

## A. Special Noble Metal Thermocouples:

We manufacture and design rare metal thermocouple assemblies. Platinum rhodium thermocouples are made from conductors containing platinum and rhodium alloys and are suited for measuring high temperatures up to +1800°C. They are a rugged design, suited for tough industrial use.

Optimal Operating Temperature: 1200-1800 degrees Celsius.

Type	Description	Standard	Class	Deviation Range Occured [At 1200 Deg. C]
R	Pt/PtRh13%	IEC 60584 P.2 / ASTM E230	1 & 2	+/-1 degrees TO 0.25% * OT
S	Pt/PtRh10%	IEC 60584 P.2 / ASTM E230	1 & 2	+/-1 degrees TO 0.25% * OT
B	Pt30%Rh-Pt6%Rh	IEC 60584 P.2 / ASTM E230	1 & 2	+/-1 degrees TO 0.25% * OT

**Available in Configurations as:** Simplex , Duplex & Triplex configurations.

**Available in Options as:** With flange, with thermowells, zirconia, ceramic, tungsten-carbide coatings as per specifications & user drawings.

**Available in Designs as:** Head Type, Connector Type, L-Shaped, Mineral Insulated. With different designs & configurations, the buyer is capable to choose from various sheathing options as well. These include High-Alumina ceramic, SS, Inconel, Silicon-Nitride, Silicon-Nitride-Bonded (for zinc, aluminum, copper & molten metal applications) and more. This ofcourse depends on the requirement, application and material involved in the process.

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## B. Special Base Metal Thermocouples

We manufacture and design base metal thermocouple assemblies. Base metal thermocouples are made from conductors containing nickel alloys and depending on thermocouple type are suited for measuring temperatures between -270 to +1300°C. They are a rugged design, suited for tough industrial use.

The base metal thermocouple junction will need contamination protection from the process it is measuring. Each thermocouple should have a protection sheath best suited to its application.

Operating temperature range: -270 to 1300 degrees celsius.

Type	Description	Standard	Class	Operating Temperature Ranges [Deg.C]
K	NiCr-Ni-Al(NiCr-Ni)	IEC 60584 P.2 / ASTM E230	1 & 2	-40 To +1260
N	NiCrSi-NiSi	IEC 60584 P.2 / ASTM E230	1 & 2	-40 To +1260
J	Fe-CuNi	IEC 60584 P.2 / ASTM E230	1 & 2	-40 To +760
E	NiCr-CuNi	IEC 60584 P.2 / ASTM E230	1 & 2	-40 To +870
T	Cu-CuNi	IEC 60584 P.2 / ASTM E230	1 & 2	-40 To +370

**Available in Configurations as:** Simplex , Duplex & Triplex configurations.  
**Single Length Availability:** MI Thermocouples upto 200 Meters Long.

**Available in designs as:** Head Type, Connector Type, L-Shaped, Mineral Insulated. With different designs & configurations, the buyer is capable to choose from various sheathing options as well. These include High-Alumina ceramic, SS, Inconel, Silicon-Nitride, Silicon-Nitride-Bonded (for zinc, aluminum, copper & molten metal applications) and more. This ofcourse depends on the requirement, application and material involved in the process.

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## C. Special RTDs

We manufacture and design mineral insulated resistance thermometers. Resistance thermometers are often called platinum resistance thermometers (PRTs), resistance thermometer detectors (RTDs) or simply Pt100 sensors. Mineral insulated resistance thermometers consists of an external metal sheath which protects the P100 element from damage and contamination. This outer sheath is insulated with magnesium oxide powder, tightly packed so no air is trapped inside. This not only gives great thermal conductivity but mineral insulated RTD can be bent into a variety of shapes to suit your application.

### Images:



**Standard: 60584 P.2 / ASTM E 230**

**Available in Options as:** With flange, with thermowells, zirconia, ceramic, tungsten-carbide coatings as per specifications & user drawings.

### Available in Designs as:

(Take images for below items from: <https://peaksensors.co.uk/resistance-thermometers/mineral-insulated-rtd/>)

- With head
- With pot seal
- With standard (Round Pin) Plug
- With Miniature (Flat-Pin) Plug
- With Temperature Transmitter
- With DIN Plate
- With Ceramic Block
- With Permanentlt attached cable

# END

## D. Mineral Insulated Thermocouples:

We manufacture and design mineral insulated thermocouples. Mineral insulated thermocouples consist of an outer metal sheath which protects the thermocouple elements from damage and contamination, this sheath is malleable so mineral insulated thermocouples can be easily bent and formed into a variety of shapes to suit your application. The inner thermocouple elements are insulated with magnesium oxide powder, tightly packed so no air is trapped inside, this provides great thermal conductivity.

### Wide variety in designs and uses:

MI Thermocouples are very tough and can withstand up to 1250°C (depending on design and thermocouple type) making them perfect for a wide variety of industrial uses such as ovens, kilns and furnaces.

There are a wide range of options for our MI thermocouples. They can be constructed with various diameters and materials of sheath, many different thermocouple types and with our laser welder, mineral insulated thermocouple lengths are practically limitless.



**Standard: 60584 P.2 / ASTM E 230**

**Available in Options as:** With flange, with thermowells, zirconia, ceramic, tungsten-carbide coatings as per specifications & user drawings.

**Available in Designs as:**

(Take images for below items from: <https://peaksensors.co.uk/resistance-thermometers/mineral-insulated-rtd/>)

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- With pot seal
- With standard (Round Pin) Plug
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- With Temperature Transmitter
- With DIN Plate
- With Ceramic Block
- With Permanentlt attached cable

**END**