

RESISTANCE THERMOMETER

Measuring insert: Interchangeable

Type: RT-B

5452-E170424V3.3

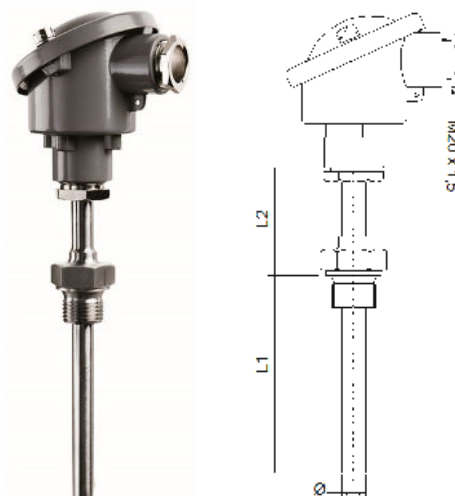


Application:

- Measurement of temperatures in closed pipelines and containers with gaseous or liquid media, e.g. air, steam, gas, water or oil.
- Field of application: up to 600°C, max. 50bar and media velocities of up to 25 m/sec
- Typically applied in:
 - Processing plants
 - Power plants
 - District heating, energy distribution

Properties:

- Pt100 or Pt1000 resistance thermometer in accordance with IEC 60751
- Mechanical and thermal stress in accordance with DIN 43772
- Process attachment: Welded
- Measuring insert: Interchangeable, short reaction time
- 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
- Marine approved by: DNV, LR, NK, RINA, ABS and BV



MECHANICAL SPECIFICATIONS

Protective sheath:

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

Sensor diameter Ø [mm]:

Ø8 / Ø9 / Ø11 / Ø15
Other on request

Extension length L2 [mm]:

None (30 mm) / 50 / 100 / 150
Other on request

Immersion length L1 [mm]:

50 / 100 / 150 / 200 / 250 / 300
Other on request

Process attachment:

1/4" BSP welded coupling (max. Ø9mm)
1/2" BSP welded coupling
1/2" NPT welded coupling
3/4" BSP welded coupling
1" BSP welded coupling (min. Ø11mm)
Other on request

Protection head:

B (aluminium (Al), enamelled, low cap, IP62)
BH (Al, enamelled, high cap, IP62)
BSB (Al, tilting lid w/screw, low cap, IP65)
BSBH (Al, tilting lid w/screw, high cap, IP65)
BSBH-W (Al, tilting lid, high cap, digital display (excl. tr.), IP65)
CE (Al, enamelled, screw cap, IP68)
BSP (plastic, black, screw cap, IP54)
BRF (stainless steel, screw cap, M20x1.5, IP67)
BRF-EEX (stainless steel, screw cap, M20x1.5, IP67)
B-SRF (sanitary, stainless steel, screw cap, PG9 thread, IP67)
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 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
+400°C
+600°C (only cl. B 1/1 Pt100 and Pt1000)

--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.:

RESISTANCE THERMOMETER

Measuring insert: Interchangeable

Type: RT-B

5452- E170424V3.3



Calibration:

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

Enhanced performance services:

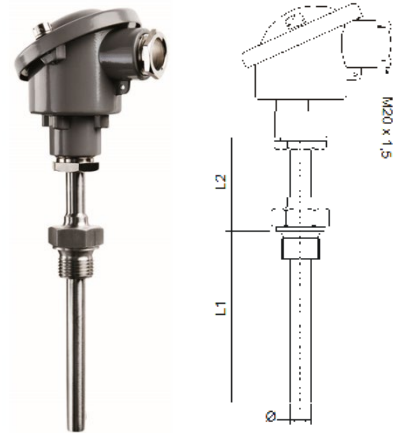
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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:

Remember to 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](#)

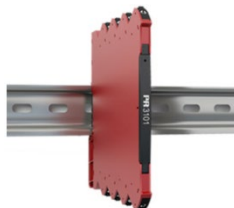


Transmitter Type:	
4 mA = C°	20 mA = C°

Link to further information:

[Transmitter Overview](#)

[Programmable rail mounted transmitter](#)



CALIBRATION

None

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 Class NK

Certificate of LR

Certificate of ABS

Other on request

Date:

Part No.:

THERMOCOUPLE THERMOMETER

Measuring insert: Interchangeable

Type: TC-B

5352-E220525V3.3

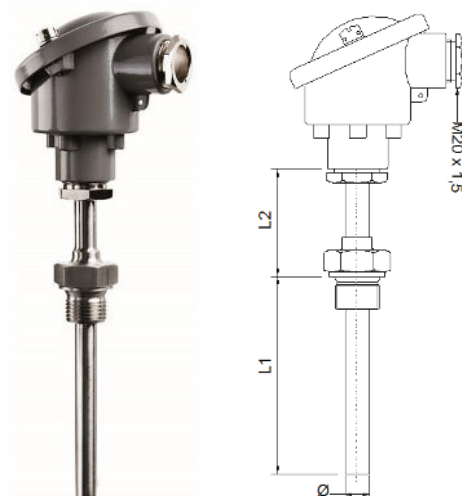


Application:

- For measuring temperatures in closed pipelines and containers with gaseous or liquid media, e.g. air, steam, gas, water or oil.
- Field of application: up to 1250°C (depending on thermocouple)
- Usually applied in: tile works, refuse disposal plants, processing plants, power plants, district heating, energy distribution

Properties:

- Thermocouple thermometer type K, J, E, N, T in acc. with DIN IEC 60584-1
- Constructed in accordance with DIN 50446
- Measuring insert: Interchangeable
- Outer protective tube: Heat-proof steel or stainless acid-proof steel
- Modular construction and standard length minimizes the number of spare parts.
- Can be delivered with head mounted transmitter
- Marine approved by: DNV, LR, NK, RINA, ABS, and BV



MECHANICAL SPECIFICATIONS

Protective sheath: -----

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

Sensor diameter Ø [mm]: -----

Ø8 / Ø9 / Ø11 / Ø15
Other on request

Extension length L2 [mm]: -----

50 / 100 / 150
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Immersion length L1 [mm]: -----

50 / 100 / 150 / 200 / 250 / 300
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Process attachment: -----

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Other on request

Cable gland (pre-mounted in Head): -----

None (standard – cable entry M20x1.5)
Plastic
Nickel 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):

PP (Plastic-Plastic)
SS (Silicone-Silicone) max. 180°C
SBS (Silicone-Inner Braided-Silicone)
TBT (Teflon-Inner Braided-Teflon)
None

Cable length [m]:

Sensor Type:

Type K (NiCr-Ni) max. +1150°C
Type J (Fe-CuNi) max. +700°C
Type N (NiCrSi-Ni) max. +1250°C
Type E (NiCr-CuNi) max. +800°C
Type T (Cu-CuNi) max. +300°C
Other on request

Number of thermocouples:

1xTC
2xTC
Other on request

Media temperature max:

+600°C
+800°C
+1250°C

Tolerance in acc. with IEC 60584-2:

Class 1 for K,J,N,E (i.e. ±1,5°C or ±(0,0040xT)
Class 2 for K,J,N,E (i.e. ±2,5°C or ±(0,0075xT)
Class 1 for T (i.e. ±0,5°C or ±(0,0040xT)
Class 2 for T (i.e. ±1,5°C or ±(0,0075xT)

Link for further information: [TC 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

THERMOCOUPLE THERMOMETER
Measuring insert: Interchangeable

Type: TC-B

5352-E220525V3.3



Calibration:

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Enhanced performance services:

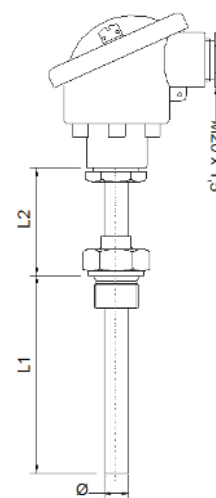
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Ambient temperature min/max: -40/+85°C

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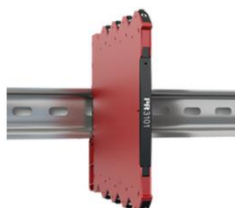


Transmitter Type:	
4 mA = C°	20 mA = C°

Link to further information:

[Transmitter Overview](#)

[Programmable rail mounted transmitter](#)



CALIBRATION

None

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



Marine Certificate

Certificate of DNV

Certificate of BV

Certificate of Rina

Certificate of ClassNK

Certificate of LR

Certificate of ABS

Other on request

Date:

Part No.: