

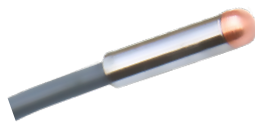
RESISTANCE TEMPERATURE PROBE

DATASHEET

MODEL ETT-10TH,
ETT-10TH-E, ETT-10PT



ETT-10TH



ETT-10TH-E



ETT-10PT

OVERVIEW

The Encardio Rite model ETT-10TH/ETT-10TH-E resistance temperature probe and ETT-10PT RTD temperature probe are designed for accurate temperature measurement in various geotechnical and structural applications. Both offer durability and weather resistance, ensuring consistent performance in challenging environments.

The ETT-10TH/ETT-10TH-E resistance temperature probe, with its low thermal mass, ensures a fast response time, while the ETT-10PT RTD temperature probe offers exceptional accuracy due to its platinum RTD sensor. These are suitable for surface mounting on metal and concrete, or embedding in concrete. With robust construction these probes are ideal for long-term stable performance.

FEATURES

- **Precision and reliability:** Ensures high accuracy and stability, making it suitable for long-term installations.
- **Versatile applications:** Suitable for surface mounting or embedded within concrete structures.
- **Fast response time:** Low thermal mass provides quick temperature readings.
- **Environmental protection:** Waterproof design rated IP-68 for thermistor probe and IP-67 for RTD probe.
- **Durable construction:** Tin-plated copper body for thermistor probe and stainless steel body for RTD probe.
- **Flexible installation:** The flattened tip of ETT-10TH allows easy attachment to flat surfaces using epoxy or bolts.
- **Fully interchangeable:** One indicator can read all sensors.
- **Versatile datalogging:** Compatible with various readout units for manual data collection. For continuous monitoring, it can be connected to a suitable datalogger, allowing for data acquisition at desired frequencies.

Encardio Rite offers a range of NexaWave dataloggers equipped with GSM/GPRS or RF communication capabilities, ensuring reliable and efficient data transmission.
- **Infrastructure data intelligence platform:** Transmit data to a local or cloud server hosting the **Proqio** platform for 24/7 insights. **Proqio** enables efficient data processing, analysis and real-time visualization. Benefit from instant alerts for critical events and automated reports, supporting informed decision-making.
- **Cross-compatibility:** The sensor can work with any manufacturer's Dataloggers and Data Management Systems.

PRODUCT OFFERINGS

MODEL ETT-10TH, ETT-10TH-E RESISTANCE TEMPERATURE PROBE

The model ETT-10TH probe features a resistance-temperature curve-matched thermistor epoxy encapsulated in copper tubing for enhanced thermal response and environmental protection. The tube is flattened at the tip so that it can be fixed to any steel and concrete surface with epoxy or bolt.

Model ETT-10TH-E is a similar thermistor probe, but with a cylindrical tip designed for embedding in concrete to measure the bulk temperature inside. It can also operate while submerged under water..

The resistance temperature probes are fully interchangeable. The temperature readings will not exceed 1°C over the specified working temperature range. This allows a single indicator to be used with any probe without recalibration.

MODEL ETT-10PT RTD TEMPERATURE PROBE

Model ETT-10PT RTD temperature probe incorporates a class A ceramic resistance element (Pt 100) with DIN IEC 60751 (former DIN 43760) European curve calibration. The element is encased in a durable stainless steel tube for moisture protection.

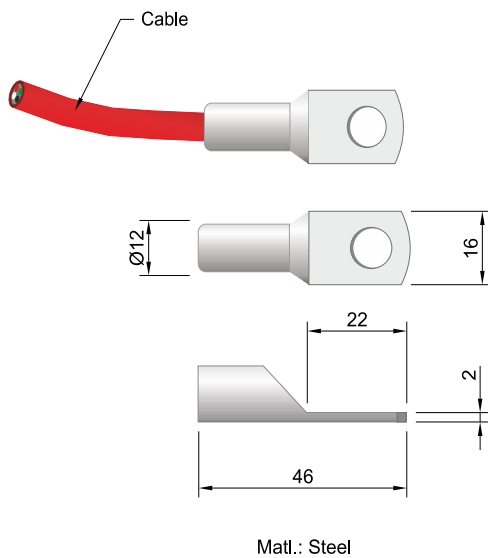
The resistance temperature probe works on the principle that sensor resistance is a function of sensed temperature. The platinum RTD has very good accuracy, linearity, stability and repeatability. The four-wire configuration further enhances measurement accuracy and reliability, by means of measuring the voltage across the RTD element supplied with a constant current. The error due to lead wire resistance is zero.



SPECIFICATIONS

Model ETT-10TH, ETT-10TH-E thermistor probe

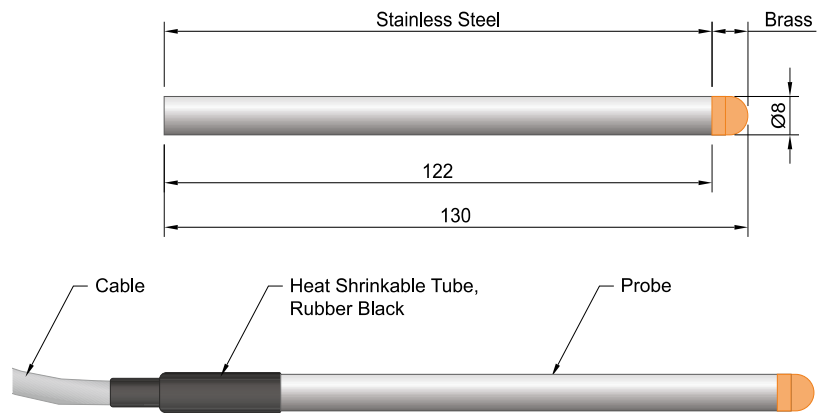
Sensor type	R-T curve matched NTC thermistor, equivalent to YSI 44005 (3 kOhms at 25°C)
Operating temperature range	-20 to 80°C
Accuracy	1°C
Resistance	3000 Ohm at 25°C
Body material	Tin plated copper
Cable	Standard 4 core cable (red and black wires is left unused)
Storage temperature range	-20 to 80°C
Humidity	0-100%
Water ingress	IP68



ETT-10TH Thermistor probe

Model ETT-10PT RTD probe

Sensor type	Class A – Platinum resistance thermometry or equivalent
Operating temperature range	-20 to 80°C
Accuracy	± (0.15 + 0.002 *t)°C
Resolution	0.01°C
Resistance	100 Ω at 0°C
Output	Analog - resistance
Body material	Stainless steel SS-316
Dimension (Ø X L)	8 x 130 mm
Wiring configuration	4 wire
Calibration	DIN IEC 751
Excitation voltage	5 VDC
Storage temperature range	-20 to 80°C
Humidity	0-100%
Water ingress	IP67



ETT-10PT RTD probe

*All specifications are subject to change without prior notice

DATASHEET | 1086-12 R04



Dams



Mining



Tunnels



Transportation



Construction



Bridges



Landslides



Energy



Environmental Monitoring



Pipelines



Structural Health Monitoring



Smart Cities