Operating and Instruction Manual:

MTT-4308-1

Specifications:

1. Input: J / K / Pt-100 selectable
2. Output: Relay 5A/230VAC Resistive
3. Op. Temperature: 0~50 Deg.
4. Supply: 230V AC +/- 15%
5. Resolution: 1 °C (0.1°C for Pt-100)
6. Range: Pt-100 -> -50.0~400.0 °C
   J -type -> 0~600 °C
   K-Type -> 0~1250 °C
7. Accuracy: 0.25% +/- 1L.C.
8. No. Of Set-Points : ½
9. PV Offset : settable from -99.9~99.9°C
10. For Set-1:
    Control Action: On/Off or Proportional
    Proportional Band: 1~99°C
    Cycle Time : 1~99 seconds
    Manual Reset : 0.1~99.9°C
    Hysterisis : 0.1~99.9°C
11. Dimensions:
    . Cutout: 92mm (W) x 92mm (H)
    Overall: 96mm(W) x 96mm(H) x 90mm (D)

Table -1

This table shows the maximum set point limit ranges for different inputs:

1. J-type : 0 ~ 600 °C
2. K-Type : 0~1250 °C
3. Pt-100 (1°C) : -50~400 °C
4. Pt-100(0.1°C) : -50.0 ~ 400.0°C

Limits for Pt-100 (0.1°C) input:

a. Hysterisis : 0.0 ~99.9°C
b. Proportional Band : 1~99°C
c. Cycle time : 1~99°C
d. Process offset : -99.9~99.9°C
e. Manual Reset : 0.0~99.9°C

Limits for Pt-100(1°C)/J/K input:

a. Hysterisis : 0 ~99°C
b. Proportional Band : 1~99°C
c. Cycle time : 1~99°C
d. Process offset : -99~99°C
e. Manual Reset : 0~99°C

Configuration Setting:
Turn Off the Instrument. Now Short the terminals marked configuration and turn ON the Instrument. Now change/read the configuration parameters as below.After setting, turn OFF the Instrument, remove the shorting and turn ON the Instrument toapply the new settings.

Key Press	Display	Description

1. To select the Input sensor type

Upper Display: inP
Sensor Type: Pt1 (-50.0~400.0° C)
Press Set +△: Pt2 (-50~ 400°C)
Press Set+△: J (0~650°C)
Press Set+△: F (0~1250°C)

2. Press ▽ to change the process value offset if required.

Upper Display: PuoS Process offset
0000 °C
Press Set + ▽ to change the offset value.
Refer Table-1 for limits for various input types.

3. Press ▽ to select Control Mode for set-1

Upper Display: Cnt 1
Control Mode: On On-Off
Press Set +▽: Pr Time Proportional

4. Press ▽ To set Hysterisis value If Cnt1 = "ON"

Upper Display: HYS1
Hysterisis: 0 1 (0.1~99.9° C for Pt1)
This parameter determines the value of the Process value at which the Relay must turn ON in On/off mode and can be changed by pressing Set+/\or Set + ▽ .

5. Press ▽ To set Proportional Band in °C If Cnt1 = "Pr"

Upper Display: P
Proportional Band: 0 1 (1~99° C)
This parameter determines the value of the Process value below the Set Value at which the Proportional Action will start .Change value by pressing Set+△ or Set +▽ .

6. Press ▽ To set Cycle Time in seconds If Cnt1 = "Pr"

Upper Display: CYCt
Cycle Time: 20 (1~99 sec.)
This parameter determines the total cycle time for the Proportional Action .Change value by pressing Set+△ or Set +▽ .

Key Press	Display	Description

7. Press ▽ To determine the maximum set point limit for Set1

Upper Display: rnG 1
Set point Limit: 0450 °C
Press Set + ▽ to change the Set point limi.
Refer Table-1 for limits for various input types.

8. Press ▽ to select Lock mode

Upper Display: LcK
Press Set +▽: 0000 (0 to5)
This parameter determines whether the manual reset parameter/set-2/set-3 should be accesible from the front panel to the user.
If Lck = 0 : disable all.
If Lck =1 : show set time only.
If Lck =2 : show set time,manual reset only.
If Lck =3: show set time, manual reset,res.
If Lck =4:show set time,manual reset,res,buzz.

9. Press ▽ To select power on reset or not

Upper Display: Por
YES
no
This parameter determines the power on status of the timer . If set to "no" then the unit will store the timer status on the last power off and restore it on the next power on. Note that in this condition, on power on,if the PV is less than SV, the timer will restore the last value but will start only after the PV crosses the SV.

10. Press ▽ To select Tres

Upper Display: trES
YES
no
This parameter enables or disables the auto timer reset parameter "res" of mode 1.

11. Press ▽ To set auto or manual timer start .

Upper Display: Cn-t
AUto
MAn
This parameter determines whether the timer is triggered by the controller section or is manually started by the user. If set to "man", the key is used to manually start the timer.

Key Press	Display	Description

Changing Set-1 Value:
Turn On the Instrument. The upper display will show the Process temperature and the lower display will show the Set-1 temperature. To change the Set-1 , press Set +△ to increase the value or Set +▽ to decrease the value. The upper display will show 'Set1' as shown below.

Press ▽ to change the Set-1 value

Upper Display: SEt 1 Process offset
0200 °C
Press Set + ▽ or Set+ △ to change the Set-1 temperature values.
Refer Table-1 for limits for various input types.

Changing Set time/Manual Reset/Set-2/Res/buzz
To enter editing mode Press and hold + for 3~4 seconds. The upper display will show as below:

Upper Display: MAn Process offset
0000 °C
Press Set + ▽ or Set+ △ to change the Manual Reset values.

After changing the required values, Press and hold △+ ▽ for 3~4 seconds to come out of the editing mode. Note that the parameters displayed in this mode is dependent upon the Lock ('Lck') parameterin the configuration mode.
Also note that If none of the keys are pressed for more than 10~12 seconds, the unit will automatically come out of this mode.

Upper Display: t ME set time
0000 Hr/min
Press Set + ▽ or Set+ △ to change the set time

Press ▽ to display ress

Upper Display: rESS set time
0000 °C
This parameter determines when the timer should be reset.If the PV falls ress° below SV the timer will be automatically reset.
NOTE: ress is valid only when tres is set to yes.
Press Set +▽ or Set+△ to change the ress value

Press ▽ to display the buzz

Upper Display: buZZ
00 10 Sec
This parameter determines for how many sec buzzer will be on.
Press set+△ or Set+ △ to change the buzz values
Refer Table-1 for limits for various input types.