

EPIC® SENSORS T-BTD / W-BTD

Bearing temperature sensor

Features

- temperature range -200...+300 °C
- suitable for bearing temperature measurement
- flat tip
- spring-loaded screw for installation
- Pt 100 or thermocouple as sensing element
- Pt 100 accuracy class A as standard delivery
- thermocouple accuracy class 1 as standard delivery
- AISI 316L as standard delivery material, other materials on request
- brass tip as standard delivery material, other tip materials on request
- tailored solutions according to customer specific needs
- ATEX and IECEx compatible Ex i versions available
- 3D step models available on request.

Typical applications

- machinery
- motor manufacturing industry
- gear manufacturing industry.



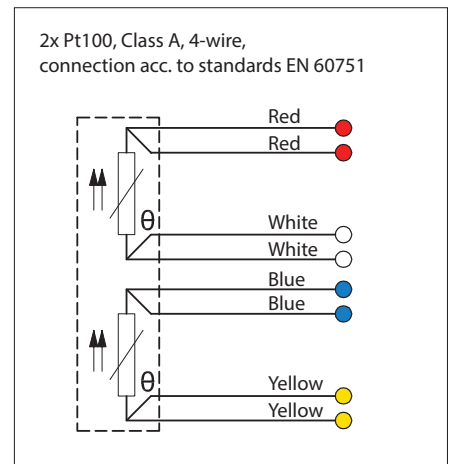
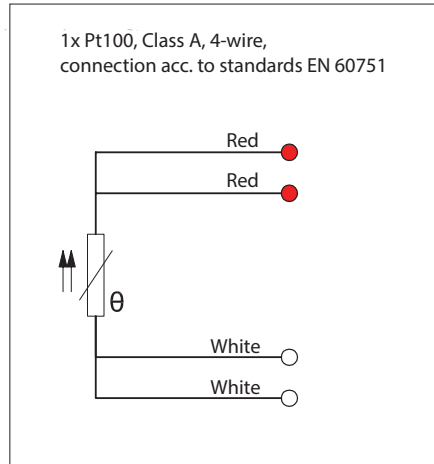
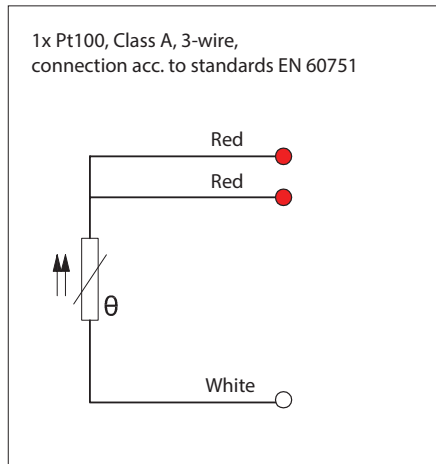
Technical data

Materials	AISI 316L/brass tip, maximum temperature +250 °C, temporarily +300 °C, other materials on request (Note: overall max. temperature according to the cable material)
Tip diameter	8 mm, other diameters on request (Note: sensor tube is tapered from tip portion to reduce the heat conduction)
Cable material	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 PUR = polyurethane cable, extremely good oil resistance, max. +80 °C (Note: PUR cable available only for this sensor type)
Thread	R3/8" as standard delivery, R1/2" as option, other threads on request
Tolerances Pt 100 (IEC 60751)	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, tolerance $\pm 1/3 \times (0.3 + 0.005 \times t)$, operating temperature -196...+600 °C B 1/10 DIN, tolerance $\pm 1/10 \times (0.3 + 0.005 \times t)$, operating temperature -196...+600 °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	-200...+300 °C, depending on cable material.
Temperature range thermocouple	-40...+250 °C, depending on thermocouple type and cable material
Approvals	ATEX, IECEx, METROLOGICAL PATTERN APPROVAL
Quality certificate	ISO 9001:2015 and ISO 14001:2015 issued by DNV

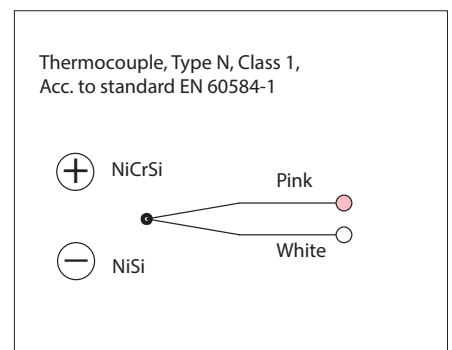
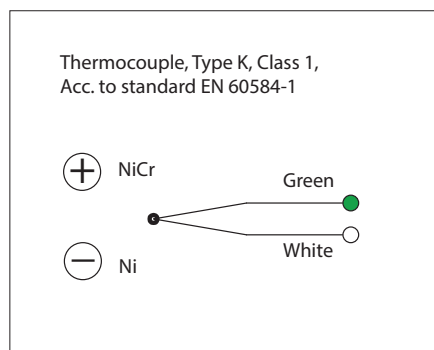
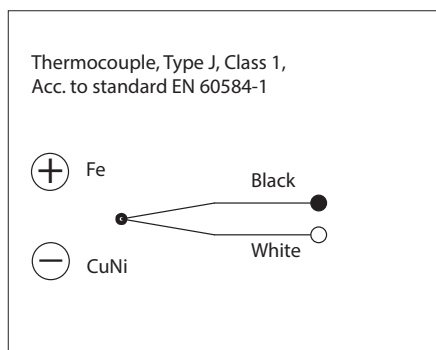
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Pt100 connections



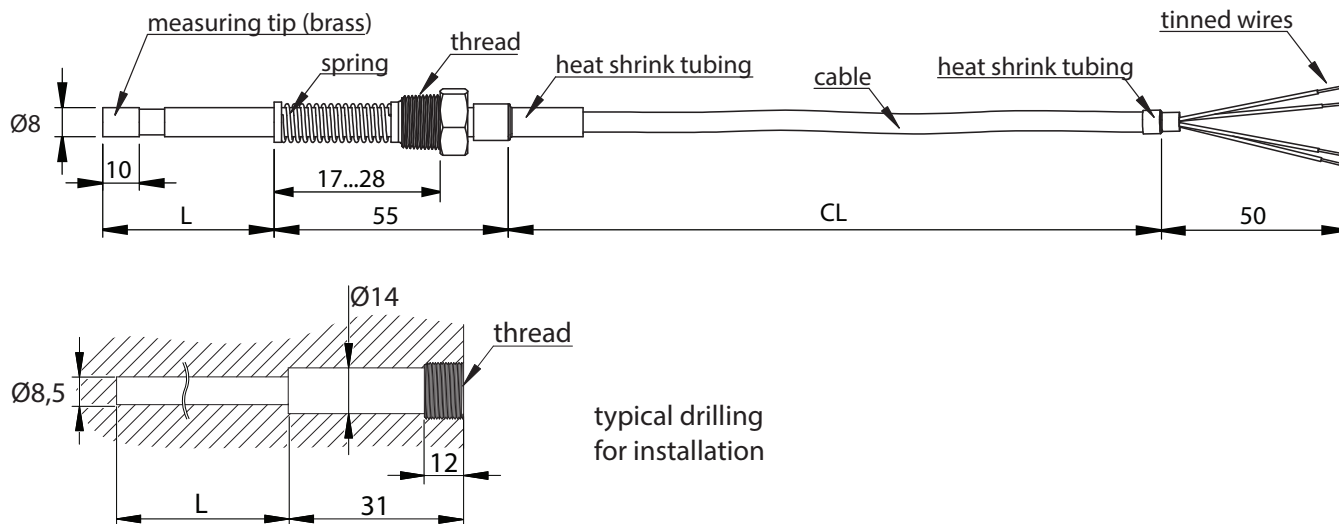
Thermoelement connections



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Drawing



Product code key

Example code: W — BTD — Pt100A — L30 — 4M / SIL — X

W	= Pt100 resistance thermometer
2xW	= 2 x Pt100 resistance thermometer
T	= thermocouple
2xT	= 2 x thermocouple
BTD	= bearing sensor (constant in code)
Pt100A	= Pt100, with accuracy class A
TC-K1	= thermocouple type K, accuracy class 1
TC-N1	= thermocouple type N, accuracy class 1
TC-J1	= thermocouple type J, accuracy class 1
L30	= length [mm]
4M	= cable length, CL [m]
SIL, FEP, GGD, FDF, TDT, SDS,	= cable material (for more information, look technical data on first page of the datasheet)
FDS, FS, PUR	
EXI	= Ex i certified sensor
X	= additional details on the text line

