RESISTANCE THERMOMETER
Measuring insert: Fixed

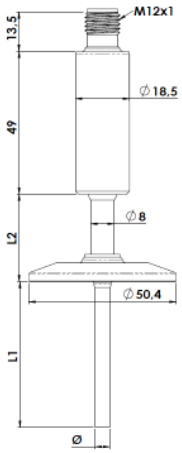
Type: BP1-T-C

5459-E260924V3.2

Application:

- For measuring temperatures of liquid and gaseous media
- Integrated programmable transmitter with output signal: 4-20 mA
- For operations that require the sensor to couple quickly and uncouple electrically, and where a secure fixing of the cable is needed
- Usually applied in: Hygienic industry, Food and Beverage, Pharma





Properties:

- Integrated programmable transmitter with output signal 4/20mA
- Pt100 and Pt1000 in acc. with IEC 60751, 3-wire
- Mechanical and thermal stress in accordance with DIN 43772
- Measuring insert: Fixed
- Electrical connection: M12 (degree of protection IP65)
- Process attachment: Tri-Clamp
- Outer protective sheath and nipple: Stainless acid-proof steel
- Stands media temperatures of up to max. 250°C
- Ambient temperature min./max.: -40/+85°C
- Withstands vibrations
- Quick reaction time

MECHANICAL SPECIFICATIONS:

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

Sensor diameter [mm] ----------
Ø5
Special

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

Extension length L2 [mm]: ----------
None
50mm
Special

Process attachment: ----------
Clamp 3/4" APC
Clamp 11/2" DN38, ISO2852
Clamp 2" DN51, ISO2852
Special

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

ELECTRICAL SPECIFICATIONS

----Sensor element:
1xPt100
1xPt1000 (only cl. B 1/1 and cl. A)

----Temperature range min/max:
-50/+180°C
-50/+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.±(0,06+0,00083xTactual)°C)
Type B 1/10 DIN (i.e.±(0,03+0,0005xTactual)°C)
Special

----M12 connector:
Angled 90°
Straight
None

----Cable:
(pre-mounted in M12 connector)
Cable type SS (Silicone-Silicone)
Cable type SBS (Silicone-Braided-Silicone)
Cable type TBT (Teflon-Braided-Teflon)
Special

----Cable length L2 [m]:
2 / 4 / 6 / 10
Special

Link for further information: Pt100 Tolerance

Date:

Part No.:

Kjaerulf Pedersen a/s, Taastrupgaardsvej 8-10, DK-2630 Taastrup, Tel.: +45 39760203, sales@kp-as.com, www.kp-as.com

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RESISTANCE THERMOMETER **Measuring insert: Fixed**	**Type: BP1-T**	**5459-E260924V3.2**

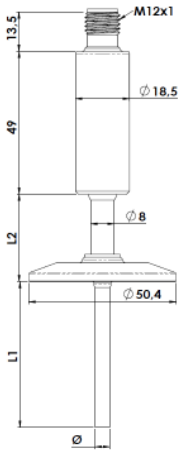
Calibration:
Temperature calibration are used to verify and certify the sensor to have the correct accuracy. We can do either: “In house” or “Accredited” calibration. Accredited is certified by 3.e part. Normally we do a calibration in 3 points.

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

Common specifications

Supply	
Supply voltage:	8.0 … 35 VDC
Iinternal power dissipation:	25 mW … 0.8 W
Respone time	
Respone time (Programmable):	0.33 … 60 s
Voltage drop:	8.0 VDC
Warm-up time:	5 min
Programming:	Loop Link
Singal / Noise ratio:Min.	60 dB
Signal dynamics, input:	19 bit
Signal dynamics, output:	16 bit
Effect of supply voltage change:	< 0.005% of span /VDC
Accuracy	Better than 0.1% of sel. Range
EMC immunity influence:	<+/-0.5% of span

Range:

4mA: [ ] °C

20mA: [ ] °C

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 points 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

Date:

Part No.:

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