T.M.Electronics (UK) Ltd Technical Data

DATA SHEET

TYPE 'T' PLUG MOUNTED FOOD PROBE KIT

Description

Comprising of four plug mounted probes, which can be plugged directly into a handheld thermometer, and a handle, which enables the user to convert the plug mounted probes into standard length probes, this kit provides all the probes commonly used for temperature monitoring within the food industry.

All 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 'T' Thermocouple : ½ Class I (±0.25˚C ±0.15%)

THS02 Surface Probe

The probe is designed for the measurement of surface temperatures with wide temperature range

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 : -50 TO 400 ˚C**

THA12 Flat Food/Pallet Probe

The probe is designed for temperature testing between cartons or boxes. Can also be used for testing the temperature of liquids

Construction

Flattened Stainless Steel blade 5mm in diameter by 110mm long: Stainless Steel 316 (Food Grade)

- **WIDE AMBIENT TEMPERATURE SPECIFICATION : -30 TO 50 ˚C**
- **TIME RESPONSE *(96% of value on clean metal)* : 3.0 Secs**
- **MEASUREMENT RANGE : -100 TO 250 ˚C**

THA02 Air Probe

The probe is designed for testing fridges, ovens and heating cabinets.

Construction

Air probe with exposed thermocouple sensor protected by a perforated stainless steel sheath. Insulated in ceramic sheaths. Sensor stem is 4mm diameter and 100mm long, the sensor is approx 15mm 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 400 ˚C**

THP05 Needle Probe

The probe is designed for penetration of semi-solid products

Construction

Needle is 3.3mm diameter and 110mm 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**

TH01 Handle

Designed for the above probes which enables the user to convert the plug mounted probes into standard length 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. Measures 135 x 15mm

- **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 its 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 'T' Thermocouple : ½ Class I (±0.25˚C ±0.15%)

- **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
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-T	COMPACT SINGLE INPUT INSTRUMENT	HIGH ACCURACY TEMPERATURE MEASUREMENT