T Series
Temperature Sensors with Linitemp

Product Overview

T Series temperature sensors are available with linitemp output. T Series devices come with several mounting options, including duct, wall, ceiling, outdoor, remote, and immersion. Where applicable, keep all vents clear of dust and debris. All T series devices are warranted for a period of five years.

Product Identification

**TC**
- **Probe Length**
  - B = 4" (102mm)
  - C = 6" (152mm)
  - D = 8" (203mm)
  - E = 12" (305mm)
  - F = 18" (457mm)
  - G = 24" (610mm)
- **Sensor Type** P = 10mV/°C, Linitemp
- **Cal Certificate**
  - 0 = None
  - 1 = 1 point Cal validation
  - 2 = 2 point Cal validation

**TS**
- **Sensor Type** P = 10mV/°C, Linitemp

**TRA**
- **Setpoint/Override**
  - 0 = None
  - 1 = 1 point Cal validation
  - 2 = 2 point Cal validation

**TW**
- **Local Display**
  - L = LCD
  - X = No
- **Sensor Type** P = 10mV/°C, Linitemp
- **Setpoint/Override** = None
- **Cal Certificate**
  - 0 = None
  - 1 = 1 point Cal validation
  - 2 = 2 point Cal validation

**TO**
- **Sensor Type** P = 10mV/°C, Linitemp
- **Output** RØ = Resistive Output
- **Cal Certificate**
  - 0 = None
  - 1 = 1 point Cal validation
  - 2 = 2 point Cal validation
**Installation Guide**

**Temperature**

**T Series**

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### Product Identification (cont.)

**Flexible Probe Length**

- **Probe Length:**
  - M = 6’ (1.8 m)
  - H = 12’ (3.6 m)
  - J = 24’ (7.3 m)

- **Sensor Type:**
  - P = 10mV/°C, Linitemp

- **Cal Certificate:**
  - 0 = None
  - 1 = 1 point Cal validation
  - 2 = 2 point Cal validation

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### Specifications

<table>
<thead>
<tr>
<th>Input Power</th>
<th>Output</th>
<th>Operating Temperature</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 30 VDC</td>
<td>10 mV/°C</td>
<td>-25°C to 105°C (-13°F to 221°F)</td>
<td>Calibration Error: 1.5°C typical, 2.5°C max. at 25°C*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Error Over Temperature: 1.8°C typical, 3.0°C max. over 0°C to 70°C range, 2.0°C typical, 3.5°C max. over -25°C to 105°C range</td>
</tr>
</tbody>
</table>

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* Room temperature error documented on each unit.

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Dimensions

**Values:**
- **IC**
  - 2” (51 mm)
  - 1.4” (36 mm)
  - 0.3” (8 mm)
  - 2.1” (52 mm)
- **TS**
  - 2” (51 mm)
  - 1.4” (36 mm)
  - 0.3” (8 mm)
  - 2.1” (52 mm)
- **TRA**
  - 2” (51 mm)
  - 0.3” (6 mm)
- **TW**
  - 0.3” (6 mm)
  - 1.2” (30 mm)
  - 4.8” (121 mm)
  - 3.5” (89 mm)
- **TO**
  - 4.3” (118 mm)
  - 2.7” (69 mm)
  - 0.9” (22 mm)
  - 4.0” (112 mm)
Dimensions (cont.)

TID

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”</td>
<td>(102 mm)</td>
</tr>
<tr>
<td>2.2”</td>
<td>(56 mm)</td>
</tr>
</tbody>
</table>

TIH

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25” dia.</td>
<td>(6.3 mm)</td>
</tr>
<tr>
<td>Overall: “L” + 2”</td>
<td>(50.8 mm)</td>
</tr>
</tbody>
</table>

TIH

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25” dia.</td>
<td>(6.3 mm)</td>
</tr>
<tr>
<td>Overall: “L” + 1.75”</td>
<td>(45 mm)</td>
</tr>
</tbody>
</table>

Thermowell

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.375” dia.</td>
<td>(10 mm)</td>
</tr>
<tr>
<td>Overall: “L” + 1.75”</td>
<td>(45 mm)</td>
</tr>
</tbody>
</table>
Dimensions (cont.)

**TIW**

![TIW Diagram]

**TD**

![TD Diagram]

**TA**

![TA Diagram]

**TB**

![TB Diagram]
Installation

**TC/TS**
1. Locate the electrical wiring in the area to be monitored. Press fit the TC/TS housing into the ceiling near this wiring.
2. Drill a mounting hole using a 1 3/8" hole saw (1" conduit, electrical trade).
3. Pull wires through the junction box or receptacle and connect them to the TC or TS device.

**TRA**
1. Set the stainless steel sensing probe in contact with the area to be monitored. No mounting is necessary.
2. Wire the sensor to the controller.

**TW**
1. Mount the housing vertically on an interior wall in the area to be monitored, in a location where air circulates freely. Locate unit away from air outlets, corners, exterior walls, windows, and doors.
2. Wire the sensor to the controller.

**TO**
1. Locate a sheltered outdoor area out of direct sunlight (e.g. under eaves, north side of the building, etc.).
2. Wire the sensor to the controller.
3. The sensor may be suspended from the conduit without damage to the unit. Do not obstruct vent openings.

**TIX**
1. Thread the assembly into a pipe fitting.
2. Wire the sensor to the controller.

**TD**
1. Drill a 3/8" diameter hole for the sensor probe.
2. Insert the probe into the duct.
3. Secure the mounting flange to the outer surface of the duct using self-tapping screws provided.
4. Wire the sensor to the controller.

**TA**
1. Drill a 1 3/16" diameter hole in the duct for the sensor probe and lug.
2. Affix foam gasket material to the probe side of the junction box.
3. Insert the probe into the duct.
4. Secure the junction box housing to the outer surface of the duct using self-tapping screws (not included).
5. Wire the sensor to the controller.

**TB**
1. Clamp the sensor around the pipe to be monitored. Make sure the copper sensing plate is in contact with the pipe surface.
2. Wire the sensor to the controller.
Installation Guide
Temperature
T Series

Wiring

**TS/TC**
- Orange V+ (15V)
- White Signal
- Blue Common/GND

**TRA**
- Orange V+ (15 V)
- White Signal
- Blue Common/GND

**TW**
- Temperature Transmitter Power
- Ground
- Temperature Transmitter Out
- Linitemp Power
- 10 mV/°C
- Ground

**TO/TIx/TA/TA**
- Orange V+ (15 V)
- White Signal
- Blue Common/GND

**TB**
- Orange V+ (15 V)
- White Signal
- Blue Common/GND