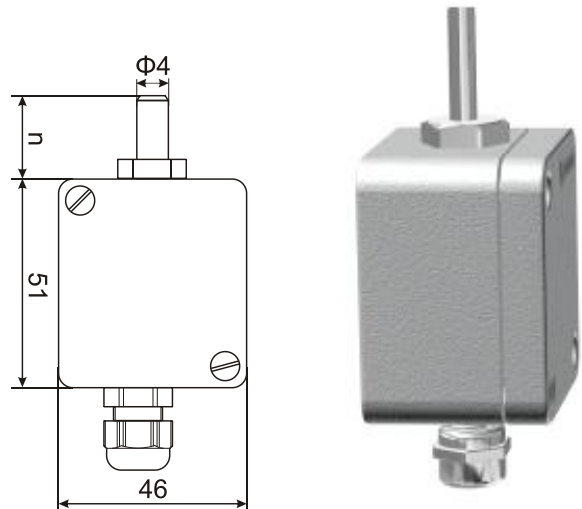


TSP (PT100 or PT1000) & TSOP (4-20mA) series outdoor temperature probes

- ◆ Low cost
- ◆ Ptx sensitive element
- ◆ 2-wire 4...20 mA output available
- ◆ IP66 protection class
- ◆ Robust aluminum enclosure
- ◆ Ready to use - no adjustments

The outdoor temperature probes TSP and TSOP measure temperature by means of a Ptx sensitive element mounted in a thin stainless steel stem for fast response. The TSOP model, in addition, converts the measured temperature into standard 4...20 mA 2-wire signal. Both models are enclosed in a freely mountable robust aluminum enclosure with IP66 protection class and are equipped with a PG7 cable gland for stable and protected electrical decoupling. Five different temperature measurement ranges from -50 °C and up to 100 °C as well as customer specified ranges are available. Thanks to their simplicity, small size, and affordable price, TSP and TSOP are applicable for various outdoor applications, environment temperature control, climatic temperature measurement, etc.



Technical specifications

Input

Incorporated RTD	Pt100 or Pt1000 (w=1.385)
Measurement range	-50...50 °C; 0...50 °C; -20...60 °C; 0...100 °C ⁽¹⁾ ; -50...100 °C ⁽¹⁾
Range on request	minimum span 50 °C
Output	(transmitter only)
Signal type	4...20 mA, 2-wire
Linearity proportional to	measured value
Output at sensor burnout	32 mA
Output at sensor shorted	0.2 mA
Accuracy	(transmitter only)
Electronic measurement error	0.2% from span or 0.2 °C ⁽²⁾
RTD measurement error	according to accuracy class
Non-linearity	within measurement error
Self-heating error	0.02%/mA at 24 V
Temperature drift	0.02% from span for 1 °C

⁽¹⁾ Not available for TSOP

⁽²⁾ Which is greater

Power supply

Loop voltage	10...32 VDC
Admissible variations	1 Vp-p at 50 Hz
Maximum line load	750 Ω at 24V/20mA

Operating conditions

Ambient temperature	-30...65 °C
Ambient humidity	5...95 %RH
EM compatibility	according to EN 61326

Design and materials

Stem diameter	4 mm	5 mm
Stem length	20...60 mm	60...200 mm
Sensor sheath	stainless steel	
Housing material	aluminum	
Wiring	PG7 metal cable gland	
Mounting	free	
Protection class	IP66	

Ordering codes TS(O)P - G2.G3.G6.G11 - #1

Code	Feature or option	Code values
G2	Sensor ⁽³⁾	RD - Pt100, RG - Pt1000
G3	Temperature range	T25 - -20...60 °C, T17 - -50...50 °C, T18 - 0...50 °C, T19 - 0...100 °C ⁽¹⁾ , T12 - -50...100 °C ⁽¹⁾ , TZ - other (specify, ΔT ≥ 50 °C)
G6	Stem length 'n' [mm]	20...200 (see table above)
G11	Accuracy class	A - 'A', B - 'B', C - '2xB'
#1	Options	X - none, OP - electrochemically polished sheath surface

⁽³⁾ Do not code for TSOP