Quality made to measure

# **PT 100 S**ensor
# **A**ccording **t**o **EN 60751 - DIN 43760**

## ***Description and general specifications***

These sensors are used to detect the oil temperature inside of distribution / power electric transformer and/or the winding temperature of distribution electrical transformer.
For dimensions see Drwg. N. 1738.

### PLATINUM THERMORESISTANCE PT 100 according to EN 60751 (DIN 43760 standard)

| RESISTANCE VALUE | TEMPERATURE |
|---|---|
| 100,00 Ohm | 0°C |
| 109,73 Ohm | 25°C |
| 138,50 Ohm | 100°C |
| 157,32 Ohm | 150°C |

**Temperature coefficient :** 0,00385 according to DIN 43760

**Precision class :** class A ( ½ DIN )

**Connecting head** : aluminium alloy die cast .

**Degree of mechanical protection** : IP 67

**Electrical connection :** 3 wires ( including cable for compensation ) or 4 wires

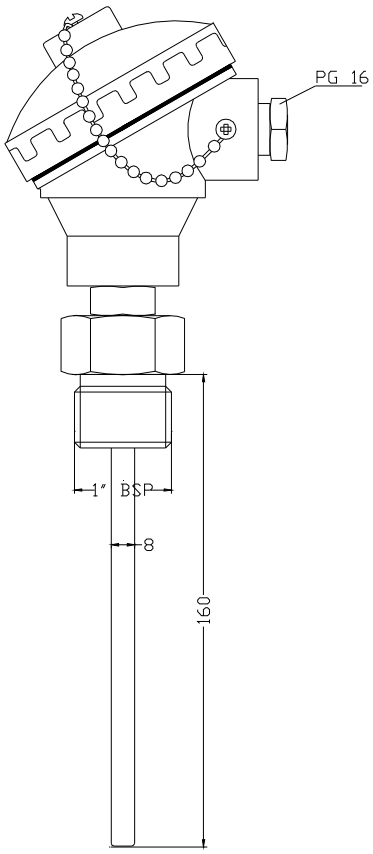
**Max. temperature :** 250°C

**Stem :** AISI 316 stainless steel – standard diameter 12. mm.

**Connection :** AISI 304 steel nut + Bronze nipple

**Thread of connection :** 1" BSP male ( for connection with DIN 42554 standard pocket )
Upon request other types of connections can be supplied.

# PT 100 PROBE




**DRWG. N. 1738**

## ***Operating instructions and maintenance.***

**Mounting** : resistance thermometer assemblies must be installed in such a depth that the heat transfer along the assembly is kept to a minimum of 6-15 times the external diameter of the stem. Where only a short depth of immersion is possible, at least 1-1,5 times the length of the resistance element winding should be immersed ( i.e. 45 / 70mm. )

Copper connection leads only are required.

Special care should be taken on installation to minimize contact resistance in order to avoid perturbations of the measurement.

The connecting cables should not run near power lines to avoid electrical or magnetic perturbations that can increase the measuring tolerance.

It is recommended to use shielded and twisted connecting cables.

**Maintenance** : the resistance thermometer stems must be inspected to assess the level of erosion, corrosion or any other possible damage of the protecting tube. In case of stainless tube immersed in non corrosive fluids the inspection can be made every 2 years.

To verify the correct functioning, periodically check the sensor by connecting it to a calibrated display suitable for PT 100 input and by comparing the temperature values shown by the display to the ones indicated by a calibrated instrument immersed in the same fluid of the resistance thermometer.

**Periodically open the resistance thermometer‘s head to check that no water or dew is inside and that the terminals are not damaged by corrosion.**

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**Terman '90** S.r.l., Via Ghisalba, 13-20/21, 20021 Bollate (MI) – Italy. Tel: +39 02 38 30 37 12, Fax: +39 02 38 30 37 19,
E-Mail info@terman.com, www.terman.com
C.F./P. IVA IT 09970270154 – C.C.I.A.A. 1332904 – Trib. Milano Reg. Soc. 302729 – Cap. Soc. € 119.000