

# TG 85 – RIGHT-ANGLE TEMPERATURE SENSORS

P04.02en



## DESCRIPTION AND APPLICATION

These right-angle temperature sensors TG 85 are designed for measuring the temperature of solids substances just below the surface. The structure of the sensor enables fast response to changes in temperature and higher accuracy of contact measurement compared to standardly used contact temperature sensors, which are just attached to the measured surface. Placing the sensing element into the tip of measuring part of case which is inserted to the measured surface ensures that measuring error is reduced. The sensor is fastened with one screw. Standard stem length is 12 mm. 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 supply 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. By using temperature sensor is recommended to ensure stripping sensor from the influence of ambient temperature and thus reduce the error method due to the impact of differences between the measured temperature and ambient temperature.

The rectangular temperature sensors are intended for operation in chemically non-aggressive environment.

## 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.

## SPECIFICATIONS

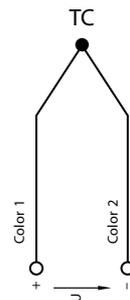
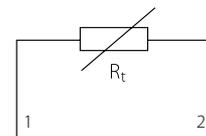
Sensor type	TG 85	
Sensing element	all types (Pt 100, Pt 1000, Ni 1000, Ni 10000, Ni 2226=T1, NTC, PTC, KTY, TSiC, DALLAS, TC K, TC J, TC T and so on)	
Case material	stainless steel DIN 1.4301	
Diameter of case - measuring part	4 mm	
Length of case L - measuring part	10 to 20 mm	
Case dimension	according to the dimensional draft	
Lead-in cable variations/ temperature range (can be limited by type of sensing element - specified in documentation)	PVC shielded	-30 to 80 °C
	PVC unshielded	-40 to 105 °C
	silicone shielded	-50 to 200 °C
	teflon shielded	-50 to 250 °C
	with fiberglass	0 to 400 °C
	(with metal braiding)	
Ingress protection	IP 50 to IP 67 according to the cable type - in accordance with EN 60529, as amended	
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.

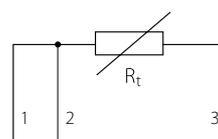


## WIRING DIAGRAM

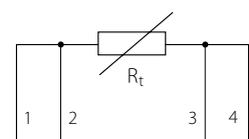
Two-wire



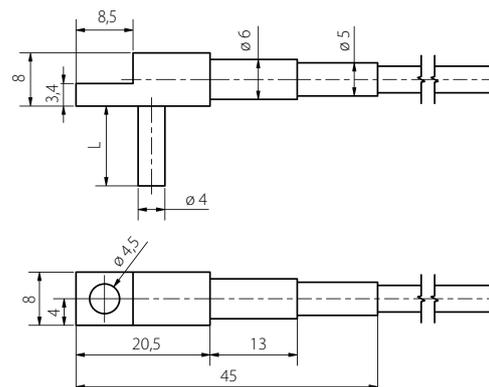
Three-wire



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 $\Omega$ )