

**RESISTANCE THERMOMETER**  
Measuring insert: Interchangeable

**Type: RT-BC-  
APV**

Sheet No.  
2-5 V2

5452-E010721V3.1

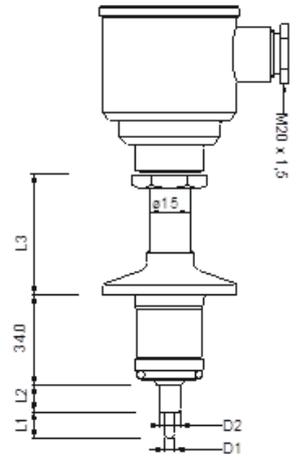


**Application:**

- In containers, tanks and pipe systems where the sensor can be replaced without emptying the system
- Applied in connection with "APV down part" Ø38-Clamp, tg. nr. 252851, where "dead volumes" in the process are not wanted
- Applied in the food industry and the pharmaceutical, cosmetic, and chemical/ technical industries

**Properties:**

- Sensor: Pt100 and Pt1000 in acc. with IEC 60751
- Mechanical and thermal stress in acc. with DIN 43772
- Parts with media contact in EN 14404 (AISI 316L)
- Withstands media temperatures up to max. 250°C
- Withstands vibrations. Quick reaction time
- Degree of protection determined by electrical connection; in this case protection head
- Following attachment of the sensor, the protection head can be turned to point in the desired direction
- Can be delivered with head mounted transmitter



**MECHANICAL SPECIFICATIONS**

**Protective sheath:**   
EN 1.4404 (AISI 316Ti) max. 850°C

**Extension length L3:**   
30 mm  
Special

**Immersion tube length L2:**   
10 mm  
Special

**Immersion tube length L1:**   
10 mm  
Special

**Immersion Tube Diameter D2:**   
Ø8 mm  
Special

**Immersion Tube Diameter D1:**   
Ø5 mm / Ø6 mm  
Special

**Surface area of parts with media contact:**   
Mechanically polished <0,8 µm  
Electro-polished <0,5 µm

**Protection head:**   
B (aluminium (Al), enamelled, low cap, IP62)  
BRF-M16 (stainless steel, screw cap, M20x1,5, IP67)  
BRF-M20 (stainless steel, screw cap, M20x1,5, IP67)  
SRF (stainless steel, screw cap, Cable Gland PG9, II)  
SRF (stainless steel, screw cap, M12x1 Plug, IP67)

**Cable gland (pre-mounted):**   
None (standard – cable entry M20x1.5)  
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  
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.±(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.**



**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:**

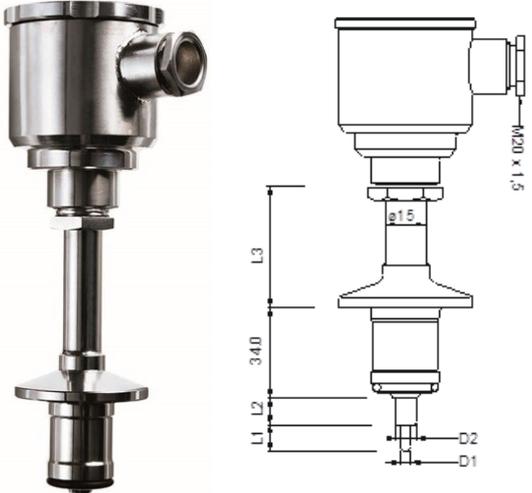
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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

**Programmable rail mounted transmitter**

Link for further information to [Rail mounted transmitter](#)

Link for further information: [Transmitter Overview](#)

**CALIBRATION**

**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

Others on request

Date:

Part No.