

## TEMPERATURE SENSORS WITH A CABLE AND METAL CASE


**DESCRIPTION AND APPLICATION**

These resistance sensors are designed to measure the temperature of gaseous and liquid substances. The maximum temperature range of use of the sensors is  $-50\text{ }^{\circ}\text{C}$  to  $200\text{ }^{\circ}\text{C}$ . The lead-in cable is a type with silicone insulation and shielding. The diameter of the case also enables the encasement of special temperature sensors – KTY, SMT 160, DS 18B20, TSiC etc. In combination with the stainless steel thermowell JTG 8, the sensor can be used for measuring the temperature in pipelines, as well as a pressure device as defined in Government Regulation No. 26/2003 Coll., as amended. The sensors are designed for universal use, the method of use must be chosen with regard to the temperature and chemical resistance of the case and lead-in cable.

**ACCESSORIES**

- stainless steel thermowell JTG 8
- screw with collet or cutting rings – if different lengths of stem immersion of the temperature sensor are set
- connector

**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.



Temperature sensors TG 8 can be also supplied in special design for an explosive environment.



TEMPERATURE SENSORS WITH A CABLE

**SPECIFICATIONS**

Sensor type	TG 8	TG 8J
Use	general	for JTG 8 thermowell
Measuring range	$-50\text{ }^{\circ}\text{C}$ to $200\text{ }^{\circ}\text{C}$ (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, thermocouple K, J, T and so on)	
Ingress protection	IP 67 in accordance with EN 60529	
Case material	stainless steel DIN 1.4301, DIN 1.4571	
Diameter of case	5.8 mm	
Length of case L	40 to 200 mm	
Lead-in cable	shielded silicone $2 \times 0.34\text{ mm}^2$ shielded silicone $4 \times 0.22\text{ mm}^2$	
Wire resistance	$0.11\ \Omega$ for 1 m of cable for 2-wire connection	
Time response	$\tau_{0.5} < 7\text{ s}$ (in flowing water at $0.4\text{ m}\cdot\text{s}^{-1}$ )	$\tau_{0.5} < 45\text{ s}$ (in flowing water at $0.4\text{ m}\cdot\text{s}^{-1}$ )

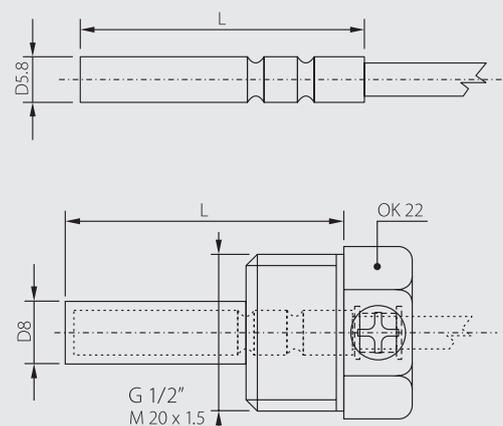
**SENSOR INSTALLATION AND SERVICING**

1. Installation of the sensor in the measured place.
2. Connection of the wires of the lead-in cable according to the wiring diagram.  
The shielding of the lead-in cable is not connected to the outer case of the sensor or temperature sensor.

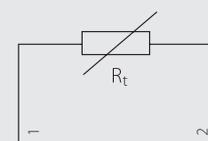
After installing and connecting to the electrical measuring equipment, the sensor is ready for use. The sensor does not require any special servicing or maintenance. The work position is adjustable.

**DIMENSIONAL DRAFT**

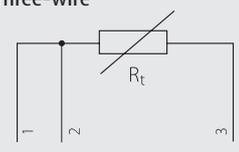
TG8J sensor + JTG 8 thermowell


**WIRING DIAGRAM**

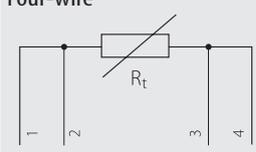
Two-wire



Three-wire



Four-wire



**■ MODIFICATION AND CUSTOMISATION**

- possibility to encase two sensing elements
- variable stem design in the area – L length
- accuracy class A (with the exception of sensors Ni 10000/5000, Ni 10000/6180, T1 = Ni 2226, thermistor NTC 20 k $\Omega$ )
- possibility of three or four-wire connection
- possibility of encasing non-standard temperature sensors (DALLAS, TSic, KTY, SMT, etc.)
- possibility to use other types of cables (PVC etc.)
- possibility of ingress protection IP 68 (1 bar)