

RESISTANCE THERMOMETER

Measuring insert: Interchangeable

Type: BP1

Sheet No.
1-20 V2

5452-E010721V3.1

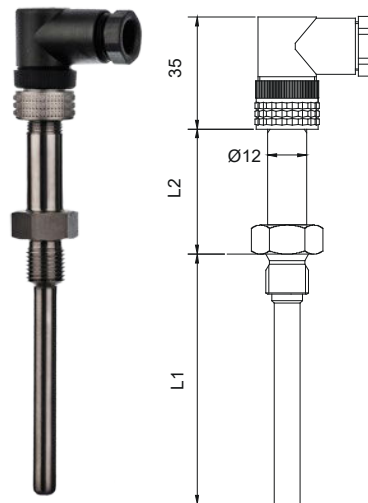


Application:

- 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](#)

Date:

Part No.

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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:

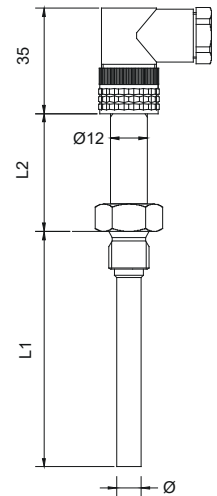
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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

None

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.GL
Certificate of BV
Certificate of Rina
Certificate of ClassNK
Certificate of LR
Certificate of ABS

Other on request

Date:

Part No.