

RESISTANCE THERMOMETER

Measuring insert: Interchangeable

Type: BP1

5452-E280325V3.2

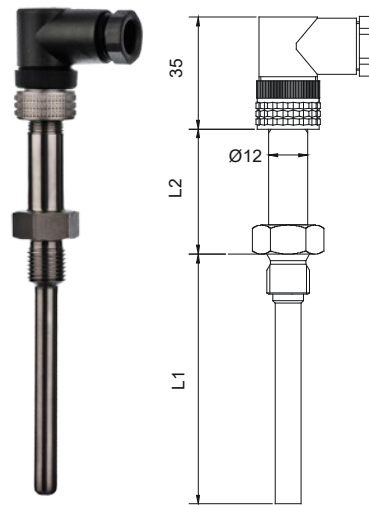


Application:

- For measuring temperatures of liquid and gaseous media
- The measuring inset can be replaced or calibrated without shutting down the system
- For operations that require the sensor to couple quickly and uncouple electrically, and where a secure fixing of the cable is needed
- Usually applied in: Processing plants, the shipping industry, the refrigeration industry, the engineering industry, the energy industry

Properties:

- Pt100 and Pt1000 in acc. with IEC 60751
- Mechanical and thermal stress in accordance with DIN 43772
- Measuring insert: Interchangeable
- Electrical connection: Valve plug (degree of protection IP65)
- Process attachment: Thread
- Outer protective sheath and nipple: Stainless acid-proof steel
- Stands media temperatures of up to max. 250°C
- Ambient temperature min./max.: -25/+120°C
- Withstands vibrations
- Quick reaction time
- Marine approved by: DNV, LR, NK, RINA, ABS and BV



MECHANICAL SPECIFICATIONS:

Protective sheath: -----
EN 1.4571 (AISI 316Ti), max. 850°C
Special

Sensor diameter [mm]: -----
Ø8
Ø6 (only with fixed measuring insert)
Special

Immersion length L1 [mm]: -----
50 / 80 / 100 / 150 / 200 / 250
Special

Process attachment: -----
1/4" BSP welded coupling
1/2" BSP welded coupling

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

-----Temperature range min/max:

-50/+180°C
-50/+250°C
Special

-----Tolerance in acc. with IEC 60751:

Type A DIN (i.e. $\pm(0,15+0,002 \times T_{\text{actual}})^{\circ}\text{C}$)
Type B 1/1 DIN (i.e. $\pm(0,3+0,005 \times T_{\text{actual}})^{\circ}\text{C}$)
Type B 1/3 DIN (i.e. $\pm(0,1+0,0017 \times T_{\text{actual}})^{\circ}\text{C}$)
Type B 1/6 DIN (i.e. $\pm(0,06+0,00083 \times T_{\text{actual}})^{\circ}\text{C}$)
Type B 1/10 DIN (i.e. $\pm(0,03+0,0005 \times T_{\text{actual}})^{\circ}\text{C}$)
Special

-----Electrical connection:

(pre-mounted in valve plug)
Cable type SS (Silicone-Silicone)
Cable type SBS (Silicone-Braided-Silicone)
Cable type TBT (Teflon-Braided-Teflon)
Special

-----Cable length L2 [m]:

2 / 4 / 6 / 10
Special

-----Degree of protection:

IP54
IP67

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

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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:

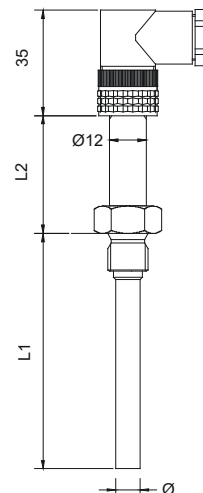
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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

Enclosure

Marine Box (112x82x42mm) -----

ABS Box (82x80x56mm) -----

NONE -----

Programmable 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°

Link to further information:

[Transmitter Overview](#)

[Programmable rail mounted transmitter](#)

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