

EPIC® SENSORS T-M-P / W-M-P or T-P / W-P

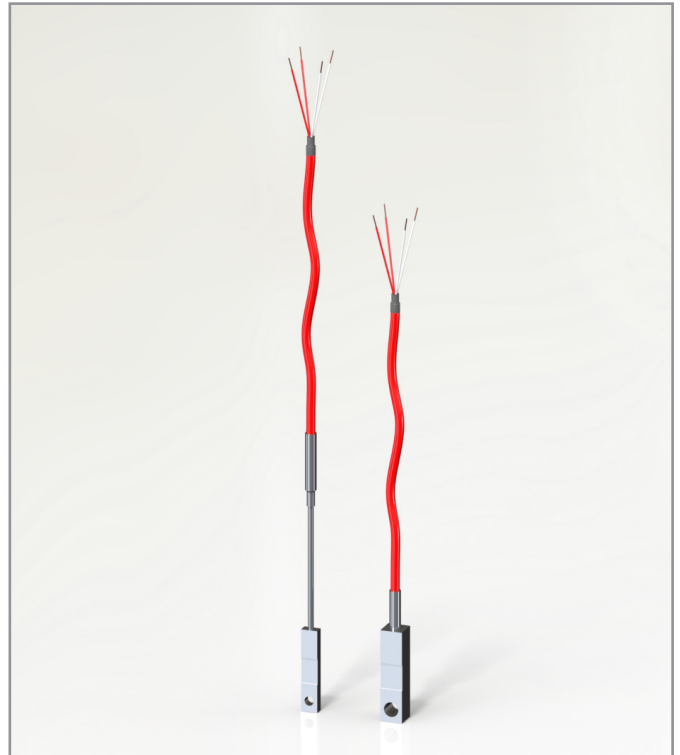
Surface temperature sensor

Features

- temperature range *) -200...+550 °C
- sensors with no welded fitting meet the ATEX, IECEx and EAC Ex (Ex e) requirements
- installation typically with welding, bolt or steel ties
- 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
- MI cable structured
- bendable sensor element
- vibration proof
- 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

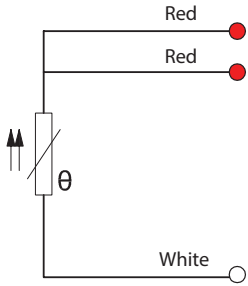
*) Materials	AISI 316L, maximum temperature +550 °C, temporarily +600 °C, other materials on request (Note. max. safe temperature +100 °C for the sealant tube in cable to sensor element transition)
Cable materials	SIL = silicone, max. +180 °C FEP = fluoropolymer, max. +205 °C GGD = glass silk cable/metal 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 (Note. max. safe temperature +100 °C for the sealant tube in cable to sensor element transition)
Dimensions	5x9x45 (WxHxL) (hole Ø5.1 mm), 12x12x50 (WxHxL) (hole Ø8.0 mm), other dimensions on request
Tolerances Pt100 (IEC 60751)	AA tolerance $\pm 0.1 + 0.0017 \times t$, operating temperature -50...+250 °C A tolerance $\pm 0.15 + 0.002 \times t$, operating temperature -100...+450 °C B tolerance $\pm 0.3 + 0.005 \times t$, 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 $\pm 0.004 \times t$ Type K and N tolerance class 1 = -40...375 °C ± 1.5 °C, 375...1000 °C $\pm 0.004 \times t$
*) Temperature range Pt100	Model W-P: -200...+350 °C, depending on materials and sensor element length, Model W-M-P: -200...+500 °C, depending on materials and MI element length. (Note. max. safe temperature +100 °C for the sealant tube in cable to sensor element transition)
*) Temperature range thermocouple	Model T-P: -200...+350 °C, depending on thermocouple type, materials and sensor element length, Model T-M-P: -200...+550 °C, depending on thermocouple type, materials and MI element length. (Note. max. safe temperature +100 °C for the sealant tube in cable to sensor element transition)
Approvals	ATEX, IECEx
Quality certificate	ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 issued by DNV

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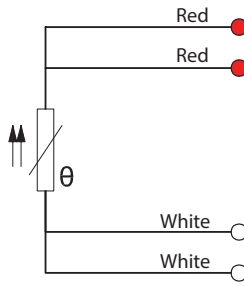
Surface temperature sensor

Pt100 connections

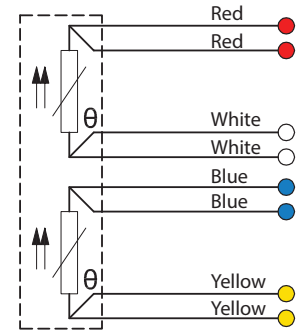
1x Pt100, Class A, 3-wire,
connection acc. to standards EN 60751



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

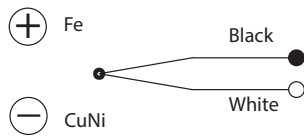


2x Pt100, Class A, 4-wire,
connection acc. to standards EN 60751

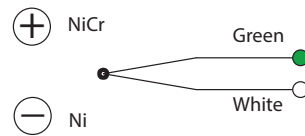


Thermoelement connections

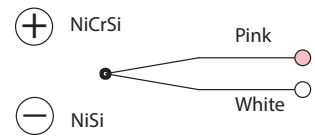
Thermocouple, Type J, Class 1,
Acc. to standard EN 60584-1



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

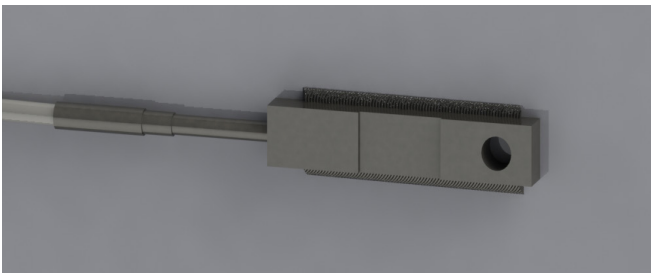


Thermocouple, Type N, Class 1,
Acc. to standard EN 60584-1

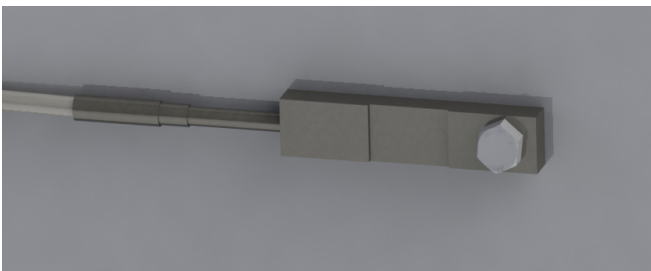


Installation examples

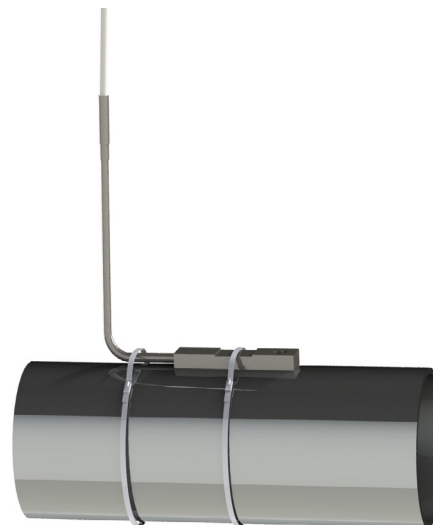
Welded



Screw



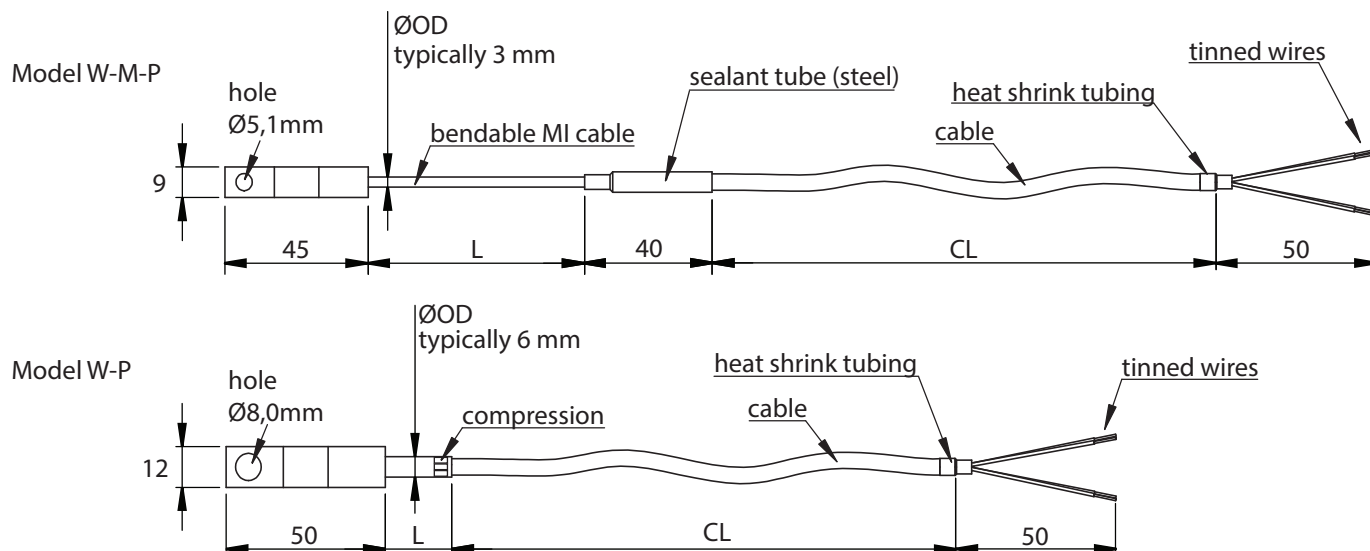
Steel collar installation



EPIC® SENSORS T-M-P / W-M-P or T-P / W-P

Surface temperature sensor

Drawing



Product code key

Example code: W — M — P — 5x9x45 — 3 / 500 — 5000 / SIL — 4 — A — X

W	= Pt100 resistance thermometer
2xW	= 2 x Pt100 resistance thermometer
T	= thermocouple
2xT	= 2 x thermocouple
empty	= non-bendable sensor element
M	= bendable MI cable as sensor element
P	= surface temperature sensor (constant in code)
5x9x45	= dimensions of the tip piece
12x12x50	(Note: 5x9x45 tip only with 3 mm element)
3, 6	= outer diameter of sensor element (ØOD) [mm]
500	= length of sensor element, L [mm]
5000	= cable length, CL [mm]
SIL, FEP, GGD, FDF, TDT, SDS, FDS, FS	= cable materials (for more information, look technical data on first page of the datasheet)
4,3,2	= Pt100 wire count
K,N,J	= thermocouple type
A,B	= Pt100 accuracy class, (class A as standard delivery)
1,2,3	= thermocouple accuracy class, (class 1 as standard delivery)
EXI	= Ex i certified sensor
X	= additional details on the text line

W-M-P-5x9x45-3/50-15000/GGD-4-A

Pt100 resistance thermometer for 4-wire measurement, surface temperature sensor with bendable MI-structure, sensor element with diameter of Ø3 mm, tip piece dimensions 5x9x45 mm, delivered with 15 meter glass silk cable, maximum temperature +350°C.