

Communication protocol

MTD-48

1.Details

(1) Communication based on Modbus RTU, support 03 read command, 06 and 10 write command

(2) Communication model: 2 wire system, half-duplex, single drop connection

(3) Communication speed: 2400, 4800, 9600, 19200 baud rate

(4) Data format: 1 start bit + 8 data bit + No parity bit + 1 stop bit

(5) Instrument support maximum 36 write command, support maximum 37 read command

Communication Address

Name	Address (HEX)	Data range	Attribute	Decimal
Measured Value (PV)	0000H	FUL range	R	0, 1, 2, 3
OUTPUT1 Value	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	0, 1, 2, 3
Spare address	0006H			
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			
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			2
Proportioning cycle C Y T	0011H	0-100	R/W	0
Control Hysteresis H Y S	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			
Spare address	001AH			

PID reset windup	001BH			
Spare address	001CH			
Spare address	001DH			
Spare address	001EH			
Spare address	001FH			
Spare address	0020H			
Spare address	0021H			
Spare address	0022H			
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, 3= no unit 1: Fahrenheit	R/W	0
Spare address	0029H			
PV follow-up PV input filter PVFt	002AH	0-60	R/W	0
Spare address	002BH			
Spare address	002CH			
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
Control output type OUt	0036H	0: Relay 1:SSR	R/W	0
Spare address	0037H			
SSR drive output method SSRM	0038H	0: Stand 1: CYCL 2: PHAS	R/W	0
Power frequency HZ	0039H	0: 50HZ 1: 60HZ	R/W	0
LBA monitoring time LbAt	003AH	0~9999 seconds	R/W	0
LBA monitoring range LbAb	003BH	0-9999	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 InP1

INP1=	Input sign	Low range	High range	Scale
0	K	0	1300	°C
1	E	0	600	°C
2	J	0	800	°C
3	N	0	1300	°C
4	Wu3/Re25	0	2000	°C
5	S	0	1600	°C
6	T	0.0	400.0	°C
7	R	0	1700	°C
8	B	0	1800	°C
9	Pt100	-200	800	°C