

TSOK series OEM style temperature transmitter



TSOK measures temperature by the means of a Ptx sensitive element and converts it into standard 4...20 mA 2-wire current 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 wiring. 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.

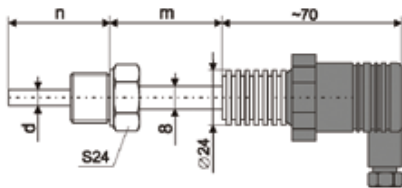
Various stem diameters and lengths as well as stainless steel types are also available. Thanks to its small size and robust design, TSOK is applicable for cars, rail vehicles, construction machines, and other industrial equipment.

- Pt100 or Pt1000 sensitive element
- 2-wire 4...20 mA output
- Easy & Fast connection plug M12
- Vibration-proof design
- Small & compact dimensions
- Extended design for higher temperature available
- High protection class - IP65
- Local indicator available

Technical Information

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 (1,4)
Range on request	minimum span 50 °C
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
Measurement error	0.2% from span or 0.2 °C (2)
Non-linearity	within measurement error
Temperature drift	0.01% from span for 1 °C

Loop voltage	10...32 VDC
Admissible variations	1 Vp-p at 50 Hz
Maximum line load	750 Ω at 24V/20mA
Medium pressure	max. 25 bar
Ambient temperature	-40...85 °C
Ambient humidity	0...95 %RH
EM compatibility and safety	according to EN 61000, EN 61010
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



(2) Whichever is greater

(1) Only for extended length variant

Options & Ordering Information

Feature or option	Order Code TSO-X.X.X.X.X.X.X.X.X.
Variant	K - short-design, K1 - extended-design
Temperature range	T17 - -50...50 °C, T10 - -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 (1,4), TZ - other (specify, T ≥ 50 °C)
Stem diameter	6 - 6mm, 8 - 8mm
Stem length 'n' mm	20...300 - (step 5 mm)
Extension length (1) 'm' mm	50...100 - (step 5 mm)
Mounting thread	Q0 - M16x1.5, Q1 - M18x1.5, Q2 - M20x1.5, Q3 - G3/8", Q4 - G1/2", Q9 - 3/8" NPT, Q10 - 1/2" NPT, QZ - other (specify!)
Sheath material	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404, M15 - 1.4362
Tip shape	X - standard closed, N - narrowed
Options	X - none, OP - electrochemically polished sheath surface
Local Indicator TI200	X - none, A - local indicator TI200 (3)

(3) Ordered separately - consult Flowtechnik

(4) Consult Flowtechnik