



TECHNOLOGY IN TEMPERATURE



TM Electronics (UK) Ltd manufactures and supplies an exciting range of temperature measuring and monitoring products - from quality budget solutions to bespoke designs.

Established in 1990, TME has a well-proven reputation for technical innovation and quality in the temperature industry, combining new technologies with extensive application experience to produce world-beating thermometers, probes and

TME prides itself on an innovative approach to product design from encapsulated probe handles to ergonomic, waterproof thermometer casings. TME Innovations include the introduction of Barcode logging with Bluetooth download facility, revolutionising temperature recording.

TME's new ThermaSprint Technology now delivers an impressive 3 second response time - up to 10 times faster than conventional digital measurements- see P12 for details.



A long tradition of solving customer application problems with novel probe and instrument variations, has produced many hundreds of bespoke designs across all industries - from supermarkets and food production lines to photocopiers and steel foundries.

At TME, we believe in a quality all round service, from helping our customers to choose the right product for their needs to providing a first class after sales back-up.

This catalogue shows just a selection of our temperature range. Many more products can be viewed and ordered on-line at www.tmelectronics.co.uk

For a helpful, well-informed response, contact: TME Sales Office on tel +44(0)1903 700651 or email sales@tmelectronics.co.uk

To keep up to date with all the recent developments at TME you can now follow us on Twitter and Facebook.



Thermometers from TM Electronics



#### Warranty

All TME instruments are warranted for two years against manufacturing defects. For unbeatable value for money ask about our Thermometer for Life Pledge.

#### Certification

Free certificates of conformance are available on request.

#### Calibration

Calibration certificates are available on request. Prices start from £35.

# Repairs

An excellent after sales repair service is available with low-cost fixed repair charges for most products.

# Design Service

TME offer a design service from special sensors to complete instrumentation systems.

### TME SENSOR SELECTION GUIDE

Use the table below as a quick guide to the correct sensor type, according to the temperature range, accuracy and speed required.

Sensor Type	Temperature Range	Accuracy @0.0 °C	Time Response
T Thermocouple	-200 to 400 °C	± 0.25 °C	Fast
K Thermocouple	-200 to 1372 °C	± 1.5 °C	Fast
Thermistor	-50 to 150 °C	± 0.2 °C	Medium
PT100	-200 to 850 °C	± 0.15 °C	Slow

Note the table above is for guidance only.

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Easy to use thermometer complete with fold out needle probe





Easy to use thermometer with a variety of plug in probes



- 0.1°C Resolution
- Low Battery Indication
- Splash Proof Casing
- Cook / Chill / Frozen Indication
- High Accuracy

£47.50



- 0.1°C Resolution
- Low Battery Indication
- Splash Proof Casing
- Cook / Chill / Frozen Indication
- High Accuracy

# **Specification Table (SOLO, SOLO-K & SOLO-T)**

ELECTRICAL	
Measurement Range	- 50 to 150 °C
Temperature Scales	°C
Accuracy @ 23°C	± 0.5°
Resolution	0.1°C
Response Time	3 Sec (95% of reading)

ENVIRONMENTAL	
Ambient Operating Range	-30 to 50 °C
Storage Temperature Range	-40 to 50 °C
Humidity	0 to 70% R.H.
Battery	2 AA Batteries
Weight	155 gms
Dimensions	160 X 50 X 30 mm

# **Plug in Probes compatible with this Instrument**



Above is a small selection of the probes available 'Refer to page 18 for details

The MM2000 series carry a two year warranty as standard. All instruments are microprocessor driven, providing exceptionally high accuracy and long term stability. They also feature a very wide operating range (-30 to 50°C), have a resolution of 0.1 to 1000 and are autoranging.

All instruments are designed to be waterproof to IP67 standards. All instruments are supplied complete with a thermoplastic rubber boot.

#### All thermocouple instruments give a choice of seven thermocouple types:















#### **Single Input Thermocouple Thermometer**

- Seven thermocouple types
- Infra-red capability
- °C/°F selectable
- Self-calibrating

2000

£95.00



# **Multi Function Thermocouple Thermometer**

- Max/min Functions
- Hold function
- Dual display
- °C/°F/°A selectable
- Simultaneous display of real time
- Max/min/hold measurement
- Self-calibrating

2010 £115.00



# **Dual Input Thermometer**

- Dual input
- Seven thermocouple types
- Infra-red capability
- Differential display
- °C/°F/°A selectable
- Simultaneous display of both inputs or differential and input 1
- Self-calibrating

2020

£120.00



#### **Thermocouple Thermometer/Simulator**

- Simulation of thermocouple output
- Seven thermocouple types
- Milli-Volt measurement/output
- °C/°F/°A selectable
- Self-calibrating

2030

£195.00

Compatible Probes pages 10 - 21

### **Thermistor Thermometer**

- °C/°F selectable
- Wide measurement range (-50 to 150°C)
- Very high accuracy
- Self-calibrating

2040

£95.00

**Compatible Probes page 19** 

#### **PT100 Thermometer**

- Four/three/ two wire measurement
- Max/min functions
- Hold function
- Dual display
- °C/°F/°A selectable
- Simultaneous display of real time and max/min/hold measurement
- Self-calibrating

2050

£115.00

**Compatible Probes page 19** 



PARAMETERS	2000	2010	2020	2030	2040	2050
Measurement Range	-200 TO 1372°C	-200 TO 1372°C	-200 TO 1372°C	-200 TO 1372°C	-50 TO 150°C	-200 TO 850°C
Sensor Type	K,T,R,N,J,E,S+IR	K,T,R,N,J,E,S+IR	K,T,R,N,J,E,S+IR	K,T,R,N,J,E,S+mV	THERMISTOR	PT100
Temperature Scales	°C/°F	°C/°F/°A	°C/°F/°A	°C/°F/°A	°C/°F	°C/°F/°A
Features		MAX, MIN, HOLD	DUAL INPUT DIFF, HOLD	SIMULATE		MAX, MIN, HOLD
Accuracy @ 23°c	±0.2°C ±0.15% OF READING			±0.2°C ±0.1% OF READING	± 0.2°C	±0.2°C ±0.15% OF READING
Operating Range	-30 TO 50°C					
Cold Junction Compensation	0.0075°C/°C					
Characterising Errors	LESS THAN 0.05°C					
Temperature Coefficient	0.01% OF READING /°C					
Resolution	0.1°, to 1° above IOOO° (auto ranging)					
Battery	PP3					
Battery Life	GREATER THAN 200 HOURS					
Dimensions	130 x 70 x 33 mm					
Weight	155gms					

# **ThermoBar Scan**

By recording a barcode along with time, date and temperature this instrument revolutionises portable temperature logging. The barcode can represent a product or a location and the instrument uses Bluetooth communication to download the data to a PC, mobile phone or PDA.

#### **Main Features**

- Integral Barcode reader
- Logs up to 1000 timed and dated temp records
- Built in Bluetooth communications
- Supplied complete with open-source PC software
- Switchable thermocouple types K/T/R/N/J/E/S
- °C/°F selectable
- Infra-Red sensor compatibility



# **NOW WITH ALARM CAPABILITY**

£375.00



ENVIRONMENTAL	
Ambient Operating Range	0 to 50 °C
Storage Temperature Range	-20 to 50 °C
Measurement Temp. Range	-200 to 1820 °C
Humidity	0 to 70% R.H.

BARCODE	
Readable Bar Codes	AII UPC/EAN /JAN Codes
	EAN28 Codes
	Code39 Code128
	Interleave 25

The ThermoBar Scan is compatible with all TME thermocouple probes (see pages 10-21)

BLUETOOTH®	
Class	Class 1
Contains	FCC ld: S22btmodule-Cl1

ELECTRICAL	
Accuracy @23°c	+/- 0.1% of Reading +/- 0.2 °C
Characterising Accuracy	Less than 0.05 °C
Temperature Coefficient	0.01% of Reading /°C
Cold Junction Compensation	0.0075 °C/°C
Resolution	0.1° to 1000 1° above 1000

GENERAL	
Battery	PP3
Weight	200 gms
Dimensions	160 X 70 X 55 mm

# Thermo Bluetooth™

A unique Bluetooth logging thermometer for customers who do not require barcode scanning. This instrument also provides a portable, logging capability: to log product temperature, time and date AND/OR give instant temperature readings via Bluetooth to a PC, mobile phone or PDA.

#### **Main Features**

- Logs up to 1000 timed and dated temp records
- Built in Bluetooth communications
- Supplied complete with open-source PC software
- Switchable thermocouple types K/T/J/R/N/E/S
- °C/°F selectable
- Infra-Red sensor compatibility
- Self calibrating
- Waterproof to IP67 standards
- Supplied complete with thermoplastic rubber boot



£275.00

# MM7000 Bluetooth Series Software

Quick and easy to use, the open source software enables the user to configure the thermometers, download stored data and can even give real time reading. The software can also store data in a CSV file ready for loading into a spreadsheet such as Excel. The software is also capable of translating Barcodes with product, and or location descriptions supplied by the customer. This equipment is key in satisfying Due Diligence requirements.

# Bluetooth Printer with Wall/Belt Mounting Kit

When used in conjunction with the MM7000/MM7010 produces a cost effective printing thermometer. Capable of providing temperature delivery receipts.

#### **Main Features**

- Compact 35mm Printer with Bluetooth™ Interface
- Supplied complete with:
  - Universal Trickle Charger
  - ▶ 2 x 35mm print rolls
  - ▶ Wall/Belt Mounting Kit
  - Data Cable

£149.00





# Cost effective solution to high accuracy measurement

Two best selling products from TM Electronics – the MM2000 Waterproof Thermometer and the TP05 needle probe are now combined in one unit.

The MM-COMBI is an easy to use handheld thermometer, which is ideal for a wide range of applications – particularly repeat temperature recordings where accuracy and speed are important. The integral sensor is a general purpose needle probe for use wherever penetration of semi-solid product is required – eg cooked/chilled foods.

# £75.00

- High accuracy
- Waterproof
- Simple point-and-probe action
- No trailing wires
- No plug-in connection
- Battery powered
- Food-safe

SPECIFICATION TABLE	
Infra-Red Compatibility	No
Sensor Type	Т
Operating Range	-30 to 50°C
Measurement Range	-100 to 280°C
Accuracy @23°C	±0.5°C over critical food temperature range
Cold Junction Compensation	0.0075°C/°C
Characteristic Errors	Less than 0.05°C
Temperature Coefficient	0.01% of reading /°C
Resolution	0.1° to 1° above 1000° (auto ranging)
Battery	PP3

# **Food Simulant System**



# **Type T Food Simulant Probe**

- O Long response time making it ideal for long term measurement
- Designed to have similar thermal characteristics as a pack of cold meat
- When placed within your cold storage environment the probe will accurately reflect the temperature of surrounding product
- Has two fixing holes, so it may be left cable-tied to your cold store
- Temperature Range: -50 to 150°C
- O Dimensions: 100mm x 100mm x 10mm



# **Cold Storage Monitoring Kits**

- MM2000 Digital Single Input Thermocouple Thermometer
- Food Simulant Probe
- Connection Lead
- Temperature Log Book

ORDER CODE	DESCRIPTION	PRICE
FSP1	MM2000 + 1 * TFS01	£132.50
FSP2	MM2000 + 3 * TFS01	£165.00
FSP3	MM2000 + 5 * TFS01	£195.00
FSP4	MM2000 +10 * TFS01	£295.00

# **Needle Probes**

TME's handheld needle sensors come with two different handles. The first is a nylon T Bar handle complete with socket for removable cable. The second is a ball shaped handle, this is a solid handle totally encapsulating the cable and the needle to give superb strength and durability. These are also entirely waterproof and dishwasher safe. Polyurethane cables are used as standard for greater retractability and strength. A moulded connector completes the assembly.



#### **Frozen Food Probe**

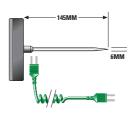
- Designed to measure semi solid/ solid frozen food temperature
- Corkscrew design to allow ease of penetration
- Detachable curly lead prevents entanglement





#### T-Bar Heavy Duty Needle Probe

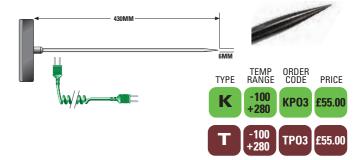
- Designed for use in food storage, cooking and chilling
- 6mm diameter shaft and pencil point tip allow ease of penetration
- Supplied with detachable curly lead and fitted plugs



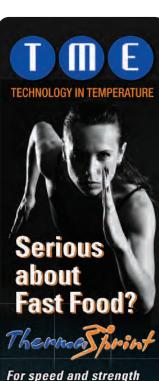


# **Extended Heavy Duty Needle Probe**

- Designed for deep penetration into semi-solid products
- 6mm shaft, 430mm long with pencil tip for easy penetration
- Supplied with detachable curly lead and fitted plugs



£45.00



For speed and strength choose ThermaSprint temperature probes - up to 10 times faster than conventional probes.

#### How does it work?

ThermaSprint technology allows the sensing element of the probe to become an integral part of the needle, producing a fantastic

#### 3 second response time

combined with the strength of TME's robust encapsulated handle design.

# Choose a probe

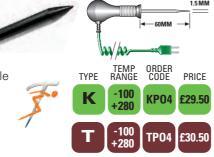
ThermaSprint technology is now available on TME's SOLO thermometer and TME's

- Extended length TP06
- Small diameter TP04
- New reduced tip TP1

For more information visit www.v.thermasprint.com

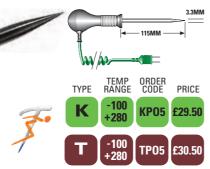
# **Small Diameter Needle Probe**

- Designed for use in semi-solid materials
- Fitted with 2m curly cable and miniature plug
- Waterproof



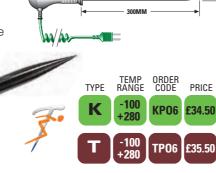
### **General Purpose Needle Probe**

- Designed for cooked/chilled products, or any semi-solid material
- For use wherever penetration of semi-solid product is required
- Waterproof



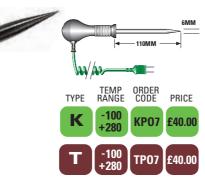
#### **Extended Needle Probe**

- Extended version of the standard needle probe
- Ideal for applications requiring extended penetration
- Waterproof



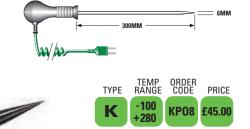
### **Heavy Duty Needle Probe**

- Designed with 6mm diameter shaft
- With pencil point tip for ease of penetration
- Ideal for measurement of semi-solid or solid materials
- Waterproof



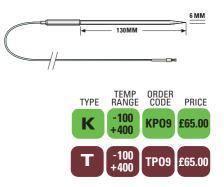
### **Extended Heavy Duty Needle Probe**

- Ideal for deep penetration and measurement of semi-solid material
- Ideal for below surface applications
- Waterproof



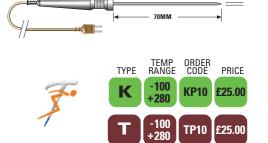
#### **Oven Needle Probe**

- Ideal for measuring Product temperature in an Oven
- -100 to +400 °C Wide Operating Range
- Stainless Steel Braided Cable
- Supplied with tails for hard wiring



#### Fine needle small handle - Ideal for Sous Vide cooking

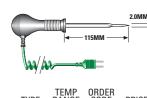
- Fine needle 1.5mm for minimum damage to vacuum pack
- Fast response
- Waterproof assembly for easy cleaning



# **Reduced Tip Needle**

- Reduced Tip from 3.3 to 2.00mm to give a fine needle with the strength of a wider needle
- Fast response
- Waterproof assembly for easy cleaning

















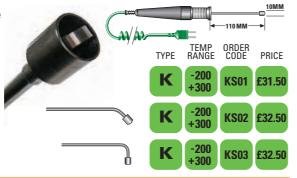
# **Surface Probes**

These handheld temperature surface probes form a comprehensive range of surface temperature probes. Suitable for use from freezer temperatures to furnace temperatures. The handles are made from polypropylene and designed for comfort and fine control. They are totally encapsulated, increasing strength, durability and therefore entirely waterproof. Polyurethane cables are used as standard (as opposed to PVC) for the enhanced memory of their curl, greater retractability and strength.

This construction delivers robust probes ideal for industrial temperature measurement also for many applications in heating and ventilation thermometery.

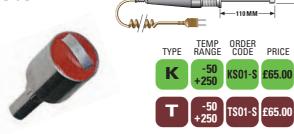
# **Fast Response Ribbon Probe**

- Excellent accuracy
- Fast response
- Ideal for measurement of surface temperatures below 300°C
- Fitted with 2m curly cable



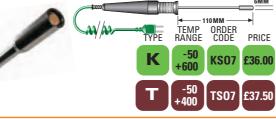
#### **Dual Surface / Immersion Probe**

- 2 in 1 probe may be used for surface temperatures and may be immersed to take liquid temperatures
- Fast response
- Waterprooof assembly
- Ideal for measurement of surface temperatures below 250°C



# **High Temperature General Purpose Probe**

- Ideal for measuring surfaces up to 600°C
- Fast response
- Fitted with a small spring loaded shield
- Fitted with 2m curly cable and miniature plug



# **Extra High Temperature Probe**

- Spring loaded tip housed in ceramic
- Extended shaft
- Ideal for high temperature measurement at a safe distance
- Fitted with 2m curly cable and miniature plug



#### **Magnetic Surface Probe**

- Button type magnet
- Spring loaded thermocouple junction
- 2m of PTFE twin twisted cable plus miniature plug
- Diameter of 13mm other sizes available on request







# **Fast Response High Temperature Surface Probe**

- Coiled Thermocouple wire construction
- Fast response
- High temperature Measurement 1100°C



# **Pipe Clip Probe**

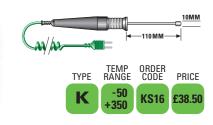
- Designed to clip onto a pipe with sprung loaded measurement disc held against the pipe
- High temperature Measurement 800°C
- Fitted with 2M curly lead and miniature plug
- Maximum pipe size 17mm



#### **Robust Ribbon Surface Probe**

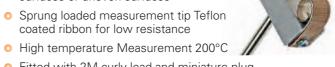
- Robust ribbon surface probe
- Slightly slower response than KS01 but with stronger construction
- High temperature Measurement 350°C

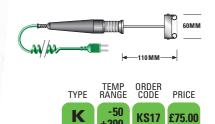




#### **Bow Probe**

- Designed for measurement of rotating surfaces or uneven surfaces
- Sprung loaded measurement tip Teflon coated ribbon for low resistance
- Fitted with 2M curly lead and miniature plug





www.tmelectronics.co.uk

# **General Purpose Probes** (Minerally Insulated Probes)

# **Pipe Clamp Probe**

- Ideal for measurement of pipe temperatures, flow and return and radiator balancing
- Supplied with 2m of curly cable plus miniature plug
- Other sizes available



K	-50	KPS10	£24.50
ТҮРЕ	TEMP RANGE	ORDER CODE	PRICE



#### **Velcro Probe**

- Designed to measure the temperature of pipes
- The probe may be wrapped around pipes of varying sizes
- The design ensure that the sensor is kept in good thermal contact with the surface of the pipe
- 400mm Long 20mm Wide

# **Fine Wire Thermocouple** Sensors

- Allow fast response and excellent repeatability
- Used for applications such as air, liquid or surface temperatures

















# **Air Probes**

# Air Probe (Moving Air)

- Ideal for the measurement of air and gases
- Funnelled shield allows maximum airflow across measuring junction
- Supplied with 2m curly cable plus miniature plug









### **General Purpose Air Probe (Still Air)**

- Designed for measuring air or gas temperatures in ducts or pipes
- Ideal for temperature measurement in small openings
- Fitted with sensor protection shield
- Supplied with 2m curly cable plus miniature plug

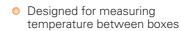








#### **Fast Response Flat Food Probe**



- Ideal for air and liquid measurement
- Supplied with 2m curly cable with miniature plug





# **High Accuracy Black Body**

- Designed to give a true reflection of temperature by imitating a black body i.e absorbs all radiation incident upon it
- Supplied with 2m glass fibre S/S overbraided plus miniature plug









# **General Purpose Probes**









TEMP ORDER RANGE CODE

- Ideal for temperatures up to 1100°C
- The material can be bent without affecting
- KM02 £30.00 TM02 £31.00

Excellent for measurement of air, gas, liquid and applications requiring difficult access

performance

- Supplied with 2m curly cable with miniature plug
- Other thermocouple types and lengths can be supplied upon request









PRICE

# **Plug Mounted Probes**

These probes are moulded directly into miniature thermocouple plugs, giving a waterproof and robust assembly. A handle is available which includes a thermocouple socket and a flexible holding piece that ensures the probe is held in place.

# **Handle Probe for Plug Mounted Probes**

- TEMP RANGE TYPE PRICE **KH01** £20.00

- These handles are used in conjunction with the range of plug-mounted probes.
- Complete with 2M curly cable and miniature plug

#### **Air Probe**

- Fast response sensor
- Comprising an exposed thermocouple junction protected by a perforated stainless steel sheath
- Ideal for use in heating and ventilation work allowing for temperature measurement with a simple one-handed operation.





£20.00

PRICE

£20.00

£20.00



# **General Purpose Probe (Mineral Insulated)**

- A 3mm diameter mineral insulated probe
- 100mm long
- Stainless steel sheath







# **Needle Probe**

- Features a pencil tip
- Ideal for measuring temperatures of semi-solids



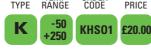




# **Surface Probe (Band)**

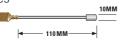
- Fast response for surface temperature measurement
- Uses a thin stainless steel band for contacting the surface



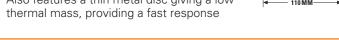


# **Surface Probe (Sprung Shield)**

- Features a sprung draught shield which serves to protect the tip when not in use
- Also features a thin metal disc giving a low thermal mass, providing a fast response









— 110 MM-







Designed to take the temperature

**Flat Food Probe** 

between cartons





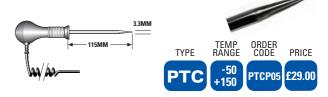


# **Thermistor Probes**

For use with MM2040 or Hard-Wired applications. Please specify when ordering.

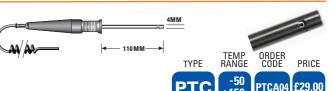
#### **Needle Probe**

- Ideal for measurement of semi-solid products
- Fitted with 2m curly cable



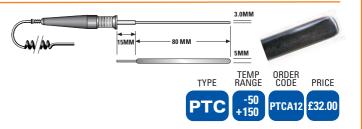
#### **Air Probe (Still Air)**

- Ideal for measurement of air and gases
- Fitted with sensor protection shield
- Supplied with 2m curly cable



#### **Flat Food Probe**

- Designed for measuring temperatures between boxes
- Ideal for air and liquid measurement
- Supplied with 2m of curly cable

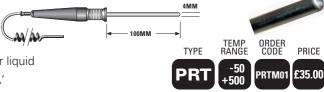


# **Platinum Resistance Probes**

For use with MM2050 or Hard-Wired applications. Please specify when ordering.

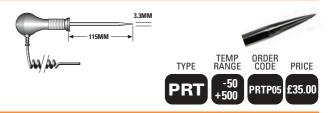
# **Immersion Probe**

- Supplied with 2m curly cable
- High accuracy probe for temperature measurement of gas or liquid
- All sensors are calibrated to class 'A'



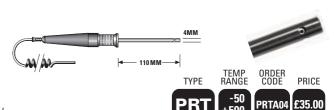
#### **Penetration Probe**

- Ideal for measurement of semi-solid products
- Supplied with 2m curly cable
- All sensors are calibrated to class 'A'



# Air Probe (Still Air)

- Ideal for the measurement of air and gases
- Fitted with sensor protection shield
- Supplied with 2m curly cable
- All sensors are calibrated to class 'A'

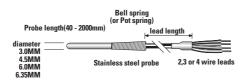


# **Fixed Industrial Sensors**

TME can manufacture a wide range of fixed sensors using Thermocouples, PRT elements or thermistor sensors. It is not possible to illustrate the full range in this catalogue, however please contact our sales office for further information on the sensors we offer.

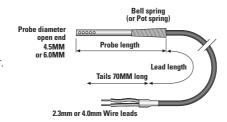
# Standard Assembly No 1

- The sensor element is protected by a 316 stainless steel tube with welded tip
- The element is hermetically sealed
- Suitable for a wide variety of applications
- Single or dual element versions are available, and the probe can be straight or formed as required



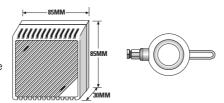
#### **Air Duct Sensor No 2**

- The sensor detector is housed in a 316 stainless steel tube, which is open-ended and perforated along the sensing length to permit free airflow around the detector.
- This design provides mechanical protection for the detector whilst ensuring good thermal sensitivity to airflow: - 100 to +250°C.



#### **Wall Mounted Resistance**

- The sensor detector is housed in a choice of standard glass filled resin or optional weatherproof cases for wall
- The cases are designed to permit free airflow around the sensor; this ensures accurate air temperature sensing.
- Nylon cable gland is fitted to the weatherproof version



#### **Head Mounted Sensor**

- Mineral insulated probe terminated in an IP67 rated connection head containing a ceramic terminal block and offering an M20 cable entry
- These sensors are available in many lengths and diameters to suit a great variety of applications



# **Fittings and Adapters**

• We can offer a huge range of both compression fittings and bayonet adaptors to suit many process threads for ease of installation.



#### **Tempatch**

- Self adhesive patch thermocouple
- Ideal for continuous surface temperature measurement
- The sensors low thermal mass ensures a fast response
- 1M lead with moulded plug other lengths available on request

K	-30 +250	KPA01	£5.75
TYPE	RANGE	CODE	PRICE





#### **Rubber Patch**

- Silicone rubber patch sensors with self adhesive foil backing
- Offers good resistance to oils and chemicals
- Fast response sensor







# **Probes Kits**

# **Food Kit Type T Probes**

- Socket in the handle
- Plug mounted surface probe
- Plug mounted flat food probe probe
- Plug mounted air probe
- Plug mounted needle probe







# **General Purpose Kit Type K Probes**

- Socket in the handle
- Plug mounted surface probe
- Plug mounted air probe
- Plug mounted needle probe
- Plug mounted G.P probe
- Fine wire



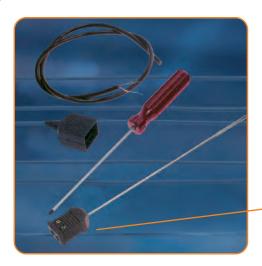


# **Heating, Ventilation and Refrigeration Kit Type K Probes**

- Socket in the handle
- Plug mounted ribbon surface probe
- Plug mounted MI probe
- Plug mounted air probe
- Velcro probe







A quick and easy way of fitting temperature probes without the requirement for bulky and cumbersome head assemblies.



#### **Air Sensors**

The probe is terminated using a moulded on terminal assembly, which is easily fitted to the sensor wire via simple screw terminals. We also provide a cable hood to inhibit ingress into the cable terminal block.

Because the connector is small compared to the normal head assemblies, for those applications in high vibration areas such as engine monitoring the sensors will be subject to less mechanical stress.

The termination block is moulded around the sensor giving a complete waterproof seal.

PART NO	Sensor Type	Diameter (mm)	Length (mm)	Price
QCKA 04	'K'	4	100	£25
QCTA 04	'T'	4	100	£25
QCKA 08	'K'	4	300	£25
QCTA 08	'T'	4	300	£25

# **General Purpose - MI Sensors**

PART NO	Sensor Type	Diameter (mm)	Length (mm)	Price
QCKM 01	'K'	1.5	100	£25
QCTM 01	'T'	1.5	100	£25
QCKM 02	'K'	1.5	300	£25
QCTM 02	'T'	1.5	300	£25
OCKM 03	'K'	3.0	100	£25
OCTM 03	'T'	3.0	100	£25
QCKM 04	'K'	3.0	300	£25
<b>QCTM 04</b>	'T'	3.0	300	£25
QCKM 05	'K'	6.0	100	£25
QCTM 05	'T'	6.0	100	£25
<b>QCKM 06</b>	'K'	6.0	1000	£25
QCTM 06	'T'	6.0	1000	£25
QCKM 07	'K'	4.0	100	£25
QCTM 07	'T'	4.0	100	£25
<b>QCKM 08</b>	'K'	4.0	300	£25
QCTM 08	'T'	4.0	300	£25
<b>QCKM 09</b>	'K'	4.0	1000	£25
QCTM 09	'T'	4.0	1000	£25
<b>QCKM 10</b>	'K'	5.0	100	£25
QCTM 10	'T'	5.0	100	£25
<b>QCKM 11</b>	'K'	5.0	300	£25
<b>QCTM 11</b>	'T'	5.0	300	£25

#### LEGK1/LEGK6



Incorrect water temperature is a key risk factor for legionella growth. The legionella bacteria multiply in water temperature between 20-45 °C. A typical method of control is to store hot water above 60°C and distribute it at above 50°C. Cold water should be kept below 20°C.

The kit may be used to monitor the temperature of both standing and running water as well as the surface of pipes and tanks

that form part of a water system. The immersion probe should be placed in the water to a minimum depth of 25mm, the temperature can then be logged in the book provided. The surface probe may be used to take the temperature of pipes and tanks, which then may be recorded in the log book provided.

#### **LEGK6 Kit Contents**

#### £198.50

ORDER CODE	DESCRIPTION
MM2000	Thermometer
KA01	Fine Wire Thermocouple
TAPS	Thermocouple Attachment Pads
TEMPRB	Temperature Record Book
KS01-S	Type K Immersion/ surface Probe
LEGC01	Carrying Case with Inserts

# MM2000 DIGITAL THERMOMETER Measurement Range -200 TO 1372°C

Accuracy @ 23°C ±0.2°C ±0.15% of reading

Battery PP3

#### TM03 IMMERSION TEMPERATURE PROBE

Temperature Range	-50 to +400
Probe Dimensions	100mm x 3mm
Supplied with	2m Curly Cable plus Miniature Plug

#### TS07 SURFACE TEMPERATURE PROBE

1007 COMPAGE TEMPERATORE TROBE			
Temperature Range	-50 to +400		
Probe Dimensions	110mm x 6mm		
Fitted with	2m Curly Cable plus Miniature Plug		

#### **LEGK1 Kit Contents**

£198.50

ORDER CODE	DESCRIPTION	
MM2000	Thermometer	
TA01	Fine Wire Thermocouple	
TAPS	Thermocouple Attachment Pads	
TEMPRB	Temperature Record Book	
TM03	Type T Immersion Probe	
TS04	Type T Surface Probe	
LEGC01	Carrying Case with Inserts	

#### LEGK2/LEGK3



# **Premier Legionnaires Temperature Kit**

Legionella bacterium, found in ponds, air conditioning/cooling systems and hot and cold water systems, multiplies in water between 20-45 °C. The Premier Legionnaire's Temperature Monitoring Kit, with its unique Bluetooth® barcode thermometer, provides revolutionary new portable logging capability. Time, date, temperature and location identity are transmitted via Bluetooth® to PC, mobile phone or PDA. Kits are in demand at schools, offices, libraries, leisure centres and parks. Residential units (including holiday lets) represent a particular risk – also nursing homes, hospitals and hostels whose clients may be more vulnerable to the disease.

#### **LEGK2 Kit Contents**

525.50

ORDER CODE	DESCRIPTION	
MM7000	Barcode Thermometer	
TA01	Fine Wire Thermocouple	
TAPS	Thermocouple Attachment Pads	
ТМ03	Type T Immersion Probe	
TS07	Type T Surface Probe	
63-7000-01	Belkin Bluetooth Dongle	
LEGC02	Carrying Case with Inserts	

#### **LEGK3 Kit Contents**

£525.50

ORDER CODE	DESCRIPTION			
MM7000	Barcode Thermometer			
KA01	Fine Wire Thermocouple			
TAPS	Thermocouple Attachment Pads			
KS01-S	Type K Immersion/Surface Probe			
63-7000-01	Belkin Bluetooth Dongle			
LEGC02	Carrying Case with Inserts			

#### **Sous Vide Temperature Monitoring Kit**

This kit is perfect for temperature measurement of vacuum-packed food using the popular sous vide cooking method.

£135.00

£185.00

ORDER CODE	DESCRIPTION	
MM2000	THERMOMETER	
	WHITE FOAM SEALING TAPE	
TEMPRB	TEMPERATURE RECORD BOOK	
TP10	FINE NEEDLE PROBE 1.5MM DIAM	
SVKC01	SOUS VIDE KIT CASE	



# **Facilities Management Kit** with Dual Input Thermocouple **Thermometer**

Single imput version FMK2 £160.00

ORDER CODE	DESCRIPTION
MM2020	THERMOMETER
KS01-S	TYPE K IMMERSION/SURFACE PROBE
MMHOLS	HOLSTER FOR INSTRUMENT AND PROBE



# Food Kit Type T with MM2000, Plug-Mounted Probes and Case

A mini temperature measurement kit designed for the food industry. Comprising of:

£216.00

ORDER CODE	DESCRIPTION	
2000	THERMOMETER	
TH01	TYPE T UNIVERSAL PROBE HANDLE	
THA01	TYPE T FUNNEL AIR PROBE WITH MP	
THN01	TYPE T NEEDLE PROBE WITH MP	
THS02	TYPE T SPRUNG SURFACE PROBE WITH MP	
THSP01	TYPE T FLAT FOOD PROBE WITH MP	
FKC01	MINI CARRYING CASE WITH INSERTS	
TEMPRB	TEMPERATURE RECORD BOOK	



# Food Kit Type T with MM2000, Standard Probes and Case

A standard temperature measurement kit housing food safe sensors to meet food regulation applications. Comprising of:

£258.00

ORDER CODE	DESCRIPTION
2000	THERMOMETER
TA03	TYPE T FUNNEL AIR PROBE
TP05	TYPE T STANDARD NEEDLE PROBE
TS04	TYPE T SPRUNG SURFACE PROBE
TA12	TYPE T FLAT FOOD PROBE
FKC02	STANDARD CARRYING CASE WITH INSERTS
TEMPRB	TEMPERATURE RECORD BOOK



#### **General Purpose Kit Type K with MM2000 Plug-Mounted Probes and Case** £210.00

A mini flexible measuring kit that will meet most industrial needs. Comprising of:

	ORDER CODE	DESCRIPTION	
	2000	THERMOMETER	
	KH01	TYPE K UNIVERSAL PROBE HANDLE	
KHA01		TYPE K MOVING AIR PROBE WITH MP	
	KHN01	TYPE K NEEDLE PROBE WITH MP	
	KHS01	TYPE K RIBBON SURFACE PROBE WITH MP	
	KHM01	TYPE K 3MM MINERAL INSULATED PROBE WITH MP	
	GPC01	MINI CARRYING CASE WITH INSERTS	



### **General Purpose Kit Type K with MM2000 Standard Probes and Case**

A standard general purpose kit that meets most industrial temperature measurement requirements in industry. Comprising of:

£245.00				

ORDER CODE	DESCRIPTION		
2000	THERMOMETER		
KA03	TYPE K MOVING AIR PROBE		
KP05	TYPE K STANDARD NEEDLE PROBE		
KS01	TYPE K RIBBON SURFACE PROBE		
KM01	TYPE K 1.5MM MINERAL INSULATED PROBE		
GPC02	STANDARD CARRYING CASE WITH INSERTS		



# **Heating and Ventilation**

A comprehensive mini kit to meet requirements of most heating, ventilation, and refrigeration engineers.

	£3			101
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ORDER CODE	DESCRIPTION
2020	DIFFERENTIAL THERMOMETER
KH01	TYPE K UNIVERSAL PROBE HANDLE
KHA01	TYPE K MOVING AIR PROBE WITH MP
KS01	TYPE K RIBBON SURFACE PROBE WITH MP
KHM01	TYPE K BINDER PROBE WITH MP
KPS10	2 X TYPE K PIPE CLAMPS
HVC01	MINI CARRYING CASE WITH INSERTS



#### **Simulator Kit**

A kit designed for the engineer / manager who needs to check the accuracy of temperature measurement instruments under their control. (The simulator can be supplied with NPL traceable certificates)

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ORDER CODE	DESCRIPTION
2030	SIMULATOR/THERMOMETER
КМРС2МР	SIMULATOR INTERFACE CABLE WITH MP/MP
KMPS.6MS	STRAIGHT CABLE 6" LONG MS/TAILED
SMC01	MINI CARRYING CASE WITH INSERTS



- Large Backlit LCD
- °C/°F Switchable
- 0.1/1 Auto Ranging
- Selectable Thermocouple Input
- 3 or 4 wire RTD
- Scalable 4-20mA
- Splash Proof Front Panel (IP65)



0.1 resolution to 10 above 1000.

The thermocouple versions are switch selectable for eight thermocouple types (J, K, T, E, N, R, S, I/R). The PT100 version offers the option of three or four wire operation. The 4-20mA version can be easily scaled by setting scale and offset terms via internal switches. The instruments are microprocessor driven and fully self calibrating, offering long term stability.

ORDER CODE	DESCRIPTION	PRICE
4001	Single I/P Thermocouple	£250.00
4006	Six I/P Thermocouple	£300.00
4050	Single I/P PRT	£300.00
4056	Six I/P PRT	£325.00



# 2 inch LED Large Display Instrument

High accuracy microprocessor based instrument with a choice of three different input signals.

- Thermocouple / PT100 / 4-20 mA input versions
- Temperature Resolution of 0.1° to 1000° autoranging
- Display of –1999 to 9999 for process inputs (scalable)
- Optional peak hold facility
- Overrange / Open circuit sensor indication
- Splash proof front

ORDER CODE	DESCRIPTION	PRICE
5200	Thermocouple 2" display	£375.00
5250	PRT 2" display	£375.00



# The 5000 Series Panel Mount Instruments

These consist of a highly versatile thermocouple instrument and a high accuracy PT100.

To increase inputs on both instruments a 12 way switchbox is also available.

- Switchable Thermocouple Inputs (J, K, T, E, N, R, S, I/R)
- Backlit LCD
- °C/°F Switchable
- 0.1/1 Auto Ranging
- Overrange / Open Circuit sensor Indication
- 3 or 4 wire RTD

ORDER CODE	DESCRIPTION	PRICE
5001	Thermocouple	£115.00
5050	I/P PRT	£115.00



# 5 inch LED Large Display Instrument

High accuracy microprocessor based instrument with a choice of three different input signals.

- Thermocouple / PT100 / 4-20 mA input versions
- Temperature resolution of 0.1° to 1000° autoranging
- Display of –1999 to 9999 for process inputs (scalable)
- Optional peak hold facility
- Overrange / Open circuit sensor indication
- Splash Proof front to IP65

ORDER CODE	DESCRIPTION	PRICE
5500	Thermocouple 5" display	£675.00
5550	PRT 5" display	£675.00

# **Bench Instruments**



#### **Versatile Thermocouple Bench Instrument**

High accuracy microprocessor based thermocouple instrument. With seven different thermocouple types available and the choice of display in °C or °F. These instruments are housed in a tough ABS case and are supplied complete with integral tilt feet and 1.5m of cable with fitted mains plug.

- °C / °F switchable
- Resolution of 0.1° to 1000° autoranging
- Switchable thermocouple types K/T/J/R/N/E/S
- Easily configured via rear mounted switches
- Overrange / Open circuit sensor indication
- Available as single or six input versions



### **High Accuracy Bench PT100 Instrument**

High accuracy microprocessor based PT100 instrument with the choice of display in °C or °F. The instruments are housed in a tough ABS case and are supplied complete with integral tilt feet and 1.5m of cable with fitted mains plug.

- °C / °F switchable via rear mounted switch
- Resolution of 0.1° to 1000° autoranging
- Compatible with two, three or four wire sensors
- Overrange / Open circuit sensor indication
- Available as single or six input versions

ORDER CODE	DESCRIPTION	PRICE
6000	Single I/P Thermocouple	£195.00
6006	Six I/P Thermocouple	£245.00
6050	Single I/P PRT	£195.00
6056	Six I/P PRT	£245.00

# **Food Temperature Range**

TM Electronics is a leading UK manufacturer and supplier of high accuracy thermometers and probes to the food and hospitality industries.

From production and distribution to storage, retail and consumption, routine use of quality thermometers and probes accurate to +/- 0.5°C is essential to comply with food safety legislation.

TME offers practical and affordable equipment for all applications in farming, food manufacturing, food service and catering, supermarkets and restaurants.

- Hygienic waterproof thermometers
- Robust dishwasher-safe probes
- Bluetooth communication and Barcode scanning
- High temperature, submersible data loggers
- Rapid Response temperature measurement
- Accurate for HACCP Food Safety regulations

**More than** 20 years experience







# **Building Management Temperature Range**

We are also a leading UK manufacturer and supplier of high accuracy thermometers and probes to the building management industry

In all buildings, correct temperature is critical for both the health of the building and for the wellbeing of its users.

- Servicing heating and cooling systems
- Monitoring water temperature for the prevention of Legionnaires' disease
- Controlling the storage of temperature-sensitive stock
- Monitoring ambient room temperatures
- Performing energy audits

Regular use of quality thermometers and probes is essential for monitoring building services and for meeting health and safety regulations eg ACoP L8.





For further details and advice on our recommended Food Temperature Range and Building Managment Temperature Range, contact the TME Sales Office on 01903 700651 sales@tmelectronics.co.uk or visit www.tmelectronics.co.uk

# **Printing Thermometer**

A dual input printing thermometer that accepts Type T or Type K thermocouple probes. It can give a print on request including time, date and temperature. Alternatively, it can print at predetermined intervals. Also available are alarm outputs. For maximum flexibility

the user can select the correct probe for their own application from TME's comprehensive range.

The thermometer is supplied complete with a print roll, calibration certificate and carrying case.

# **Printing Rolls for the P4101**

37 x 30 Thermal Printing Rolls



P4101

# **Data loggers**

TME loggers are compact, robust and battery-powered data loggers that measure temperature, humidity and a wide range of other variables. Suitable for indoor and outdoor applications, and underwater monitoring in many industries such as Environment, Food, Logistics, Healthcare and Laboratories, Agriculture, Museums and Archives etc.

We have a variety of loggers to suit your needs:

- Robust and waterproof with large memories for long term monitoring
- Dust and splashproof for less demanding environments
- Made from Food Grade Materials with an integral display for 'on the spot' checking of measurements.

Our loggers are supplied with software to enable you to download and display data graphically or in tabular format.

Please contact us to discuss your specific requirements.



# Thermocouple/ PRT Cables & Connectors

TM Electronics hold a wide range of thermocouple / PRT cable in stock (PVC, PTFE, Glass Fibre, Braided, Armoured, Screened, Single or Multi Core). Any cable not available from stock can be obtained upon request. Cables are supplied in a minimum of 50m lengths.

#### **Connectors Miniature**

ORDER CODE	TYPE	PRICE
MP01	Plug (K,T,J&N)	£1.60
MS01	Sockets (K,T,J&N)	£1.85
MFS02	Facia Sockets & Clip (K,T,J&N)	£2.10
MCS03	Circular Facia Socket & Clip (K,T,J&N)	£2.15
MFL04	External Cable Clamp	£0.90
MRB05	Connector Rubber Boot	£3.00 PR

#### **Connectors Standard**

ORDER CODE	TYPE	PRICE
SSP01	Plug (K,T,J,&N)	£2.75
SSS01	Socket (K,T,J&N)	£2.45
SFS02	Facia Socket & Clip	£2.65
SCS03	Circular Facia Socket & Clip (K,T,J&N)	£2.65
SEC04	External Cable Clamp	£0.95
SRB05	Connector Rubber Boot	£4.00



#### Thermo Attachment Pads

Purpose designed for attaching small diameter thermocouples to surfaces. **£7.50** 

Temperature range -50 to + 250°C. Available in books of 100.



Wall Mount Holder

£15.00



Temperature Log Book

£2.50



Holster for SOLO

Fabric Holster with belt loop and 'D' Rings

£15.00



Pocket Probe Wipes

£2.50



Holster belt clip

£5.00



Probe Wipes Tub of 200

£4.75



Holster for MM7000

Fabric holster with shoulder strap and belt loop

£25.00



Holster for MM Range

Holster for MM Instrument and Probe

£27.50



Holster shoulder strap

£5.00

www.tmelectronics.co.uk

Call TME on 01903 700651



TM Electronics is a leading UK manufacturer of quality temperature measurement instruments - from affordable off-the-shelf solutions to bespoke customer designs.

- IP67 waterproof design
- HACCP safety compliance
- Calibration and repair services
- Wireless data monitoring
- Bluetooth© communications
- Barcode reading

Established in 1990, we are proud to offer a comprehensive range of high accuracy thermometers, probes and data loggers for all industries.

- Heating, ventilation and refrigeration
- Legionella water monitoring
- Industrial process applications
- Catering and hospitality
- Food manufacture and distribution.
- Facilities management



MULBERRY HOUSE MULBERRY LANE GORING-BY-SEA WORTHING WEST SUSSEX BN12 4RD

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