

MFH MODBUS USER INSTRUCTIONS

1, The instrument RS485/RS232 MODBUS-RTU data format

Start bit	Data bit	Stop bit	Parity	Baud rate
1	8	1	None	9600Bit/ S

2, The format of the data reading and writing is same as standard Modbus protocol. Definition as follows:

Request: 01 03 00 B4 00 03 45 ED

01	03	180(00B4)	0003	45ED
ADD	COM	PV1	Counts	CRC

Response: 01 03 06 D8 FF 31 00 00 00 29 45

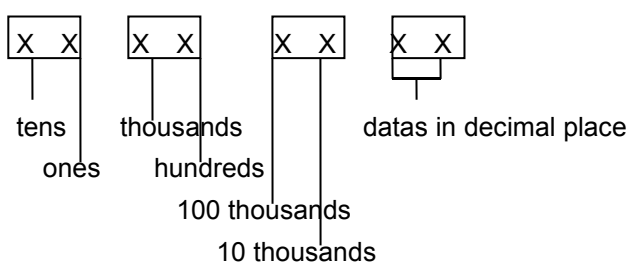
01	03	06	D8FF31000000	2945
ADD	COM	Counts	PV1	CRC

Count the first 5 bytes of PV1 from left to right (neglect the last byte): D8FF310000, the first 2 bytes is decimal, the other 3 bytes are int. Then write the data from right to left as 000031.FFD8H. .(INT 000031H=49, POINT 0 .FFD8=0.99938), Therefore,the actual value is 49.99938;

When the count value is negative,please convert to its complement and add 1,and that's what we want.Then follow the steps of counting a positive one.eg.the response value=01030680CC2CFFFF0057F5, count the first 5 byte of PV1=80CC2CFFFF, and write the data from right to left = FFFF2C.CC80, convert to it's complement and add 1 = 0000D3.337F. (INT 0000 D3=211 , POINT 0. 337F=0.2011).Therefore,the actual value is - 211.2011.

Note:1.When read OUT1 preset value,it's a 5 fixed-point value,complement representation and write down according to the count value by BCD code.

Note 2: When read other parameters,please present it by BCD code.Count Count=0002 4 bit, 0001 2 bit, Details as below:



The decimal part counts from ones.When data in position of 100 thousands is bigger than 9, A stands for negative,B stands for -1.

eg. 1.2345=45 32 01 04

- 1.2345=45 32 A1 04

- 19.8765=65 87 B9 04

Count 2-byte of TIM1,TIM2 according to BCD code, from right to left. eg. 4.10 second means 10.04.

2-byte data TIM1、TIM2 take values according to BCD code from right to left. Eg.4.10s means 10.04.

The other 2 byte,just take right byte and neglect left byte, and represent it in binary system directly. eg.INP input mode (A,B,C,D) correspond to data 1,2,3,D mode as 03 .XX separately

3, When setting parameters, can read multi- parameters; when writing, can write 1 parameter only every time

4, Clear zero to PVF: Any data in single bit writes to PVF(0180), the current counting value(PVF) will reset to 0. After this operation, if send order 01 06 00 B4 00 00 C9 EC, you will get 0 in return.

Clear zero to output: when you send order to OUT1, the OUT1, OUT2 reset. Eg. 01 06 00 04 00 00 C8 0B.

5, Communication parameters:

Factory setting	Parameters	Parameter address (DEX)	Counts(WORD)	Function	Remark
	PV1	0180(00B4H)	0003	Accumulated counting no.s /Length	Read only
	PV2	0097(0061H)	0003	Current counting/Length	Read only
	PV3	0185 (00B9H)	0001	Batch value set	Read WRITE
	SCL1	0040(0028H)	0003	Read Preset value	Read WRITE
1.00000	PC	0000	0002	Count set	R / W
C	OUT1	0004	0001	Output mode	R / W
10.00	TIM1	0006	0001	Delay time set	R / W
02.0000	SCL2	0008	0002	OUT2 preset value	R / W
F	OUT2	0012	0001	OUT2 output mode	R / W
04.00	TIM2	0014	0001	OUT2 delay time set	R / W
D	INP	0016	0001	Input mode set	R / W
0000.00	DP	0018	0001	Min demical point set	R / W
0050.00	CPS	0020	0002	Max count speed set	R / W
NO	DATA	0024	0001	Power-failure protection set	R / W
0050.00	SIG	0026	0001	Count up/down set	R / W
0	BATH	0028	0002	Batch set(INT)	R / W
000	ADDR	0034	0001	Communicate address set	R / W
000	LCK	0036	0001	Password	R / W