

# TG 55 – TEMPERATURE SENSORS WITH BAYONET MOUNT

B03.03en

## DESCRIPTION AND APPLICATION

These temperature sensors with a bayonet head TG 55 are designed to measure temperature of solid substances, however, they may be used also to measure temperature of liquid and gaseous substances.

To mount the temperature sensor to the measuring point, a bayonet nut is used that is screwed on a spring. Combination of the bayonet nut, the spring and the corresponding bayonet adapter can provide higher pressure of the temperature sensor with the bayonet into the measured point or can adjust any changes in the distance between the nut and the measured point during the measurement. Maximum temperature range of sensor use is -50 to 350 °C (400 °C for a short period). The range for each design variant is reduced with a type of the temperature sensing element and the lead-in cable. The temperature sensors meet ingress protection from IP 50 to IP 67 according to the EN 60529 standard, as amended depending on the lead-in cable variant.

The temperature sensors with a bayonet mount are intended for operation in chemically non-aggressive environment.

## ACCESSORIES

- bayonet adapter
- 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.

## SPECIFICATIONS

Sensor type	TG 55
Case end	straight, semisphere R6 or apex 120°
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)
Case material	stainless steel DIN 1.4301
Diameter of case	6 mm
Length of case	L 60 to 200 mm
Lead-in cable variations/temperature range (can be limited by type of sensing element - specified in documentation)	<div>PVC shielded -30 to 80 °C</div> <div>PVC unshielded -40 to 105 °C</div> <div>silicone shielded -50 to 200 °C</div> <div>teflon shielded -50 to 250 °C</div> <div>with fiberglass 0 to 350 °C (with metal braid)</div> <div>with fiberglass 0 to 400 °C (with metal braid)</div>
Ingress protection	IP 50 to IP 67 according to the cable type - in accordance with EN 60529, as amended
Material / dimension of bayonet nut	nickel-plated brass / L = 16 mm, inner ø 12.8 mm
Material / dimension of spring	stainless steel DIN 1.4301 / L = 200 mm, outer ø 8 mm, ø of wire 1 mm
Insulation resistance	200 MΩ at 500 V DC, 25 ± 3 °C
Maximum permissible static pull on the lead-in cable	1 kg

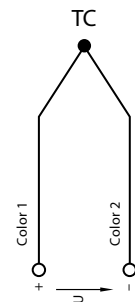
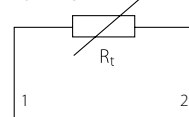
Note: Certain technical specifications of thermocouple sensors (lead wires, IP rating, etc.) may differ with different types.



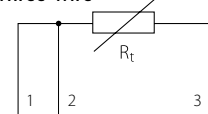
TEMPERATURE SENSORS WITH A CABLE

## WIRING DIAGRAM

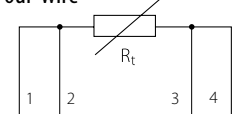
Two-wire



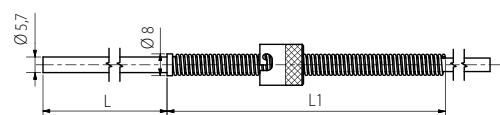
Three-wire



Four-wire



## DIMENSIONAL DRAFT



## MODIFICATION AND CUSTOMIZATION

- variable stem design – length L, diameter, case material, case ending
- possibility to encase two sensing elements
- accuracy class A (with the exception of sensors Ni 10000/5000, Ni 10000/6180, T1 = Ni 226, thermistor NTC 20k $\Omega$ )
- encapsulation of other types of sensing elements (DALLAS, KTY, TSiC, SMT, etc.)
- optional design of case dimensions and materials
- variable spring length

