TEMPCON
MEASUREMENT • CONTROL • DATALOGGING SOLUTIONS

Probes & Sensors

Mineral Insulated Thermocouple Sensor Fitted With Standard Connector

Product Code **TMISC**

Mineral Insulated Thermocouple

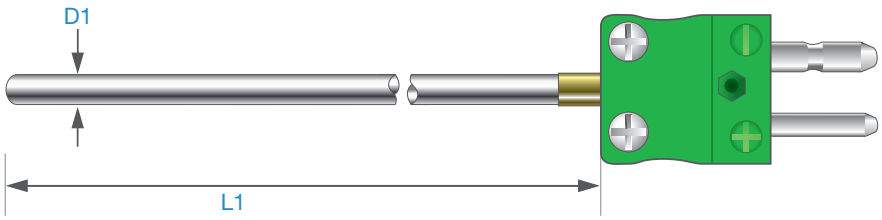
Type K Thermocouple Shown for illustration only

Mineral Insulated Thermocouple Sensors Fitted With Standard Connector Available in Types K, J, T, N and E.
These semi rigid thermocouples are ideal for applications where more mechanical strength maybe required along with a quick, simple connection and are available with various sheath materials. The thermocouple junction is located at the tip and is generally insulated from the sheath to eliminate earth loops. The metal sheaths are impervious to liquids and gases and can withstand high pressure, high vacuum, high vibration and harsh environments in general. Smaller diameter sensors respond to temperature changes more rapidly than larger diameters where as larger diameter sensors are mechanically stronger and have a longer operational life when used at high temperatures. The diameters range between 1.5mm up to 6.0mm and can be formed to shape particular applications without impairing performance. The typical bending radius is 10 x probe diameter but can be reduced to 4 x if required. A standard round pinned plug or socket can be terminated to the probe.

A wide range of instrumentation or accessories including extension cables, connectors, pockets, thermowells and adjustable compression fittings are available for this product.

- Accuracy to IEC 60584.1 2013 Class 2 (Class 1 also available)
- IEC 60584.3 2008 colour coded extension cables and connectors
- In House Calibration Service is also available
- Bespoke designs available upon request
- Stocked versions available to order

Sensor Specifications



Sheath Materials Versus Application Type

316 Stainless Steel	Excellent corrosion resistance often specified for food and medical applications
321 Stainless Steel	Good corrosion resistance and high ductility and widely used in industry
310 Stainless Steel	Good corrosion resistance at high temperatures and recommended for use in sulphurous atmospheres
600 Inconel Alloy	Good resistance to oxidation and extremely corrosive atmospheres at high temperatures. Not recommended for use in sulphurous atmospheres
Nicrobell® Alloy	Recommended for use with type K & N conductors, Nicrobell is a Ni/Ch/Si alloy that is suitable for use in reducing, oxidising and vacuum atmospheres

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Sensor Style	**Thermocouple Mineral Insulated Sensor Fitted With Standard Connector**	
Conductor/Thermocouple Type	Type K, Nickel – Chromium (+ Conductor) & Nickel – Aluminium (- Conductor)	
	Type J, Iron (+ Conductor) & Constantan (- Conductor)	
	Type T, Copper (+ Conductor) & Constantan (- Conductor)	
	Type N, Nicrosil (+ Conductor) & Nisil (- Conductor)	
	Type E, Nickel Chromium (+ Conductor) & Constantan (- Conductor)	
Maximum Temperature Of Probe	Type K (1100°C), Type J (800°C), Type T (350°C), Type N (1250°C), Type E (800°C)	
Thermocouple Type/Metal Sheath	Type K,	(310 Stainless Steel, 1100°C)
Materials & Temperature	Type K, T, J & E	(321 Stainless Steel, 800°C)
	Type K & T	(316 Stainless Steel, 800°C)
	Type K & N	(Inc 600, 1100°C)
	Type K & N	(Nicrobell®, (1250°C)
Probe Diameters (D1)	1.0mm, 1.5mm, 2.0mm, 3.0mm, 4.5mm & 6.0mm Ø	
Sensing Junction	Insulated (isolated) or Grounded (non-insulated)	
Number of Elements	Simplex or Duplex (Duplex above1.5mm Ø only)	
Probe Length (L1)	As required in millimetres	
Termination	Standard Plug or Socket Connector (+220°C) Higher Temperature Options Available	
Installation Compression Fittings	Brass or Stainless Steel In Tapered and Parallel	
	• ⅛" BSPT, ⅛" BSP • ¼" BSPT, ¼" BSP • ½" BSPT, ½" BSP	

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