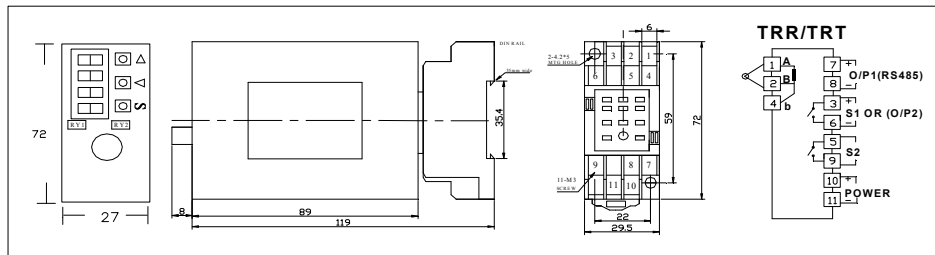


TRR/TRT RTD/Thermocouple Communication Control Transmitter

□ Operation panel / Dimension / Terminal layout / Connection diagram



□ Keys

Name	Function	Instruction
S	Setting key	Enter function setting mode
↑	Change number	Change the numbers
→	Change position	Change the position of numbers

□ Parameters setting

Press S to enter setting mode 01, 02, 03, 04.....09.

Press ↑ to change number. Press → to change position

	Function	Operation Instruction.
01	XXXXXXXXXXXXXX	No need to set. Press "S" to enter 02.
02	Lowest Display value setting	Press ↑ to change number. Press → to change position. Range= ± 0~1999 Press "S" to enter 03.
03	XXXXXXXXXXXXXX	No need to set. Press "S" to enter 04
04	XXXXXXXXXXXXXX	No need to set. Press "S" to enter 05.
05	Output select	Press "↑" to select (V / mA can't exchange) 0-10mA / 0-20mA / 4-20mA or 0-5V / 0-10V / 1-5V Press "S" to enter 06.
06	Baud Rate	Press ↑ to select baudrate 1200-2400-4800-9600-19200 (preset as 9600) Press "S" to enter 07
07	Address	Press ↑ and → to set address (1~99) Press "S" to enter 08
08	Output corresponding value setting 2-Stage setting (SPAN / ZERO)	Press ↑ to change number. Press → to change position Change the SPAN corresponding value (0-9999) Press S to Change the SPAN corresponding value (0~9999) Press "S" to enter 09.
09	Save	Press S to enter 89. Press "↑" to set the number as 99 Press "S" to save.

□ ALARM Hi Lo Function Setting

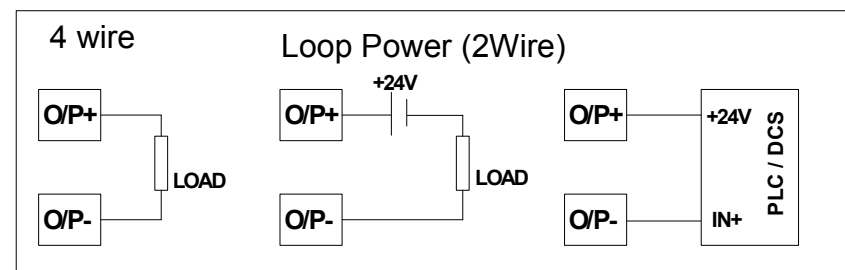
Press "S" to enter "00". Press "→" screen shows "51".

Option	Function	Operation Instruction
51	S1 value setting -1000~1000°C	Press S to use ↑ and → keys to change the number as 1000 Press S to enter 52.
52	S1 deadband setting 0~1000°C	Press ↑ and → keys to change the number as 1000 Press S to enter 53
53	S1 delay time setting 0~99 sec	Press ↑ and → keys to change the number as 99 Press S to enter 54
54	S2 value setting -1000~1000°C	Press ↑ and → keys to change the number as 1000 Press S to enter 55
55	S2 deadband setting 0~1000°C	Press ↑ and → keys to change the number as 1000 Press S to enter 56
56	S2 delay time setting 0~99 sec	Press ↑ and → keys to change the number as 99 Press S to enter 57
57	S1 ; S2 HI-LO setting Screen shows 00 Tens digit 0 for S1 Units digit 0 for S2	Press ↑ and → keys to match the numbers with the HI-LO function (1=Hi, 0=Lo) Hi-Hi. Hi-Lo. Lo-Hi. Lo-Lo (selectable) Press S to enter 58
58	Start Delay Time 0~99 sec	Press "↑" and "→" keys to set the number as 99. Set the time from 0 to 99, no alarm function within the time. Press "S" to enter 59
59	Save	Press S to enter 89. Press "↑" to set the number as 99 Press "S" to save.

□ Analog Output

Output Load : Current Output : <math>< 750\Omega</math> at 20mA , Voltage Output : 10mA Maximum

Output Signal : 0-10ma / 0-20ma / 4-20ma 或 0-5V / 1-5V / 0-10 V
(V / mA can't exchange)



Output Setting

O/P : 4-20ma(corresponding value 50.0 - 100.0°C)

Please refer to 08 for the setting:

Set SPAN as: 1000

Set ZERO as: 0500

TRR/TRT RTD/Thermocouple Communication Control Transmitter

□ Communication

RS 485 MODBUS RTU (Half-Duplex)
 Baud rate : (2400-4800-9600-19200)
 (Parity) : No Parity Check
 Address : 1-99
 Start Bit: 1
 Data Bit: 8

Data Format (HEX)

(ID Number) 1Byte	(Function Code) 1Byte	(Data) N Byte	CRC 2 Byte
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Function Code

03 (03H)	Read parameters of the meter
06 (06H)	Set parameter.

EXAMPLE:

EX 1. Read Temperature Value Master calls meter ID No.1 to read address 0001.Data number 0001

Master sends message to meter TX : 01 03 00 01 00 01 D5 CA				
ID Number 1Byte (01H)	Function 1Byte (03H)	Address 2Byte (00 01H)	Data Number 2Byte (00 01H)	CRC 2Byte (D5 CA)

If meter Displays 1000

Meter responses to Master RX : 01 03 00 02 03 E8 B8 FA				
ID Number (01H)	Function (03H)	Byte (02H)	Data (03E8H)	CRC (B8FAH)

Parameter/Address cross-reference

Address		Name	Length (Byte)	Range	Function Code	Note	
DEC	HEX						
00	0000H	RY/Polarity/Decimal Point	2Byte	Unsigned Int		Note 1	
01	0001H	Display value	2Byte	Unsigned Int	0-9999	03H	Note 2
02	0002H	No function	2Byte	Unsigned Int	0-9999	03H	
03	0003H	CJC	2Byte	Unsigned Int	0-9999	03H	Note 3
04	0004H	S1 relay setting value	2Byte	Unsigned Int	0-9999	03H	
05	0005H	S2 relay setting value	2Byte	Unsigned Int	0-9999	03H	

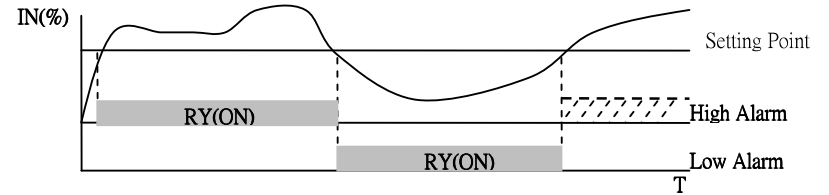
NOTE

- Note 1 : Relay state/Polarity/Decimal Point Read address: 0000H
 bit0~bit3 1digit after decimal point. Reading: 0001 (PS : RTD is always with 1 digit after decimal point)
 bit8~bit9 Relay state bit8=S1 · bit9=S2 ; 1=ON · 0=OFF
 bit15 Polairy 0=positive · 1=negative
- Note 2 : Display value
 If displays 200.0 , 485 reading =2000. Decimal point read address0000H
 (PS : RTD is always with 1 digit after decimal point)
 If display -50.0 · 485 reading= 500. Decimal point / Polarity read address 0000H ;
- Note 3 : CJC read address , no polarity. If the CJC is ±0005,reading is 5

□ Alarm Function Explanation

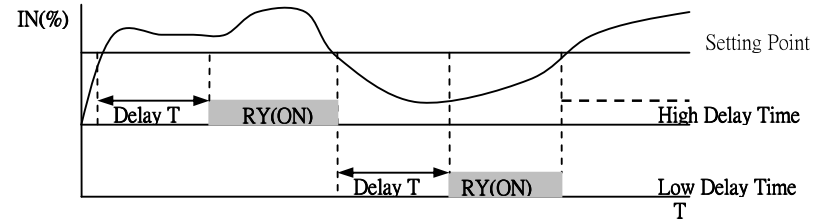
1.High Alarm & Low Alarm

When input signal is higher or lower than setting point, relay is activated.



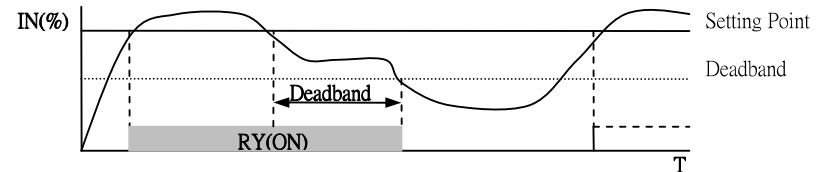
2.High Delay Time & Low Delay Time

When signal is higher or lower than setting point, relay is activated after delay time.



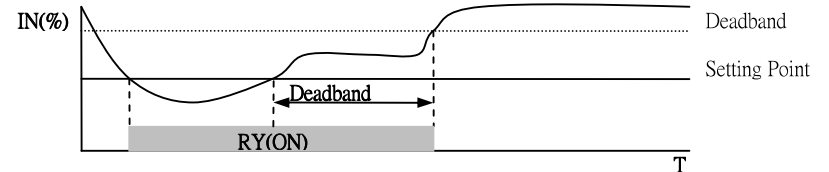
3.High Alarm with Deadband setting

Signal higher than setting point,relay activated. When signal is lower Deadband,relay deactivated.



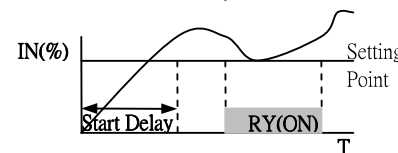
4.Low Alarm with Deadband setting

Signal lower than setting point,relay activated. When signal is higher Deadband,relay deactivated.



5.Start Delay Time

Suitable for low alarm function.
 Input signal starts from 0. No alarm function within Start delay time.



6.Zero no Alarm

Suitable for low alarm function.
 When input signal is under 0.3%,no Low Alarm
 Start Delay =0, function is on.
 Start Delay >0 , function is off.

