

SLAB TEMPERATURE SENSOR

TE200SL Series

Installation Manual

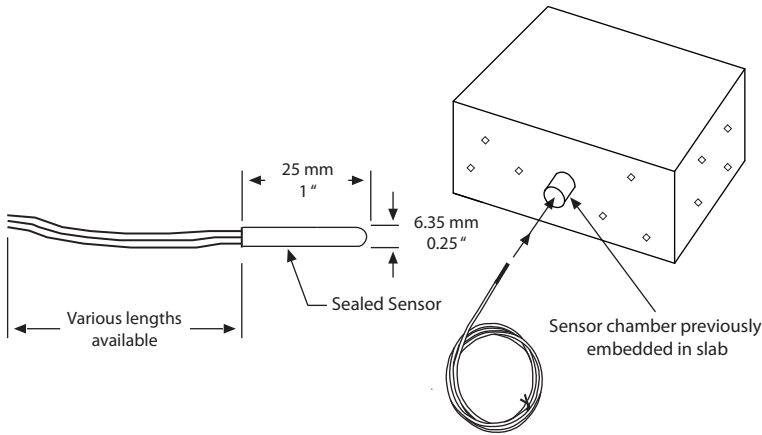


The TE200SL single point slab temperature sensor utilizes a precision sensor encapsulated in a thermal conductive coating and used to measure the temperature of a concrete slab. They are available with various sensor types, wire types and lengths. All probes are constructed to provide excellent heat transfer, fast response and to resist moisture penetration.

TYPICAL INSTALLATION:

Typically a predetermined area is defined where the temperature reading is required. During concrete installation a sufficient length of conduit or copper tubing is imbedded from this point to an area that will be accessible once complete.

At the entrance to the sensor chamber, unravel the TE200SL and carefully insert sensor and feed into chamber until the chamber end is reached.



SPECIFICATION:

Sensor Type:.....Thermistor or RTD

Temperature Range:..**ZW:** -20 to 105 °C (-4 to 221 °F)
FT: -20 to 60 °C (-4 to 140 °F)
MP: -20 to 80 °C (-4 to 176 °F)

Wire Material:.....**ZW:** PVC Zip wire, 22 AWG
FT: Plenum rated FT-6, 22 AWG
MP: EPC Moisture proof, 22AWG

Termination:.....Pigtail 2 or 3 wire

TYPICAL WIRE RESISTANCE VALUES:

When using low resistance sensors (i.e. 100 ohm RTD), long wire runs can add significant error to the readings.

Use the following chart to determine errors due to wire resistance or consider using a 1000 ohm sensor or a transmitter for better accuracy. Locate the type of wire being used. Multiply the total length of the wire (distance from the controller to the sensor and back) by the number found in the following chart for total resistance

Gauge	18 AWG	18 AWG	18 AWG
Wire Type	18 AWG	18 AWG	18 AWG
Stranded (Ohms/Foot)	5.85 mΩ	14.75 mΩ	23.29 mΩ
Solid (Ohms/Foot)	6.40 mΩ	15.85 mΩ	25.72 mΩ

WIRING AND COLOR CODES:

All two-wire sensors are polarity insensitive. The three-wire sensors have the following color code:

Connection	Wire Color
EXCitation	RED
SENse	GREEN
NEGative	BLACK

To connect a three-wire sensor as a two-wire, tie the EXCitation and SENse lines together. All connections should be made using either butt-splices or soldering. The use of wire nuts is not recommended.