

TEMPERATURE SENSOR

TH Series

APPLICATIONS

The temperature sensor series TH provides a reliable means to monitor temperature in rock, concrete, soil, grout or ground fill. Applications include the monitoring of:

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

DESCRIPTION

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

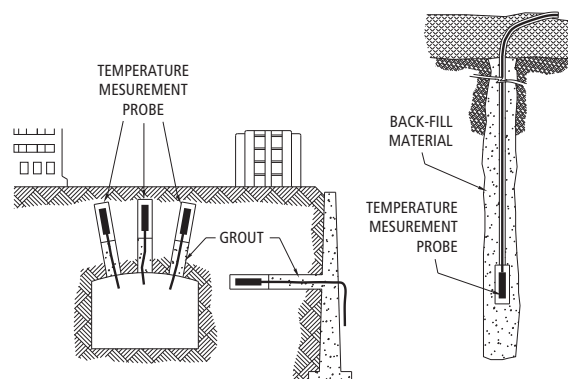
Model TH-T uses an exceptionally predictable 3 k Ω chip thermistor. The thermistor is encapsulated and sealed into a stainless steel or PVC cylindrical housing. Two lead wires are connected to the thermistor for readout. The TH-T incorporates the standard thermistor used in most vibrating wire instruments.

Model TH-PT100 consists of a platinum resistor highly sensible 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).



Model TH-T



TH Probe Typical Installations

SPECIFICATIONS

MODEL	TH-T	TH-PT100	TH-TC TYPE T
Range*	–50 to +150°C	–50 to +300°C	–60 to +400°C
Accuracy	±0.5% F.S.	0.1% F.S.	±0.1% F.S.
Resolution	0.1°C	Depends on readout	0.1°C
Sensor	3 k Ω thermistor	100 Ω resistor (class A)	Thermocouple
Thermal drift	—	0.385 Ω / °C	—
Housing	PVC or stainless steel 16 mm OD 51 mm long	Stainless steel 6 mm OD 51 mm long	PVC 16 mm OD 51 mm long
Cable	IRC-41A or IRC-295	IRC-41A	Duplex AWG 20 extension wire, copper-constantan, PVC jacket
Sensibility	—	<0.1% F.S.	—

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

ACCESSORIES AND OPTIONS

- Armored cable
- Readout instruments

ORDERING INFORMATION

Please specify:

- Cable length and type
- Accessories and options