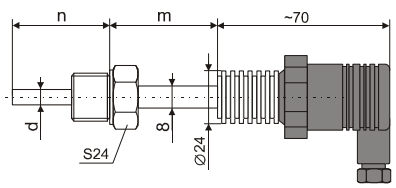
RTD Probe with transmitter TSOK

- **Pt100 or Pt1000 sensitive element**
- **2-wire 4…20 mA or 3-wire 0...20 mA, 0...10 V output**
- **Easy & Fast connection plug**
- **Vibration-proof design**
- **Small dimensions**
- **Extended design for higher temperature available**
- **High protection class - IP65**
- **Local indicator available**

TSOK measures temperature by the means of a Ptx sensitive element and converts it into standard 4...20 mA 2-wire or 3-wire 0...20 mA, 0...10 V output signal. This transmitter has a robust vibration-proof stainless steel sheath with IP65 protection class, and is equipped with a DIN 43650 connector that allows fast and easy electrical decoupling. The probe interior is filled with special compound, which protects the electronics from the harsh ambient influences. Eight different temperature measurement ranges from -50 °C and up to 400 °C as well as customer specified ranges are available. Various stem diameters and lengths as well as stainless steel types are also available. A local loop-powered indicator TI200 can be optionally mounted between the sheath top and the connector. Thanks to its small size and robust design, TSOK is applicable for cars, rail vehicles, construction machines, and other industrial equipment.



Technical specifications

Input	
Input (RTD) type	Pt100 or Pt1000 (w=1.385), class B
Measurement range	-50...50 °C; -20...60 °C; 0...50 °C; 0...100 °C; -50...100 °C; 0...150 °C; 0...200 °C; 0...300 °C [1]; 0...400 °C [1,5]
Range on request	minimum span 50 °C
Output	
Signal type	2-wire 4...20 mA or 3-wire 0...20 mA, 0...10 V
Linearity proportional to	measured value
Output at sensor burnout	32 mA
Output at sensor shorted	0.2 mA
Accuracy	
Electronic measurement error	0.2% from span or 0.2 °C [2]
RTD measurement error	according to accuracy class
Non-linearity	within measurement error
Temperature drift	0.01% from span for 1 °C

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	
Medium pressure	max. 25 bar
Ambient temperature	-40...85 °C
Ambient humidity	0...98 %RH
EM compatibility and safety	according to EN 61000, EN 61010
Design and materials	
Sensor sheath	stainless steel
Wiring	4-pin detachable connector DIN 43650
Mounting thread	M16, M18, M20, 3/8", 1/2", or other
Stem diameter	6 or 8 mm
Stem length	20...300 mm
Extension length [1]	50...100 mm
Protection class	IP65

[1] Only for the extended-design variant!
[2] Which is greater

Ordering code TSO✱- G3.G4.G6.G7.G9.G10.G11.G14 - #1.#2

Code	Feature or option		Code values
✱	Variant		**K** - short-design, **K1** - extended-design
G3	Temperature range		**T17** - -50...50 °C, **T25** - -20...60 °C, **T18** - 0...50 °C, **T19** - 0...100 °C, **T12** - -50...100 °C, **T20** - 0...150 °C, **T7** - 0...200 °C, **T23** - 0...300 °C [1], **T8** - 0...400 °C [1,5], **TZ** - other (specify, ΔT ≥ 50 °C)
G4	Stem diameter 'd' [mm]		**6**, **8**
G6	Stem length 'n' [mm]		**20** [3]**...300** (step 5 mm)
G7	Extension length 'm' [mm] [1]		**50...100** (step 5 mm)
G9	Mounting thread	cylindrical (15 mm length)	**Q0** - M16x1.5, **Q1** - M18x1.5, **Q2** - M20x1.5, **Q3** - G3/8", **Q4** - G1/2", **QZ** - other (specify!)
		tapered (standard length)	**Q9** - 3/8" NPT, **Q10** - 1/2" NPT, **QZ** - other (specify!)
G10	Sheath material		**M1** - 1.4301, **M2** - 1.4541, **M3** - 1.4571, **M9** - 1.4404
G11	Output signal		**E** - 0...20 mA, **F** - 4…20 mA, **K** - 0…10 V
G14	Tip shape		**X** - standard closed, **N** - narrowed
#1	Options		**X** - none, **OP** - electrochemically polished sheath surface
#2	Local indicator TI200		**X** - none, **A** - local indicator TI200 [4]

[3] Minimum thread length + 5 mm!
[4] See TI200 specifications and order separately!
[5] Contact COMECO!