

RESISTANCE THERMOMETER
Measuring insert: Fixed

Type:
RT-REG1S

Sheet No.
1-14 V2.1
5850-E010818V2.1

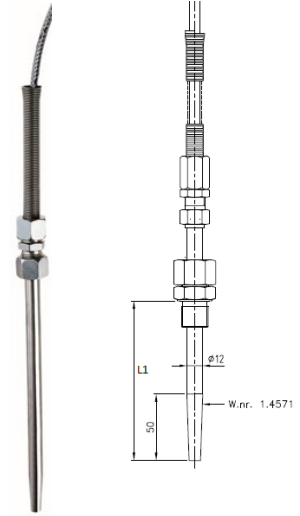


Application:

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

Properties:

- Media temperatures up to 600°C
- Ambient temperature up to 200°C
- Process attachment: weld-in nipple
- Measuring insert: interchangeable
- Pt100 and Pt1000 resistance thermometer in acc. with IEC 60751, type B1/1DIN
- Mechanical and thermal stress in acc. with DIN 43772
- Cable with clamp, type TGSB (Teflon-Glass Fibre-Braided)
- Constructed to have the greatest possible accuracy and durability during demanding operating conditions
- Outer protective sheath: acid-proof steel
- Marine approved by: DNV.GL, LR, NK, RINA, ABS, and BV
- Approved by: GOST, TCRU on request.



MECHANICAL SPECIFICATIONS

Protective sheath: -----
EN 1.4571 (AISI 316Ti) max. 850°C
Other on request

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

Reduced Tip-----
50 mm
Other on request

Process attachment: -----
1/2" BSP welded coupling
3/4" BSP welded coupling
Other on request

ELECTRICAL SPECIFICATIONS

---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)

---Cable
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

---Cable length [m]:

Link for further information: [Pt100 Tolerance](#)

THERMOCOUPLE THERMOMETER
Measuring insert: Fixed

Type:
TC-TEG1S

Sheet No.
3-36 V2

5850-E010818V2

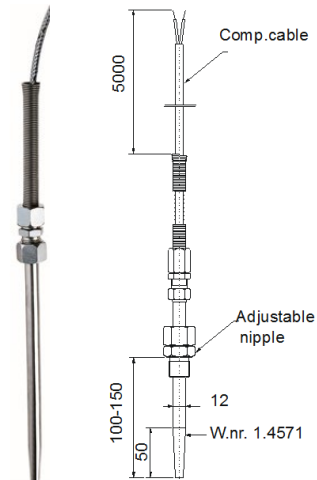


Application:

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

Properties:

- Media temperatures up to 850°C
- 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, LR, GL, NK, RINA, ABS and BV
- Approved by: GOST, TCRU on request.



MECHANICAL SPECIFICATIONS:

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

Sensor diameter [mm]: -----
Ø12
Special

Immersion length L1 [mm]: -----
150 / 200 / 250 / 300
Special

Reduced protection tube end on sensor: ----
50 mm
Special

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

ELECTRICAL SPECIFICATIONS

---Cable
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. $\pm 1,5^{\circ}\text{C}$ or $\pm(0,0040 \times T)$)
Class 2 for K,J,N,E (i.e. $\pm 2,5^{\circ}\text{C}$ or $\pm(0,0075 \times T)$)
Class 1 for T (i.e. $\pm 0,5^{\circ}\text{C}$ or $\pm(0,0040 \times T)$)
Class 2 for T (i.e. $\pm 1,5^{\circ}\text{C}$ or $\pm(0,0075 \times T)$)

Link for further information: [Pt100 Tolerance](#)

THERMOCOUPLE THERMOMETER
Measuring insert: Fixed

Type:
TEG1S

Sheet No.
 3-36 V2
 5850-E010818V2



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:

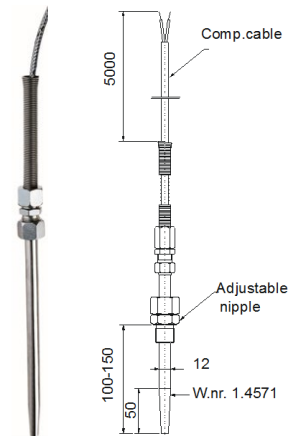
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

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

Enclosure

Marine Box (112x82x42mm) -----

ABS Box (82x80x56mm) -----

NONE -----

Programmable mounted transmitter:

- [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

---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