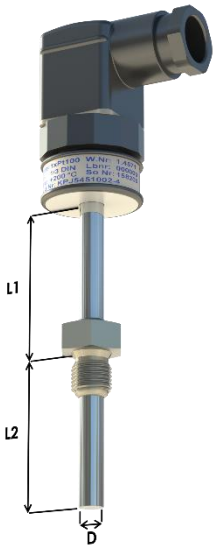
RESISTANCE THERMOMETER **Measuring insert: Fixed**	**Type:** **RT-BP2-T**	Sheet No. 1-21 V2.1 **5451-E010321V3**

Application:

- For measuring temperatures of liquid and gaseous media
- Integrated transmitter with output signal: 4-20 mA @10-30V supply.
- For operations that require the sensor to connect/disconnect electrically fast and easy, and where a secure fixing of the cable is needed.
- Usually applied in: Processing plants, the shipping industry, the refrigeration industry, the engineering industry, the energy industry



Properties:

- Sensor: Pt100 in acc. with IEC 60751
- Mechanical and thermal stress in accordance with DIN 43772
- Electrical connection: Valve plug PG9 or PG11 (IP 65)
- Process attachment: Thread
- Outer protective sheath and nipple: Stainless acid-proof steel
- Stands media temperatures of up to max 200°C
- Ambient temperature min/max: -40/+80°C
- Withstands vibrations.
- Quick reaction time

MECHANICAL SPECIFICATIONS:

Protective sheath: ----------
EN 1.4571 (AISI 316Ti)
Special

Sensor diameter [mm]: ----------
Ø8
Ø6
Special

Immersion length L1 [mm]: ----------
50 / 80 / 100 / 150 / 200 / 250
Special

Extension length L2 [mm]: ----------
None (standard)
50mm (requirement above 150°C)
Special

Process attachment: ----------
1/4" BSP welding coupling
1/2" BSP welding coupling
Special

ELECTRICAL SPECIFICATIONS

----Temperature:
T1: -50°C - +50°C
T2: 0°C - +100°C
T3: 0°C - +150°C (Extension length 50mm)
T4: 0°C - +200°C (Extension length 50mm)
Others on request

----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)

----Electrical connection:
Valve plug PG9
Valve plug PG11

----Cable (pre-mounted in Valve plug):
SS (Silicone-Silicone) max. 180°C
SBS (Silicone-Inner Braided-Silicone)
TBT (Teflon-Inner Braided-Teflon)
None

----Cable length [m]:

Link for further information: Pt100 Tolerance

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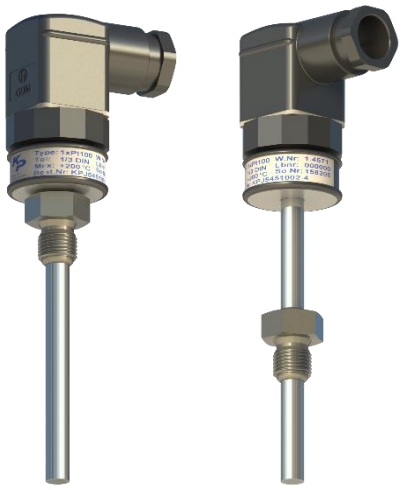
RESISTANCE THERMOMETER **Measuring insert: Fixed**	**Type: RT-BP2-T**	Sheet No. 1-21 V2.1 **5451- E010321V3**

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.



Installation:

The sensor is a 4-20mA sensor.

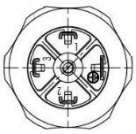
Burden resistor can be calculated using this formula:

$$Rburden = \frac{\text{Vsupply} - 10\text{V}}{20\ mA}$$

Supply:
10-30 VDC.

Output:
4-20mA, current limited to max 30mA.

Electrical connections:



1 + supply.
2 – supply
3 not connected.
4 Earth. Cable shield can be connected here.
This connector is electrically connected to the metal housing of the sensor.

We recommend using a shielded twisted pair cable. Connect the cable shield to connector 4.

ENVIRONMENTAL:

Temperature on electronics:	-40°C to 85°C.
Media temperature:	-50°C to 200°C.

Max 100°C. without cooling neck.

Transportation temperature:	-50°C to 85°C.
Storage temperature:	-40°C to 85°C.

EMC:

Emission:	Domestic, EN 61000-6-3
Immunity:	Industrial, EN 61000-6-2

Vibration:

Random 5,34g 50Hz – 1kHz.	EN 60068-2-64
Shock 30g	EN 60068-2-27

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
Certificate of GOST

Other on request

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