

# TP-550 Series

## Temperature/Process Monitor With or Without Alarms

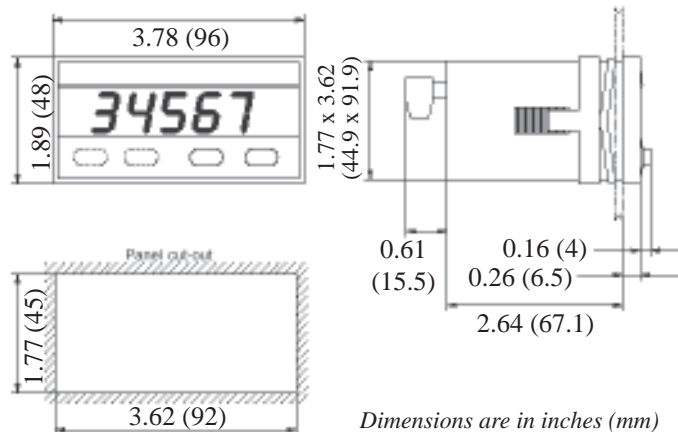
### Features

- 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)
- 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

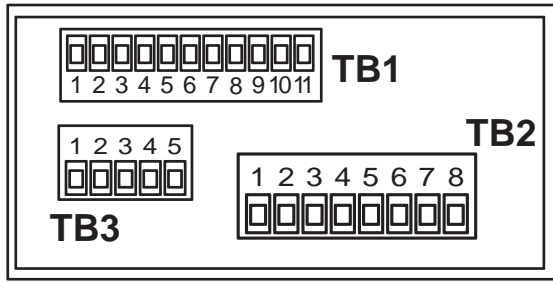
Operating Voltage:

- 0 = 90 to 260 VAC
- 3 = 10 to 30 VDC

Options:

- 00 = without interface
- 05 = RS232
- 06 = RS422
- 07 = RS485

## Electrical Connections



### TB1

- 1 Measuring input 1 (Sense)
- 2 Measuring input 2 (- Ref)
- 3 Sensor (+Ref)
- 4 Current output for 0 .. 4000  $\Omega$  (+ Sense)
- 5 Current output for 0 .. 400  $\Omega$  (+ 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 Relay 2 Com. (Opto-Emitter)
- 2 Relay 2 N.O.
- 3 Relay 2 N.C. (Opto-Collector)
- 4 Relay 1 Com. (Opto-Emitter)
- 5 Relay 2 N.O.
- 6 Relay 2 N.C. (Opto-Collector)
- 7 A.C. In (10-30 VDC)
- 8 A.C. In (Ground; 0 VDC)

### TB3

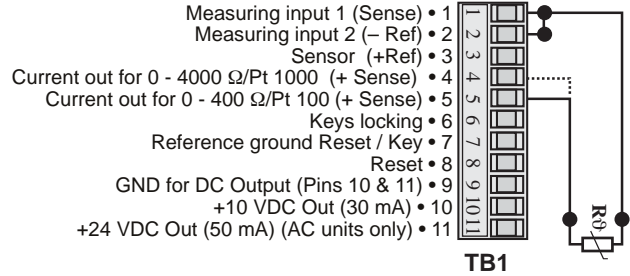
	RS232	RS485	RS422
1	GND	-	-
2	RxD	DO+/RI+	RI+
3	TxD	DO-/RI-	RI-
4	-	-	DO+
5	-	-	DO-

## Resistance measurements

0 .. 400/4000  $\Omega$  or  
Pt 100/1000

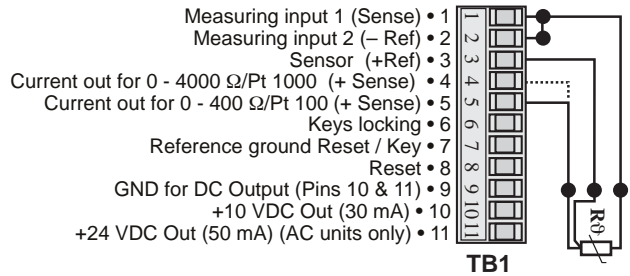
### 2 wire measurement (measuring resistance 0 .. 400/4000 $\Omega$ )

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



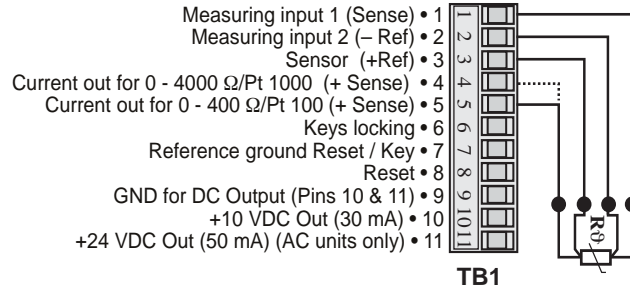
### 3 wire measurement (measuring resistance 0 .. 400/4000 $\Omega$ )

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

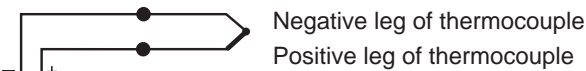


### 4 wire measurement (measuring resistance 0 .. 400/4000 $\Omega$ )

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



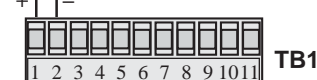
## Thermocouples



- Measuring input 1 (Sense) • 1
- Measuring input 2 (- Ref) • 2
- Sensor (+Ref) • 3
- Current output for 0 .. 4000  $\Omega$  (+ Sense) • 4
- Current output for 0 .. 400  $\Omega$  (+ 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  $\Omega$  (+ Sense) • 4
- Current output for 0 .. 400  $\Omega$  (+ Sense) • 5
- Keys locking • 6
- Reference ground Reset / Key • 7
- Reset • 8
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