

Hardware description: Data bit: 8 bits; Baud rate: 9600

Check mode: No check; Stop bit: 1 bit.

Address description: The device address in the Modbus protocol is from 1-247.

Note: 0X68(104) is a reserved address and cannot be used by the device.

The baud rate and check method are subject to the actual order. If there is no special requirement, it is generally 9600, without check.

Address Function code Starting register

High address

Starting register

Low address

Register number

High bit of quantity

Register number

Low bit of quantity

CRC check

Low bit

CRC check

High bit

XX 0x03 0x00 0x00 0x00 0x1B XX XX

Note: All the "XX" in the above table are variable content, and other numbers are fixed hexadecimal numbers

Example of the host sending command sequence:

ModBus address:

Command code:

Register starting address high byte:

Register starting address low byte:

Register address number high byte:

Register address number low byte:

0x01

0x03

0x00

0x00

0x00

0x1B

CRC check high byte:

CRC Check low byte:

Slave response command sequence description:

ModBus address: 0x01

Command code: 0x03

Number of bytes of returned register data: 0x36

Example:

01 03 36 56 78 12 34 0B 3B 56 78 12 34 0B 2C 56 78 12 34 0C 14

Address Instantaneous flow Unit Power Unit Accumulated flow Unit

56 78 12 34 0C 06 56 78 12 34 0C 06 0A AE 00 00 0A AB 00 00 00 00

Accumulated heat Unit Accumulated cooling Unit Inlet temperature Return temperature Status

00 01 00 00 00 0A 0D 55 00 00 00 00 00 00 F2 BA

Working time Pressure Unit

Instantaneous flow: 305419896 L/H

Power: 3054198960 W

Cumulative flow: 3054198960 L

Cumulative heat: 305419896 kwh

Cumulative cooling capacity: 305419896 kwh

Inlet water temperature: 27.34 °C

Return water temperature: 27.31 °C

Status: Normal

Working time: 1 h (hour)

Pressure: 1 mpa

Reserved

0x05

0xC1

0x0000 Table status

All 0 means normal, BIT2 means low voltage, BIT5 means flow water shortage or transducer failure

For example,

Cumulative heat:

0C 00 0.001 W\*h

0C 01 0.01 W\*h

0C 02 0.1 W\*h

0C 03 1 W\*h

0C 04 10 W\*h

0C 05 100 W\*h

0C 06 1 kW\*h

0C 07 10 kW\*h

0C 0E 1MJ

0C 0F 10MJ

Cumulative cooling capacity:

0C 00 0.001 W\*h

0C 01 0.01 W\*h

0C 02 0.1 W\*h

0C 03 1 W\*h

0C 04 10 W\*h

0C 05 100 W\*h

0C 06 1 kW\*h

0C 07 10 kW\*h

0C 0E 1MJ

0C 0F 10MJ

Cumulative flow rate:

0C 10 1 mL

0C 11 10 mL

0C 12 100 mL

0C 13 1 L

0C 14 10 L

0C 15 100 L

0C 16 1m<sup>3</sup>

0C 17 10m<sup>3</sup>

0C 18 100m<sup>3</sup>

Power:

0B 28 0.001 W

0B 29 0.01 W

BiT6 Inlet temperature sensor fault, BiT7 Return temperature sensor fault

0x0080, indicates return sensor fault

If 0x0020, indicates flow water shortage or transducer failure

BiT8 Flow rate exceeds limit

0B 2A 0.1 W

0B 2B 1 W

0B 2C 10 W

0B 2D 100 W

0B 2E 1 kW

0B 2F 10 kW

Instantaneous flow rate:

0B 38 1 mL／h

0B 39 10 mL／h

0B 3A 100 mL／h

0B 3B 1 L／h

0B 3C 10 L／h

0B 3D 100 L／h

0B 3E 1 m<sup>3</sup>／h

0B 3F 10 m<sup>3</sup>／h

Pressure:

0D 53 1 kpa

0D 54 10 kpa

0D 55 0.1 mpa

0D 56 1 mpa

Change table address:

0x01 0x06 0x04 0x05 0x00 0x02 0x19 0x3A

Address: 0x01

Write function code: 0x06

Data register address: 0x0405

Data content: 0x0002

CRC16 check: 0x19 0x3A

Heat meter reply:

0X01 0X06 0X04 0X05 0X00 0X02 0x19 0x3A

If the write is successful, the original data will be returned

Change the baud rate and check mode

Baud rate:

0 2400

1 9600

2 4800

(New address 02)

(Original address 01)

Check

0 No check

1 Odd check

2 Even check

0x01 0x06 0x06 0x08 0x00 0x02 0x89 0x41

Address: 0x01

Write function code: 0x06

Data register address: 0x0608

Data content: 0x0002, 0x00:2400bps; 0x02:Even check

CRC16 check: 0x89 0x41

Remarks Data type Corresponding value Name Register number Register address

20000-0001 Instantaneous flow rate \*LONG

10002-0002 Instantaneous flow rate unit \*INTEGER

20003-0004 Power \*LONG

10005-0005 Power unit \*INTEGER

20006-0007 Cumulative flow rate \*LONG  
10008-0008 Cumulative flow rate unit \*INTEGER  
20009-0010 Cumulative heat volume \*LONG  
10011-0011 Cumulative heat volume unit \*INTEGER  
20012-0013 Cumulative cooling volume \*LONG  
10014-0014 Cumulative cooling volume unit \*INTEGER  
20015-0016 Inlet water temperature LONG  
20017-0018 Return water temperature LONG  
10019-0019 Status \*INTEGER  
20020-0021 Working hours \*  
LONG10022-0022 Pressure \*  
10023-0023 Pressure unit \*  
2 decimal places  
2 decimal places  
INTEGER  
INTEGER  
Parameters not available are uploaded to FF