MTA PID Controller Communication Manual

1. SPECIFICATION

Interface: Base on standard RS-485

Connection method: 2 wire system, half-duplex multidrop connection

Communication distance: 1.2km (max.)

*However, the maximum communication distance varies slightly with the surroundings such as cables etc.

Communication speed: 2400bps, 4800bps, 9600bps, 19200bps

Data type: Start bit: 1

Data bit: 8

Parity bit: None

Stop bit: 1

Protocol: Modbus-RTU

2. COMMUNICATION ADDRESS

Name	Address （HEX）	Data range	Attribute	Decimal
Measured Value (PV)	0000H	FUL range	R	0，1，2，3
OUTPUT1 Bar Graphic display %	0001H	0-1000 （0-100.0%）	R	1
Alarm lamp （8 bits）	0002H	0：ON 1：OFF see ***1**	R	0
Spare address	0003H			
Spare address	0004H			
Set value (SV)	0005H	-1999-9999	R/W	0，1，2，3
Spare address	0006H	0	R	0
Auto tuning (AT)	0007H	0: No 1: Auto tuning	R/W	0
Alarm 1 (AL1)	0008H	-1999~9999	R/W	0，1，2，3
Alarm 2 (AL2)	0009H	-1999~9999	R/W	0，1，2，3
PV compensation (SC)	000AH	-199.9~199.9	R/W	0，1，2，3
Spare address	000BH		R	
Proportional band P	000CH	0-200.0	R/W	1
Integral time I	000DH	0-3600	R/W	0
Derivative time d	000EH	0-200	R/W	0
Spare address	000FH			
Spare address	0010H			
Proportioning cycle C Y T	0011H	0-100	R/W	0

Control Hysteresis H YS	0012H	0-100.0	R/W	1
Spare address	0013H			
Spare address	0014H			
Spare address	0015H			
Spare address	0016H			
Spare address	0017H			
Spare address	0018H			
Spare address	0019H			
Overshoot protection r E	001AH	-30.0~30.0	R/W	0，1
Proportional reset rSt	001BH	-30.0~30.0	R/W	0，1
Spare address	001CH			
Output limit(Low) OPL	001DH	0.0~100.0%	R/W	1
Output limit (High) OPH	001EH	0.0~100.0%	R/W	1
Spare address	001FH			
Spare address	0020H			
Spare address	0021H			
Output buffer only for out1 BUFF	0022H	0.0~100.0%	R/W	1
Data lock LCK	0023H	0-255	R/W	0
Main input type 1nP1	0024H	See *2	R/W	0
Decimal point dP （only for Analog input）	0025H	0~3	R/W	
Low setting Limiter LSPL	0026H	-1999~9999	R/W	0，1，2，3
High setting limiter USPL	0027H	-1999~9999	R/W	0，1，2，3
Display scale UNit	0028H	0: Centigrade, 1: Fahrenheit 3: Without scale（for analog)	R/W	0
Spare address	0029H			
PV follow-up PV input filter PVFt	002AH	0-60	R/W	0
Lowest value of PV display ANL1	002BH	-1999~9999	R/W	0，1，2，3
Highest value of PV display ANH1	002CH	-1999~9999	R/W	0，1，2，3
Spare address	002DH			
Spare address	002EH			
Alarm1 mode ALd1	002FH	0~16	R/W	0

Alarm1 differential gap AH1	0030H	0.0~100.0	R/W	1
Alarm2 mode ALd2	0031H	0~16	R/W	0
Alarm2 differential gap AH2	0032H	0.0~100.0	R/W	1
Spare address	0033H			
Spare address	0034H			
Control action for OUT1 OUd	0035H	0:Reverse action (Heating) 1: Direct action (Cooling)	R/W	0
Spare address	0036H			
Spare address	0037H			
Buffer mode for out1analog output BEr	0038H	0，1，2	R/W	0

*1 ：Alarm lamp （8 bits）， Address: 0002H 0：ON 1：OFF

bit0: COM bit1:MAN bit2:AL3 bit3: AL2 bit4:AL1 bit5:AT bit6:OUT2 bit7:OUT1

*2：Main input type 1nP1

INP1=	Input sign	Low range	High range	Scale
0 or 1	K	0	1300	℃
2 or 3	E	0	600	℃
4 or 5	J	0	800	℃
6	N	0	1300	℃
7	Wu3/Re25	0	2000	℃
8	S	0	1600	℃
9	T	0.0	400.0	℃
10	R	0	1700	℃
11	B	0	1800	℃
12	AN4（2-10VDC or 1-5VDC or DC4-20mA	-1999	9999	
13	AN3（0-10VDC or 0-5VDC or DC0-20mA	-1999	9999	
14	AN2 (0-50mV)	-1999	9999	
15	AN1 (0-20mV)	-1999	9999	
16	Pt100	-200	800	℃

MAXWELL ELECTRICAL LIMITED

NO.68 JianMeiLi Industrial Park, HaiCang district, XiaMen,FuJian, China 361026

Tel:+86-592-6382791

Fax:+86-592-6091734

www.maxwell-fa.com