EPIC® SENSORS T-SCREW / W-SCREW

Threaded temperature sensor with cable

Features

- temperature range *) -200...+300 °C
- Pt100 or thermocouple as sensing element
- AISI 316L as standard delivery material, other materials on request
- Pt100 accuracy class A as standard delivery
- thermocouple accuracy class 1 as standard delivery
- tailored solutions according to customer specific needs
- ATEX and IECEx compatible Ex i versions available
- 3D step models available on request.



Typical applications

- energy and power plant technology
- process industry
- chemical industry
- machinery and vessel construction
- manufacturing industry.

Technical data

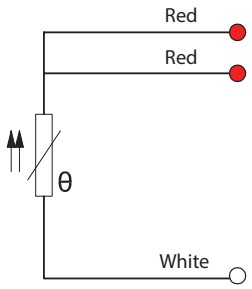
*) **Materials**	AISI 316L, maximum temperature +250 °C, temporarily +300 °C, other materials on request (Note: overall max. temperature according to the cable)
Diameter	3, 4, 5, 6 or 8 mm, other diameters on request
Thread size and length	According to request, all sizes and lengths available Note: minor diameter of thread cannot be < element diameter
Cable material	SIL = silicone, max. +180 °C FEP = fluoropolymer, max. +205 °C GGD = glass silk cable/metal braid jacket, max. +350 °C FDF = FEP wire insulation/braid shield/FEP jacket, max. +205 °C SDS = silicone wire insulation/braid shield/silicone jacket, only available as 2 wire cable, max. +180 °C TDT = fluoropolymer wire insulation/braid shield/fluoropolymer jacket, max. +205 °C FDS = FEP wire insulation/braid shield/silicone jacket, max. +180 °C FS = FEP wire insulation/silicone jacket, max. +180 °C
Tolerances Pt100 (IEC 60751)	AA tolerance ±0.1 + 0.0017 x t, operating temperature -50...+250 °C A tolerance ±0.15 + 0.002 x t, operating temperature -100...+450 °C B tolerance ±0.3 + 0.005 x t, operating temperature -196...+600 °C B 1/3 DIN, 0.1 °C +0.5%, B1/10 DIN 0.03 °C +0.5%, operating temperature -196...+250 °C
Tolerances thermocouple (IEC 60584)	Type J tolerance class 1 = -40...375 °C ±1.5 °C, 375...750 °C ±0.004 x t Type K and N tolerance class 1 = -40...375 °C ±1.5 °C, 375...1000 °C ±0.004 x t
*) **Temperature range Pt100**	-200...+300 °C, depending on materials
*) **Temperature range thermocouple**	-200...+300 °C, depending on thermocouple type and other materials
Approvals	ATEX, IECEx
Quality certificate	ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 issued by DNV

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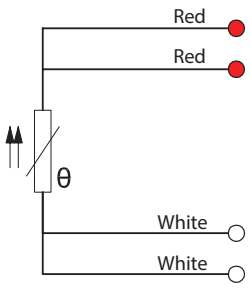
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Pt100 connections

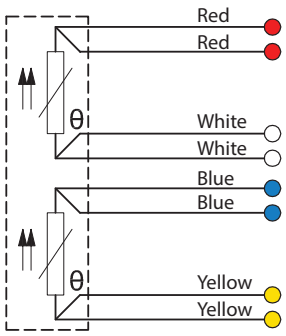
1x Pt100, Class A, 3-wire,
connection acc. to standards EN 60751



1x Pt100, Class A, 4-wire,
connection acc. to standards EN 60751

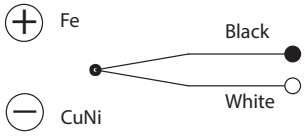


2x Pt100, Class A, 4-wire,
connection acc. to standards EN 60751

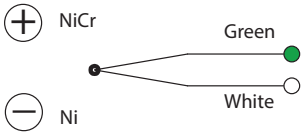


Thermoelement connections

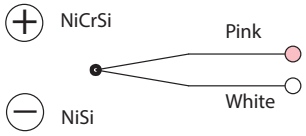
Thermocouple, Type J, Class 1,
Acc. to standard EN 60584-1



Thermocouple, Type K, Class 1,
Acc. to standard EN 60584-1



Thermocouple, Type N, Class 1,
Acc. to standard EN 60584-1

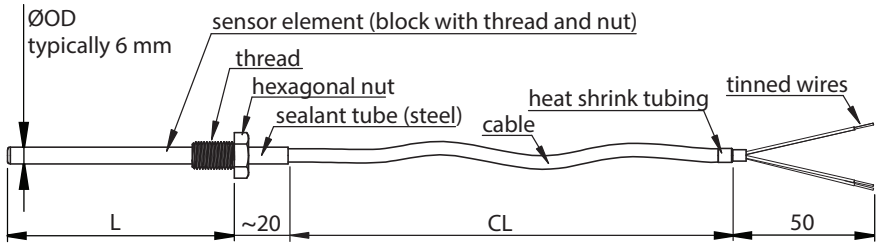


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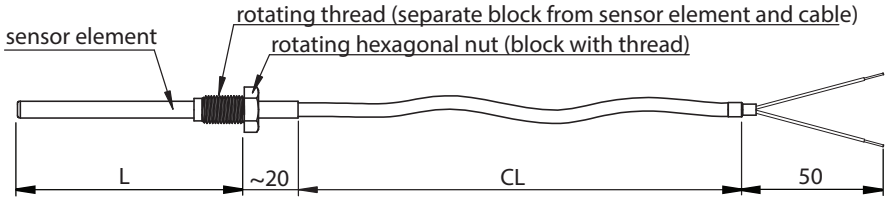
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Drawing

Model SCREW-S
(fixed structure)



Model SCREW-R
(rotating structure)



Product code key

Example code: W — SCREW — R — M8x1 / 10 — 6 — 100 — 5000 / SIL — 4 — A — X

W 2xW T 2xT	= Pt100 resistance thermometer = 2 x Pt100 resistance thermometer = thermocouple = 2 x thermocouple
SCREW	= sensor with thread (constant in code)
S R	= solid structure = rotating structure (easy to assemble, note: does not obstruct gas or liquid flow)
M8x1	= thread size (all available)
10	= thread length [mm]
3, 4, 5, 6, 8	= outer diameter of sensor element (ØOD) [mm]
100	= immersion length, L [mm]
5000	= cable length, CL [mm]
SIL, FEP, GGD, FDF, TDT, SDS, FDS, FS	= cable material (for more information, look technical data on first page of the datasheet)
4,3,2 K,N,J	= Pt100 wire count = thermocouple type
A,B 1,2,3	= Pt100 accuracy class, (class A as standard delivery) = thermocouple accuracy class, (class 1 as standard delivery)
EXI X	= Ex i certified sensor = additional details on the text line