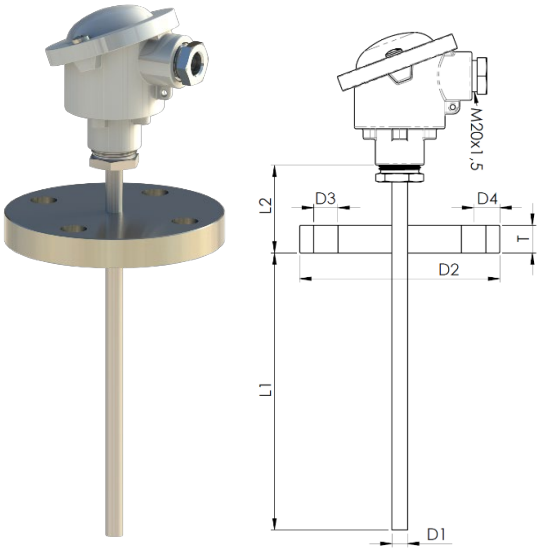
RESISTANCE THERMOMETER **Measuring insert: Interchangeable**	**Type: RT-B-FL**	Sheet No. 2-10 V2.1 **5452-E010321V3.1**

Application:

- For measuring temperatures in the Off-Shore, Marine, Food and pharmaceutical, cosmetic and chemical/ technical industries

Properties:

- Heavy Duty
- Sensor Pt100, 2xPt100, Pt1000 and 2xPt1000 in acc. with IEC 60751
- Measuring insert: interchangeable
- Process attachment: flange
- Outer protective sheath and flange: acid-proof steel
- Can be delivered with head mounted transmitter
- Different electrical connection
- 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 / Ø9 / Ø11/ Ø15
Other on request

Extension length L2 [mm]: ----------
50 / 100 / 150 / 200
Other on request

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

Process attachment: ----------
DN25 PN16
DN25 PN40
DN50
ANSI 1” 150Lbs
ANSI 2” 150Lbs
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, 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)
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
+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

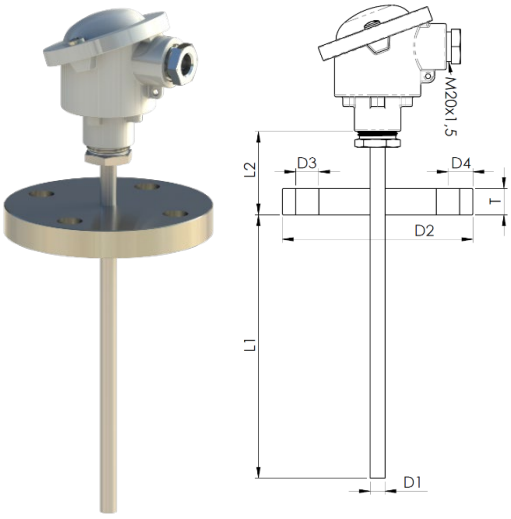
RESISTANCE THERMOMETER **Measuring insert: Interchangeable**	**Type: RT-B-FL**	Sheet No. 2-10 V2.1 **5452- E010321V3.1**

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

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

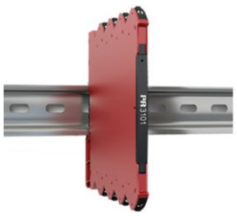
5333A Uninsulated for RTD
5333D EEX Uninsulated for RTD
5332A Uninsulated for RTD
5332D EEX Uninsulated for RTD
5331A Galvanic Isolated RTD / TC
5331D EEX Galvanic Isolated RTD / TC
5335A Hart 5 Protocol Standard
5335D Hart 5 Protocol CSA, FM, ATEX, IECEx
5337A Hart 5 & 7 Protocol
5337D Hart 5 & 7 Protocol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

Save Print Submit

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

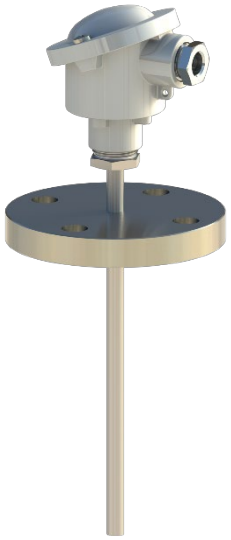
THERMOCOUPLE THERMOMETER **Measuring insert: Interchangeable**	**Type: TC-B-FL**	Sheet No. 3-3 V2 **5353- E010321V3.1**

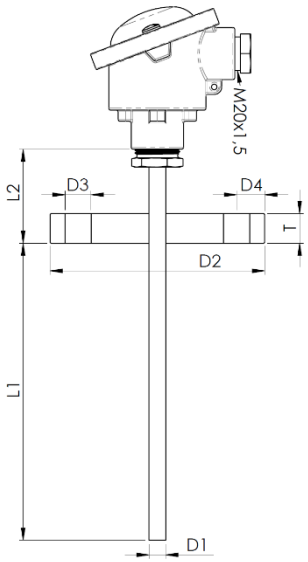
Application:

- 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 minimize the number of spare parts.
- Can be delivered with head mounted transmitter





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 mm, 100mm, 150mm
Other on request

Immersion length L1 [mm]: ----------
100mm, 150mm, 200mm, 250mm
Other on request

Process attachment: ----------
DN25 PN16
DN25 PN40
ANSI 1" 150Lbs
ANSI 2" 150Lbs
Other on request

Protection head: ----------
B (aluminum, enameled, low cap, IP62)
BH (aluminum, enameled, high cap, IP62)
BSB (aluminum, tilting cap with screw, low cap, IP65)
BSBH (aluminum, tilting cap with screw, high cap, IP65
CE (aluminum, enameled, IP68)
BSP (plastic, black, screw cap, IP54)
BRF-M16 (stainless steel, screw cap, M16x1,5, IP67)
BRF-M20 (stainless steel, screw cap, M20x1,5, IP67)
Other on request

Cable gland (pre-mounted in Head): ---------
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)
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 DIN 50446:
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.**

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THERMOCOUPLE THERMOMETER **Measuring insert: Interchangeable**	**Type: TC-B-FL**	Sheet No. 3-3 V2 **5353- 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.

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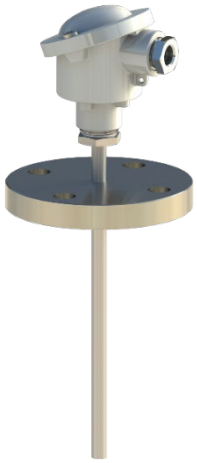

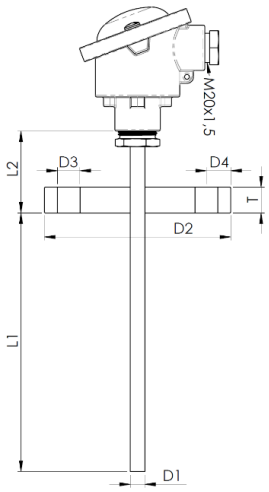

SIGNAL PROCESSING

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

5334A Uninsulated for TC
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:			
4 mA =	C°	20 mA =	C°

Programmable rail mounted transmitter

Link for further information to Rail mounted transmitter

Link for further information: Transmitter Overview

CALIBRATION

None ----**Calibration:**
In house (Span)
Accredited – in laboratory

4.	Point	°C
5.	Point	°C
6.	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

Link for further information:

Save Print Submit

Date: **Part No.**

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