RESISTANCE THERMOMETER
Measuring insert: Interchangeable

Type: RT D/DS/DDS

Sheet No.
1-17 V2

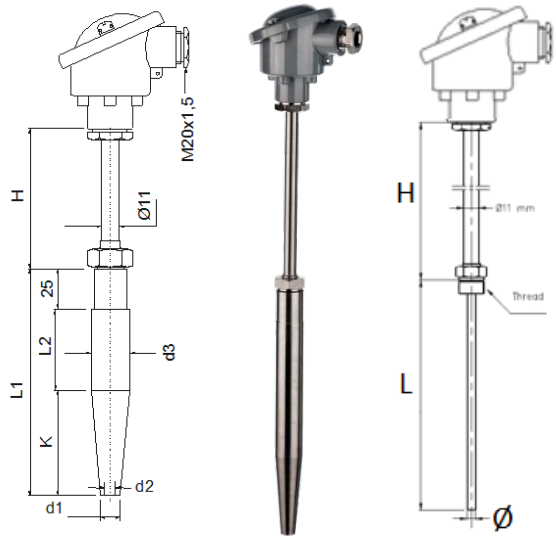
5453-E241121V3.1

Application:

- Measurement of temperatures in closed pipelines and containers with gaseous or liquid media, e.g. air, steam, gas, water or oil in places with high pressure or high media speeds.
- Field of application: up to 600°C, max. 500 bar

Properties:

- Pt100 and Pt1000 resistance thermometer in acc. with IEC 60751
- Mechanical and thermal stress in accordance with DIN 43772
- Process attachment: Solid weld-in thermowell
- 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
- Approved by: GOST, TRCU on request.



MECHANICAL SPECIFICATIONS

Protective sheath: ----------
Steel 1.7335 (13CrMo44)
Steel 1.0460 (C22.8)
Stainless acid-proof steel EN 1.4571 (AISI 316Ti)
Stainless acid-proof steel EN 1.4404 (AISI 316L)

Weld-in thermowell type: ----------
None – if none, please inform thermowell type for which insert should fit D

Thermowell type:	L1 [mm]	K [mm]	d3 Ø	d1 Ø	d2 Ø	Thread
D1	140	65	24	12,5	7,0	M18x1.5
D4	200	65	24	12,5	7,0	M18x1.5
D5	260	125	24	12,5	7,0	M18x1.5
D4S	140	65	18	9,0	3,5	M14x1.5
D4SS	200	65	18	9,0	3,5	M14x1.5
D5S	260	125	18	9,0	3,5	M14x1.5

Extension length H [mm]: ----------
Ø11x152
Ø11x252
Special

Welding boss: ----------

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, M20x1,5, IP67)
Other on request

Cable gland (pre-mounted): ----------
None (standard – cable entry M20x1.5)
Plastic
Nickle platted 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.

Kjaerulf Pedersen a/s, Taastrupgaardsvej 8-10, DK-2630 Taastrup, Tel.: +45 39760203, Fax: +45 39760501, sensor@kp-as.com, www.kp-as.com

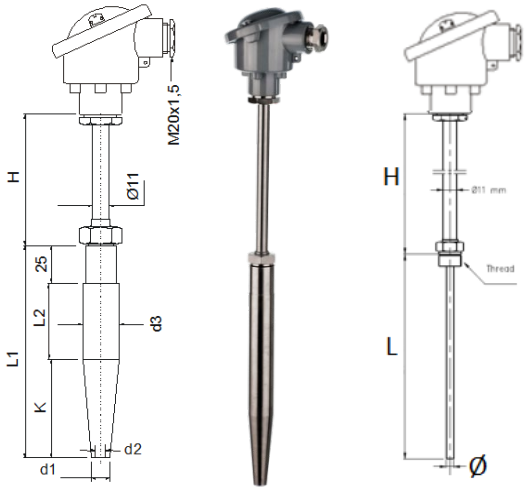
RESISTANCE THERMOMETER **Measuring insert: Interchangeable**	**Type: RT** D/DS/DDS	Sheet No. 1-17 V2 **5453-E241121V3.1**

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

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

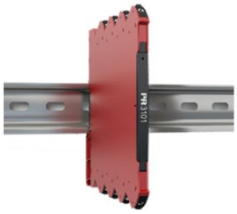
5333A Uninsulated for RTD
5333D EEX Uninsulated for RTD
5332A Uninsulated for RTD
5332D EEX Uninsulated for RTD
5331A Galvanic Isolated RTD / TC
5331D EEX Galvanic Isolated RTD / TC
5335A Hart 5 Protocol Standard
5335D Hart 5 Protocol CSA, FM, ATEX, IECEx
5337A Hart 5 & 7 Protocol
5337D Hart 5 & 7 Protocol 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
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

Date:

Part No.

Kjaerulf Pedersen a/s, Taastrupgaardsvej 8-10, DK-2630 Taastrup, Tel.: +45 39760203, Fax: +45 39760501, sensor@kp-as.com, www.kp-as.com

RESISTANCE THERMOMETER
Measuring insert: Interchangeable

Type: TC D/DS/DDS

Sheet No.
3-50 V2

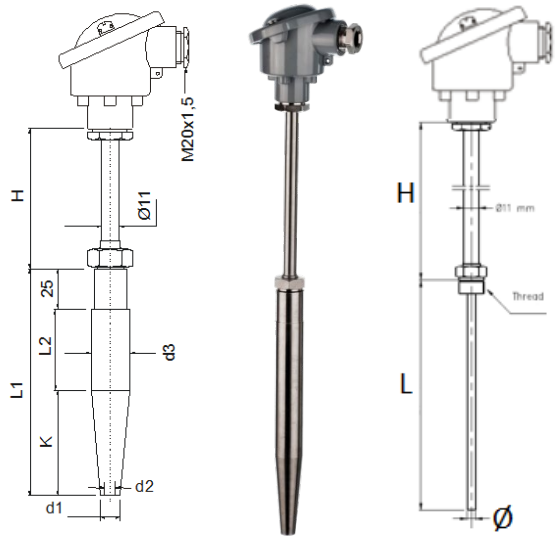
5354-E241121V3.1

Application:

- Measurement of temperatures in closed pipelines and containers with gaseous or liquid media, e.g. air, steam, gas, water or oil in places with high pressure or high media speeds.
- Field of application: up to 650°C, max. 500 bar

Properties:

- Mechanical and thermal stress in acc. with DIN 43767
- Tolerance in accordance with:
  DIN IEC 584-1
  DIN IEC 584-2
  DIN 43710
- Process attachment: Weld-in thermowell
- Outer protective sheath: Steel or stainless acid-proof steel
- Modular construction and standard length minimizes the number of spare parts
- Can be delivered with head mounted transmitter
- Measuring insert: Interchangeable
- Approved by: GOST, TRCU on request



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Extension length H [mm]: ----------
Ø11x152
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Special

Welding boss: ----------

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Other on request

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Nickle platted brass
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Please specify cable diameter: ----------

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--Plug (pre-mounted In Head):
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SBS (Silicone-Inner Braided-Silicone) max. 180°C
TBT (Teflon-Inner Braided-Teflon) max. 250°C
None

--Cable length [m]:

----Sensor element:
Type K (Ni-CrNi) max. 1150°C
Type J (Fe-CuNi) max. 700°C
Type N (NiCr-NiSi) max. 1200°C
Type E (NiCr-CuNi) max. 800°C
Special

----Number of thermocouples:
1xTC
2xTC

----Media temperatures:
Max. 850°C
Special

----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))

Link for further information: Pt100 Tolerance

Date:

Part No.

Kjaerulf Pedersen a/s, Taastrupgaardsvej 8-10, DK-2630 Taastrup, Tel.: +45 39760203, Fax: +45 39760501, sensor@kp-as.com, www.kp-as.com

RESISTANCE THERMOMETER **Measuring insert: Interchangeable**	**Type: TC D/DS/DDS**	Sheet No. 3-50 V2 **5354-E241121V3.1**

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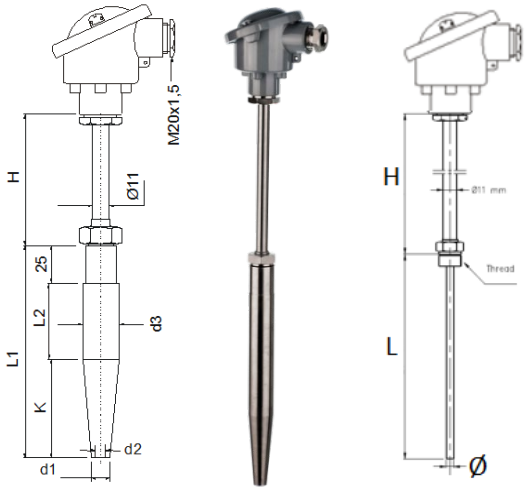

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5334D EEX Uninsulated for TC
5331A Galvanic Isolated RTD / TC
5331D EEX Galvanic Isolated RTD / TC
5335A Hart 5 Protocol Standard
5335D Hart 5 Protocol CSA, FM, ATEX, IECEx
5337A Hart 5 & 7 Protocol
5337D Hart 5 & 7 Protocol CSA, FM, ATEX, IECEx

Transmitter Type:			
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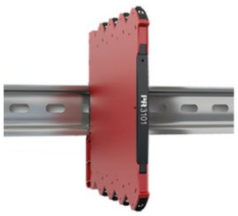

CALIBRATION

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5.	Point	°C
6.	Point	°C

More point on request

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For temperature sensor under -50°C

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☐ ----**Documentation**
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