

MINERAL INSULATED RESISTANCE TEMPERATURE SENSORS (MGO)

T04.02en

DESCRIPTION AND APPLICATION

Mineral insulated resistance temperature sensors (MGO) are designed for measuring the temperature of gaseous, liquid or solid substances. Their main advantage compared to the standard design of resistance temperature sensors is the possibility to form the shape of the sensor body. The temperature range of the measuring end of the sensor is up to 600 °C, according to the temperature sensor design. These mineral insulated resistance temperature sensors (MGO) can be used for all control systems compatible with the type of sensing element stated in the table of technical parameters. Mineral insulated resistance temperature sensors (MGO) meet the degree of protection of up to IP 67 according to EN 60529, depending on the type of thermoelement and production technology used. The case diameter of 1.5 mm to 3 mm ensures very quick time response of the sensor to temperature changes. These sensors are designed for operation in chemically non-aggressive environments, the using must be chosen with regard to temperature and chemical resistant housing and a cable.

ACCESSORIES

- connectors
- screw with collet or cutting rings – if different lengths of stem immersion of the temperature sensor are set



DECLARATION, CERTIFICATES, CALIBRATION

Manufacturer provides **EU Declaration of Conformity**.

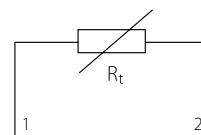
Calibration – The final metrological inspection – comparison with standards or working instruments – is carried out for all the products. Continuity of the standards and working measuring instruments is ensured within the meaning of the Section 5 of Act no.505/1990 on metrology. The manufacturer offers a possibility to supply the sensors calibrated in an Accredited laboratory.

SPECIFICATIONS

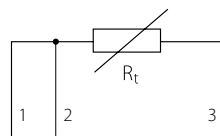
Sensor type	TR 09x.xP
Sensing element	Pt 100, Pt 500, Pt 1000
Ingress protection	up to IP 67 in accordance with EN 60529 acc. to type of the cable
Design	jacket resistance sensor
Diameter of measuring part	1.5, 2, 3, 4.5 and 6 mm
Length of the measuring part	from 50 to 300 mm as standard, others acc. requested
Maximal temperature range (on measuring tip)	-50 to 500 °C for diameters up to 3 mm -50 to 600 °C for diameters from 3 mm (could be limited by length of the measuring tip or variant of lead-in cable)
Accuracy class	class B standard (class A on request)
Jacket material	stainless steel DIN1.4571
Body of sensor	flexible, shapeable
Minimum bend radius	10time of diameter
Lead-in cable variations/ Temperature range of the cable	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 fibreglass 0 to 400 °C (with metal braiding)

WIRING DIAGRAM

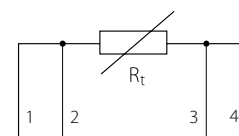
Two-wire



Three-wire

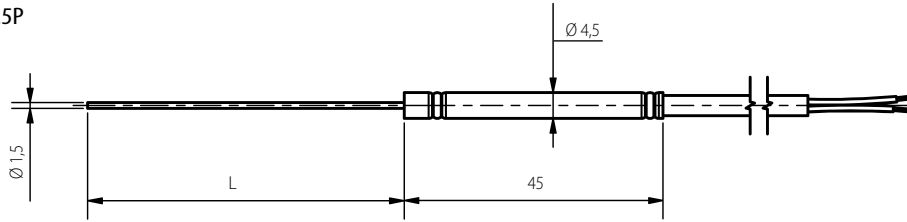


Four-wire

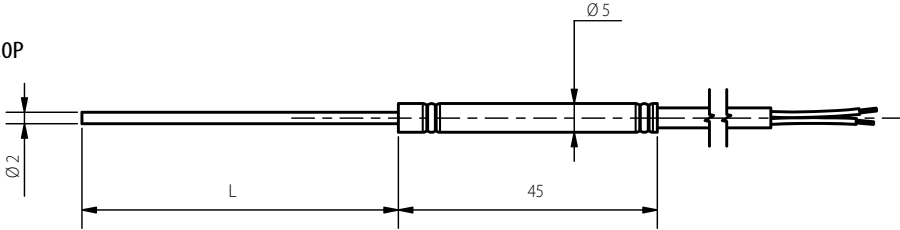


DIMENSIONAL DRAFT

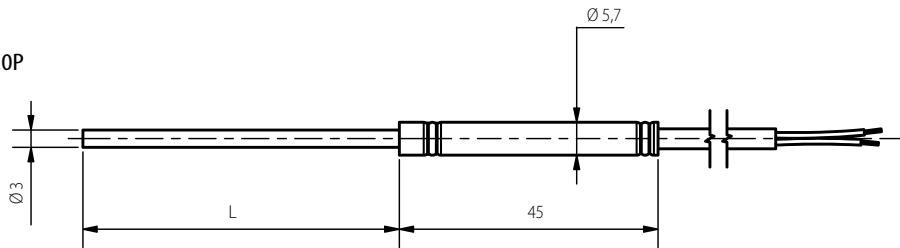
TR 091.5P



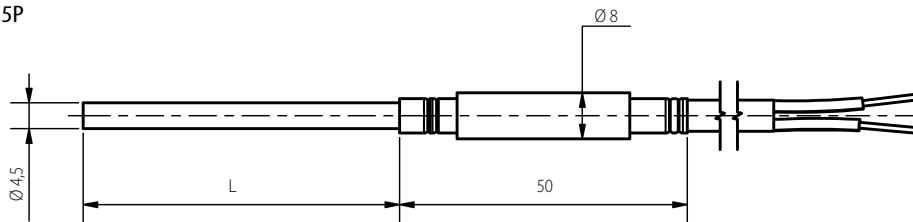
TR 092.0P



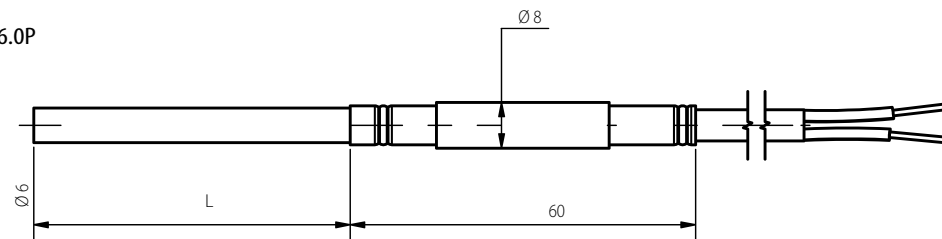
TR 093.0P



TR 094.5P



TR 096.0P



MODIFICATION AND CUSTOMIZATION

- variable stem design in the area – L length,
- possibility to encase two sensing elements
- accuracy class A (with the exception of sensors Ni 10000/5000, Ni 10000/6180, T1 = Ni 226, termistor NTC 20k Ω)