

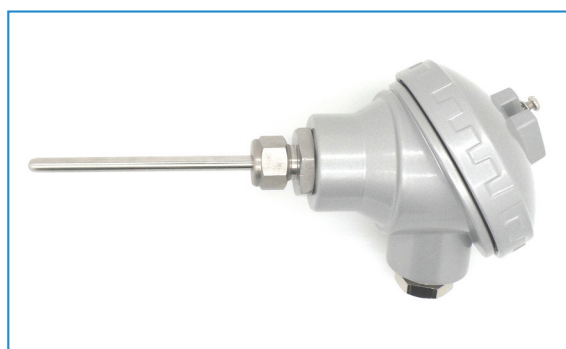
Mineral Insulated Thermocouple Sensor Fitted With Standard Head

Product Code **TMISH**

Mineral Insulated Thermocouple

Mineral Insulated Thermocouple Sensors Fitted With Standard Head Available in Types K, J, T, N and E.

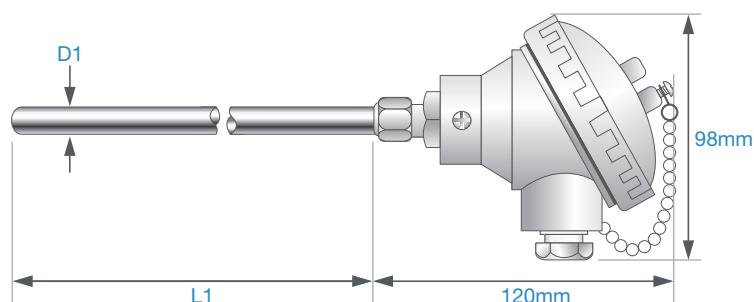
These semi rigid thermocouples are available with various sheath materials and are fitted with a heavy duty IP67 rated die cast alloy terminal head for excellent environmental protection. The screw lid has a robust chain so to ensure it stays connected to the head. A ceramic terminal block inside the head ensures any connections to extension cable is simple via a M20 X 1.5mm cable entry thread and is supplied with a cable gland. Additionally the sensor can be supplied with an optional 4-20Ma transmitter that can be programmed to suit your requirements. The probe is attached to the head with a compression gland. 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 3.0mm up to 8.0mm and the sensors 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 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	Mineral Insulated Thermocouple Sensor With Fitted Standard Head	
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)	3.0mm, 4.5mm, 6.0mm & 8.0mm Ø	
Sensing Junction	Insulated (isolated) or Grounded (non-insulated)	
Number of Elements	Simplex or Duplex	
Probe Length (L1)	As required in millimetres	
Termination	Standard die cast alloy terminal head (IP67) with ceramic terminal block, M20 X 1.5mm cable entry gland Options Other terminal heads are available upon request Head Mounting 4-20Ma transmitters (replaces terminal block) Isolated and ATEX Versions also available upon request.	
Installation Compression Fittings	Brass or Stainless Steel In Tapered and Parallel • ⅛" BSPT, ⅛" BSP • ¼" BSPT, ¼" BSP • ½" BSPT, ½" BSP	