

TR 151 AND TR 152 – TEMPERATURE SENSORS WITH CABLE AND PLASTIC CASE

K31.04en

DESCRIPTION AND APPLICATION

Temperature sensors in the plastic case are intended for temperature measurements of gaseous, eventually liquid materials. For long-lasting temperature measurements (especially at the temperatures over 90 °C) there is better to use sensor with thermowell combination. The sensors have always polastic polyamide case which in which is the temperature sensing element located. The case diameter of TR 151 is 6 mm and case diameter of TR 152 is 8 mm. All types of resistance sensing elements used by company SENSIT s.r.o. can be used. The wiring of the sensor is always 2-wire. Material of the case has medium resistivity to atmospheric aging, it resists to oils, fuels, hydraulic liquids, alifatic and aromatics hydrocarbons, esters, ketons and slight alcalis. Material is not resistant to acids, strong alcalis and chlorinated hydrocarbons.



ACCESSORIES

- connectors

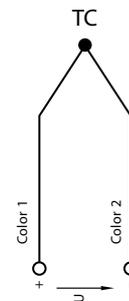
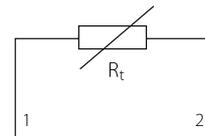
DECLARATION, CERTIFICATES, CALIBRATION

Manufacturer provides **EU Declaration of Conformity**.

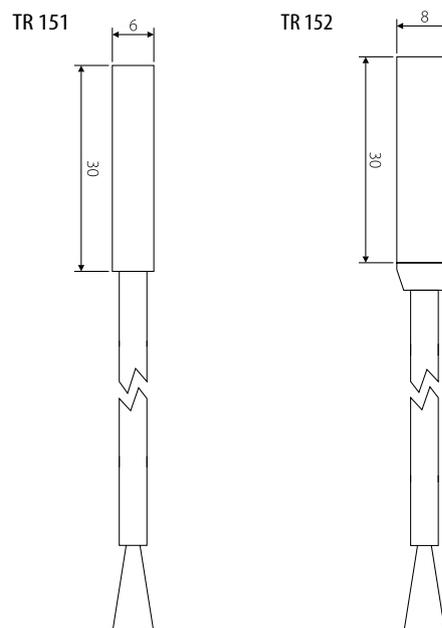
Calibration – The final metrological inspection – comparison with standards or working instruments – is carried out for all the products. Continuity of the standards and working measuring instruments is ensured within the meaning of the Section 5 of Act no.505/1990 on metrology. The manufacturer offers 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.

WIRING DIAGRAM

Two-wire



DIMENSIONAL DRAFT



SPECIFICATIONS

Sensor type	TR 151	TR 152
Measuring range	-20 to 105 °C (can be limited by the type of cable, determine in documentation)	
Type of sensing element	all types (Pt 100, Pt 1000, Ni 1000, Ni 10000, Ni 2226=T1, NTC, PTC, KTY, TSic, DALLAS, TC K, TC J, TC T and so on)	
Ingress protection	IP 67 in accordance with EN 60529	
Case material	on the base of POLYAMIDE	
Diameter of case	6 mm	8 mm
Length of case	L 30 mm	
Lead-in cable	PVC unshielded 2 x 0.35 mm ² up to 105 °C PVC shielded 2 x 0.25 mm ² up to 80 °C	
Wire resistance	0.105 Ω for 1 m of cable for 2-wire connection - PVC up to 105 °C 0.159 Ω for 1 m cable for 2-wire connection - PVC up to 80 °C	
Time response	$\tau_{0,9} \leq 45$ s (in flowing water at 0.2 m.s ⁻¹)	$\tau_{0,9} \leq 75$ s (in flowing water at 0.2 m.s ⁻¹)

Note: Certain technical specifications of thermocouple sensors (lead wires, IP rating, etc.) may differ with different types.

MODIFICATION AND CUSTOMIZATION

- possibility of encasing non-standard temperature sensing elements (DALLAS, TSic, KTY, SMT, etc.)
- accuracy class A (with the exception of sensors Ni 10000/5000, Ni 10000/6180, T1 = 2226, thermistor NTC 20 k Ω)

TEMPERATURE SENSORS WITH A CABLE