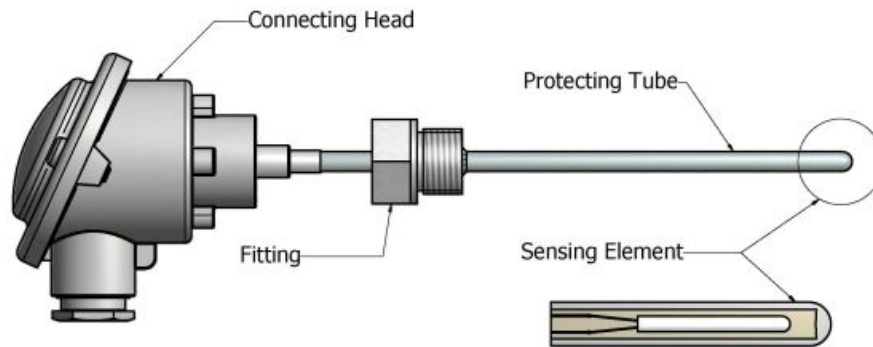


Resistance Temperature Detector Assemblies

For temperature measurement in the range, -200°C to $+850^{\circ}\text{C}$ Resistance Temperature Detector (RTD) is preferred to Thermocouple and other sensors because of its higher accuracy, reliability, compact size and faster response. RTDs find use in almost all industries like plastic and rubber processing, food industries, pharmaceuticals, chemical & petrochemical plants, and power plants. It is also used in diesel engines & ships, process control and laboratories for temperature measurement and control.

RTDs are available with single or double resistance elements and in 2, 3 or 4 wire circuits. Various types of protection sheaths for protection of the element and screw-in threaded bushes either fixed (welded) or adjustable by screws (for non-pressure application) or by compression fitting (for pressure application) for mounting are available.

RTD assemblies normally consist of spring-loaded insert, outer protecting sheath with mounting connections [Fittings] and cast aluminum terminal head. The insert assembly consists of Pt 100 element with silver/copper connection leads, insulated by ceramic multi hole insulating tube/beads in a stainless steel sheath with ceramic terminal block and brass terminals attached to a spring loaded arrangement.



RTD assembly with flying leads [cable] is also used in some of the cases. It consists of outer protecting sheath with Pt 100 element inside directly connected to cable, coming out from metallic tube. Mounting connections [Fittings] if desired can be used.



FEATURES:

- High accuracy and stability
- Wide temperature range; -200°C to $+850^{\circ}\text{C}$
- Fast response & High insulation resistance
- Needs only copper cables for long runs.

SPECIFICATIONS:

TECHNICAL DATA

Resistance element	Pt 100, 100 Ohms at 0°C
Fundamental interval	38.5 Ohms change in resistance from 0-100°C
Temperature range	-50°C to + 400°C (-200°C to + 850°C also available)
No. of elements	Single or Double
Insulation resistance	10M Ohms at 500V DC (100 M ohms on request)

LIMITS OF ERROR FOR RTD Pt 100

Temp.°C	Class 'B'		Class 'A'	
	±°C	± Ω	±°C	± Ω
0	0.3	0.12	0.15	0.06
100	0.8	0.30	0.35	0.13
200	1.3	0.48	0.55	0.20
300	1.8	0.64	0.75	0.27
400	2.3	0.79	0.95	0.33
500	2.8	0.93	1.15	0.38

APPLICATION:

They are used in industries, power plants, industrial process control, laboratories and numerous other applications.

FOR MODIFICATION PURPOSES DESIGN/SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

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