

RESISTANCE THERMOMETER
Measuring insert: Fixed

Type:
RT-RR1-SRF

Sheet No.
1-30 V2.1
5853-E010818V2.1



Application:

- For measuring indoor and outdoor air temperatures
- For damp rooms
- For freezer compartments
- For storage containers

Properties:

- Pt100 or Pt1000 resistance thermometer in acc. with IEC 60751
- Measuring insert: Fixed
- Process attachment: Stainless acid-proof steel
- Resists shocks and vibrations
- Outer protective sheath: Stainless acid-proof steel
- IP67



MECHANICAL SPECIFICATIONS:

Protective sheath: -----

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

Protective sheath diameter Ø [mm]: -----

Ø6
Ø8
Other on request

Insert length L1 [mm]: -----

50
80
Other on request

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

Media temperature max:

-40/+80°C
Special

Tolerance in acc. with IEC 60751:

Type A DIN (i.e. $\pm(0,15+0,002 \times T_{\text{actual}})$ °C)
Type B 1/1 DIN (i.e. $\pm(0,3+0,005 \times T_{\text{actual}})$ °C)
Type B 1/3 DIN (i.e. $\pm(0,1+0,0017 \times T_{\text{actual}})$ °C)
Type B 1/6 DIN (i.e. $\pm(0,05+0,00083 \times T_{\text{actual}})$ °C)
Type B 1/10 DIN (i.e. $\pm(0,03+0,0005 \times T_{\text{actual}})$ °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 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. ----- ☐

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

[5350A Profibus standard](#)

[5350B Profibus ATEX, FM and CSA](#)

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

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