



MEAS RTD PROBE

- Variety of Configurations
- Single and Dual Elements
- Stainless Steel Case
- Custom Designs Available with:
 - » Degree Specific Case Bends
 - » Fast Response Time
 - » Cut-to-Length Cases
 - » Connector Options
 - » Special Cable or Leadwires

The RTD Probe is constructed with a Stainless Steel case. The sensing element is embedded into the tip of the sheath. With the element located in the tip of the case this is the area that needs to be in contact with the process to obtain correct temperature measurement. Fittings associated with the probe designs are related to the mounting technique required by your application. These sensors can be utilized in many different industries and applications. Probe sensors are ideal for immersion in processes.

Features

- Sheath Styles:
 - » Stainless Steel
- Elements, Single and Dual:
 - » Platinum, Cooper, Nickel
- Sheath Diameters:
 - » 0.125", 0.188", 0.250"
- Leadwire/Cable Options

Applications

- Process
- Aerospace
- Defense
- Hot Melt

Dimensions



'D' = Sheath Diameter
 'L' = Sheath Length
 'Y' = Leadwire/Cable Length

Performance Specifications

Repeatability:

Less than $\pm .06\%$ change in ice point resistance after 10 consecutive cycles between ice point and 250°C

Long Term Stability:

Less than $\pm .2\%$ ice point resistance shift after 1,000 hours at 250°C

Self-Heating:

10 mW/C in water moving 3 feet/sec

Pressure Rating:

1,500 psi

Insulation Resistance:

1,000 megohms @ 500 V, leads to case

Vibration:

Withstands 5 to 500 Hz at 3 g-level peak for 3 hours. Per ASTM E 644, Sec. 10.

Shock:

Withstands 50 g-level peak sine wave shock of 11 milliseconds duration. Per ASTM E 644, Sec. 11

RTD TEMPERATURE ACCURACY SPECIFICATIONS:

| Element Material | TCR | Standard Tolerances at 0°C | | | |
|------------------|---------|----------------------------|------------------|-------------------|-------------------|
| | | $\pm .06\%$ | $\pm .12\%$ | $\pm .2\%$ | $\pm .5\%$ |
| Platinum | 0.00385 | 0.15°C, 0.06Ω | 0.30°C, 0.12Ω | 0.50°C, 0.19Ω | 1.20°C, 0.46Ω |
| Platinum | 0.00392 | N/A | N/A | N/A | 1.20°C, 0.46Ω |
| Copper | 0.00427 | N/A | N/A | 0.71°C, 0.028Ω | 1.49°C, 0.058Ω |
| Nickel | 0.00672 | N/A | N/A | N/A | 0.85°C, 0.68Ω |

Ordering Information

| RTD PROBE | | | |
|------------------|---|------------------------|--|
| Model | Temperature Range | | |
| 100M | Moderate: -50 to 250°C (-58 to 482°F) | | |
| 100H | High: -50 to 500°C (-58 to 932°F) | | |
| 100F | Full: -200 to 500°C (-328 to 932°F) | | |
| Model | Element | Accuracy | Temperature Coefficient |
| P2A | Platinum | 100 Ohm ±.06% at 0°C | .00385 |
| P2B | Platinum | 100 Ohm ±.12% at 0°C | .00385 |
| P2C | Platinum | 100 Ohm ±.5% at 0°C | .00385 |
| P6B | Platinum | 1,000 Ohm ±.12% at 0°C | .00385 |
| G2C | Platinum | 100 Ohm ±.5% at 0°C | .00392 |
| C1D | Copper | 10 Ohm ±.2% at 25°C | .00427 (Model 100 M Only) |
| N3C | Nickel | 120 Ohm ±.5% at 0°C | .00672 (Model 100 M Only) |
| Model | Leadwires, Element Configuration | | Typical Color Code |
| 3S | Three Wire, Single | | Red/Red/White |
| 3D | Three Wire, Dual | | Red/Red/White // Black/Green/Green |
| 4S | Four Wire, Single | | Red/Red/White/White |
| 4D | Four Wire, Dual | | Red/Red/White/White // Black/Black/Green/Green |
| Model | 'L' Sheath Length | | |
| --- | Define 'L' Length in Inches Note: Minimum 1.5" / Maximum 96.0" Example: (12.0 = 12.0"; 28.5 = 28.5") | | |
| Model | 'D' Sheath Diameter | | |
| A | .125" Diameter (Single Element Only) | | |
| B | .188" Diameter | | |
| C | .250" Diameter | | |
| Model | 'Y' Leadwire/Cable Options | | |
| N | No Options, Stranded TFE Leadwires (36.0" Standard) | | |
| W | Leadwire Options | | |

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