

## Exposed Junction Thermocouple Sensor

Product Code **TEJ**

### Exposed Junction Thermocouple

Exposed Junction Thermocouple Sensor available in Types K, J, T and N. This type of Thermocouple sensor is Ideal for test & development applications and can be used for surface, air and liquid temperature measurements. Applications can include sensing the air temperature in fridges, freezers and ovens as well as concrete temperature whilst it cures etc. The thermocouple junction is formed directly on the end of a length of thermocouple extension cable. The exposed junction has a small thermal mass and is designed for fast accurate measurements where a small flexible sensor is required. In many applications the sensor can be secured to the measurement surface using self adhesive thermocouple attachment pads (supplied separately).

Various cable options are available and the operating temperature of the sensor is determined by the temperature rating of the extension cable insulation which includes PVC, PFA, Glassfibre and Silicone Rubber. However with certain extension cable combinations the actual exposed junction of the thermocouple can withstand a higher temperature.

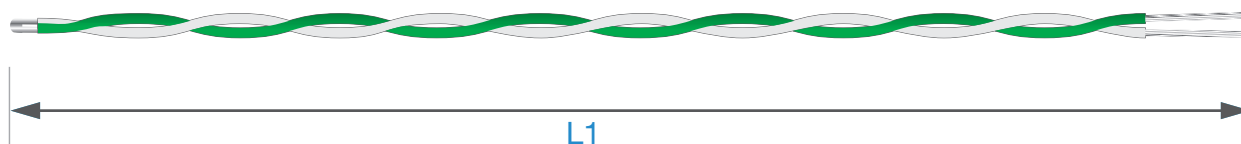
Typically the sensors are formed from single stranded leads of 0.2mm, 0.315mm and 0.50mm diameter though multi-stranded leads of 7/0.2mm and above are also available which would offer greater durability and mechanical strength. In most cases the sensors will be supplied coiled but for long cable lengths it can be spooled should any application require this. The sensor is supplied with tails but can be terminated with other options that include fitted miniature or standard connectors.



Note: It is recommended that sensors of a fibreglass insulated construction are not used in liquid applications.

A wide range of accessories including instrumentation, extension cables, connectors, attachment pads 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 Style	<b>Exposed Junction Thermocouple Sensor</b>
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)
Maximum Temperature Of Junction	Type K, (1000°C), Type J, (750°C), Type T, (350°C), Type N, (1000°C)
Sensing Junction	Exposed (Simplex)
Extension Cable Length (L1)	As required in metres
Extension Cable Insulation	PFA Twin Twisted, 1/0.2mm, 1/0.315mm, 1/0.50mm or 7/0.2mm Ø (-75°C to +260°C)
	PFA Flat Pair, 1/0.2mm, 1/0.315mm, 1/0.50mm or 7/0.2mm Ø (-75°C to +260°C)
	Glassfibre Flat Pair, 1/0.2mm, 1/0.315mm, 1/0.5mm or 7/0.2mm Ø (-60°C to +400°C)
	PVC Flat Pair, 7/0.2mm Ø (-10°C to +105°C)
	PFA/PTFE/Silicone Rubber, 7/0.2mm Ø (-60°C to +200°C)
Termination	Tails, Spade Terminals, Miniature, Standard Plug or Socket & Connector Block
Installation Option	Self Adhesive Thermocouple Attachment Pads (12mm x 18mm) Nominal
	2.7mm punched hole for accepting thermocouple for location
	PTFE glass cloth, Temperature range, (-50°C to 250°C)
	Supplied as a sheet of 20 or 100 (5 x sheets of 20)

