

OPERATING MANUAL

PROCESS TEMPERATURE CONTROLLER

PTC 4912

MISTURA

Technical Specification:

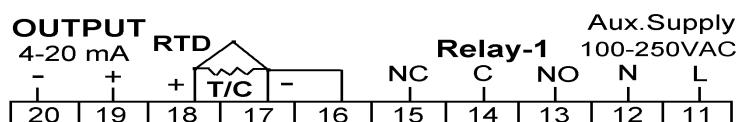
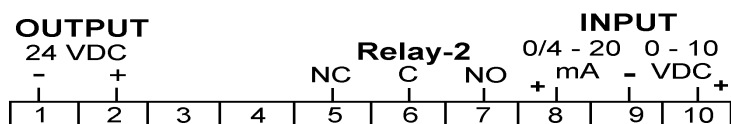
INPUT SPECIFICATION:			
Sr.	INPUT		Range
1	TC-J	J	0 To 700 °C
2	TC-K	K	0 To 1300 °C
3	TC-T	T	0 To 350 °C
4	TC-R	R	0 To 1650°C
5	TC-S	S	0 To 1650°C
6	TC-E	E	0 To 650°C
7	TC-N	N	0 To 1250°C
8	PT	PT	-100 To 400°C
9	PT-1	PT.1	-100.0 To 400.0°C
10	0-10VDC	0-10	-1999 To 9999
11	0-5VDC	0-50	-1999 To 9999
12	4-20mA	4-20	-1999 To 9999
13	0-20mA	0-20	-1999 To 9999
Indication Accuracy		±1% of FSD ± 1°C (FSD: full scale deflection)	
Resolution		J,K,T,R,S,E,N,PT-100 = 1°C	
		PT.1 = 0.1°C	
		0-10V DC,0-5VDC,0-20mA DC,4-20mA DC = 0.1,0.01,0.001,0001	
OUTPUT SPECIFICATION:			
1) Relay Output/ SSR Output (Factory Set)			
Relay/SSR	2 (2 nd Relay Optional)		
Rating	Relay:10A, 230VAC/30V DC SSR: 12VDC,30mA		
2) Analog Output (4-20mA/0-10VDC)			
3) 24VDC Transmitter supply			

AUXILIARY SUPPLY:	
Supply voltage	100 to 250V AC, 50-60Hz
Power consumption (VA RATING)	Approx. 7 VA @ 230V AC MAX
ENVIRONMENT CONDITION:	
Operating Temp.	0°C to 55°C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level	IP-65 (Front side) As per IS/IEC 60529 : 2001
DIMENSION & DISPLAY:	
Size	48(H) X 96(W) X 85(D)/ Cut-out 44(H) X 92(W)
Display	4 digit, Seven Segment, 1.00" RED

Key Operations:

- Press SET Key to enter in programming mode.
- Press SET Key to go to next parameter.
- Use Up Or Down key to change value of parameter.
- Press ENT Key to save change in setting
- To start Auto-Tuning Press Up key for 6 sec. (In PID Mode).

Connection Diagram



Set point Setting:

00 12 Process Value
Press SET ↓

IF 4-20mA/0-10VDC-O/P Control Action: ONOF/PID

SEt 1 Set Value1 [4-20mA/0-10VDC OP]
Press SET ↓

00 12
Press SET ↓

SEt 2 Set Value2 [Relay1]
Press SET ↓

00 12
Press SET ↓

SEt 3 Set Value3 [Relay2]
Press SET ↓

00 12
Press SET ↓

Press ENT Key for Exit

Press SET Key for Program Menu

IF 4-20mA/0-10VDC-O/P Control Action: Retransmission

rELo Retransmission Low
Press SET ↓

0000
Press SET ↓

rEH 1 Retransmission High
Press SET ↓

1000
Press SET ↓

4-20mA/0-10VDC Output Control Action:-

ONOF: 4mA/0 VDC when OFF, 20mA/10VDC when On [Heat mode]

PID: 4-20mA/0-10VDC Output according to PID equation

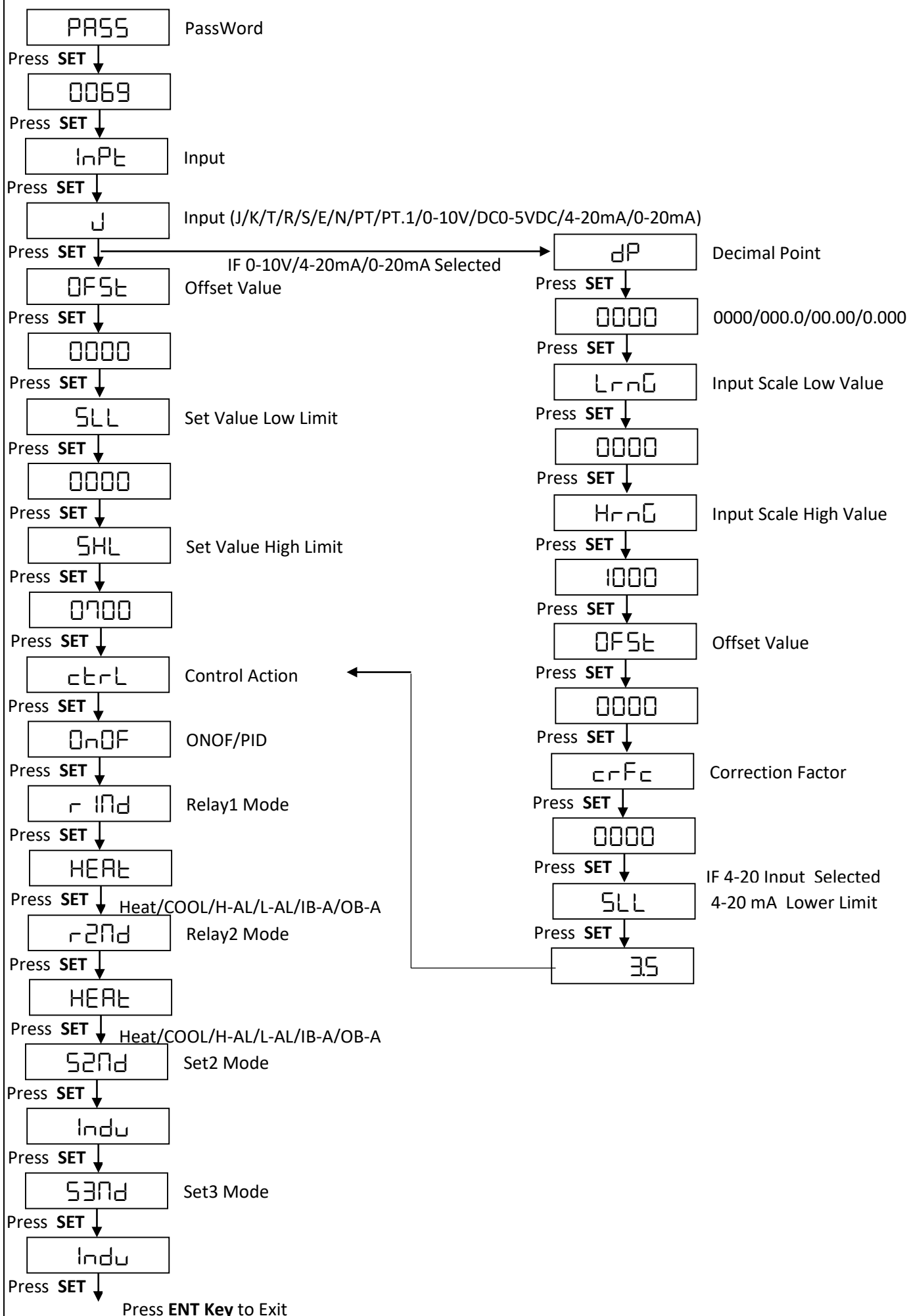
Retransmission: 4-20mA/0-10VDC output according to Retransmission Low Value -> Retransmission High Value

[Ex.1. Input (TC-J), RTLO (Retransmission Low Value) = 0 °C RTHI (Retransmission High Value) =200°C

0 °C->4mA,50°C->8mA,100°C->12mA, 150°C->16mA, 200°C->20mA.

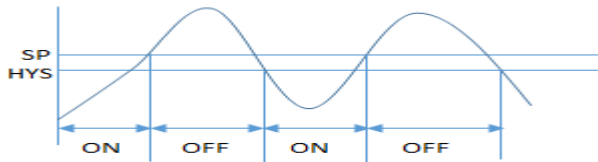
Ex.2. Input (4-20mA), Low Range=0, High Range=1000,RTLO=0 & RTHI=1000 4-20mA Output according 4-20mA Input.]

Basic Configuration:



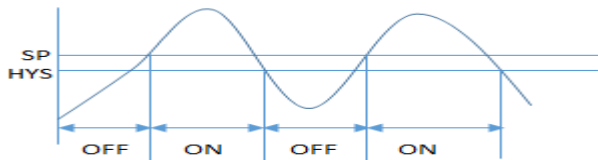
Relay1 Operating Modes

- Heat Mode:**



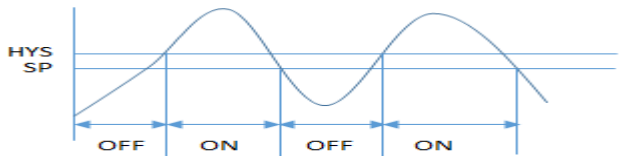
Initially Relay will be on condition. When Process value equals to Set Point Relay will turn off. When Process value equal to Set Point- Hysteresis then again Relay will be on.

- Cool Mode:**



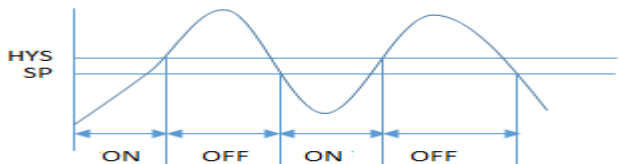
Initially Relay will be off condition. When Process value equals to Set Point Relay will turn on. When Process value equal to Set Point+ Hysteresis then again Relay will turn off.

- High Alarm Mode [H-AL]:**



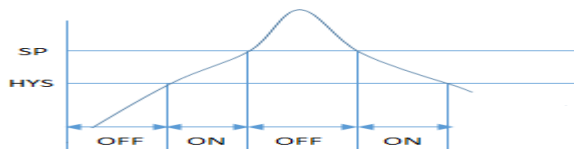
Initially Relay will be off condition. When Process value equals to Set Point + Hysteresis Relay will turn on. When Process value equal to Set Point then again Relay will turn off.

- Low Alarm Mode [L-AL]:**



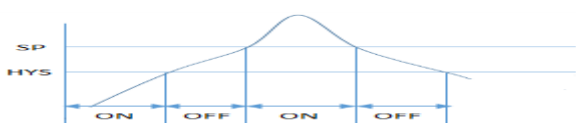
Initially Relay will be on condition. When Process value equals to Set Point + Hysteresis Relay will turn off. When Process value equal to Set Point then again Relay will turn on.

- In Band Alarm Mode [IB-A]:**



Relay will be on between Set point & Hysteresis condition. If Set Point=100 & Hysteresis=3 than Relay on between 97to100

- Out Band Alarm Mode [OB-A]:**



Relay will be off between Set point & Hysteresis condition. If Set Point=100 & Hysteresis=3 than Relay off between 97to100.

Control Parameter:

PASS PassWord

Press SET

0054

Press SET

IF Control Action: PID

Pb Proportion Band

Press SET

0300

Press SET

It Integration Time

Press SET

0240

Press SET

dt Derivative Time

Press SET

0060

Press SET

ct Cyclic Time

Press SET

0010

Press SET

Ar Filter

Press SET

0100

Press SET

t1 Over shoot Band1

Press SET

-4.0

Press SET

t2 Over shoot Band2

Press SET

-6.0

Press SET

HYS2 Hysteresis2

Press SET

0003

Press SET

HYS3 Hysteresis3

Press SET

0003

Press SET Press ENT Key to Exit

IF Control Action: ONOF

