Heat meter **MODBUS** protocol

The heat meter supports MODBUS command codes 03 and 06 to read registers and write single registers.

The default serial port settings are 2400,n,8,1.

MODBUS Register Table

Register Address	#of registers	Variable Name	Data Type Notes	
0001-0002 2		Instantaneous	LONG	*
0003-0003	1	flow rateInstantaneous flow	INTEGER *	
0004-0005	2	rate	LONG	*
0006-0006	1	unitPowerPower	INTEGER *	
0007-0008 2		unitCumulative	LONG	*
0009-0009	1	flow rateCumulative flow	INTEGER *	
0010-0011	2	rate unitCumulative	LONG	*
0012-0012	1	heatCumulative heat	INTEGER *	
0013-0014 2		unitCumulative	LONG	*
0015-0015	1	cooling capacityCumulative cooling capacity unit	INTEGER *	
0016-0017 2		T1/water inlet temperature	LONG	x0.01degC
0018-0019 2		T2/Return water	LONG	X0.01degC
0020-0020	1		INTEGER	
0021-0022 2		temperature	LONG	Unsigned. second
0023-0024 2		status working time	BCD	Writable. 3bytes BCD for second, minute and hour. Low on left
0025-0026 2		date	BCD	Writable. 4bytes BCD for day, month and year. Low on left
0027-0027	1	Reserve	INTEGER	
0028-0029 2		Reserve	LONG	
0030-0031	2	Reserve	LONG	
0032-0032	1	Calibre	INTEGER mm (saved in flash)	
0033-0034 2		Serial Number	BCD	High on left
0035-0035	1	MODBUS address	INTEGER Writable(saved in flash)	
0036-0036	1	table type	INTEGER BIT0=0:water meter BIT0=1:heat meter (save in flash)	
0037-0037	1	Keep the	INTEGER	
0038-0038	1	version number	INTEGER Hex	

Note: *Unit

code: 05--KWH; 14--Watt; 32--Litre/H; 2C--Cubic Meter; 02--WH; 08--

GWH; 17--KW; 1A--GW; 29--

Litre; 35--Cubic Meter/H. Data format: Long integer data is 32 bits,

occupying

two registers, with the low word first and the high word last.

(1) Function code: 03 Read register

Host sends:

ADR 03H	Start register	High Byte	Start register low byte	Register number high byte	Register number low byte	CRC low byte	CRC high byte

From the machine:

ADR 03H	Total number of bytes		Register data 1	Register data 2	…… Register data M	CRC low byte	CRC high byte

Example: Send: 12 03 00 07 00 06

76 AA Receive: 12 03 0C 02 58 00 00 00 29 39 08 00 00 00 02 CF 70

Data interpretation: 00 00 02 58 00 29 00 00 39 08 00 02

258:600

29:Unit L

3908:14600

02: Unit WH

(1) Function code: 06 Write single register

Host sends:

ADR 06H	Start register	High Byte	Start register low byte	Data high byte	Data low byte	CRC low byte	CRC high byte

Example

write address: Send: 00 06 00 23

00 01 B8 11 00: Broadcast address 06: Write mark 00 23: Register address 00 01: Address to be written B8 11:

16CRC low bit front

check back: 01 06 00 23 00 01 B9 C0