

## RESISTANCE TEMPERATURE DETECTORS



HARCO RTD's are engineered for the most exacting applications and environments. Ranging from the relatively benign environment of aircraft cabin temperature control to harsh turbine engine environments, HARCO RTD's deliver high accuracy temperature detection and proven reliability.

### Features

- Application Specific Designs
- High Accuracy Platinum Wire-Wound Elements
- Hermetically Sealed Construction
- Low Excitation Current
- High Signal-To-Noise Ratio
- Fast Linear Response
- Excellent Stability
- Wide Temperature Range
- Low Maintenance
- High Reliability

### Typical Applications

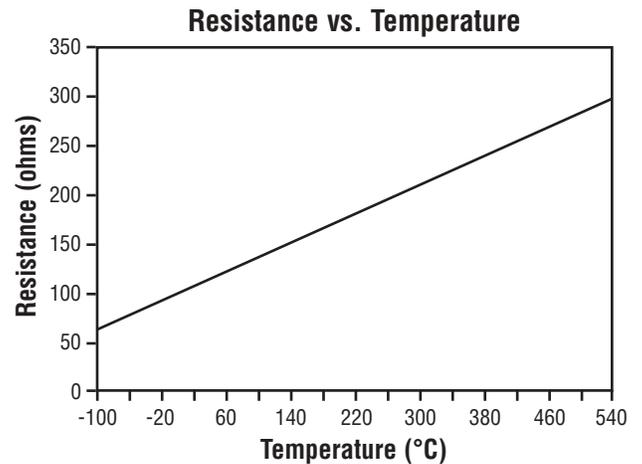
Temperature monitoring of critical aircraft components and subsystems:

- Engine Fuel
- Cabin Temperature Control
- Avionics
- Brake Pads
- Cylinder Heads
- Engine Bearing Oil
- Hydraulic Fluids
- Inlet Air Ducts

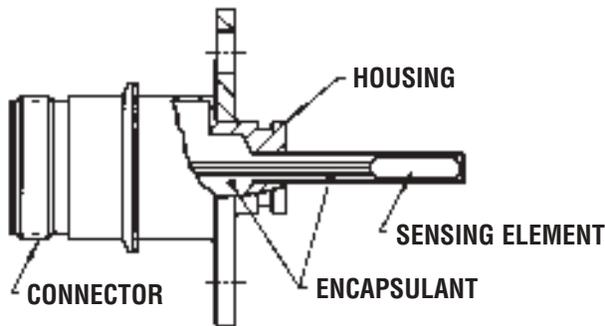


## Specifications (Typical Aerospace Unit)

- Excitation Current: 1.0 ma
- Accuracy:  $\pm .25^{\circ}\text{C}$  (Ref. IEC 751)
- Temperature Range:  $-40^{\circ}\text{C}$  to  $200^{\circ}\text{C}$
- Temperature Coefficient: .00385
- Signal-to-Noise Ratio: 3 x > Premium Grade Thermocouples
- Standard Resistance: 100 ohms @  $0^{\circ}\text{C}$
- Response Time: 3 Sec.
- Self-Heating Error:  $< 1^{\circ}\text{C}$  @ 15 ma Excitation Current
- Stability:  $< -1^{\circ}\text{C}$  per year
- Elements: Wire-Wound; Din Grade or Ref. Grade Platinum
- Packaging: Hermetically Sealed Units; 300 Series Stainless Steel; Impervious to Salt, Humidity, and Dust
- Vibration: 10 to 2000 Hz @ 20 g's
- Weight: 3 oz.

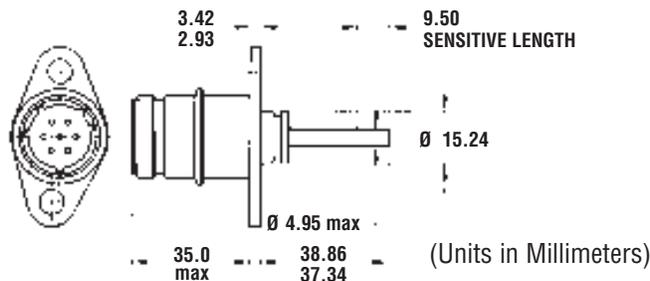


## Operation



RTD's operate on the principle of a material's electrical resistance change with temperature. Platinum elements are typically used because of their excellent sensitivity, accuracy, and temperature range characteristics.

## Dimensions



Represented by: