

TG 80, TG 81 AND TG 82 – TEMPERATURE SENSORS WITH BAYONET MOUNT

B02.04en

DESCRIPTION AND APPLICATION

These temperature sensors are primarily designed for temperature measurement of solid substances, but can also be used for temperature measurement of liquids or gaseous substances. To mount the sensor to the measuring point, a bayonet nut is used that is screwed on a spring. The combination of a bayonet nut, spring and corresponding bayonet connector can provide higher contact pressure of the sensor to the measuring point or correct any changes in the distance between the nut and measuring point during measurement. The maximum temperature range of the sensors is -50 to 350 °C (short-term 400 °C). The range for individual design variations is narrowed down by the type of temperature sensing element and lead-in cable. The sensors meet the level of protection from IP 50 to IP 67 according to EN 60529, as amended depending on the type of lead-in cable. The sensors are designed to operate in a non-aggressive environment. The method of use must be chosen with regard to temperature and chemical resistance of the case and lead-in cable.

ACCESSORIES

- stainless steel thermowell JS 130F
- 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

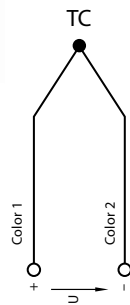
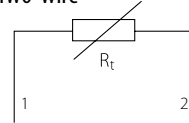
Sensor type	TG 80	TG 81	TG 82
Case end	straight	semisphere R8	apex 120°
Sensing element	all types (Pt 100, Pt 1000, Ni 1000, Ni 10000, Ni 2226=T1, NTC, PTC, KTY, TSIC, DALLAS, TC J, TC K, TC T and so on)		
Case material	stainless steel DIN 1.4301		
Diameter of case	8 mm		
Length of case L	10 to 85 mm (with addition of 15 mm for cable attachment)		
Lead-in cable variations/temperature range (can be limited by type of sensing element – determine in documentation)	PVC shielded PVC unshielded silicone shielded teflon shielded with fibreglass	-30 to 80 °C -40 to 105 °C -50 to 200 °C -50 to 250 °C 0 to 400 °C	
Ingress protection	PVC and silicone cables teflon cables cables with glass fibre	IP 67 IP 64 IP 50	
	with EN 60529, as amended		
Material / Dimension of bayonet nut	nickel-plated brass / L = 18 mm, inner \varnothing 15 mm		
Material / Dimension of spring	stainless steel DIN 1.4301 / L = 200 mm, outer \varnothing 8 mm, \varnothing of wire 0,9 mm		
Insulation resistance	200 M Ω at 500 VDC, 25° \pm 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.

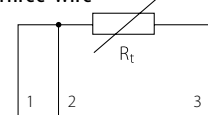


WIRING DIAGRAM

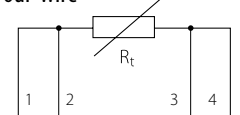
Two-wire



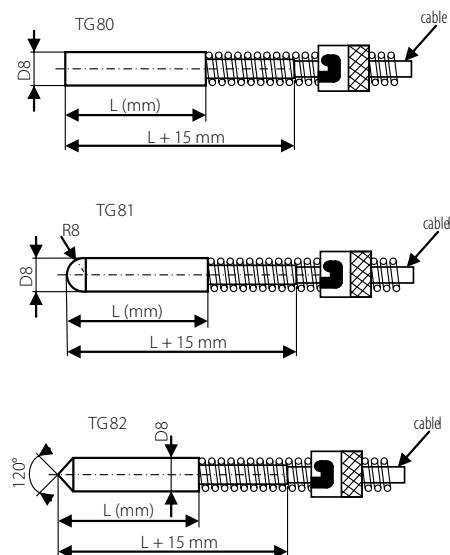
Three-wire



Four-wire



DIMENSIONAL DRAFT



MODIFICATION AND CUSTOMIZATION

- 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 Ω)
- encapsulation of other types of sensing elements (DALLAS, KTY, TSiC, SMT, etc.)
- optional design of case dimensions in terms of: diameter 8 to 10 mm, length L, case material, case end design
- variable spring length