

DATA SHEET

TYPE K PLUG MOUNTED GENERAL PURPOSE KIT

Description

Comprising of four plug mounted probes, which can be plugged directly into a handheld thermometer, a fine wire (PTFE) Thermocouple Sensor, which can be left in situ and a handle, which enables the user to convert the plug mounted probes into standard length probes. This kit provides all the probes in common usage across a wide range of industries.

All Plug Mounted Probes:

- **TOTAL ENCAPSULATION TECHNIQUE FOR MAXIMUM STRENGTH AND DURABILITY.**

This probe is manufactured using a two stage moulding technique. Firstly the probes are encased in tough nylon, then a thermoplastic over moulding is applied. This gives an extremely robust and durable construction with the added benefit that the assembly is waterproof.

- **HIGH ACCURACY THERMOCOUPLE MATERIAL THROUGHOUT**

Type 'K' Thermocouple : Class I ($\pm 1.5^{\circ}\text{C} \pm 0.25\%$)

KHS02 Surface Probe

Sprung Shield Probe for surface temperature measurement at high temperature. Ideal for one-handed temperature measurement.

Construction

Surface probe with copper sensing tip protected by a sprung stainless steel draught shield. Stainless Steel 316 (Food Grade). 4mm diameter stem 110mm long. Probe tip 6mm diameter.

- **WIDE AMBIENT TEMPERATURE SPECIFICATION** : -30 TO 50 °C
- **TIME RESPONSE (96% of value on clean metal)** : 3.0 Secs
- **MEASUREMENT RANGE** : -100 TO 750 °C

KHP05 Needle Probe

Designed for measurement of semi solids, liquids and dry materials.

Construction

Stainless Steel Needle probe plug mounted. Needle is 3.3mm diameter and 100mm long with a sensor welded to the tip.

- **WIDE AMBIENT TEMPERATURE SPECIFICATION** : -30 TO 50 °C
- **TIME RESPONSE (96% of value in water)** : 1.6 Secs
- **MEASUREMENT RANGE** : -100 TO 250 °C

KHM01 General Purpose Probe

This probe is ideal for the temperature measurement of liquids.

Construction

3.0mm diameter by 100mm long minerally insulated plug mounted probe.

- **WIDE AMBIENT TEMPERATURE SPECIFICATION** : -30 TO 50 °C
- **TIME RESPONSE** (*96% of value in water*) : 2.0 Secs
- **MEASUREMENT RANGE** : -100 TO 750 °C

KHA02 Air Probe

This probe is ideal for the temperature testing of heating and ventilation work.

Construction

Air probe with exposed thermocouple sensor protected by a perforated stainless steel sheath. Insulated in ceramic sheaths. Sensor stem is 4mm diameter and 110mm long, the sensor is approx 5mm from the stem end.

- **WIDE AMBIENT TEMPERATURE SPECIFICATION** : -30 TO 50 °C
- **TIME RESPONSE** (*96% of value in moving gas*) : 0.1 Secs
- **MEASUREMENT RANGE** : -100 TO 750 °C

KA01 Fine wire (PTFE) Thermocouple Sensor

Used for applications such as air, liquid or surface temperatures

Construction

This sensor is constructed using a 1M length PTFE wire constructed as a flat pair. The wire used is Class 1 Type K alloys (NiCr / NiAl). A weld bead is manufactured at one end of the wire whilst the other end is terminated in a moulded miniature thermocouple plug.

Sensor Features

➤ **MOULDED PLUG**

The use of a moulded plug gives a robust construction as well as providing a waterproof termination.

➤ **HIGH ACCURACY THERMOCOUPLE MATERIAL THROUGHOUT**

Type 'K' Thermocouple : Class I ($\pm 1.5^{\circ}\text{C} \pm 0.25\%$)

- **WIDE AMBIENT TEMPERATURE SPECIFICATION** : -100 TO 50 °C
- **TIME RESPONSE** (*96% of value in moving gas*) : 0.1 Secs
- **MEASUREMENT RANGE** : -100 TO 250 °C

(Please note may be used for temperatures down to -100°C however insulation will become brittle at temperatures below -50°C)

KH01 Handle

This handle is used in conjunction with the range of plug mounted probes offered by TME. The socket in the end of the handle allows for the plug mounted probes to be inserted into the handle. This means that a variety of temperature measurements may be performed using the socket in the handle and different plug mounted probes.

Construction

Handle which includes miniature thermocouple socket into which any one of the TME plug mounted probes may be inserted. Complete with 2M curly polyurethane cable with moulded connector. Complete waterproof assembly.

Sensor Features

➤ **TOTAL ENCAPSULATION TECHNIQUE FOR MAXIMUM STRENGTH AND DURABILITY.**

This results in a solid handle as opposed to a hollow handle. This is particularly important as there is often damage to the handles caused by excess heat. With a hollow handle it is possible to puncture the outer plastic and damage the sensor irreparably.

➤ **WATERPROOF HANDLE**

Due to the total encapsulation method used, all TME probe handles are completely waterproof.

➤ **TOUGH POLYURETHANE CABLE**

- Polyurethane cables are used in place of the standard PVC for the following reasons :-
- Greater retractability
- Enhanced memory of it's curl
- Non-Toxic
- Greater mechanical strength for durability
- 12 X 0.2mm wires used internally for greater strength.
- PTFE inner insulation for strength and retractability.

➤ **HIGH ACCURACY THERMOCOUPLE MATERIAL THROUGHOUT**

Type 'K' Thermocouple : Class I ($\pm 1.5^{\circ}\text{C} \pm 0.25\%$)

➤ **POLYPROPYLENE HANDLES**

Polypropylene is an extremely tough and durable material, commonly used for milk crates, it has good low temperature performance and a relatively high melt temperature. It performs exceptionally well under chemical attack.

➤ **WIDE AMBIENT TEMPERATURE SPECIFICATION : -50 TO 50 °C**

Cross-reference for compatible instruments

Suitable instruments for use with this probe

TME PART No	DESCRIPTION	APPLICATION
MM2000	SINGLE INPUT INSTRUMENT	HIGH ACCURACY TEMPERATURE MEASUREMENT
MM2008	SINGLE INPUT THERMOMETER with 1 & 2 MINUTE TIMERS	LEGIONELLA TEMPRATURE MONITORING
MM2010	MAX / MIN HOLD INSTRUMENT	HIGH ACCURACY INSTRUMENT WITH MAX, MIN AND HOLD FEATURES
MM2020	DIFFERENTIAL INSTRUMENT	DUAL INPUT INSTRUMENT FOR DIFFERENTIAL MEASUREMENTS
MM2030	THERMOCOUPLE SIMULATOR	HIGH ACCURACY SIMULATOR WITH MEASUREMENT FACILITY
SOLO-K	COMPACT SINGLE INPUT INSTRUMENT	HIGH ACCURACY TEMPERATURE MEASUREMENT