

6.1.2 Relay control (function code 05H)

Note that for the control relay, 0x0000 relay is separated, the 0xFF00 relay is closed.

Request data frame:

Addr	Fun	DOaddr hi	DO addr lo	Value hi	Value lo	CRC16 hi	CRC16 lo
01H	05H	xx	xx	FFH	00H	xxH	xxH

Response data frame:

Addr	Fun	DOaddr hi	DO addr lo	Value hi	Value lo	CRC16 hi	CRC16 lo
01H	05H	xx	xx	FFH	00H	xxH	xxH

6.2 System parameters read and write

This area stores system parameters related to equipment operation, including communication parameters, current ratio, etc.,

which can be read by using the Modbus protocol 03H function code, or using the 10H function code setting.

Address	Parameter	Numerical range	Data type
0000H	Protection password	0~9999	Word
0001H	Communication address	Modbus address: 1~247	Word
0002H	Baud rate	Baud rate (BIT0~7) 0: 1200bps 1: 2400bps 2: 4800bps 3: 9600bps	Word
0003H	Current ratio	1~9999	Word
0004H	Relay settings	0: Remote control, 1: Local control	Word
0007H	Write power	Integer part	Word
0009H	Write power	Decimal part	Word
000CH	Clear power	Enter 0x5578 command to clear the power parameters immediately	Word

6.3 Basic Measurement Parameters Area

Basic measurement area, mainly measuring basic voltage, current, power, power factor, etc.;

All parameters in this area are real-time measurement parameters and are read using the Modbus protocol 03H function code. It is read-only data. The data format is floating-point data, and the data in this area is a real-time data on the primary side because it has been multiplied by the transformation ratio.

Address	Parameter	Data type	Unit
0030H	Voltage U	Floating point	V
0032H	Current I	Floating point	A
0034H	System active power P	Floating point	W
0036H	System reactive power Q	Floating point	var
0038H	System apparent power S	Floating point	VA
003AH	System power factor PF	Floating point	
003CH	System frequency F	Floating point	Hz

• Compare the voltage and current input of the actual wiring and wiring diagram, and check if the phase relationship is correct

➢ RS-485 communication is not working properly

• Check whether the communication baud rate, ID and communication protocol settings of the host computer are consistent with the meter

• Please check the data bits, stop bits, parity settings and the host computer is consistent

• Check if the RS-232 / RS-485 converter is working properly

• Check if there are the problems in the entire communications network lines (Such

as short circuit, open circuit, grounding, if the shield is properly grounded at one end, etc.)

• Turn off the device and the host computer, and then reboot

• If the communication line is longer, it is recommended to parallel connect a 100

~200Ω matching resistors at the end of the communication line

Note: If there are any unsolved problems, please contact our company's after-sales service department.

8 Contact details

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6.4 Energy data area

All data in this area are cumulative amount of energy and they all belong to the primary side, which can be read using the Modbus protocol 03H function code.

0080H	Total active energy	Floating point	kWh
0082H	Forward active energy	Floating point	kWh
0084H	Reverse active energy	Floating point	kWh
0086H	Total reactive energy	Floating point	kvarh
0088H	Forward total reactive energy	Floating point	kvarh
008AH	Reverse total reactive energy	Floating point	kvarh
008CH	Total sharp active energy	Floating point	kWh
008EH	Total peak active energy	Floating point	kWh
0090H	Total flat active energy	Floating point	kWh
0092H	Total valley active energy	Floating point	kWh
0094H	Total sharp reactive energy	Floating point	kvarh
0096H	Total peak reactive energy	Floating point	kvarh
0098H	Total flat reactive energy	Floating point	kvarh
009AH	Total valley reactive energy	Floating point	kvarh
009CH	Total combined active energy for this month	Floating point	kWh
009EH	Total combined active energy of the previous 1 settlement day	Floating point	kWh
00A0H	Total combined active energy of the previous 2 settlement day	Floating point	kWh
00A2H	Total combined active energy of the previous 3 settlement day	Floating point	kWh
00A4H	Total combined active energy of the previous 4 settlement day	Floating point	kWh
00A6H	Total combined active energy of the previous 5 settlement day	Floating point	kWh
00A8H	Total combined active energy of the previous 6 settlement day	Floating point	kWh
00AAH	Total combined active energy of the previous 7 settlement day	Floating point	kWh
00ACH	Total combined active energy of the previous 8 settlement day	Floating point	kWh
00AEH	Total combined active energy of the previous 9 settlement day	Floating point	kWh
00B0H	Total combined active energy of the previous 10 settlement day	Floating point	kWh
00B2H	Total combined active energy of the previous 11 settlement day	Floating point	kWh
00B4H	Total combined active energy of the previous 12 settlement day	Floating point	kWh
00B6H	Total combined reactive energy for this month	Floating point	kvarh
00B8H	Total combined reactive energy of the previous 1 settlement day	Floating point	kvarh
00BAH	Total combined reactive energy of the previous 2 settlement day	Floating point	kvarh
00BCH	Total combined reactive energy of the previous 3 settlement day	Floating point	kvarh
00BEH	Total combined reactive energy of the previous 4 settlement day	Floating point	kvarh
00B0H	Total combined reactive energy of the previous 5 settlement day	Floating point	kvarh
00C2H	Total combined reactive energy of the previous 6 settlement day	Floating point	kvarh
00C4H	Total combined reactive energy of the previous 7 settlement day	Floating point	kvarh
00C6H	Total combined reactive energy of the previous 8 settlement day	Floating point	kvarh
00C8H	Total combined reactive energy of the previous 9 settlement day	Floating point	kvarh
00CAH	Total combined reactive energy of the previous 10 settlement day	Floating point	kvarh
00CCH	Total combined reactive energy of the previous 11 settlement day	Floating point	kvarh
00CEH	Total combined reactive energy of the previous 12 settlement day	Floating point	kvarh
00D0H	Sharp active energy for this month	Floating point	kWh
00D2H	Sharp active energy of the previous 1 settlement day	Floating point	kWh
00D4H	Sharp active energy of the previous 2 settlement day	Floating point	kWh
00D6H	Sharp active energy of the previous 3 settlement day	Floating point	kWh
00D8H	Sharp active energy of the previous 4 settlement day	Floating point	kWh
00DAH	Sharp active energy of the previous 5 settlement day	Floating point	kWh
00DCH	Sharp active energy of the previous 6 settlement day	Floating point	kWh
00DEH	Sharp active energy of the previous 7 settlement day	Floating point	kWh
00E0H	Sharp active energy of the previous 8 settlement day	Floating point	kWh
00E2H	Sharp active energy of the previous 9 settlement day	Floating point	kWh
00E4H	Sharp active energy of the previous 10 settlement day	Floating point	kWh

00E6H	Sharp active energy of the previous 11 settlement day	Floating point	kWh
00E8H	Sharp active energy of the previous 12 settlement day	Floating point	kWh
00EAH	Sharp reactive energy for this month	Floating point	kvarh
00ECH	Sharp reactive energy of the previous 1 settlement day	Floating point	kvarh
00EEH	Sharp reactive energy of the previous 2 settlement day	Floating point	kvarh
00F0H	Sharp reactive energy of the previous 3 settlement day	Floating point	kvarh
00F2H	Sharp reactive energy of the previous 4 settlement day	Floating point	kvarh
00F4H	Sharp reactive energy of the previous 5 settlement day	Floating point	kvarh
00F6H	Sharp reactive energy of the previous 6 settlement day	Floating point	kvarh
00F8H	Sharp reactive energy of the previous 7 settlement day	Floating point	kvarh
00FAH	Sharp reactive energy of the previous 8 settlement day	Floating point	kvarh
00FCH	Sharp reactive energy of the previous 9 settlement day	Floating point	kvarh
00FEH	Sharp reactive energy of the previous 10 settlement day	Floating point	kvarh
0100H	Sharp reactive energy of the previous 11 settlement day	Floating point	kvarh
0102H	Sharp reactive energy of the previous 12 settlement day	Floating point	kvarh
0104H	Peak active energy for this month	Floating point	kWh
0106H	Peak active energy of the previous 1 settlement day	Floating point	kWh
0108H	Peak active energy of the previous 2 settlement day	Floating point	kWh
010AH	Peak active energy of the previous 3 settlement day	Floating point	kWh
010CH	Peak active energy of the previous 4 settlement day	Floating point	kWh
010EH	Peak active energy of the previous 5 settlement day	Floating point	kWh
0110H	Peak active energy of the previous 6 settlement day	Floating point	kWh
0112H	Peak active energy of the previous 7 settlement day	Floating point	kWh
0114H	Peak active energy of the previous 8 settlement day	Floating point	kWh
0116H	Peak active energy of the previous 9 settlement day	Floating point	kWh
0118H	Peak active energy of the previous 10 settlement day	Floating point	kWh
011AH	Peak active energy of the previous 11 settlement day	Floating point	kWh
011CH	Peak active energy of the previous 12 settlement day	Floating point	kWh
011EH	Peak reactive energy for this month	Floating point	kvarh
0120H	Peak reactive energy of the previous 1 settlement day	Floating point	kvarh
0122H	Peak reactive energy of the previous 2 settlement day	Floating point	kvarh
0124H	Peak reactive energy of the previous 3 settlement day	Floating point	kvarh
0126H	Peak reactive energy of the previous 4 settlement day	Floating point	kvarh
0128H	Peak reactive energy of the previous 5 settlement day	Floating point	kvarh
012AH	Peak reactive energy of the previous 6 settlement day	Floating point	kvarh
012CH	Peak reactive energy of the previous 7 settlement day	Floating point	kvarh
012EH	Peak reactive energy of the previous 8 settlement day	Floating point	kvarh
0130H	Peak reactive energy of the previous 9 settlement day	Floating point	kvarh
0132H	Peak reactive energy of the previous 10 settlement day	Floating point	kvarh
0134H	Peak reactive energy of the previous 11 settlement day	Floating point	kvarh
0136H	Peak reactive energy of the previous 12 settlement day	Floating point	kvarh
0138H	Flat active energy for this month	Floating point	kWh
013AH	Flat active energy of the previous 1 settlement day	Floating point	kWh
013CH	Flat active energy of the previous 2 settlement day	Floating point	kWh
013EH	Flat active energy of the previous 3 settlement day	Floating point	kWh
0140H	Flat active energy of the previous 4 settlement day	Floating point	kWh
0142H	Flat active energy of the previous 5 settlement day	Floating point	kWh
0144H	Flat active energy of the previous 6 settlement day	Floating point	kWh
0146H	Flat active energy of the previous 7 settlement day	Floating point	kWh
0148H	Flat active energy of the previous 8 settlement day	Floating point	kWh
014AH	Flat active energy of the previous 9 settlement day	Floating point	kWh
014CH	Flat active energy of the previous 10 settlement day	Floating point	kWh
014EH	Flat active energy of the previous 11 settlement day	Floating point	kWh
0150H	Flat active energy of the previous 12 settlement day	Floating point	kWh

0152H	Flat reactive energy for this month	Floating point	kvarh
0154H	Flat reactive energy of the previous 1 settlement day	Floating point	kvarh
0156H	Flat reactive energy of the previous 2 settlement day	Floating point	kvarh
0158H	Flat reactive energy of the previous 3 settlement day	Floating point	kvarh
015AH	Flat reactive energy of the previous 4 settlement day	Floating point	kvarh
015CH	Flat reactive energy of the previous 5 settlement day	Floating point	kvarh
015EH	Flat reactive energy of the previous 6 settlement day	Floating point	kvarh
0160H	Flat reactive energy of the previous 7 settlement day	Floating point	kvarh
0162H	Flat reactive energy of the previous 8 settlement day	Floating point	kvarh
0164H	Flat reactive energy of the previous 9 settlement day	Floating point	kvarh
0166H	Flat reactive energy of the previous 10 settlement day	Floating point	kvarh
0168H	Flat reactive energy of the previous 11 settlement day	Floating point	kvarh
016AH	Flat reactive energy of the previous 12 settlement day	Floating point	kvarh
016CH	Volley active energy for this month	Floating point	kWh
016EH	Volley active energy of the previous 1 settlement day	Floating point	kWh
0170H	Volley active energy of the previous 2 settlement day	Floating point	kWh
0172H	Volley active energy of the previous 3 settlement day	Floating point	kWh
0174H	Volley active energy of the previous 4 settlement day	Floating point	kWh
0176H	Volley active energy of the previous 5 settlement day	Floating point	kWh
0178H	Volley active energy of the previous 6 settlement day	Floating point	kWh
017AH	Volley active energy of the previous 7 settlement day	Floating point	kWh
017CH	Volley active energy of the previous 8 settlement day	Floating point	kWh
017EH	Volley active energy of the previous 9 settlement day	Floating point	kWh
0180H	Volley active energy of the previous 10 settlement day	Floating point	kWh
0182H	Volley active energy of the previous 11 settlement day	Floating point	kWh
0184H	Volley active energy of the previous 12 settlement day	Floating point	kWh
0186H	Volley reactive energy for this month	Floating point	kvarh
0188H	Volley reactive energy of the previous 1 settlement day	Floating point	kvarh
018AH	Volley reactive energy of the previous 2 settlement day	Floating point	kvarh
018CH	Volley reactive energy of the previous 3 settlement day	Floating point	kvarh
018EH	Volley reactive energy of the previous 4 settlement day	Floating point	kvarh
0190H	Volley reactive energy of the previous 5 settlement day	Floating point	kvarh
0192H	Volley reactive energy of the previous 6 settlement day	Floating point	kvarh
0194H	Volley reactive energy of the previous 7 settlement day	Floating point	kvarh
0196H	Volley reactive energy of the previous 8 settlement day	Floating point	kvarh
0198H	Volley reactive energy of the previous 9 settlement day	Floating point	kvarh
019AH	Volley reactive energy of the previous 10 settlement day	Floating point	kvarh
019CH	Volley reactive energy of the previous 11 settlement day	Floating point	kvarh
019EH	Volley reactive energy of the previous 12 settlement day	Floating point	kvarh

6. Common malfunction Analysis

- Nothing is displayed after the unit is powered on
 - Check if the supply voltage and other wiring are correct, also the supply voltage should be within the operating range
 - Turn off the device and the host computer, and then reboot
- The device is not working properly after power on
 - Turn off the device and the host computer, and then reboot
- Voltage or current readings incorrect
 - Check if the wiring mode setting matches the actual wiring mode
 - Check whether the voltage transformer (PT) and current transformer (CT) ratio are set correctly
 - Check if GND is grounded properly
 - Check if the shield is grounded
 - Check if the voltage transformer (PT) and current transformer (CT) are intact
- The power or power factor reading is incorrect, but the voltage and current readings are correct