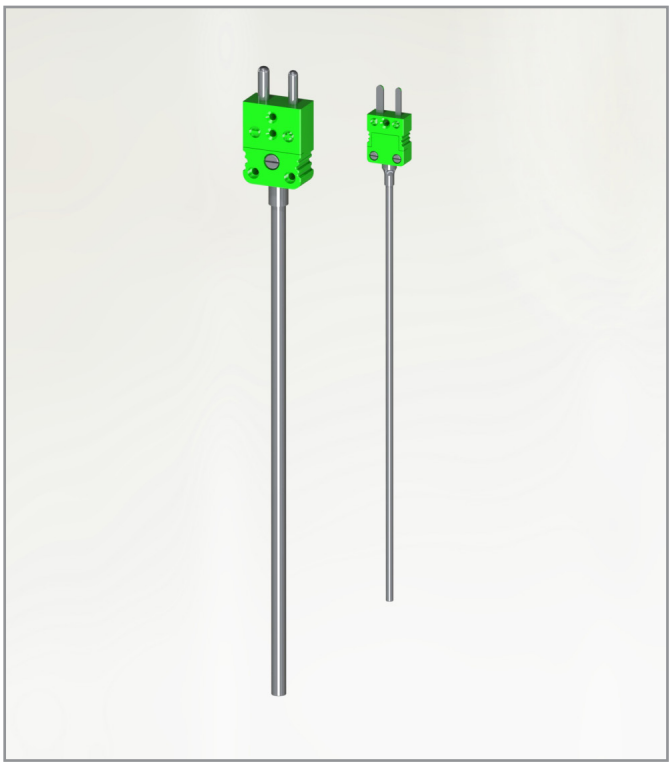
EPIC® SENSORS T-M-313 or T-M-314

Mineral insulated thermocouple insert with connector

Features

- according to DIN 43721
- temperature range *) -200...+1200 °C
- thermocouple as sensing element
- thermocouple accuracy class 1 as standard delivery
- available with standard STD or mini-plug
- AISI 316L and INCONEL 600 as standard materials, other materials on request
- MI cable structured sensor element
- bendable
- 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, INCONEL 600, maximum temperature +1100 °C, temporarily +1200 °C Other materials on request
Connectors	Construction ”313” = connector with round pins, STD Construction ”314” = connector with flat pins, mini (Note: maximum safe temperature for connector +220 °C, unless other wise specified)
Diameter	0.5 / 1.0 / 1.5 / 2.0 / 3.0 / 4.5 / 6.0 mm (Note: mini connector up to 4.5 mm element diameter)
Color	According to EN 60584
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 thermocouple**	-200...+1200 °C, depending on thermocouple type and sensor element material
Approvals	ATEX, IECEx
Quality certificate	ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 issued by DNV

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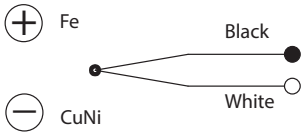
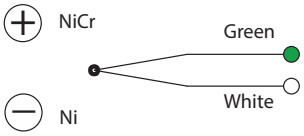
Thermoelement connections

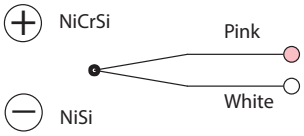
Thermocouple, Type J, Class 1,
Acc. to standard EN 60584-1



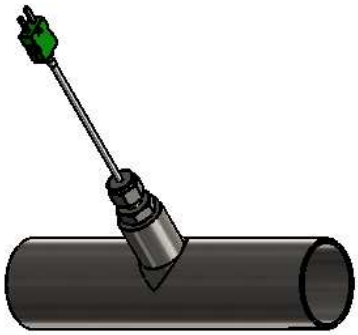
Thermocouple, Type K, Class 1,
Acc. to standard EN 60584-1

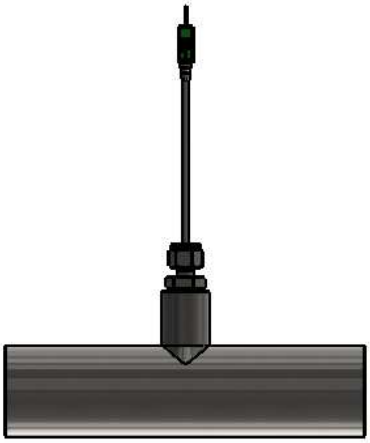


Thermocouple, Type N, Class 1,
Acc. to standard EN 60584-1



Installation examples







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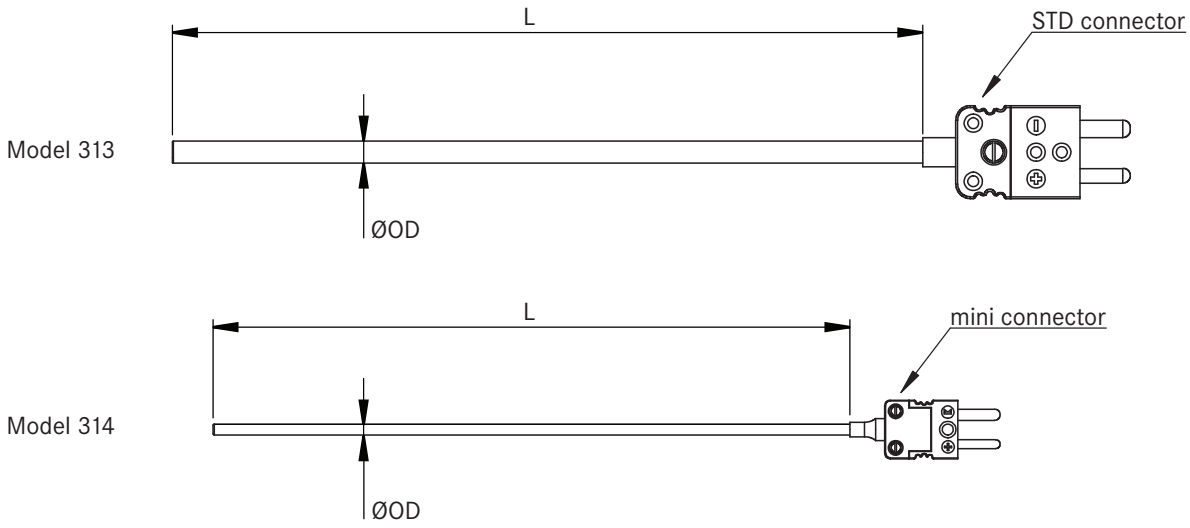
Drawing



Product code key

Example code: T — M — 313 — 3 / 1000 — K — 1 — X

T	= thermocouple
2xT	= 2 x thermocouple
M	= MI cable structured sensor (constant in code)
313	= with STD connector
314	= with mini connector
0.5, 1, 1.5, 2, 3, 4.5, 6	= outer diameter of sensor element (ØOD) [mm] (Note: mini connector up to 4.5mm diameter) (other diameters on request)
1000	= MI cable length, L [mm]
K,N,J	= thermocouple type
1,2,3	= thermocouple accuracy class, (class 1 as standard delivery)
EXI	= Ex i certified sensor
X	= additional details on the text line