

RESISTANCE THERMOMETER
Measuring insert: Fixed

Type: IN
R20/R25/R40/R60

10130-E210524V3.2

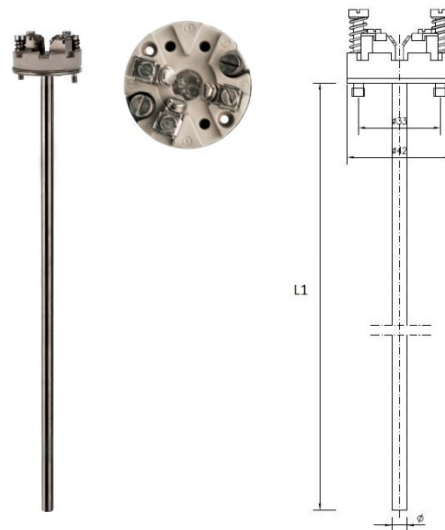


Application:

- For type A and B resistance thermometers
- Electrical connection: Standard heads

Properties:

- Sensor 1xPt100, 2xPt100, Pt1000 or 2xPt1000 in acc. with IEC 60751
- Process attachment: Free leads, ceramic block, temperature transmitter
- Marine approved by: DNV, LR, NK, RINA, ABS and BV



MECHANICAL SPECIFICATIONS:

Protective sheath: -----
EN 1.4571 (AISI 316Ti) max. 850°C
Other on request

Sensor diameter Ø [mm]: -----
Ø6 / Ø8
Other on request

Insert length L1 [mm]: -----
125
175
225
275
325
525
735
1025
1425
Special

ELECTRICAL SPECIFICATIONS

---Sensor element:
1xPt100
2xPt100
1xPt1000 (only cl. B 1/1 and cl. A)
2xPt1000 (only cl. B 1/1 and cl. A)

---Number of conductors:
2-wire (recommended only for Pt1000)
3-wire
4-wire

---Media temperature max:
+180°C
+250°C
+400°C
+600°C (only cl. B 1/1 Pt100 and Pt1000)

---Tolerance in acc. with IEC 60751:
Type A DIN (i.e. $\pm(0,15+0,002 \times \text{Tactual})$ °C)
Type B 1/1 DIN (i.e. $\pm(0,3+0,005 \times \text{Tactual})$ °C)
Type B 1/3 DIN (i.e. $\pm(0,1+0,0017 \times \text{Tactual})$ °C)
Type B 1/6 DIN (i.e. $\pm(0,05+0,00083 \times \text{Tactual})$ °C)
Type B 1/10 DIN (i.e. $\pm(0,03+0,0005 \times \text{Tactual})$ °C)

Link for further information: [Pt100 Tolerance](#)

RESISTANCE THERMOMETER

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Calibration:

Temperature calibration are used to verify and certify the sensor to have the correct accuracy. We can do either: "In house" or "Accredited" calibration. Accredited is certified by 3.e part. Normally we do a calibration in 3 points.

Enhanced performance services:

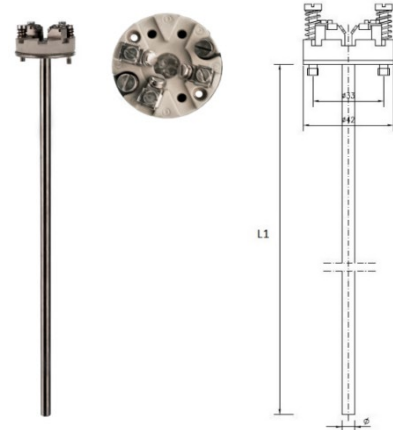
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

A sensor will always drift over time, especially when there are high temperature fluctuations.

With "Ageing treatment" we stabilize the sensor to ensure a minimum drift over time. The benefits are long term stability, more correct measurement and easier planning of calibration periods.

Documentation:

Please order the correct documentation when ordering the sensor.



SIGNAL PROCESSING

Ceramic socket mounted. -----

Prepared for transmitter w/o ceramic socket. -----
w/long leads

Programmable head mounted transmitter-----

Measuring range min/max: -200/+850°C

Output: 2-wire, 4-20 mA

Min. span: 25°C

Ambient temperature min/max: -40/+85°C

[5333A Uninsulated for RTD](#)

[5333D EEX Uninsulated for RTD](#)

[5332A Uninsulated for RTD](#)

[5332D EEX Uninsulated for RTD](#)

[5331A Galvanic Isolated RTD / TC](#)

[5331D EEX Galvanic Isolated RTD / TC](#)

[5335A Hart 5 Protocol Standard](#)

[5335D Hart 5 Protocol CSA, FM, ATEX, IECEx](#)

[5337A Hart 5 & 7 Protocol](#)

[5337D Hart 5 & 7 Protocol CSA, FM, ATEX, IECEx](#)



Transmitter Type:			
4 mA =	C°	20 mA =	C°

Programmable rail mounted transmitter

Link to further information: [Transmitter Overview](#)

CALIBRATION

---Calibration:

In house (Span -33°C - +700°C)

Accredited – in laboratory (-196°C - +1200°C)

1. Point	°C
2. Point	°C
3. Point	°C

More point on request

[Enhanced performance services](#)

-----Cryo treatment.

For temperature sensor under -50°C

-----Ageing:

For long term stability.

Secure minimum drift of sensor accuracy

-----Documentation

Certificate: 3.1 Material

Certificate of origin

Certificate of conformity

-----Marine Certificate

Certificate of DNV

Certificate of BV

Certificate of Rina

Certificate of ClassNK

Certificate of LR

Certificate of ABS

Other on request

THERMOCOUPLE

Measuring insert: Fixed

Sensor element: Thermocouple

Type: IN
T40/T60/T85

Sheet No.
4-15 V2.1

10130-E010321V3.1

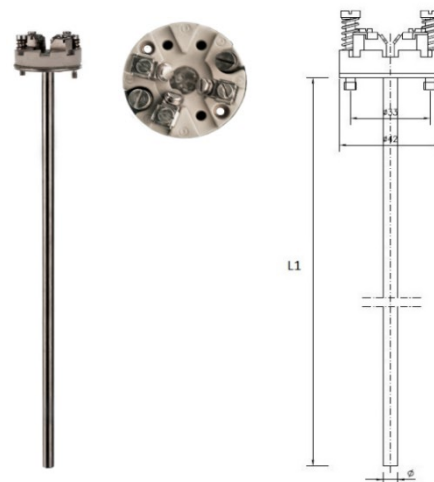


Application:

- For type A and B sensors with standard heads
- Electrical connection: Standard heads

Properties:

- Thermocouple type K, J, E, N or T in acc. with IEC 60584-1
- Thermocouple weld: Insulated
- Constructed in accordance with DIN 43733
- Process attachment: Loose wires, ceramic block with terminals, temperature transmitter or special process attachment
- Marine approved by: DNV, LR, NK, RINA, ABS and BV



MECHANICAL SPECIFICATIONS:

Protective sheath: -----

EN 1.4571 (AISI 316Ti) max. 850°C

Other on request

Protective sheath diameter Ø [mm]: -----

Ø6

Ø8

Special

Insert length L1 [mm]: -----

125

175

225

275

325

525

735

1025

1425

Special

ELECTRICAL SPECIFICATIONS:

-----Sensor type:

Type K (Fe-CuNi) max. +1150°C

Type J (NiCr-Ni) max. +700°C

Type E (NiCr-CuNi) max. +800°C

Type N (NiCrSi-Ni) max. +1250°C

Type T (Cu-CuNi) max. +300°C

Special

-----Number of thermocouples:

1xTC

2xTC

Special

-----Media temperatures max.:

+400°C (T40)

+600°C (T60)

+850°C (T85)

Special

-----Tolerance in acc. with DIN 43732:

Class 1

Class 2

THERMOCOUPLE
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Sheet No.
4-15 V2.1
10130-E010321V3.1



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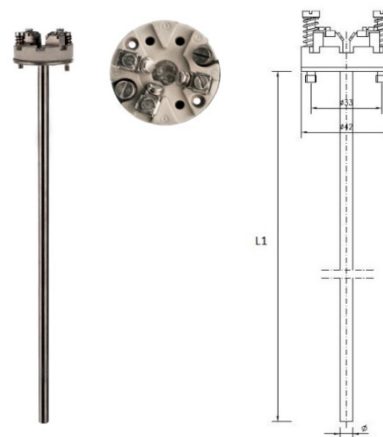
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Documentation:

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SIGNAL PROCESSING

Ceramic socket mounted in terminal head. -----

**Prepared for transmitter w/o ceramic socket. -----
w/long leads**

Programmable head mounted transmitter-----

Measuring range min/max: -200/+1800°C
Output: 2-wire, 4-20 mA
Min. span: 25°C
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[Programmable rail mounted transmitter](#)

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