EPIC® SENSORS T-M-Ø / W-M-Ø
Mineral insulated element

Features
- similar to DIN 43762
- temperature range *) -200...+1200 °C
- Pt100 or thermocouple as sensing element
- AISI 316L or INCONEL 600 as standard delivery material, other materials on request
- Pt100 accuracy class A as standard delivery
- thermocouple accuracy class 1 as standard delivery
- mineral insulated cable
- bendable
- 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.

Special applications
- for very high temperature solutions we can offer special thermocouple inserts with ceramic tubing and platinum wiring up to +1600 °C
- for this type of insert please contact our sales.

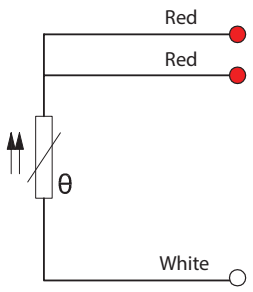
Technical data

Materials	AISI 316L, max. temperature +550 °C, temporarily +600 °C INCONEL 600, max. temperature +1100 °C, temporarily +1200 °C Other materials on request
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...+550 °C, depending on sensor housing materials
*) **Temperature range thermocouple**	-200...+1200 °C, depending on thermocouple type and sensor housing materials
Approvals	ATEX, IECEx
Quality certificate	ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 issued by DNV
IP rating	IP65, higher IP rating on request

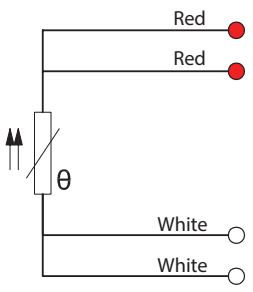
EPIC® SENSORS T-M-Ø / W-M-Ø
Mineral insulated element

Pt100 connections

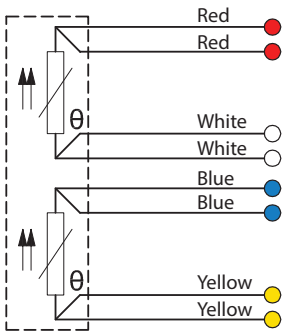
1x Pt100, Class A, 3-wire,
connection acc. to standards EN 60751



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

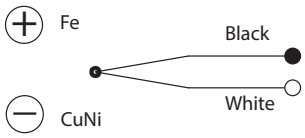


2x Pt100, Class A, 4-wire,
connection acc. to standards EN 60751

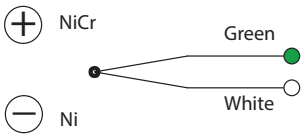


Thermoelement connections

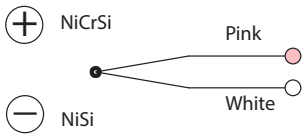
Thermocouple, Type J, Class 1,
Acc. to standard EN 60584-1



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

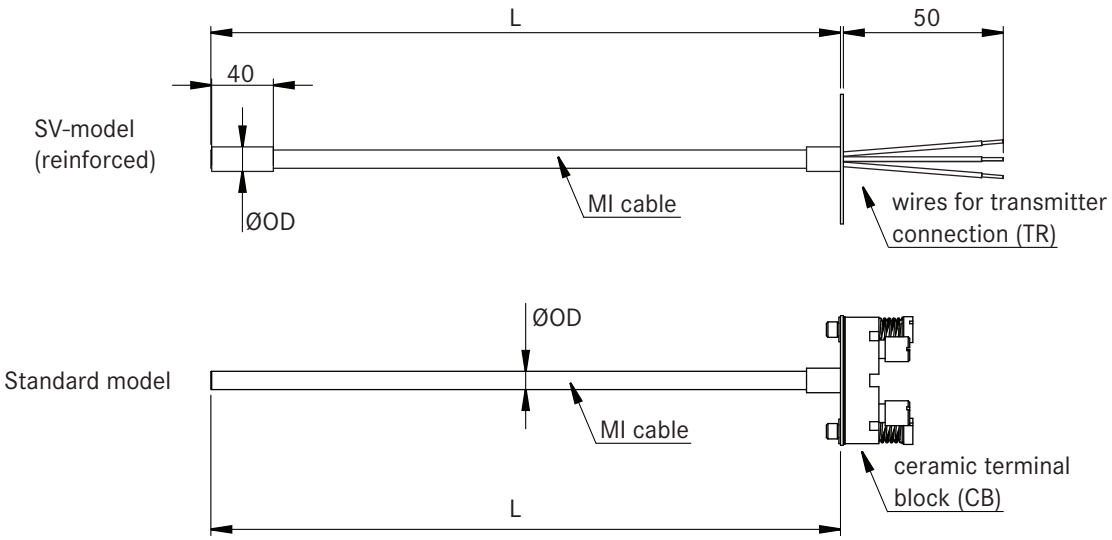


Thermocouple, Type N, Class 1,
Acc. to standard EN 60584-1



EPIC® SENSORS T-M-Ø / W-M-Ø
Mineral insulated element

Drawing



Product code key

Example code: W — M — 6 — / 315 — 4 — A — TR / EXD— X

W	= Pt100 resistance thermometer
2xW	= 2 x Pt100 resistance thermometer
T	= thermocouple
2xT	= 2 x thermocouple
M	= mineral insulated sensor (constant in code)
3, 6, 8	= outer diameter of MI cable (ØOD) [mm]
empty	= even thickness (as standard delivery)
SV	= thick wall in measure end
315	= length, L [mm]
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)
TR	= wires for transmitter connection
CB	= with ceramic terminal block
empty	= normal version for regular and EXI sensor
EXD	= Ex d -version with specific dimensions, used only with EXD enclosure
X	= additional details on the text line

W-M-6/315-3-A-CB
Pt100 resistance thermometer for 3 wire measurement, Pt100 with accuracy class A, mineral insulated element with diameter 6 mm and length 315 mm, ceramic block for cable connection.

T-M-8-SV/1500-K-1-TR
Thermocouple type K with accuracy class 1, mineral insulated element with diameter 8 mm and length 1500 mm, reinforced structure, wire ends for connecting 2 wire mA transmitter.