

## Datasheet

# ANSI Mineral Insulated Thermocouple with Miniature Thermocouple Plug

Type 'K', either 0.5, 1.0, 1.5 or 3.0mm diameter with insulated hot junction (un-grounded)



- Mineral insulated Type 'K' Thermocouple
- 310 stainless steel sheath
- Highly flexible, sheath can be bent/formed to suit many applications and processes
- 0.5mm diameter fast response option, other diameters include 1.0, 1.5 & 3.0mm
- Insulated hot junction
- Probe temperature range -40°C up to +1100°C
- Miniature plug termination (200°C)
- Conforms to ANSI specification

### Specifications

Sensor type:	Type 'K' (Nickel Chromium/Nickel Aluminium) to ANSI
Construction:	Flexible mineral insulated probe with 310 stainless steel sheath
Element/hot junction:	Single element, junction insulated from sheath (offers protection against spurious electrical signals)
Termination:	Miniature flat pin plug, colour coded 'yellow' in accordance ANSI
Probe temperature range:	-40°C to +1100°C for 1.5 & 3.0mm diameters -40°C to +750°C for 0.5 & 1.0mm diameter
Plug temperature range:	200°C

### **A Calibrated (SYSCAL) version is also available**

- A certificated 2 point (0°C & 100°C) calibrated item straight out of the box, ready to use
- If a temperature indicator is also selected (as a SYSCAL) - a 4 point calibration is performed (-20°C, 0°C, 100°C & 190°C or -20°C, 0°C, 70°C & 140°C for food types)
- No hassle or wasted time getting your new item calibrated elsewhere and having to raise separate purchase orders

**310 stainless steel:** Good corrosion & oxidation resistance to suit a wide range of processes, satisfactorily operates in sulphur bearing atmospheres

Typical applications include brick & cement kilns, glass industry, heat treatment & annealing furnaces, power stations, flues, heat exchangers etc.

T/C Type	Probe Dia. (mm)	Probe Length (mm)	Sheath	Thermocouple junction	Allied code	RS order Code	RS 2 Point Calibrated Version SYSCAL (0°C & 100°C)
K	0.5	250	310SS	Insulated	70654817	<b>804-7937</b>	181-7298
K	1	150	310SS	Insulated	70654815	<b>804-7931</b>	181-7299
K	1.5	150	310SS	Insulated	70654808	<b>804-7909</b>	181-7296
K	1.5	1000	310SS	Insulated	70654822	<b>804-7956</b>	181-7300
K	3	250	310SS	Insulated	70654810	<b>804-7915</b>	181-7290
K	3	1000	310SS	Insulated	70654825	<b>804-7965</b>	181-7297

### Why is Calibration So Important?

Calibration defines the accuracy and quality of measurements recorded using a piece of equipment. Over time there is a tendency for results and accuracy to 'drift' particularly when using technologies or measuring parameters such as temperature and humidity. To be confident in the results being measured there is an ongoing need to maintain the calibration of equipment throughout its lifetime for reliable, accurate and repeatable measurements.

The goal of calibration is to minimise any measurement uncertainty by ensuring the accuracy of test equipment. Calibration quantifies and controls errors or uncertainties within measurement processes to an acceptable level.