

RESISTANCE THERMOMETER

Measuring insert: Fixed

Type:
RT-BUI-M

Sheet No.
1-8 V2.1

5451-E010721V3.1

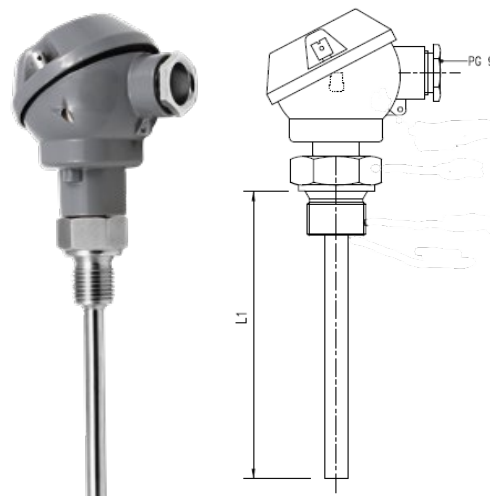


Application:

- For measuring temperatures where a quick reaction time is required
- Typically applied in:
 - processing plants
 - power plants
 - district heating, energy distribution

Properties:

- Pt100, Pt1000 resistance thermometer in accordance with IEC 60751
- Mechanical and thermal stress in accordance with DIN 43772
- Process attachment: Welded
- Measuring insert: Fixed
- Outer protective sheath: Stainless acid-proof steel
- Modular construction and standard length minimize the number of spare parts
- Can be delivered with head mounted transmitter



MECHANICAL SPECIFICATIONS

Protective sheath: -----

EN 1.4571 (AISI 316Ti)
Special

Sensor diameter Ø [mm]: -----

Ø6 mm
Ø8 mm
Special

Immersion length L1 [mm]: -----

50 mm, 100 mm, 150 mm
Special

Process attachment: -----

Welded coupling 1/4" BSP
Welded coupling 1/2" BSP
None
Special

Protection head: -----

BM (aluminium, enamelled, low cap, IP62)
Special

Cable gland (pre-mounted): -----

None (standard – cable entry PG9)
Plastic
Nickle plated brass
Stainless acid-proof steel

Please specify cable diameter: -----

ELECTRICAL SPECIFICATIONS

---Plug (pre-mounted In Head):

M12 (for M20)
Harting (specify type)
Other on request
None

---Cable (pre-mounted in Head):

SS (Silicone-Silicone) max. 180°C
SBS (Silicone-Inner Braided-Silicone) max. 180°C
TBT (Teflon-Inner Braided-Teflon) max. 250°C
None

---Cable length [m]:

---Sensor element:

1xPt100
1xPt1000 (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

---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

Measuring insert: Fixed

Type:
RT-BUI-M

Sheet No.
1-8 V2.1

5451-E010721V3.1



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:

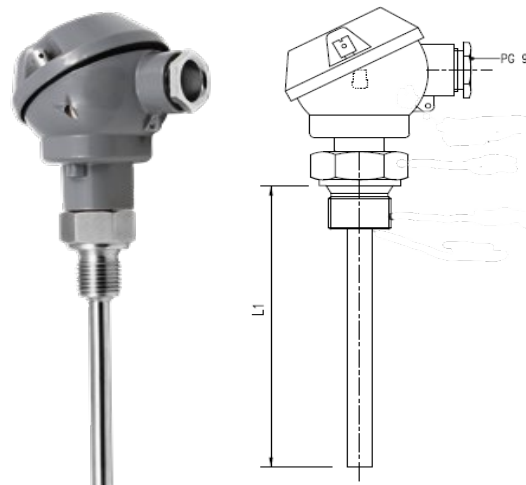
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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

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](#)

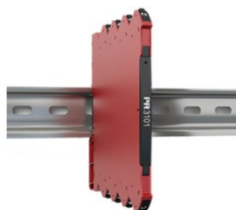


Transmitter Type:			
4 mA =	C°	20 mA =	C°

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

Other on request