

TEMPERATURE SENSORS WITH A CABLE AND METAL CASE


DESCRIPTION AND APPLICATION

These resistance sensors are designed to measure the surface temperature of ferromagnetic objects. The maximum temperature range of use of the sensors is $-30\text{ }^{\circ}\text{C}$ to $150\text{ }^{\circ}\text{C}$. In order to mount the sensor correctly, the measured surface must have a minimum diameter of 28 mm. The structure of the sensor ensures quick response to changes in temperature, in particular if silicone grease or thermally conductive paste is applied between the measured surface and the sensor. The sensors are designed for use in a chemically non-aggressive environment. The method of use must be chosen with regard to the temperature and chemical resistance of the case and lead-in cable.

ACCESSORIES

- thermal conductive paste up to $200\text{ }^{\circ}\text{C}$, 5g
- connectors

DECLARATION, CERTIFICATES, CALIBRATION

EU Declaration on Conformity – in accordance with Act. 22/1997 Col. on technical requirements on products as amended.

Calibration – The final metrological inspection – comparison with standards or working instruments – is carried out for all the products. Continuity of the standards and working measuring instruments is ensured within the meaning of the Section 5 of Act no.505/1990 on metrology. The manufacturer offers a possibility to supply the sensors calibrated in SENSIT s.r.o.'s laboratory (according to requirements of the EN ISO/IEC 17025 standard) or in an Accredited laboratory.

SPECIFICATIONS

Sensor type	TR 158
Measuring range	$-30\text{ }^{\circ}\text{C}$ to $150\text{ }^{\circ}\text{C}$
Type of sensing element	Pt, Ni, NTC
Ingress protection	IP 67 in accordance with EN 60 529
Holding force of sensor	20 N
Measuring surface pressure	3 N
Case material	nickel plated steel 11373/alloy
Diameter of case	$\varnothing 26 \times 13\text{ mm}$
Lead-in cable	shielded silicone $2 \times 0.34\text{ mm}^2$ shielded silicone $2 \times 0.22\text{ mm}^2$
Standard cable length	2, 5, 10 m
Wire resistance	$0.11\ \Omega$ for 1 m of cable for 2-wire connection

SENSOR INSTALLATION AND SERVICING

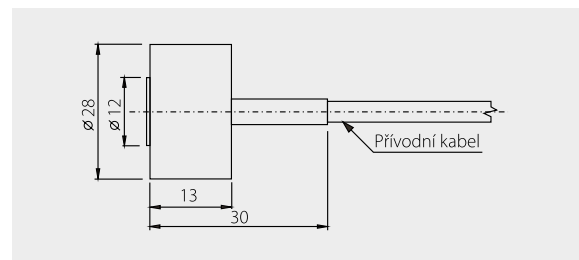
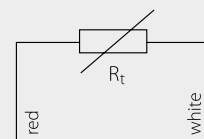
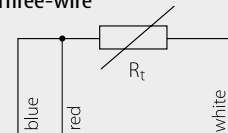
TR158 sensors with magnetic mount are designed for contact measurement of surface temperatures of ferromagnetic objects. In order to mount the sensors, they require a flat surface with a minimum diameter of 28 mm. Once the sensor is mounted, we recommend attaching the lead-in cable so that the cable weight does not affect the holding force of the sensor.

After installing and connecting to the electrical measuring equipment, the sensor is ready for use. The sensor does not require any special servicing or maintenance. The work position is adjustable.

MODIFICATION AND CUSTOMISATION

FOR MANUFACTURED STANDARD SENSORS, THE FOLLOWING PARAMETERS CAN BE MODIFIED:

- accuracy class A (with the exception of sensors Ni 10000/5000, Ni 10000/6180, T1 = Ni 2226, thermistor NTC 20 k Ω)
- possibility of three or four-wire connection


DIMENSIONAL DRAFT

WIRING DIAGRAM
Two-wire

Three-wire

Four-wire
