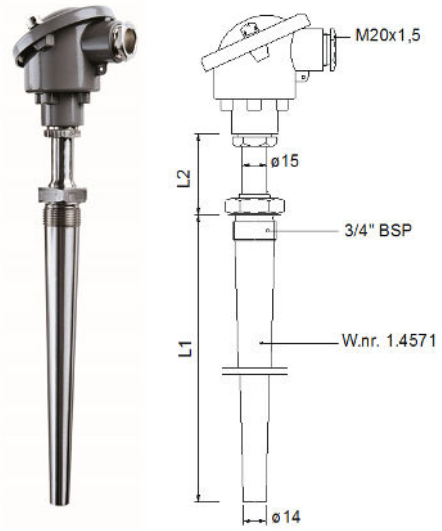
RESISTANCE THERMOMETER **Measuring insert: Interchangeable**	**Type: RT-REG3**	Sheet No. 1-15 V2.1 **5852-E010818V2.1**

Application:

- For measuring and regulating exhaust gas in stationary or maritime
  - diesel engines
  - turbines

Properties:

- Media temperatures up to 600°C,max. 500 bar
- 1xPt100, 2xPt100, 1xPt1000, 2xPt1000
- 2, 3 or 4 conductors
- Measuring insert: Interchangeable
- Ambient temperature up to 200°C
- Process attachment: Nipple
- Constructed to have the greatest possible accuracy and durability during demanding operating conditions
- Outer protective sheath: acid-proof steel
- Marine approved by: DNV, LR, NK, RINA, ABS, and BV



MECHANICAL SPECIFICATIONS

Protective sheath: ----------
Solid thermowell Wnr.1.4571 (AISI316TI)

Extension length: ----------
50 mm
100 mm
Special

Diameter: ----------
Ø18/14 mm 1/2" BSP welded coupling
Ø23/17 mm 3/4" BSP welded coupling
Other on request

Immersion length L: ----------
100 mm
150 mm
200 mm
250 mm
Other on request

Information regarding the connection between process attachment and immersion tube dimensions:

Thread	D1 mm	D2 mm	L2 mm
1/2" BSP	18	14	40
3/4" BSP	24	14	40

ELECTRICAL SPECIFICATIONS

---Plug (pre-mounted In Head):
M12 (for M20)
Harting (specify type)
Other on request
None

---Cable (pre-mounted In Head):
SBS (Silicone-Inner Braided-Silicone) max. 180°C
TBT (Teflon-Inner Braided-Teflon) max. 250°C
TGSB (Teflon-Glass Fibre-Braided) max. 250°C
Other on request
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

---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

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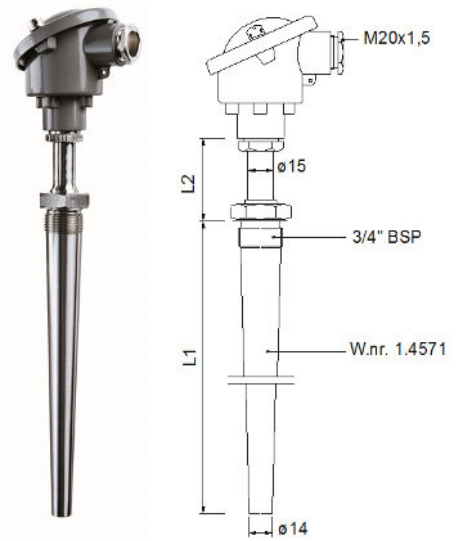
THERMOCOUPLE THERMOMETER **Measuring insert: Interchangeable**	**Type: TC-TEG3**	Sheet No. 3-45 V2.1 **5852-E010818V2.1**

Application:

- For measuring and regulating exhaust gas in stationary or maritime
  - diesel engines
  - turbines

Properties:

- Media temperatures up to 850°C, max. 500 bar
- Ambient temperature up to 200°C
- Process attachment: Adjustable nipple
- Immersion length: Adjustable
- Measuring insert: Fixed
- Tolerance in acc. with:
  DIN IEC 584-1, DIN IEC 584-2, DIN 43710
- Constructed to have the greatest possible accuracy and durability during demanding operating conditions
- Outer protective tube: Stainless acid-proof steel
- Marine approved by: DNV, GL, NK, RINA, ABS and BV



MECHANICAL SPECIFICATIONS:

Protective tube: ----------
Thermowell, EN 1.4571 (AISI 316Ti)

Extension length L2 [mm]: ----------
50 / 100
Specia

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

Process attachment: ----------
1/2" BSP
3/4" BSP
Special

Protection head: ----------
B (aluminum (Al), enameled, low cap, IP62)
BH (Al, enameled, 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 w/screw, high cap, digital display (excl. tr.), IP65)
CE (Al, enameled, 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)
Special

Cable gland (pre-mounted): ----------
Plastic
Nickle platted brass
Stainless acid-proof steel
None

Please specify cable diameter: ----------

ELECTRICAL SPECIFICATIONS

---Plug (pre-mounted In Head)
M12 (for M20)
Hurting (specify type)
Other on request
None

---Cable (pre-mounted In Head)
TGSB (Teflon-glass Fibre-braided)
SGSB (Silicone-Glass Fibre-Braided)
Special

---Cable length [m]:

---Sensor element:
Type K (NiCr-Ni) max. +1150°C
Type J (Fe-CuNi) max. +700°C
Type E (NiCr-CuNi) max. +800°C
Type N (NiCrSi-Ni) max +1250°C
Special

---Number of thermocouples:
1xTC
2xTC

---Tolerance in acc. with DIN 43732:
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: Pt100 Tolerance

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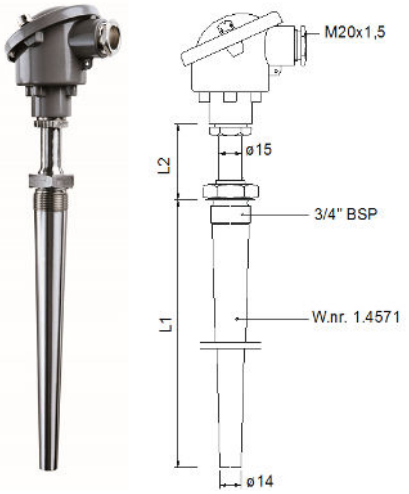
THERMOCOUPLE THERMOMETER **Measuring insert: Interchangeable**	**Type: REG3/TEG3**	Sheet No. 3-45 V2.1 **5852-E010818V2.1**

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

Head mounted transmitter

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
5334A Uninsulated for TC
5334B Galvanic Isolated 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°

5350A Profibus standard
5350B Profibus ATEX, FM and CSA

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 ClassNK
Certificate of LR
Certificate of ABS

Other on request

Save Print Submit

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