

TH MODBUS USER INSTRUCTIONS

1, The instrument RS485 communication BPS is fixed at 9600 bits/s, start bit=1, data bit=8, stop bit=1, starting and ending time >5ms. 2, The format of the data reading and writing is same as standard Modbus protocol.

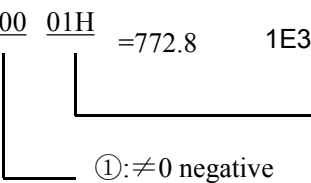
Definition as follows:

Request: (eg: send order to read PV1: 01 03 00 C9 00 02 14 35)

01	03	201(00C9)	0002	5173 (1435)
ADD	COM	PV1	Counts	CRC

Response: (01 03 04 1E 30 00 01 XX XX)

01	03	04	1E300001	****
ADD	COM	Counts	PV1	CRC

$PV1 = \frac{1E3}{PV} \times \frac{00}{01H} = 772.8$ $1E30 = 7728$, take 1 point = 772.8 $PV1 = 1E300101H = -772.8$

 ②:00=INT
 01=1 Point
 02=2 Point
 03=3 Point

3, When it is TC/RTD Input, reading and writing is one decimal. When it is other Input, reading and writing is as parameter DP1,

4, Commands:

02H: read digital value / discrete I/O parameters

03H: read holding registers parameters

06H: write single holding register parameter value

10H: write multi holding registers parameters value

Eg. Write SV, 1) Write 100.5, send: 01 10 00 00 00 02 04 03 ED 00 01 A2 1E,

2) Write: -100.5, send: 01 10 00 00 00 01 04 03 ED 01 01 A3 8E

5, Communication parameters:

Factory setting	Parameters	Parameter address (DEC)	COUNTS	Function	Remark
	FLAG4	104	1	Symbol	Read only
	MV	105	2	PID1 operating value output	Read only
	MV1	168	2	PID2 operating value output	Read only
	PV1	201	2	1 st input measuring value	Read only
	PV2	204	2	2nd input measuring value	Read only
	SV	0000	2	Setting value	R / W
100	AL1	0004	2	Alarm 1 set value	R / W
900	AL2	0008	2	Alarm 2 set value	R / W
500	AL3	0012	2	Alarm 3 set value	R / W
0. 0	cdb	0016	2	Cooling clearance	R / W

0	AT	0019	1	Auto-tune	R / W
000	LCK	0020	1	Set lock function	R / W
0	MAN	0021	1	manual or auto	R / W
001	ADD	0022	1	communication address	R / W
0. 0	PSV1	0024	2	PV1 correction value	R / W
0. 0	PSV2	0028	2	PV2 correction value	R / W
1. 0	HY1	0032	2	Alarm 1 hysteresis value	R / W
0	AM1	0035	1	Alarm 1 mode setting	R / W
1. 0	HY2	0036	2	Alarm 2 hysteresis value	R / W
1	AM2	0039	1	Alarm 2 mode setting	R / W
1. 0	HY3	0040	2	Alarm 3 hysteresis value	R / W
2	AM3	0043	1	Alarm 3 mode setting	R / W
3. 0	P	0044	2	PID 1 proportion band	R / W
240	I	0048	2	PID 1 Integral time	R / W
0. 0	D	0052	2	PID 1 differential coefficient time	R / W
0	OUTD	0055	1	PID 1 control direction	R / W
1. 0	HYS	0056	2	PID 1 control function	R / W
020	CTL	0059	1	PID 1 control cycle	R / W
0. 0	OUTL	0060	2	PID1 MV output low limit	R / W
100. 0	OUTH	0064	2	PID1MV output high limit	R / W
0. 0	HUM	0068	2	PID 1 desiccant output limit	R / W
5. 0	Pc	0072	2	PID 2 proportion band	R / W
240	Ic	0076	2	PID 2 Integral time	R / W
0. 0	Dc	0080	2	PID 2 differential coefficient time	R / W
1	OUC	0083	1	PID 2 control direction	R / W
020	C-t	0084	1	PID 2 control cycle	R / W
K type	INP1	0085	1	1 st input signals	R / W
0.0	LSP	0088	2	1 st input low limit	R / W
1200	USP	0092	2	1 st input high limit	R / W
1	DP1	0095	1	decimal point for 1 st input	R / W
0	UNIT	0096	1	display unit for 1 st input	R / W