

# TP-550 Series

## Temperature/Process Monitor With or Without Alarms

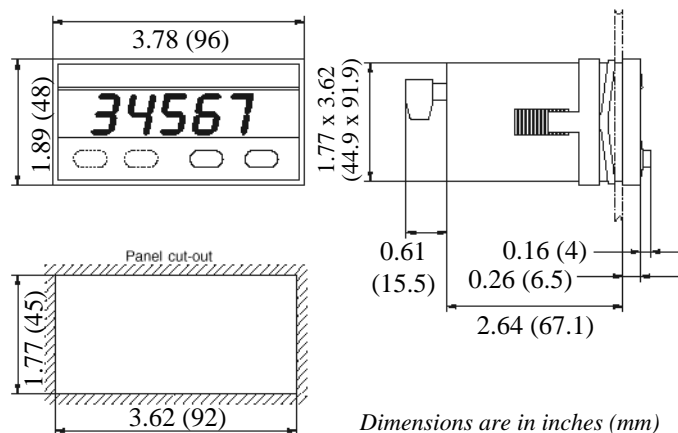
### Features

- Very bright LED display, height 14mm
- DIN housing, 96 x 48 mm
- Programmable operating curve for standard signals, thermocouples, resistance thermometers, etc.
- Programmable operating curve, even non-linear, allowing the use of economical sensors
- Two relay outputs with two preset limit values

### Additional features:

- DIN housing 96 x 48 mm
- Character height: 14 mm
- Resolution 14 bits
- Simple menu-driven programming, and operation with 4 keys
- Electrical connections by means of plug-in screw terminals
- Voltage supply: 10-30 VDC or 90-260 VAC
- IP 65/NEMA4 (front)
- Auxiliary power supply output for transducer or sensor  
10..30 VDC: 10 VDC  $\pm$  2%, 30 mA  
90..260 VAC: 24 VDC  $\pm$  15%, 50 mA and 10 VDC  $\pm$  2%, 30 mA
- Hum eliminator (50/60 Hz user selectable)
- Coming Soon: Serial interface allows reading of the measured values and set-up programming.

### Dimensions



### TP554 Specifications:

Process controller for thermocouples, resistance thermometers and sensors with mV range; two preset limit values

- Display range: -19.999..99.999
- Input ranges:  
0..400  $\Omega$ , 0..4000  $\Omega$   
0..100 mV, -100..+100 mV

### Thermocouples

- Integrated operating curves for thermocouples (types B, C, D, E, G, J, K, L, N, R, S, T, U)
- Programmable input operating curve with up to 24 reference points
- 2 programmable limit values (TP551; unit without presets, has only 2 buttons)
- Outputs: Two (2) SPDT relays (250 VAC / 3A)
- Programmable hysteresis (on, off, on/off)
- SET key to reset the outputs
- Inputs: thermocouple, millivolt, resistance thermometer with measurement on 2, 3 or 4 wires, RESET to reset the outputs, KEY terminal to lock the front keys.

### Order Code

Example: TP554.010 0 00

Series:

TP551.012 = No Presets/Relays

TP554.010 = 2 Presets/Relays

Operating Voltage:

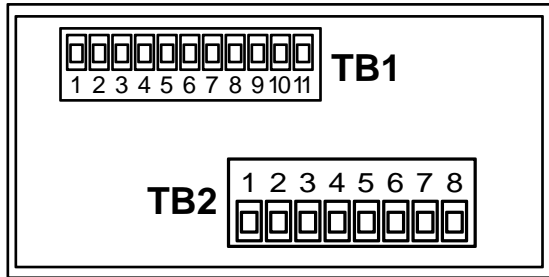
0 = 90 to 260 VAC

3 = 10 to 30 VDC

Options:

00= None

## Electrical Connections



TB1	
1	Measuring input 1 (Sense)
2	Measuring input 2 (- Ref)
3	Sensor (+Ref)
4	Current output for 0 .. 4000 Ω (+ Sense)
5	Current output for 0 .. 400 Ω (+ Sense)
6	Keys locking
7	Reference ground Reset / Key
8	Reset
9	GND for DC Output (Pins 10 & 11)
10	+10 VDC Out (30 mA)
11	+24 VDC Out (50 mA) (AC units only)

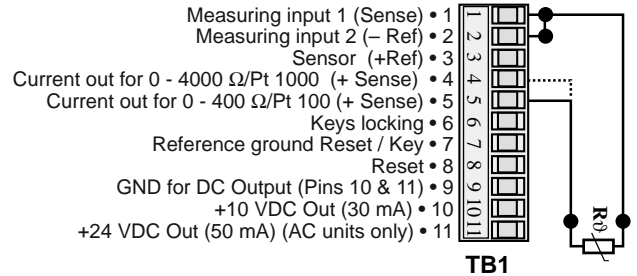
TB2			
1	Output 1	Relay C	Optocoupler Emitter
2	Output 1	Relay N.O.	
3	Output 1	Relay N.C.	Optocoupler Collector
4	Output 2	Relay C	Optocoupler Emitter
5	Output 2	Relay N.O.	
6	Output 2	Relay N.C.	Optocoupler Collector
Power Supply			
7	Power In	AC 90 to 260V	DC 10 to 30V
8	Power In	AC 90 to 260V	DC 0V (GND)

**NOTE:** Check unit label before applying power

## Resistance measurements 0 .. 400/4000 Ω or Pt 100/1000

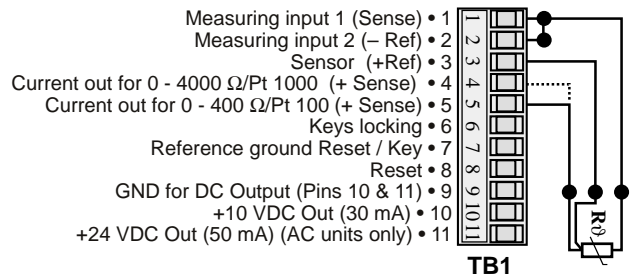
**2 wire measurement** (measuring resistance 0 .. 400/4000 Ω)

**NOTE:** Not recommended for long runs.



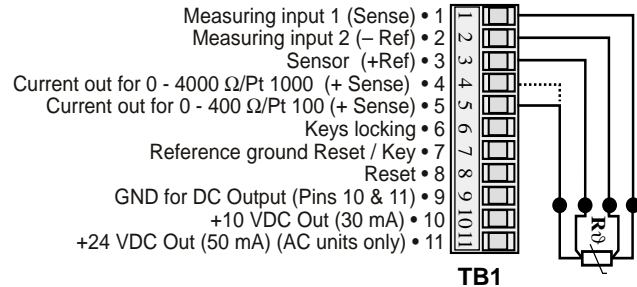
**3 wire measurement** (measuring resistance 0 .. 400/4000 Ω)

**NOTE:** Jumper 1 & 2 at meter, wires 3 & 4 must go to sensor

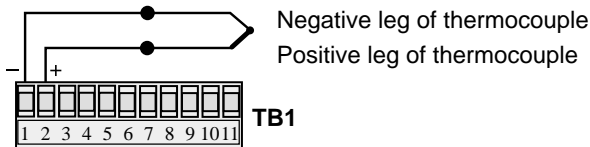


**4 wire measurement** (measuring resistance 0 .. 400/4000 Ω)

**NOTE:** All 4 wires must go to sensor



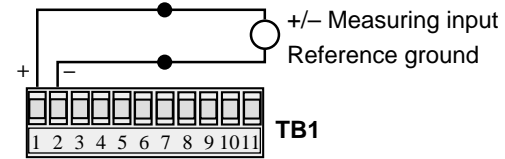
## Thermocouples



Measuring input 1 (Sense) • 1  
 Measuring input 2 (- Ref) • 2  
 Sensor (+Ref) • 3  
 Current output for 0 .. 4000 Ω (+ Sense) • 4  
 Current output for 0 .. 400 Ω (+ Sense) • 5  
 Keys locking • 6  
 Reference ground Reset / Key • 7  
 Reset • 8  
 GND for DC Output (Pins 10 & 11) • 9  
 +10 VDC Out (30 mA) • 10  
 +24 VDC Out (50 mA) (AC units only) • 11

**NOTE:** For accurate readings, use only leads of same type thermocouple wire without junctions to dissimilar metals.

## Voltage measurement (0 to 100mV or -100 to +100mV)



Measuring input 1 (Sense) • 1  
 Measuring input 2 (- Ref) • 2  
 Sensor (+Ref) • 3  
 Current output for 0 .. 4000 Ω (+ Sense) • 4  
 Current output for 0 .. 400 Ω (+ Sense) • 5  
 Keys locking • 6  
 Reference ground Reset / Key • 7  
 Reset • 8  
 GND for DC Output (Pins 10 & 11) • 9  
 +10 VDC Out (30 mA) • 10  
 +24 VDC Out (50 mA) (AC units only) • 11