☆
P813	Reserved	40~120℃	Changing	
P814	Motor overload coefficient	0.20~10.00	1.00	☆
P815	PWM switchover frequency	0.0~100.0Hz	12.0Hz	☆
P816	Motor overload protection selection	0: Disabled；1Enabled	0	☆

G. Fault alarm

Fault code	Fault name	Possible Causes	Solutions
OC1（2）	Over-current during acceleration	1：The acceleration time is too short 2 ： V/F curve is not appropriate. 3 ： The output circuit is grounded or short circuited. 4：Torque boost set too large 5：Grid voltage is too low 6：The startup operation is performed on the rotating motor 7： The inverter model is of too small power class. 8：Inverter fault	1：Increase the acceleration time 2：Adjust the V/F curve. 3：Eliminate external faults. 4：Decrease the value of torque boost 5：Check the grid 6：Check the load 7：Set speed tracking startup 8：Select a inverter of higher power class. 9：Looking for technical support
OC2（3）	Over-current during deceleration	1：The deceleration time is too short 2：The inverter model is of too small power class 3：There is interference	1：Increase the deceleration time 2：Select a inverter of higher power class. 3：Solve the interference
OC3（4）	Over-current during running	1：Poor insulation of motor and motor output wire 2：Large fluctuations in load or slight jamming 3：Grid voltage fluctuates 4: The inverter model is of too small power class	1：Check the motor and motor wire insulation 2：Check whether the load is stuck or poorly lubricated. 3：Check the grid voltage 4：Select a inverter of higher power class.

		5：A high-power motor is started in the system, the grid voltage is drop 6：There is interference	5：Solve the interference
OU1（5）	Over voltage during acceleration	1：Power supply abnormal 2：Peripheral circuit is set improperly. (such as using air switch to control start and stop, etc) 3：Inverter fault	1：Check power supply voltage 2：Do not use air switch to control start and stop 3：Looking for technical support
OU2（6）	Over voltage during deceleration	1：The deceleration time is too short 2：Power supply voltage abnormal 3：Load inertia is too large 4：Braking resistor selection is improperly 5：Braking parameter set is improperly	1：Increase the deceleration time 2：Check power supply voltage 3：Install braking unit, braking resistor 4：Select a proper braking resistor 5：Set parameter correctly, such as braking tube action voltage.
OU3（7）	Over voltage during running	1：Power supply voltage abnormal 2：There is load with energy feedback 3：Braking resistor selection is improperly	1：Check power supply voltage 2：Install braking unit, braking resistor 3：Select a proper braking resistor
POF（8）	Snubber resistor overload	1：Power supply voltage abnormal 2：Power supply voltage phase loss	1：Check power supply voltage 2：Check whether there is a phase loss in power supply or air switch
LU（9）	Under voltage		
OL1（11）	Motor overload	1：Load is too large 2：The acceleration time is too short 3：Torque boost set too large 4：V/F curve is not appropriate 5：Grid voltage is too low 6：The startup operation is performed when the inverter is not stop 7：The load fluctuates or stuck	1：Decrease the load or use a inverter of higher power class 2：Increase the acceleration time 3：Decrease the value of torque boost 4：Adjust the V/F curve. 5：Check the grid votlage , increase inverter power class 6：Select rotational speed tracking start 7：Check the load
OL2（12）	Inverter overload		
OH（14）	Module overheat	1: The ambient temperature is too high.. 2: The air filter is blocked. 3: The fan is damaged. 4:The thermally sensitive resistor of the module is damaged. 5:The inverter module is damaged.	1:Lower the ambient temperature. 2:Clean the air filter. 3:Replace the damaged fan. 4:Replace the damaged thermally sensitive resistor. 5:Replace the inverter module.

CO（16）	Communication fault	1: The host computer is in abnormal state. 2: The communication cable is faulty. 3:The communication parameters in group PD are set improperly.	1:Check the cabling of host computer. 2: Check the communication cabling. 3: Set the communication parameters properly.
TE（29）	Power-on time reached	1 、 Accumulate power-on time reached setting value	1、Contact the factory
LP（24）	Low pressure alarm (During running， Pressure <P606 ， Continue at P643, it will alarm “low pressure fault” and stop， fault code “LP”. If set P643=0, no detect the fault)	1, The pressure sensor wiring error 2, Parameter set is improperly	1. Check the pressure sensor wiring 2. Set the parameter correctly
HP（27）	High pressure alarm (Pressure>P605, it will alarm “high pressure fault” and stop，fault code“HP”.If set P605=P614,no detect the fault)		
LL（28）	Short of water alarm (During running, when the frequency reached maximum frequency, pressure <P641, the holding time > P644, it will alarm “short of water fault” and stop, fault code “LL”. If set P641=0, no detect the fault)	1.The pressure sensor wiring error 2.Parameter set is improperly 3. There are no water in the tube	1、Check the pressure sensor wiring 2、Set the parameter correctly 3、Check the tube
20（31）	PID feedback lost	1. Pressure sensor problem 2. The pressure sensor wiring error 3. Parameter set is improperly	1. Change the pressure sensor 2. Check the pressure sensor wiring 3. Set the parameter correctly
SLP	Inverter is sleeping, this is not fault.	-	-

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