

RESISTANCE THERMOMETER

Measuring insert: Fixed

Type:
RT-BCQ-IN

5452-E150825V3.0



Application:

- For measuring temperatures in the food industry and the pharmaceutical, cosmetic and chemical/ technical industries

Properties:

- Resistance thermometer Pt100 and Pt1000 in acc. with IEC 60751
- Mechanical and thermal stress in acc. with DIN 43772
- Measuring insert: Fixed
- Withstands media temperatures of up to max. 250°C
- Withstands vibrations
- Quick reaction time
- For sensor RT-BCQ and drilled (solid machined) thermowell w/bayonet coupling



MECHANICAL SPECIFICATIONS

Protective sheath: -----
EN 1.4404 (AISI 316L) max. 850°C

Sensor diameter Ø [mm]: -----
Ø4 / Ø6
Other on request

Immersion length L1 [mm]: -----
95 / 167
Other on request

Process attachment: -----
Quick connect

Protection head: -----
B-SRFQ (sanitary, stainless steel, screw cap.)
Other on request

Cable gland (pre-mounted): -----
None (PG9 thread)
PG9
Plastic
Nickel-plated brass
Stainless acid-proof steel

Please specify cable diameter: -----

ELECTRICAL SPECIFICATIONS

---Plug (pre-mounted in head):
M12
Harting (specify type)
None
Other on request

---Cable (pre-mounted in head):
SS (Silicone-Silicone) max. 180°C
SBS (Silicone-Inner Braided-Silicone)
TBT (Teflon-Inner Braided-Teflon)
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

---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](#)

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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 3rd 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 -----
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°

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