Temperature sensor series TH provides reliable means to monitor temperature in rock, concrete, soil, or ground fill.

Description

Temperature sensors are available in three different models: TH-T, TH-PT100, and TH-TC.

Model TH-T uses a 3 kΩ chip thermistor. The thermistor is encapsulated and sealed into a stainless steel or PVC cylindrical housing. Two lead wires are connected to the thermistor for readout. The TH-T incorporates the standard thermistor used in most vibrating wire instruments.

Model TH-PT100 consists of a platinum resistor highly sensitive to temperature. Platinum is well suited because of its stability at high temperature. A four- or three-wire bridge mounting gives a good measurement resolution with a portable bridge measurement device or a data acquisition system. The sensor is enclosed inside a stainless steel housing, which allows grouting while offering resistance to strain.

Model TH-TC is a thermocouple consisting of a twin solid thermocouple wire AWG 24, covered by a 0.38-mm thick PVC jacket and encapsulated in a PVC protective housing. It is usually connected with an extension wire, which will be connected to a readout unit. The thermocouple and extension wires are copper-constantan alloy (type T).

Key Features

- Available in various configurations
- Reliable & sensitive
- Rugged

Applications

- Dams and bridges
- Buildings and tunnel linings
- Influence of instrument temperature
### Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TH-T</th>
<th>TH-PT100 (Class A)</th>
<th>TH-TC TYPE T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range*</td>
<td>−50 to +150°C</td>
<td>−200 to 600°C</td>
<td>−60 to +400°C</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.5% F.S.</td>
<td>±0.15°C at 0°C</td>
<td>±0.1% F.S.</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1°C</td>
<td>Depends on readout</td>
<td>0.1°C</td>
</tr>
<tr>
<td>Sensor</td>
<td>3 kΩ thermistor</td>
<td>100 Ω resistor</td>
<td>Thermocouple</td>
</tr>
<tr>
<td>Housing</td>
<td>PVC or stainless steel</td>
<td>Stainless steel</td>
<td>PVC</td>
</tr>
<tr>
<td></td>
<td>16 mm OD</td>
<td>16 mm OD</td>
<td>16 mm OD</td>
</tr>
<tr>
<td></td>
<td>51 mm long</td>
<td>51 mm long</td>
<td>51 mm long</td>
</tr>
<tr>
<td>Cable</td>
<td>IRC-41A or IRC-29S</td>
<td>IRC-41A</td>
<td>Duplex AWG 20 extension wire,</td>
</tr>
<tr>
<td>Sensibility</td>
<td>—</td>
<td>&lt;0.1% F.S.</td>
<td>—</td>
</tr>
</tbody>
</table>

* Temperature range of cable must be considered (e.g. −20 to +80°C for the IRC)

### Ordering Information

Please specify:
- Model of temperature sensor
- Cable length and type

### Optional Accessories

- Armored cable
- Readout instruments

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SMARTEC SA
Via Pobiette 11
CH-6928 Manno, Switzerland
Phone +41 91 610 18 00
Fax +41 91 610 18 01
Email info@smatec.ch
Web www.smartec.ch

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