

# PtS-84 temperature Sensor

Indian Space Research Organisation (ISRO) at its Liquid Propulsion Systems Centre has developed a novel Temperature sensor, which will find wide industrial and commercial applications.

## Principle of Operation

Accurate and reliable measurement of temperatures in high pressure gaseous and liquid media requires dedicated and specialized thermocouple probes. The PTS-84 an RTD type temperature sensor, developed at ISRO, is qualified for measuring temperature under severe environmental conditions posed by the propellants high pressure and corrosive nature.

The basic element used here is a wire wound platinum sensor which has  $100\Omega$  at  $0^\circ\text{C}$  and encapsulated with S.S AISI 304/316/Inconel material. The sensor uses unique construction techniques to achieve noise immunity and high response.

## Advantages & Salient Features

- Accurate
- Reliable Measurement
- Linear
- Rugged
- Less weight
- Can withstand high flow rate
- Stable

## Application

- Space application
- Process Industries
- Atomic Purposes
- R&D Laboratories
- Defense Application
- Commercial Application
- Oil & Gas Industries



## Specifications

Temperature Range	-196°C To 250 °C
Time Constant	$\leq 3.0$ s
Material of Sheath	AISI 304L/Z2 CN 18-10 (S.S.)
Sensitivity	$0.39 \mu\text{V} / ^\circ\text{C}$
Accuracy	
Resistance at $0^\circ\text{C}$	$100.0 \pm 0.25$ ohms
Mass	$\leq 100$ g
Max. Pressure	300 Bar.
Electrical interface	Multi-pin hermetically sealed connector.