

# Parameter description

## List of functions/parameters

Classification	No. Function/Parameter	Function Description	Setting range	Factory value
Basic parameter	P00	Main frequency input source setting	00: Main frequency input controlled by digital operator	0
			01 : Keypad potentiometer input, below the most P35 setting value, the output is 0Hz.	
			02 : Keypad potentiometer input, below the most P35 setting value output for P45 value	
			03: External analog input, below the most P35 setting value output is 0Hz	
			04: External analog input, below the most P35 setting value output for P45 value	
			05: 485 communication given	
			06: PID control mode (PID input with external analog input)	
	P01	Operation signal source setting	00: Operation command is controlled by digital operator	0
			01: Operation command is controlled by external terminal	
			02: 485 communication control	
	P02	Motor stopping mode setting	00: Stop by deceleration brake	0
			01: Stop by free running	
	P03	Motor rated (maximum frequency) selection	1.00~ 400.0Hz	50.00
	P04	Maximum output voltage selection	230V: 0.1~ 255.0V 460V: 0.1~ 510.0V	220.0 380.0
	P05	Intermediate frequency selection	0.10~ 400.0Hz	25.0
	P06	Intermediate voltage selection	230V: 0.1~ 255.0 V 460V: 0.1~ 510.0 V	110.0 220.0
	P07	Minimum output frequency selection	0.10~ 20.00 Hz	1.50
	P08	Minimum output voltage selection	230V: 0.1~ 255.0 V 460V: 0.1~ 510.0 V	10.0 20.0
	P09	First acceleration time selection	0.01~ 600.0 s	10.0
	P10	First deceleration time selection	0.01~ 600.0 s	10.0
	P11	Second acceleration time selection	0.01~ 600.0 s	10.0
	P12	Second deceleration	0.01~ 600.0 s	10.0

		time selection		
	P13	First frequency setting	0.00~ 400.0 Hz	0.00
	P14	Second frequency setting	0.00~ 400.0 Hz	0.00
	P15	Third frequency setting	0.00~ 400.0 Hz	0.00
	P16	Fourth frequency setting	0.00~ 400.0 Hz	0.00
	P17	Fifth frequency setting	0.00~ 400.0 Hz	0.00
	P18	Sixth frequency setting	0.00~ 400.0 Hz	0.00
	P19	Seventh frequency setting	0.00~ 400.0 Hz	0.00
	P20	Setting of anti-reverse function	00: Reversal prohibited 01: Reversal possible 02 direction can be saved	00
	P21	Carrier frequency setting	01~ 15; fc = 1kHz~ 15kHz	15
	P22	DC braking current alignment setting	00~ 80 %	00
	P23	DC braking time setting at startup	0.0~ 5.0 s	0.0
	P24	DC braking time setting at stop	0.0 to 25.0 s	0.0
	P25	DC braking start frequency when stopping	0.00 to 15.00 Hz	0.00
	P26	Output frequency upper limit setting	0.10~ 400.0 Hz	400.0
	P27	Output frequency lower limit setting	0.00~ 400.0 Hz	0.00

Classification	Classification	Function	Setting range	Factory value
Basic parameter	P28	Multi-function input selection I (X0) Multi-function input selection two (X1)	0: X0: forward/stop; X1: reverse/stop	0
			1: X0: Run/Stop; X1: Reverse/Positive turn	
			2: X0: forward/stop; X1: reverse/stop X2: Tap forward; X3: Tap reverse	
			3: Multi-function input programmable setting (X0-X3 functions are set by P29-P32)	
	P29	Multi-function input selection two (X2)	0: No function 1: Stop by deceleration time	4
	P30	Multi-function input selection 3 (X3)	2: Free stop 3: RESET command	5
	P31	Multi-function input selection four (X4)	4: Multi-segment speed command I 5: Multi-segment speed instruction II	6
	P32	Multi-function input selection V (X5)	6: Multi-segment speed instruction III 7: Forward rotation/stop	0

			8: Reverse/Stop 9: Run/Stop 10: Forward / reverse 11: Point forward 12: On-spot reverse 13: Normally closed input deceleration stop 14: Normally open input deceleration stop	
	P33	Arbitrary frequency setting	0.00~ 400.0 Hz	0.00
	P34	Torque compensation gain	00~ 10	00
	P35	AVI Minimum Setting	0.0V~P36	1.0
	P36	AVI Maximum Setting	P35~10.0V	10.0
	P37	Auto reset/start after abnormality Number of times setting	00~ 10	00
	P38	Automatic reset/startup interval setting after abnormality	0. 0~ 20s	00
	P39	Analog output gain setting	00~ 200 %	100
	P40	Power start operation lock	00: Operational 01: Non-operational	01
	P41	Multi-function output RELAY 点	00: Running indication	03
			01: Set frequency arrival indication	
			02: Any frequency arrival indication	
			03: Fault indication	
			04: Timing 1 output	
			05: Timing 2 output	
			06: Counting 1 output	
			07: Count 2 output	
			08: Constant pressure water supply pump switching	
	P42	Parameter lock/reset setting	00: All parameter values are set to read/write mode	00
			01: All parameters set to read only mode	
General parameters	P43	Setting frequency	0.00~400.00Hz	50.00
	P44	DC braking frequency at startup	0.00~15.00Hz	0.50
	P45	Analog low side frequency	0.00~400.00Hz	0.00
	P46	Fault Clear	0	0
	P47	Fault record 1	*	*
	P48	Fault Record 2	*	*
	P49	Fault Record 3	*	*
	P50	Fault Record 4	*	*
	P51	Latest fault record item	47~50	47
	P52	Motor rated current	0-65000	15
	P53	Motor no-load current	0-65000	10
	P54	Electrical rotational difference compensation factor	0~1000	0

Classification	No.	Function	Setting range	Factory value
General Parameters	P55	Motor overload protection mode	0: Thermal equivalent protection mode	0
			1: Equivalent protection mode	
	P56	Motor overload protection alignment	0~300%	150%
	P57	Motor overload protection time	0~600.0S	60.0S
	P58	Overvoltage stall voltage	0~999.9V	370.0V
	P59	Stall prevention current alignment in acceleration	0~300%	150%
	P60	Stall current quasi-potential in constant speed	0~300%	150%
	P61	Stall current quasi-position in deceleration	0~300%	150%
	P62	Constant speed overcurrent deceleration time	0~600.0S	0.0S
	P63	Starting mode selection	0: Accelerated start from start frequency	0
			1: Frequency tracking start	
	P64	Failure restart start method selection	0: Failure restart accelerated from start frequency	0
			1: Failure restart by frequency tracking	
	P65	Plus/minus key frequency adjustment step value	0~400.0Hz	0.10Hz
	P66	DAC output selection	0: Set frequency	0
			1: Output frequency	
			2: Output current	
			3: Bus voltage	
			4: Inverter temperature	
	P67	Parameter restore factory value	8: Restore factory value	0
			Other values: invalid	
	P68	Frequency tracking current alignment	0~300%	150%
	P69	Frequency tracking time	0~900.0S	3.0S
	P70	Frequency tracking voltage rise time	0~900.0S	3.0S
	P71	Tap Frequency	0~400.0Hz	0Hz
	P72	Multi-step acceleration and deceleration time selection	0~255 is set by binary weighting. Bit1~bit7 correspond to P13~P19 respectively. 0: Acceleration/deceleration time 1 1: Acceleration/deceleration time 2	0
Factory Parameters	P73	Rated voltage of inverter	0~550.0V	2200
	P74	Inverter Rated Current	0~6500.0A	20
	P75	Frequency converter overload protection quasi position	0~300%	150%
	P76	Inverter overload protection time	0~600.0S	60.0S

	P77	Overvoltage Protection Voltage	0~999.9V	400.0V
	P78	Undervoltage Protection Voltage	0~999.9V	200.0V
	P79	Current Detection Factor	0~65535	1000
	P80	Voltage Detection Factor	0~65535	2750
	P81	Output AC Voltage Coefficient	0~65535	1000

Classification	Classification	Function	Setting range	Factory value
Factory parameter	P82	IO input filter coefficient	0~65535	50
	P83	Fan startup temperature	0~80	50
	P84	Motor Type	0: 3-phase output	0
			1: Single-phase 2-wire output without removing capacitor (U,V connected to the motor, W empty without)	
			2: single-phase 3-wire output to remove capacitance (U is the common terminal, V is the main, W is the deputy)	
			3: single-phase 3-wire output 2 remove capacitance (U is the common terminal, V is the main, W is the vice)	
	P85	Inverter type	0: general-purpose inverter	0
			1: Special inverter for constant pressure water supply	
	P86	Dead time	0~250	30
	P87	Percentage of external brake output	0-100	10
	P88	Software version number	*	
	P89	Reserved	*	
	P90	Password	*	
	P91	Speed display	Maximum speed in relation to the maximum frequency	1500

Classification	No.	Function	Setting range	Factory value
General Extension Parameters	P92	Control mode	0: VF control	0
	P93	VF curve	0: Linear VF curve	0
	P94	Bus voltage filtering time	10-1000MS	0.020S
	P95	Output current sampling filtering time	10-10000MS	1.000S
	P99	Panel display lock item	0-7 (0 is no lock function, ENTER DOWN key to enable lock function)	0
	P98	Overcurrent protection detection sensitivity	0-9 (0 bit disables overcurrent protection)	2

Classification	No.	Function	Setting range	Factory value
Communication and PID Control parameters	P100	485 communication address	1-255	8
	P101	Communication format (Modbus RTU 8-bit data, no parity, 1 stop bit) <b>40000 start address for P00</b>	0=1200,1=2400,2=4800,3=9600,4=19200,5=38400	3
			6=57600,7=115200	
			Read P00 example ( station 03 9C40 0001 CRCL CRCH)	
			Write P00=1 Example ( 08 10 9C40 0001 02 0001 CRCL CRCH)	
			<b>Baud rate change requires a restart of the inverter to take effect</b>	
	P102	485 Frequency set value	0-400.00	50.00
	P103	485 operation setting	Each bit represents a different function	0000
			Bit0; 0=stop, 1=run	
			Bit1 0=Forward rotation, 1=Reverse rotation	
			Bit2; 0=Spot stop, 1=Forced spot run	
			Bit3; 0=deceleration stop, 1=free stop, 2=brake stop	
	P104	Reserved		
	P105	P105 Reserved		
	P106	PID Configuration	Bit: 0=single, 1=bidirectional	000
			Ten bits: 0=negative action, 1=positive action	
			Hundred bits: 0=PID failure without alarm 1=deceleration stop, 2 free stop	
	P107	PID output limit	0-100	100%
	P108	PID given signal selection	0: Keypad key to set	0
			1: Keypad Potentiometer Setting	
			2: AI1 external analog give and take	
			3: AI2 external analog give and take	
	P109	PID feedback signal selection	0: Keypad button given	2
			1: Keypad potentiometer given	
			2: AI1 external analog set point	
			3: AI2 external analog give and take	
	P110	PID integration time	0.001-9.999	0.250 S
	P111	PID differentiation time	0.000-9.999	0.0 S
	P112	PID proportional gain	000.0-999.9	100.0%
	P113	PID sampling period	0.001-9.999	0.010s
	P114	PID deviation limit	0.0-20.0	5.0%
	P115	PID fault detection time	0.0-9.9	5.0s
	P116	PID fault detection value	0.0-100.0	10.0%
	P117	PID display range	0.00-1.99	1.00
	P118	PID keypad given value	0.0-9.9	0.25

Classification	No.	Function	Setting range	Factory value
Constant pressure water supply parameters	P122	Starting pressure deviation	0.0-9.9	10.0
	P123	Starting delay time	0.0-32.000	5.0S
	P124	Stopping frequency	0.0-400.0	5.00hz
	P125	Shutdown delay time	0.0-32.000	30.0S
	P136	Hibernation detection time	0-65535	60.00S

Classification	No.	Function	Setting range	Factory value
	137	Input port polarity	0 normally open input 1 normally closed input	0000
			Position: 0=X0 and X1 are normally open, 1=X0 is normally closed and X1 is normally open, 2=X0 is normally open and X1 is normally closed. 2=X0 normally open, X1 normally closed, 3=X0 and X1 are normally closed.	
			Tenth position: 0=X2 and X3 are normally open, 1=X2 normally closed X3 normally open, 2=X2 normally open X3 normally closed, 2=X2 normally open X3 normally open 2=X2 normally open X3 normally closed 3=X2 and X3 both normally closed	
	138	Input port type	0: Pilot input disconnect stop type 1: Pilot input disconnect hold type (refer to P137)	0000

## Chapter 4 Fault Codes

Classification	Alarm type	Fault description	Fault Explanation	Fault Number
	OC	Instantaneous overcurrent	Check if motor is normal	3
	OCA	Acceleration overcurrent	Adjust the acceleration time appropriately	4
	OCD	Deceleration overcurrent	Adjust the deceleration time appropriately	5
	OCN	Constant speed overcurrent	Check whether the machine is normal and the voltage is stable	6
	OU	Over-voltage	Adjust the acceleration and deceleration time appropriately, and whether the utility power is normal or not.	7
	LU	Undervoltage	Detect whether the utility power is normal or not (180V-240V)	8
	OH	Inverter overheat	Detect whether the inverter heat dissipation is normal	9
	EF	External fault	Check if external sensors and inputs are normal	10

	ERS	Failure to restart	Restart inverter	11
	LP	Input phase loss	Detect whether utility power is normal	12
	OL1	Motor overload	Detecting the motor is normal and if the load is too heavy	13
	OL2	Frequency converter overload	Check whether the motor is normal and whether it is matched with the power of the inverter.	14
	OL3	Temporary motor overload	Check whether the load matches the motor	15
	OL4	Temporary overload of frequency converter	Check whether the motor matches the power of the inverter	16
	485	Communication Failure	Check whether the communication line is normal, and whether the communication of the upper computer is normal.	17
	PID	PID fault	Check whether the analog input is output and whether the sensor is normal.	18

Inverter 485 communication status	ModBus 485 status feedback address	Function	Explanation	
	40180	Running status	Bit0-bit3 (running status) 0=stop (Bit0-Bit3>1)=running	
		Running direction	Bit4-bit7 (running direction) 0=forward 1=reverse	
	40181	Current set frequency of frequency converter	Current set frequency of inverter	
	40182	Frequency converter current running frequency	Frequency converter current real-time running frequency	
	40183	Frequency converter running current	Frequency converter working running current	
	40184	Frequency converter running voltage	Current operating voltage of the inverter (this voltage is the internal DC voltage)	
	40185	Frequency converter temperature	Current operating temperature of the frequency converter	
	40186	Setting pressure	For constant pressure water supply	
	40187	Feedback pressure	For constant pressure water supply pressure feedback	
	40188	External terminal input status	Feedback external input status	
	40189	Fault Alarms	Refer to the number in the fault alarm list for the alarm code.	
	40198	Fault clearing	Write a number greater than 0 to clear the fault	