

# RESISTANCE THERMOMETER

Measuring insert: Fixed

Type: RT-  
AUFO

Sheet No.  
1-10 V2.1

5455-E010321V3.1

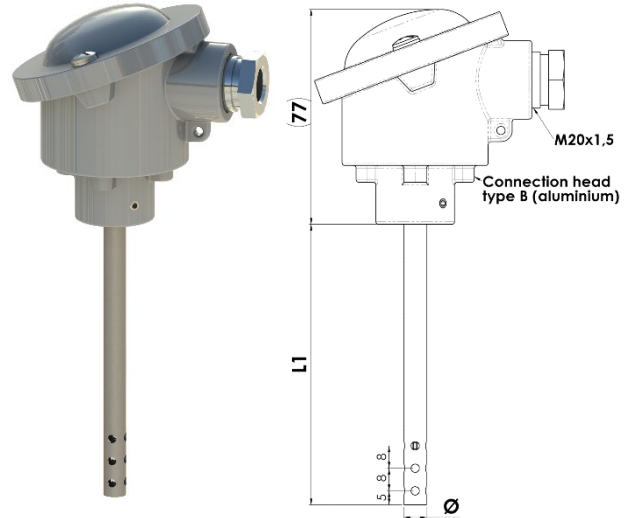


## Application:

- For measuring air-temperature
- Field of application: up to 250°C
- Typically applied in:
  - Processing plants
  - District heating, energy distribution
  - Ventilation, HVAC and Climate control.

## Properties:

- Pt100 resistance thermometer in accordance with IEC 60751
- Measuring insert: Fixed
- Withstands moisture
- Sensor: Quick reaction time
- Process attachment: Adjustable nipple or flange
- 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
- Sensor max. IP62
- Marine approved by: DNV·GL, LR, NK, RINA, ABS, and BV
- Approved by: GOST, TRCU on request



## MECHANICAL SPECIFICATIONS

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

**Sensor diameter Ø [mm]:** -----  
Ø8  
Other on request

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

**Process attachment:** -----  
1/2" BSP adjustable nipple  
1/4" BSP adjustable nipple  
None  
Other on request

**Protection head:** -----  
B (aluminium (Al), enamelled, low cap, IP62)  
BH (aluminium, enamelled, high cap, IP62)  
BSB (aluminium, tilting lid w. screw, low cap, IP65)  
BSBH (aluminium, tilting lid w. screw, high cap, IP65)  
BRF-M20 (stainless, screw cap, M20x1.5, IP67)  
CE (aluminium, enamelled, screw cap, IP68)  
Other on request

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

**---Cable (pre-mounted):**  
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.±(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](#)

**RESISTANCE THERMOMETER**  
Measuring insert: Fixed

**Type: RT-  
AUFO**

Sheet No.  
1-10 V2.1

5455- E010321V3.1



**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:**

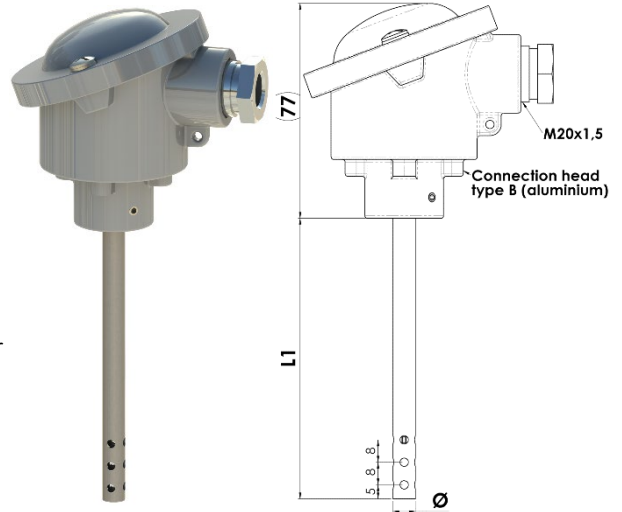
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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**

**Head mounted transmitter**

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](#)

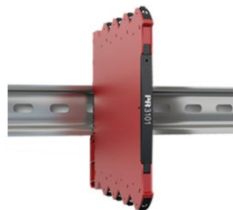
[5337D Hart 5 & 7 Protocol CSA, FM, ATEX, IECEx](#)



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

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

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



**CALIBRATION**

**---Calibration:**

In house (Span)  
Accredited – in laboratory

1.	Point	°C
2.	Point	°C
3.	Point	°C

**Enhanced performance services**

**-----Cryo treatment.**

For temperature sensor under -50°C

**-----Ageing:**

For long term stability.

**-----Documentation**

Certificate: 3.1 Material  
Certificate of origin  
Certificate of conformity  
Certificate of GOST

**-----Marine Certificate**

Certificate of DNV.GL  
Certificate of BV  
Certificate of Rina  
Certificate of ClassNK  
Certificate of LR  
Certificate of ABS  
Other on request