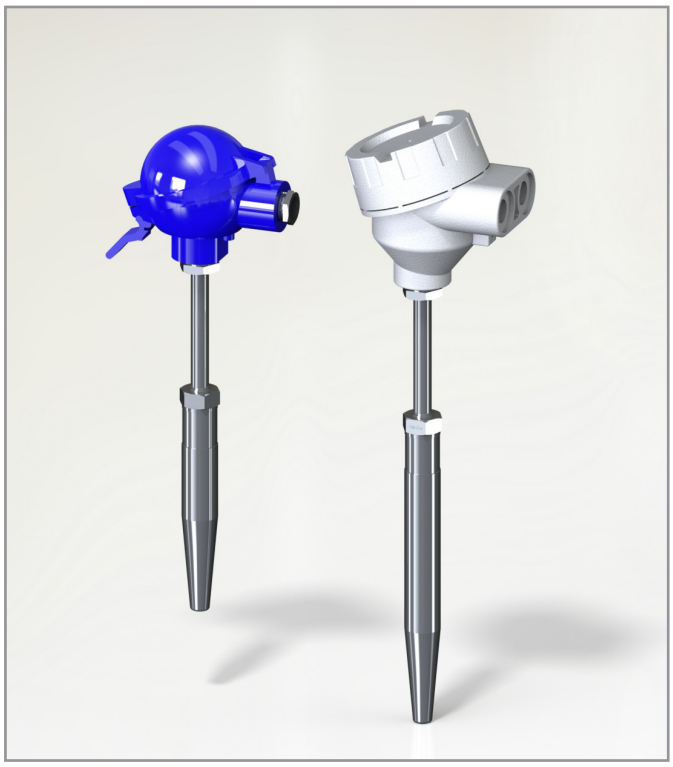
EPIC® SENSORS T-D / W-D
Weldable temperature sensor

Features

- according to DIN 43772 form 4
- temperature range *) -200...+1200 °C
- neck pipe for heat source clearance
- with weldable thermowell
- AISI 316L as standard delivery material, other materials on request
- Pt100 or thermocouple as sensing element
- Pt100 accuracy class A as standard delivery
- thermocouple accuracy class 1 as standard delivery
- MI cable structured sensor element
- internal sensor element replaceable on the fly
- tailored solutions according to customer specific needs
- ATEX and IECEx compatible Ex db and Ex i versions available
- neck pipe length 165 mm as standard delivery, other lengths on request
- 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, max. temperature +550 °C, temporarily +600 °C 13CrMo44/1.7335, max. temperature +550 °C 10CrMo910/1.7380, max. temperature +580 °C 16Mo3/1.5415, max. temperature +480 °C Other materials available on request, for example: AISI S31803/1.4462, SMO254/1.4547, AISI304L/1.4307, TiGr2/3.7035, etc.
Thermowell types	D1, D2, D3, D4, D5, D6 with M18x1,5 thread or D1/S, D2/S, D4/S, D5/S with M14x1,5 thread According to standard DIN 43772 form 4, other thermowell types 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
*) **Temperature range thermocouple**	-200...+1200 °C depending on thermoelement, thermowell material and cooling neck length Neck pipe length = 250 mm, typical maximum temperature +750 °C Neck pipe length = 300 mm, typical maximum temperature +1000 °C Neck pipe length = 350 mm, typical maximum temperature +1200 °C
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

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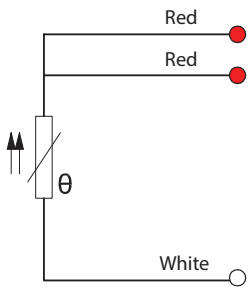
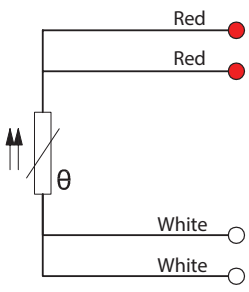
Pt100 connections

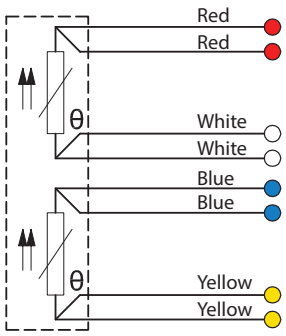
1x Pt100, Class A, 3-wire,
connection acc. to standards EN 60751



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

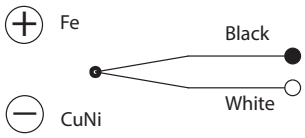


2x Pt100, Class A, 4-wire,
connection acc. to standards EN 60751

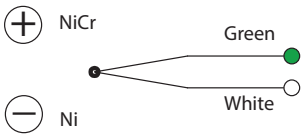


Thermoelement connections

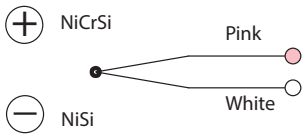
Thermocouple, Type J, Class 1,
Acc. to standard EN 60584-1



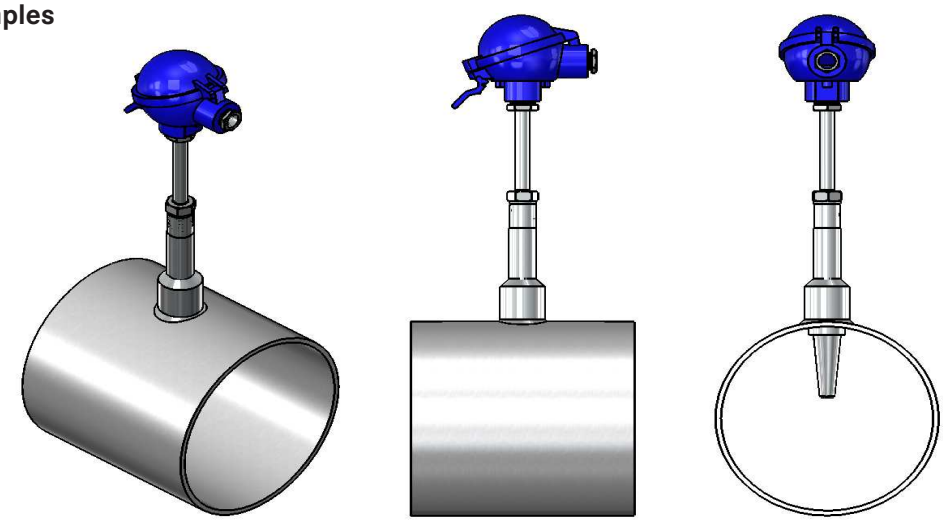
Thermocouple, Type K, Class 1,
Acc. to standard EN 60584-1



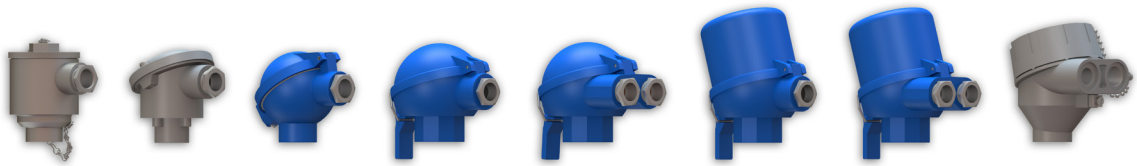
Thermocouple, Type N, Class 1,
Acc. to standard EN 60584-1



Installation examples



Connection heads



HST B N D/H D/H/D D/W/H D/W/H/D EXD

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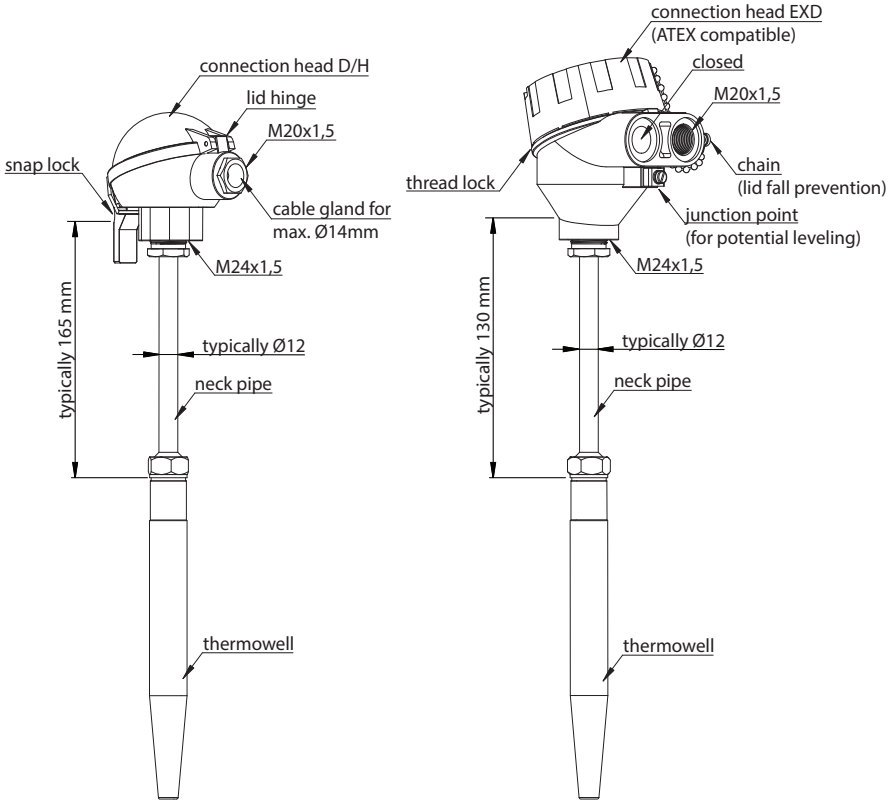
Drawing



Product code key

Example code: W — D — D1 / K — D/H — 4 — A — TR — X

W	= Pt100 resistance thermometer
2xW	= 2 x Pt100 resistance thermometer
T	= thermocouple
2xT	= 2 x thermocouple
D	= welded thermowell (constant in code)
D1, D2, D3, D4, D5, D6, D1/S, D2/S, D4/S, D5/S	= thermowell size (separate datasheet available, welded thermowells)
K	= AISI 316L / EN1.4404
L	= 13CrMo44 / EN1.7335
M	= 10CrMo910 / EN1.7380
O	= 16Mo3 / EN1.5415 (other materials available on request)
B	= connection head B
D/H	= connection head with snap lock
D/H/D	= connection head with snap lock and double barrel (2x cable gland)
D/W/H	= high cover onnection head with snap lock
D/W/H/D	= high cover onnection head with snap lock and double barrel (2x cable gland)
EXD	= ATEX-compatible connection head
HST	= acid proof connection head
N	= connection head N
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
EXI	= Ex i certified sensor
X	= additional details on the text line