



Process Controls (India)

Manufacturers of:

Resistance Thermometers (RTD), Thermocouples,
Thermistors, PTFE Insulated Wire & Cables

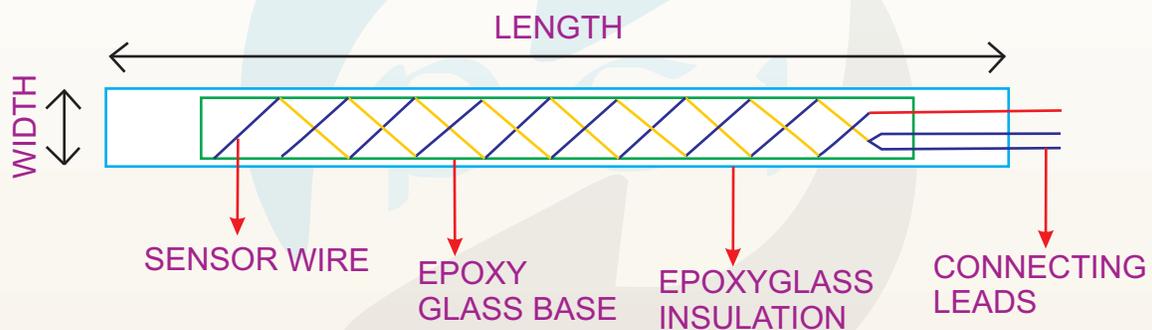


PRODUCT
Catalogue

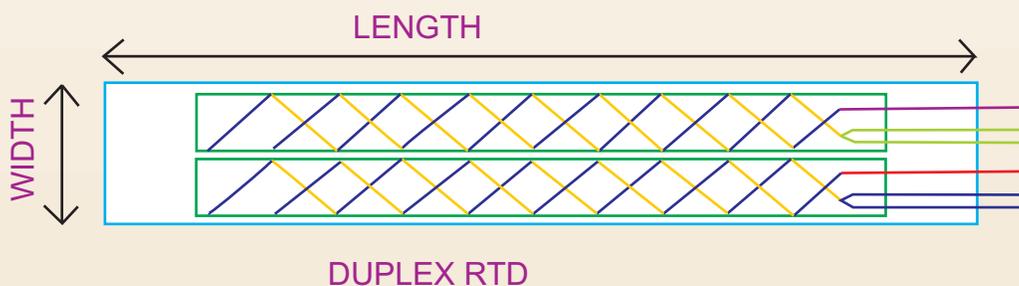
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FLAT TYPE WIRE WOUND RTD

These types of RTDs are used in measuring the temperature of the winding of the Motor and Generator. They are placed in the slot available in the stator-winding core.



These Flat Type RTDs are made up of sensor wire (Platinum, Copper or Nickel) non-inductively wound on an epoxy glass base and are insulated with glass epoxy lamination. We are manufacturing these RTDs in Simplex (with single element) as well as Duplex (two sensors embedded in a single insulation) type.



These Long length Wire wound RTD is much better than thin film chip type RTD because the sensing elements of Wire wound RTD extend through most of the body length to provide an average temperature reading. This eliminates the danger of a point-type sensor missing a localized hot spot.

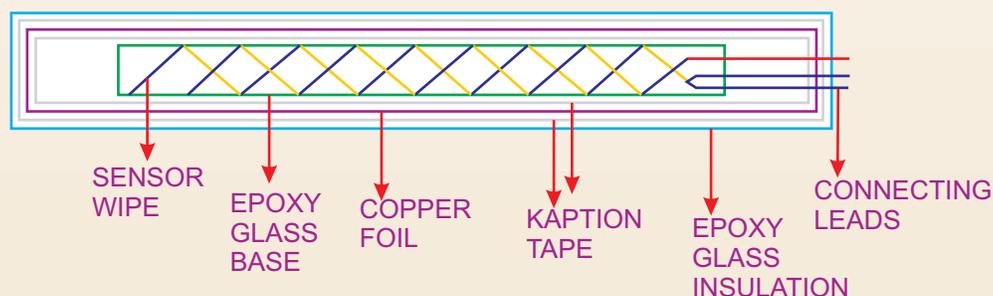
Our RTDs are moulded using hot curing epoxy resin.

TECHNICAL SPECIFICATIONS:

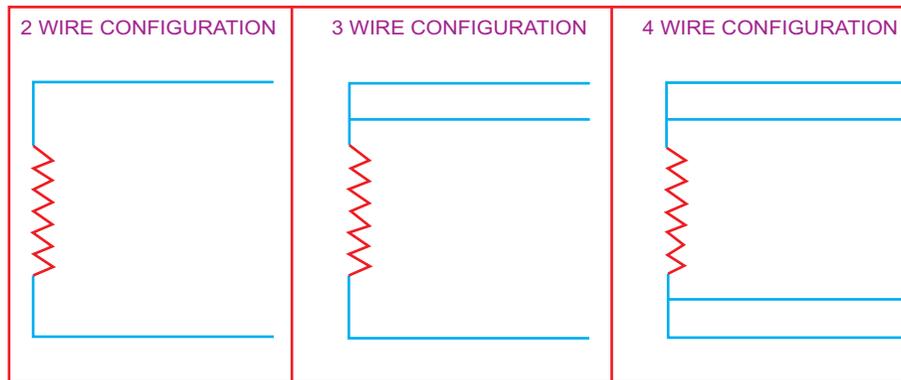
Our RTD's has following Technical specification:-

1. Measure's the temperature of Stator Winding of Electric motor from range –up to -50°C to +200°C.
2. Resistance wire is non-inductively wound.
3. Have H class insulation.
4. Accuracy:- For Platinum RTD:- R0 (Resistance at 0 Degree) tolerance $\pm 0.06 \Omega$ (class A), 0.12Ω (Class B) & 0.25Ω (Class C).
For Copper RTD:- R0 tolerance $\pm 0.2\%$
For Nickel RTD:- R0 tolerance $\pm 0.2\%$ (class A) & $\pm 0.5\%$ (class B).
5. Dimensions as per costumer requirement.
6. Insulation resistance between element and covering is greater than $100M\Omega$ at room temperature & $20M\Omega$ at 200°C .
7. Dielectric Strength:- Can withstand HV test at 2 Kv to 25 Kv. (increase in the thickness will increase the insulation strength of RTD).
8. The Leads wire specification will be as per costumer requirement. Generally we use $7 \times 0.2\text{MM}$ & $19 \times 0.15\text{MM}$ with PTFE/ETFE/FEP insulation. Leads color will be as per costumer requirement.
9. Lead wire combination will be 2wire/ 3wire/ 4wire as per costumer requirement.
10. The leads/joint will pass the pullout test of 3 Kg (for $7 \times 0.2\text{mm}$ lead) & 5 KG (for $19 \times 0.15 \text{ M}$). Minimum thickness of RTD for pullout test will be 2mm.
11. Our RTD will pass all tests mentioned in IEC60751, Clause 6. Our RTD will pass Stability at upper temperature limit, Thermoelectric effect, Self heating, insulation resistance at elevated temperatures, Thermal response time, Effect of temperature cycling, Hysteresis, Minimum immersion depth, Capacitance, Inductance, Vibration & Drop Test.
12. Any additional specific technical requirement will also be fulfilled.
13. RTDs will be supplied with Tests & calibration certificate.

We are also manufacturing special type of winding RTD in which copper shielding is provided over the complete length of sensor.



Connecting Wire configuration of RTDs:-.



We are manufacturing RTDs as per customer specification, however some of them which are widely used are as follow:-

1. PT100 (TCR0.00385):- In these RTDs the sensor is made up of platinum wire and the Resistance of sensor at 0°C (R0) is 100Ω & Resistance of sensor at 100°C (R100) is 138.50 Ω.
2. PT 100 (TCR0.00392):- In these RTDs the sensor is made up of platinum wire and the Resistance of sensor at 0°C (R0) is 100Ω & Resistance of sensor at 100°C (R100) is 139.20 Ω.
3. PT 1000 (TCR0.00385):- In these RTDs the sensor is made up of platinum wire and the Resistance of sensor at 0°C (R0) is 1000Ω & Resistance of sensor at 100°C (R100) is 1385.0Ω.
4. CU10 (TCR0.00427):- In these RTDs the sensor is made up of copper wire and the Resistance of sensor at 25°C (R25) is 10Ω.
5. CU53 (TCR0.00427):- In these RTDs the sensor is made up of copper wire and the Resistance of sensor at 100°C (R25) is 53Ω.
6. NI120 (TCR0.00672):- In these RTDs the sensor is made up of Nickel wire and the Resistance of sensor at 100°C (R100) is 120Ω.

We have facility to manufacture RTD with thickness from 0.8MM to 10MM, width from 4MM to 40MM & Length from 25MM to 5000MM. However we can manufacture other RTDs with other dimensions also.



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