

通讯协议

MODBUS-RTU Communication Protocol

V1.2

2025/11/13

Powerland Signatures						
Prepared	Checked			Approved	Marketing	CPO
	Mechanical Engineer	Safety Engineer	R&D Manager			

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The product uses RS485 communication interface to support MODBUS-RTU communication protocol, the default baud rate is 115200, data bits are 8, stop bits are 1, and parity bits are none.

Register table

The product supports 02, 03H, 05H, 10H commands in the MODBUS-RTU protocol. 02H reads multiple bit variables, 03H reads multiple registers, 05H writes multiple bits, and 10H writes multiple registers. Please inquire the protocol data format yourself.

Register address adopts the bit variable and register unified addressing mode, the following table is the register address table of the product:

Regular Register Address Table 1

NO.	Address	Name	R/W	Word Length	Type	Unit	Remark
1	0x0000	SN1	R	1	uint16		
2	0x0001	SN2	R	1	uint16		
3	0x0002	SN3	R	1	uint16		
4	0x0003	SN4	R	1	uint16		
5	0x0004	SN5	R	1	uint16		
6	0x0005	SN6	R	1	uint16		
7	0x0006	SoftVer1	R	1	uint16		Software Version
8	0x0007	SoftVer2	R	1	uint16		Software Version
9	0x0008	HardVer1	R	1	uint16		Hardware Version
10	0x0009	HardVer2	R	1	uint16		Hardware Version
11	0x000A	ProductCode1	R	1	uint16		ProductCode
12	0x000B	ProductCode2	R	1	uint16		ProductCode
13	0x000C	ProductCode3	R	1	uint16		ProductCode
14	0x000D	ProductCode4	R	1	uint16		ProductCode
15	0x000E	PowerFactNo1	R	1	uint16	s	Date of manufacture
16	0x000F	PowerFactNo2	R	1	uint16	s	Date of manufacture
17	0x0010	Operating MinutesH	R	1	uint16	1min	Run time
18	0x0011	Operating MinutesL	R	1	uint16	1min	Run time
19	0x0012	Input Voltage	R	1	uint16	v	Reserved
20	0x0013	Input Current	R	1	uint16	ma	Reserved
21	0x0014	Input Power	R	1	uint16	w	Reserved
22	0x0015	Supply frequency	R	1	uint16	hz	Reserved
23	0x0016	Power factor	R	1	uint16		0~1000
24	0x0017	Driver temperature	R	1	uint16	℃	0~120
25	0x0018	Driver cumulative power consumption	R	2	uint32	wh	Reserved
26	0x0019						
27	0x001A	Fault code 1	R	1	uint16		Reserved
28	0x001B	Fault code 2	R	1	uint16		Reserved
29	0x001C	Operative mode	R	1	uint16		Reserved
30~48	...	resv					Reserved
49	0x0030	channel1 OutPercent	R/W	1	uint16	0.1%	0~1000
50	0x0031	channel2 OutPercent	R/W	1	uint16	0.1%	0~1000
51	0x0032	channel3 OutPercent	R/W	1	uint16	0.1%	0~1000
52~64	...	channel4~15 OutPercent	R/W	1	uint16	0.1%	0~1000
65	0x0040	channel1 Vol	R	1	uint16	0.1V	

66	0x0041	channel1 Cur	R	1	uint16	10mA	
67	0x0042	channel2 Vol	R	1	uint16	0.1V	
68	0x0043	channel2 Cur	R	1	uint16	10mA	
69	0x0044	channel3 Vol	R	1	uint16	0.1V	
70	0x0045	channel3 Cur	R	1	uint16	10mA	
71~96	...	channel4~15 Vol ~ Cur	R	1	uint16	0.1V	Reserved

System settings parameter register table 2

NO.	Address	Name	R/W	Word Length	Type	Unit	Remark
97	0x0060	BaudRate	R/W	1	uint16	baud/10	11520(default)
98	0x0061	Data bits	R/W	1	uint16		1=7;2=8(default)
99	0x0062	Parity	R/W	1	uint16		1=none(default); 2=even;3=odd
100	0x0063	Stop bits	R/W	1	uint16		1=1(default);2=2
101	0x0064	control bit 1	R/W	1	uint16		Reserved
102	0x0065	control bit 2	R/W	1	uint16		Reserved
103	0x0066	Percentage of current 1	R/W	1	uint16	0.01%	0~100.00%
104	0x0067	Current Calibration 1	R/W	1	int16	0.01%	-5.00%~5.00%
105	0x0068	Percentage of current 2	R/W	1	uint16	0.01%	0~100.00%
106	0x0069	Current Calibration 2	R/W	1	int16	0.01%	-5.00%~5.00%
107	0x006A	Percentage of current 3	R/W	1	uint16	0.01%	0~100.00%
108	0x006B	Current Calibration 3	R/W	1	int16	0.01%	-5.00%~5.00%
109	0x006C	Percentage of current 4	R/W	1	uint16	0.01%	0~100.00%
110	0x006D	Current Calibration 4	R/W	1	int16	0.01%	-5.00%~5.00%
111	0x006E	Percentage of current 5	R/W	1	uint16	0.01%	0~100.00%
112	0x006F	Current Calibration 5	R/W	1	int16	0.01%	-5.00%~5.00%
113	0x0070	Slave address	R/W	1	uint16		0(default)
114~128	...	resv	R/W	1	uint16		Reserved

Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2025.7.2	V1.0			
2025.9.24	V1.1	System settings parameter register table 2		Mod: 104/106/108/110/112
2025.11.13	V1.2	System settings parameter register table 2	Mod: 104/106/108/110/112 Unit: 5%, Remark: 0~100.00%	Mod: 104/106/108/110/112 Unit: 0.01%, Remark: ±5.00%