⊛ LAPP

EPIC® SENSORS T-A-Ø / W-A-Ø or T-A-Ø-U / W-A-Ø-U
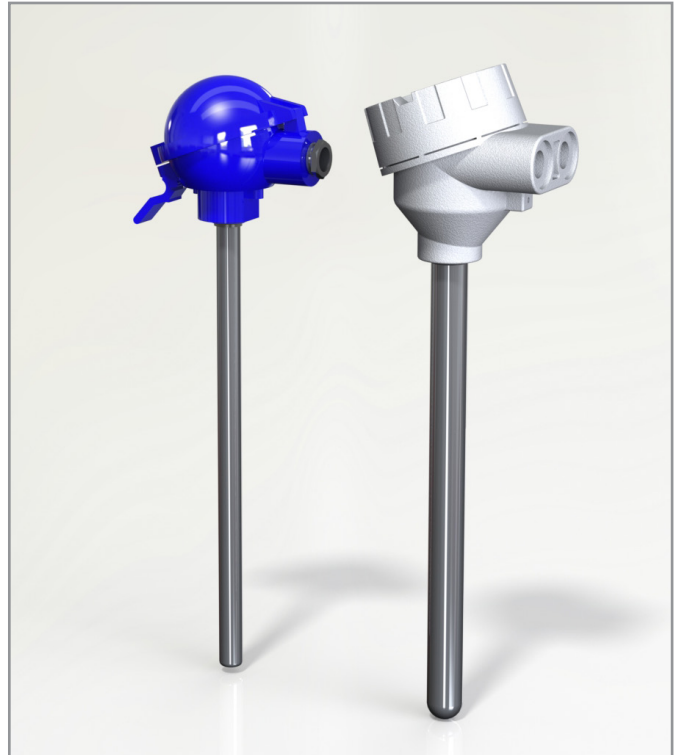## Immersible temperature sensor

Features

- according to DIN 43772 form 1
- temperature range *) –200...+1200 °C
- AISI 316L/EN1.4044 or heat-resistant steel AISI 446-1/EN1.4749 as typical material, other materials on request
- available with solid tip
- 200 mm as typical length for the solid tip
- 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
- 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

Thermowell material	AISI 316L/EN1.4044 max. temperature +550 °C, temporarily +600 °C, AISI 446-1/EN1.4749 max. temperature +1100 °C, temporarily +1200 °C Other materials on request
Thermowell tip material	AISI 316L/EN1.4044 max. temperature +550 °C, temporarily +600 °C AISI 446-1/EN1.4749 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 housing and thermowell materials
*) Temperature range thermocouple	–200...+1200 °C, depending on thermocouple type and thermowell 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

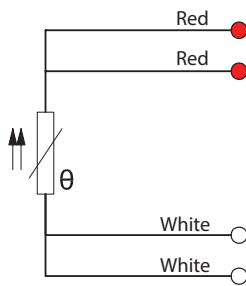LAPP

EPIC® SENSORS T-A-Ø / W-A-Ø or T-A-Ø-U / W-A-Ø-U
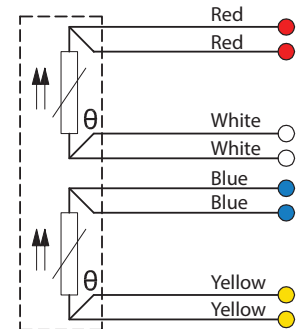## Immersible temperature sensor

Pt100 connections

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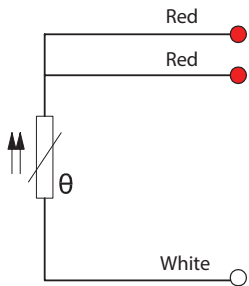
Red
Red
θ
White

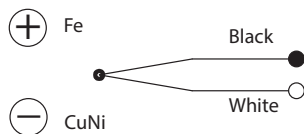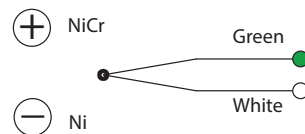1x Pt100, Class A, 4-wire,
connection acc. to standards EN 60751

Red
Red
θ
White
White

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

Red
Red
θ
White
White
Blue
Blue
θ
Yellow
Yellow

Thermoelement connections

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

+ Fe
Black
White
− CuNi

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

+ NiCr
Green
White
− Ni

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

+ NiCrSi
Pink
White
− NiSi
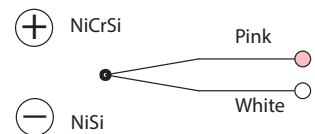
Installation examples

Connection heads

HST   B   N   D/H   D/H/D   D/W/H   D/W/H/D   EXD
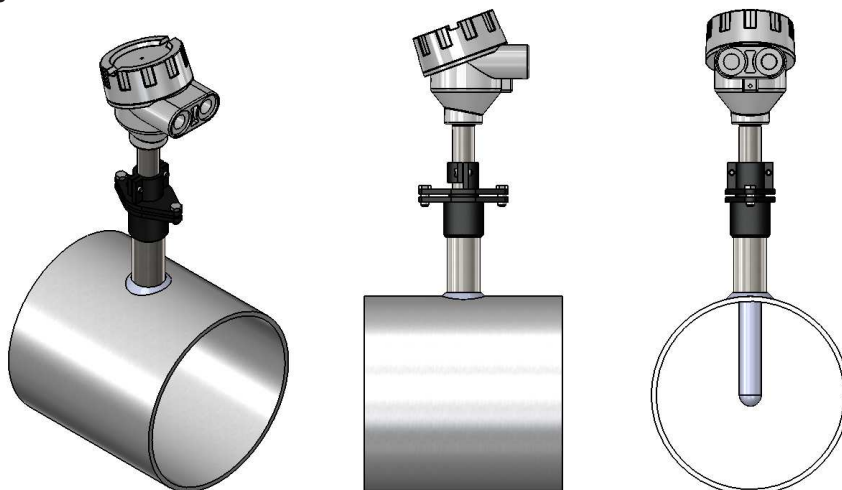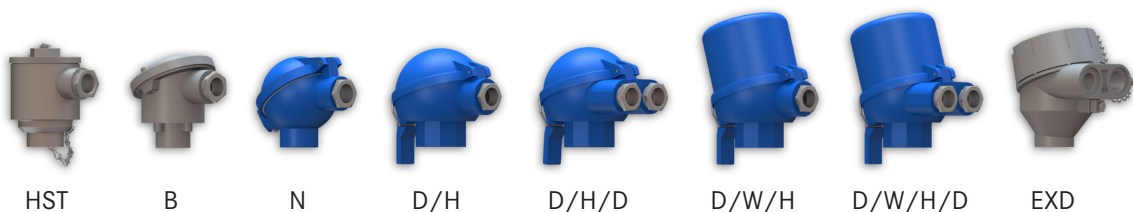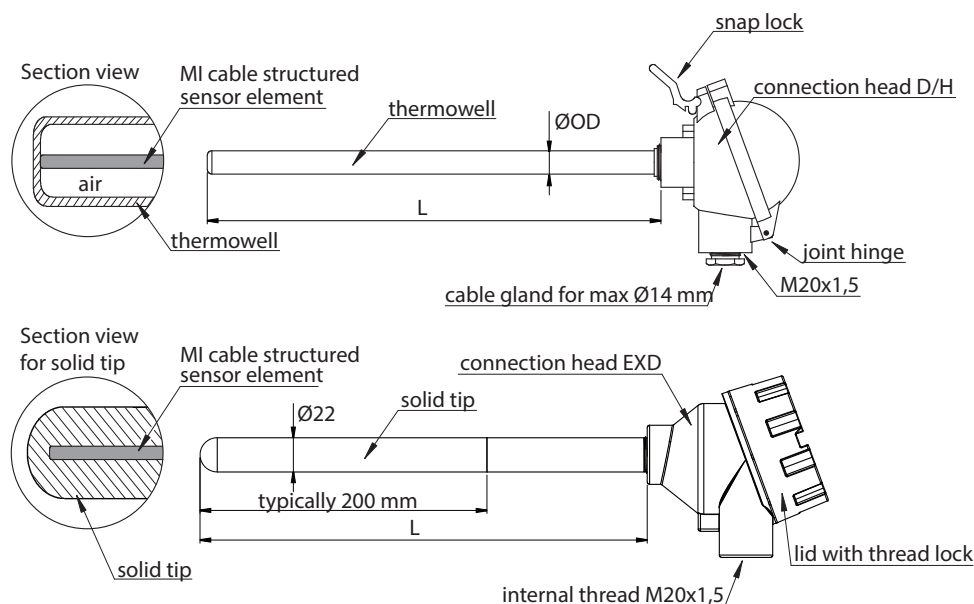
EPIC® SENSORS T-A-Ø / W-A-Ø or T-A-Ø-U / W-A-Ø-U
Immersible temperature sensor

Drawing

Product code key

Example code: T — A — 22 — D/H — U / 1000 / 1.4749 — K — 1 — TR — X

W	= Pt100 resistance thermometer
2xW	= 2 x Pt100 resistance thermometer
T	= thermocouple
2xT	= 2 x thermocouple
A	= immersible sensor type (constant in code)
10, 22	= outer diameter of sensor element (ØOD) [mm] (other diameters 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 connection head with snap lock
D/W/H/D	= high cover connection head with snap lock and double barrel (2x cable gland)
EXD	= ATEX-compatible connection head
HST	= acid proof connection head
N	= connection head N
empty	= without solid tip
U	= with solid tip (tip length typically 200 mm)
1000	= length, L [mm]
1.4404, 1.4749	= thermowell or tip material, (other materials on request)
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

W-A-22-EXD-500/1.4404-4-A-CB
Pt100 resistance thermometer for 4 wire measurement, Pt100 with accuracy class A, immersible sensor type, 22 mm diameter for sensor element, ATEX compatible housing, without solid tip, sensor length 500 mm, materials AISI316L/EN1.4404, with ceramic block for cable connection.