

RESISTANCE THERMOMETER

Measuring insert: Fixed

Type: RT-BUI-R

5451-E060524V3.2

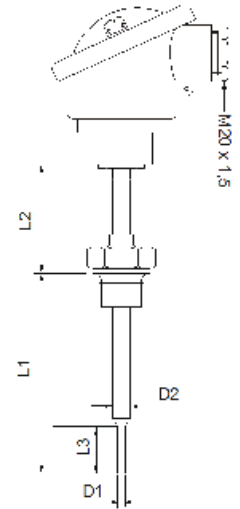


Application:

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

Properties:

- Pt100 resistance thermometer in accordance with IEC 60751
- Mechanical and thermal stress in accordance with DIN 43772
- Process attachment: Welded or adjustable coupling
- Measuring insert: Fixed, short reaction time
- Outer protective sheath: Stainless acid-proof steel
- Modular construction and standard length minimizes the number of spare parts
- Can be delivered with head mounted transmitter
- Marine approved by: DNV-GL, LR, NK, RINA, ABS and BV



MECHANICAL SPECIFICATIONS

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

Sensor diameter D2 [mm]:
 Ø6 / Ø8 / Ø9 / Ø11 / Ø15
 Other on request

Extension length L2 [mm]:
 None (13 mm) / 50 / 100 / 150
 Other on request

Immersion length L1 [mm]:
 50 / 100 / 150 / 200 / 250 / 300
 Other on request

Reduced tip:
 Standard: L3 = 18mm / D1 = Ø3mm
 Other on request

Process attachment:
 1/4" BSP welded coupling (max. Ø9mm)
 1/2" BSP welded coupling
 1/2" NPT welded coupling
 3/4" BSP welded coupling
 1" BSP welded coupling (min. Ø11mm)
 Other on request

Protection head:
 B (aluminium (Al), enamelled, low cap, IP62)
 BH (Al, enamelled, high cap, IP62)
 BSB (Al, tilting lid w/screw, low cap, IP65)
 BSBH (Al, tilting lid w/screw, high cap, IP65)
 BSBH-W (Al, tilting lid, high cap, digital display (excl. tr.), IP65)
 CE (Al, enamelled, screw cap, IP68)
 BRF (stainless steel, screw cap, M20x1,5, IP67)
 BRF-EEX (stainless steel, screw cap, M20x1,5, IP67)
 B-SRF (sanitary, stainless steel, screw cap, M20x1,5, IP67)
 Other on request

Cable gland (pre-mounted):
 None (standard – cable entry M20x1.5)
 Plastic
 Nickel 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
 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.±(0,15+0,002xTactual) °C)
 Type B 1/1 DIN (i.e.±(0,3+0,005xTactual) °C)
 Type B 1/3 DIN (i.e.±(0,1+0,0017xTactual) °C)
 Type B 1/6 DIN (i.e.±(0,05+0,00083xTactual) °C)
 Type B 1/10 DIN (i.e.±(0,03+0,0005xTactual) °C)

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

Date:

Part No.:

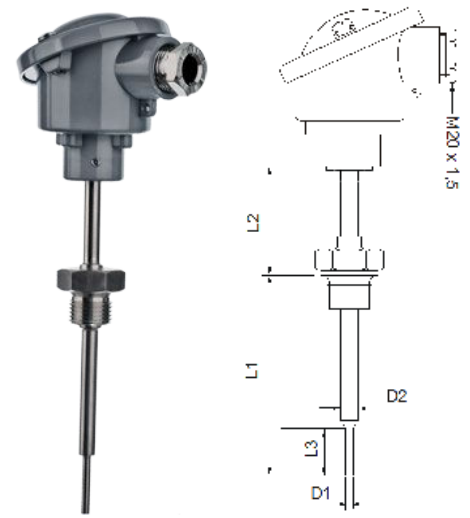
RESISTANCE THERMOMETER Measuring insert: Fixed	Type: RT-BUI-R	 5451-E060524V3.2
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Calibration:
 Temperature calibration are used to verify and certify the sensor to have the correct accuracy. We can do either: "In house" or "Accredited" calibration. 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 in terminal head. -----○
- Prepared for transmitter w/o ceramic socket. -----●
- 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

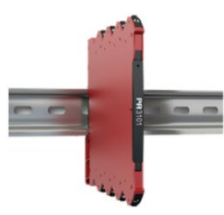
- [5333A Uninsulated for RTD](#)
- [5333D EEX Uninsulated for RTD](#)
- [5332A Uninsulated for RTD](#)
- [5332D EEX Uninsulated for RTD](#)
- [5331A Galvanic Isolated RTD / TC](#)
- [5331D EEX Galvanic Isolated RTD / TC](#)
- [5335A Hart 5 Protocol Standard](#)
- [5335D Hart 5 Protocol CSA, FM, ATEX, IECEx](#)
- [5337A Hart 5 & 7 Protocol](#)
- [5337D Hart 5 & 7 Protocol CSA, FM, ATEX, IECEx](#)



Transmitter Type:		<input style="width:100%;" type="text"/>	
4 mA =	<input style="width:50px;" type="text"/>	C°	20 mA =
	<input style="width:50px;" type="text"/>	C°	<input style="width:50px;" type="text"/>

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	<input style="width:80%;" type="text"/>	°C
2.	Point	<input style="width:80%;" type="text"/>	°C
3.	Point	<input style="width:80%;" type="text"/>	°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

<input type="button" value="Save"/>	<input type="button" value="Print"/>	<input type="button" value="Submit"/>
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Date:
Part No.: