YaliTech®
INSTRUMENTS
FOOD & WATER

FULL PRODUCT CATALOGUE

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Specialists in the design & manufacture of
temperature measuring equipment since 1983

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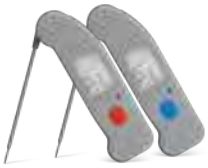

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HACCP
These products help you achieve a HACCP compliant system

INDUSTRIAL THERMOMETERS

Industrial thermometers are designed for a wide range of applications that may require more robust or specific styles of thermometer to ensure consistently accurate readings. Common applications include:

- HVAC
- Water temperature measuring
- Manufacturing
- Facilities management

CHOOSING AN INDUSTRIAL THERMOMETER

When selecting a thermometer for your industrial application, some common features to consider are:

- Waterproofness: protection from water and dust
- Range: the highest and lowest temperatures required
- Accuracy: the potential margin for error
- Hold: locking readings on-screen for easy recording
- Max/min: the maximum and minimum temperatures over a period

THERMOMETER KITS

Some types of common temperature checks usually require certain probes or accessories to go alongside their thermometer. For example, HVAC engineers often use two clamp probes for radiator balancing. In addition, legionella risk assessments can benefit from a timer to ensure the water runs for the correct length of time.

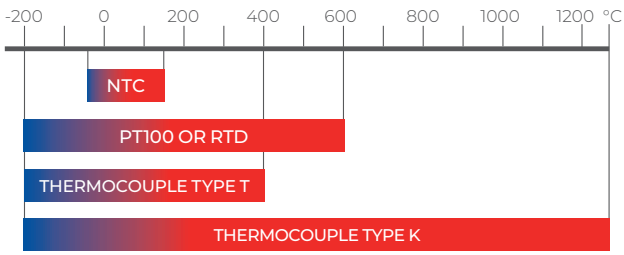
Our thermometer kits are specifically tailored to these requirements, including all of the essential equipment typically needed for these checks. They're also packed in a handy carrying case, which makes transporting the equipment to different locations easy.

SENSOR TYPES

Our digital thermometers and probes use three sensor types: thermocouple, thermistor and RTD (PT100).

Thermocouple thermometers have a fast response and wide temperature range, suitable for most general applications. They have different types of connectors: types K and T are the most common.

Thermistor and PT100 thermometers are more accurate but slower to respond, so are best for when accuracy is a priority. Thermistor probes also tend to have a narrower temperature range.



THERMA 1, 3 & ELITE THERMOMETERS

- Elite model includes backlight & max/min functions
- FREE traceable certificate of calibration
- Interchangeable thermocouple probes
- Compact & robust design

The Therma 1 and 3 digital thermometers are rugged and easy-to-use instruments that operate through the range of -100 to 1372 °C with a 0.1 °C or 1 °C resolution. The thermometers are housed in a robust ABS case that contains Biomaster product protection to reduce bacterial growth.

The Therma 1 and 3 feature large, easy-to-read, LCD displays with open circuit 'Err', hold and low battery indication. Each thermometer is powered by three AAA batteries that give a minimum of 10,000 hours of battery life. The units will power off automatically after ten minutes, maximising battery life. This feature can be disabled by the user, if not required.

We offer an extensive range of interchangeable type K thermocouple probes for a variety of different applications, see pages 81 to 87 for full details.

- **Therma Elite thermometer**
  The Therma Elite incorporates all the features of a Therma 1 thermometer, but with the addition of a backlit display, max/min memory function and a mode button for the selection of 0.1/1 °C/°F. The thermometer also incorporates a calibration trim function (±2 °C) which allows the user to compensate for thermocouple probe errors.

Penetration probe (123-160)

Bluetooth®

model available see page 63

OPTIONAL ACCESSORIES:

- Protective silicone cover - the Therma series is splashproof to IP64 when used in conjunction with this cover. Various colours are available - see page 14 for details
- Stainless steel wall bracket (screws not supplied) & protective black silicone cover (832-053)

HOLD | MAX/MIN | AUTO OFF | Biomaster | 2 YEAR GUARANTEE | MADE IN BRITAIN

Order code	Description
221-041	Therma 1*
221-043	Therma 3
221-061	Therma Elite
123-160	Penetration probe
830-227	Protective silicone cover - black
832-053	S/steel wall bracket & cover

The Therma series is exclusive of probe
*Therma 1 Type T version available. See page 15

Specification	Therma 1/Elite	Therma 3
Range 0.1 °C	-99.9 to 299.9 °C	N/A
Range 1 °C	300 to 1372 °C	-100 to 1372 °C
Resolution	0.1 °C & 1 °C	1 °C
Accuracy	±0.4 °C ±0.1 %	±1 °C
Battery & life	3 x 1.5 volt AAA - 10,000 hours	
Sensor type	K thermocouple	
Display	12 mm LCD	
Dimensions	25 x 56 x 128 mm	
Weight	130 grams	

FREE traceable certificate of calibration included

THERMA WATERPROOF THERMOMETERS

- Interchangeable thermocouple probes
- Waterproof IP67, robust design
- Integrated rubber seal for durability
- Large, easy-to-read backlit LCD

The Therma Waterproof thermometer is housed in a robust waterproof ABS case which offers IP67 protection and helps reduce the possibility of damage in harsh environments. The thermometer utilises state of the art electronic circuitry, designed for reliability and ease of use and can be submerged or washed under a running tap - ideal for industrial applications.

The Type K thermometer measures temperature over the range of -99.9 to 299.9 °C with a 0.1 °C resolution, auto-ranging to 1 °C resolution over the range of 300 to 1372 °C, whilst the Type T measures temperature over the range of -100 to 400 °C with a 0.1 °C resolution, auto-ranging to 1 °C resolution over the range of 300 to 400°C

The Therma Waterproof thermometers features a large easy-to-read, LCD display with max/min, hold, open circuit, low battery indication and a user selectable backlight. The unit also incorporates an auto-power-off facility that automatically turns the instrument off after ten minutes, maximising battery life.

We offer an extensive range of interchangeable type K and type T thermocouple probes, for a variety of different applications, see pages 81 to 87 for full details.

Waterproof penetration probe (143-162)

OPTIONAL ACCESSORIES:

- Protective silicone cover. Various colours are available. See page 20 for details
- Probe Wipes - helps reduce bacterial growth. See page 44.

Waterproof penetration probe Type T (147-162)

Order code	Description
232-101	Therma Waterproof - Type K
232-107	Therma Waterproof - Type T
143-162	Penetration probe - Type K
147-162	Penetration probe - Type T
830-257	Protective silicone cover - black
The Therma Waterproof is exclusive of probe	

HOLD | MAX/MIN | AUTO OFF | IP67 | Biomaster | 2 YEAR GUARANTEE | MADE IN BRITAIN

Specification	Therma Waterproof
Range 0.1 °C - Type K & T	-99.9 to 299.9 °C
Range 1 °C - Type K	300 to 1372 °C
Range 1 °C - Type T	300 to 399.9°C
Resolution	0.1 °C to 299.9 °C thereafter 1 °C
Accuracy - Type K	±0.4 °C ±0.1 % of reading
Accuracy - Type T	±0.2 °C ±0.1 % of reading
Battery	3 x 1.5 volt AAA
Battery life	10,000 hours
Sensor type - Type K	K thermocouple
Sensor type - Type T	T thermocouple
Display	15 mm LCD
Dimensions	32 x 71 x 141 mm
Weight	220 grams
FREE traceable certificate of calibration included	

LEGIONNAIRES' THERMOMETER KITS

- For routine water temperature monitoring
- Excellent value-for-money

Incorrect water temperature is a key risk factor for legionella growth. The legionella bacteria multiply in water at temperatures between 20 to 45 °C. A typical method of control is to store hot water above 60 °C and distribute it at above 50 °C (care must be taken to prevent scalding). Cold water should be kept below 20 °C. These kits represent excellent value-for-money and are supplied in a robust ABS carrying case/zip pouch. For a full specification on the Therma 1, see page 69.

LEGIONNAIRES' STANDARD THERMOMETER KIT

Each kit contains:

- Therma 1 thermometer (221-041)
- Waterproof surface immersion probe (323-046)
- Heavy-duty PFA wire probe (133-372)
- Zip pouch (830-037)

MADE IN BRITAIN

Order code	Description
860-885	Legionnaires' Standard kit
FREE traceable certificate of calibration included	

Bluetooth®
versions coming soon

LEGIONNAIRES' PREMIUM THERMOMETER KIT

Each kit contains:

- Therma 1 thermometer (221-041)
- Penetration probe (123-160)
- Precision ribbon surface probe (123-030)
- PFA wire probe (133-362)
- Water-resistant countdown timer (806-150)
- Box of 100 Probe Wipes (836-220)
- ABS carrying case (834-150)

MADE IN BRITAIN

Order code	Description
860-860	Legionnaires' Premium kit
FREE traceable certificate of calibration included	

LEGAL RESPONSIBILITIES FOR TESTING FOR LEGIONELLA

As an employer or the person in control of premises, it's your legal responsibility to conduct a risk assessment for exposure to legionella. The revised Approved Code of Practice (ACOP) Legionnaires' disease: Control of Legionella Bacteria in water systems (L8), issued by the Government's Health and Safety Executive (HSE), ex-tends the guidance on controlling legionella bacteria in water systems. The code applies to all hot and cold water systems in the workplace, regardless of their capacity. While domestic systems may pose a risk, the code only applies to risks arising from work activities. However, it does include domestic landlords who have a responsibility to keep their tenants safe from health hazards. This means that all employers and landlords who manage premises with hot/cold water systems and/or wet cooling systems must identify any risk of contamination and take steps to prevent or control it.

THERMA DIFFERENTIAL THERMOMETER

- Robust, waterproof case offering IP67 protection
- Ideal for radiator balancing or HVAC applications
- Designed for plumbers, reliable & easy-to-use
- Backlit LCD with max/min & hold functions

The Therma Differential is a digital thermometer that allows the user to operate two type K thermocouple probes simultaneously. The display can be switched to show probe T1 or T2 temperature or the difference between probes T1 and T2 (T1-T2). This allows, for example, the temperature drop across radiators or the temperature rise or fall of two items being measured.

The Therma Differential measures temperature over the range of -99.9 to 299.9 °C with a 0.1 °C resolution or 300 to 1372 °C with a 1 °C resolution. The unit features a custom, LCD display with °C/°F, T1, T2, diff, hold, open circuit, low battery indication and a user selectable backlight, plus an auto-power-off facility that automatically turns the instrument off after ten minutes, maximising battery life.

Housed in a durable, ABS case that has an integrated rubber seal to ensure complete water tightness and help reduce the possibility of damage in harsh environments.

We offer an extensive range of interchangeable type K thermocouple probes, for a variety of different applications, see pages 81 to 87 for full details.

HVAC STANDARD THERMOMETER KIT

Each kit contains:

- Therma Differential thermometer (231-022)
- 2 x pipe clamp probes (133-040)
- Zip pouch (830-090)

HVAC thermometer kits are ideal for a wide range of plumbing and heating applications. The kits can be used to monitor both cold and hot water temperatures as well as undertake other routine HVAC checks.

Order code	Description
231-022	Therma Differential
860-090	HVAC Premium thermometer kit
860-095	HVAC Standard thermometer kit
830-258	Protective silicone cover - black
133-040	Pipe clamp probe
832-015	Stainless steel wall bracket
The Therma Differential is exclusive of probe	

HVAC PREMIUM THERMOMETER KIT

Each kit contains:

- Therma Differential thermometer (231-022)
- Precision ribbon surface probe (123-030)
- Penetration probe (123-160)
- 2 x pipe clamp probes (133-040)
- ABS carrying case (834-300)

HOLD | MAX/MIN | AUTO OFF | IP67 | Biomaster | 2 YEAR GUARANTEE | MADE IN BRITAIN

Specification	Therma Differential
Range 0.1 °C	-99.9 to 299.9 °C
Range 1 °C	300 to 1372 °C
Resolution	0.1 °C to 299.9 °C thereafter 1 °C
Accuracy	±0.4 °C ±0.1 % of reading
Battery	3 x 1.5 volt AAA
Battery life	7,500 hours
Sensor type	K thermocouple
Display	15 mm LCD
Dimensions	32 x 71 x 141 mm
Weight	220 grams
FREE traceable certificate of calibration included	

MICROTHERMA 1 THERMOMETER

- ±0.3 °C high accuracy, 0.1 °C resolution over the full range (°C only)
- Multi-input type K, J, T, R, N, S & E thermocouple probes
- In-built microprocessor for automatic recalibration
- FREE traceable certificate of calibration

The MicroTherma 1 microprocessor thermometer measures temperature over the range of -270 to 1768 °C with a 0.1 °C/°F resolution. Each MicroTherma 1 incorporates an easy-to-read, LCD display with open circuit, low battery, hold, max/min and °C/°F indication.

The thermometer should never need re-calibrating as the microprocessor enables the instrument to continuously and automatically carry out self-diagnostic recalibration. An additional feature allows the user to adjust the reading (±2.5 °C) to offset any probe errors, correcting any inaccuracies of the thermocouple probe.

Each thermometer thereafter will automatically store, display the offset and adjust the instrument for the known probe error, maximising system accuracy.

High temperature probe (123-212)

The MicroTherma 1 has the versatility of accepting any type K, J, T, R, N, S & E thermocouple probe, the probe type is simply selected through the mode button. The unit incorporates both max and min readings with a reset function and also features an auto-power-off facility that maximises the battery life, turning the instrument off automatically after 30 minutes, this function can be disabled by the user, if not required. Other selectable parameters include: display contrast and internal CJC temperature reading. For details of the wide range of type K or type T thermocouple probes available, see pages 81 to 87.

Air probe (127-300)

- Acrylic wall bracket (screws not supplied). Ideal for storing your thermometer safely when not in use (832-115)

- Protective silicone cover - black. Protect your instrument against accidental damage by fitting a cover (830-205)

HOLD | MAX/MIN | AUTO OFF | 2 YEAR GUARANTEE | MADE IN BRITAIN

Order code	Description
221-091	MicroTherma 1
123-212	High temperature probe
127-300	Air probe
830-205	Protective silicone cover - black
832-115	Acrylic wall bracket
The MicroTherma 1 is exclusive of probe	

Specification	MicroTherma 1
Range 0.1 °C	-270 to 1768 °C (-454.0 to 3214 °F)
Resolution	0.1 °C/°F (within ±1999.9 °)
Accuracy	±0.3 °C (±0.5 °F)
Battery	2 x 1.5 volt AAA
Battery life	1,000 hours
Sensor type	K, J, T, R, N, S & E thermocouple - selectable
Display	Custom LCD
Dimensions	35 x 73 x 141 mm
Weight	175 grams
FREE traceable certificate of calibration included	

PRECISION PT100 THERMOMETERS

- High accuracy ±0.2 °C or 0.05 °C
- Interchangeable PT100 probes
- 0.1 °C or 0.01 °C resolution
- Meets the European Standard EN 13485

PT100 1/10th DIN liquid probe (160-222)

High accuracy is one of the notable features of the Precision thermometers. There are two models available, the Precision and Precision Plus. The Precision measures temperature over the range of -199.9 to 850 °C with a 0.1 °C resolution and high accuracy of ±0.2 °C. The Precision Plus measures temperature over the range of -199.99 to 299.99 °C with a 0.01 °C resolution and high accuracy of ±0.05 °C. **Please note:** the range and accuracies quoted are for the instruments only.

Conveniently located on the front of the instrument are the on/off, max/min and display hold buttons. The Binder probe socket is positioned at the top of the instrument which enables a variety of probes to be used depending on the application.

The Precision thermometers feature a large, easy-to-read, LCD display with open circuit 'Err' and low battery indication. Each thermometer is powered by three AAA batteries that give a minimum of 2,000 hours of battery life. The unit will power off automatically after ten minutes, maximising battery life. This feature can be disabled by the user, if required.

We offer a range of interchangeable PT100 Class A probes for use with the Precision thermometer, see page 89 for full details. The Precision Plus is supplied with a PT100 1/10th DIN liquid probe (160-222) and a UKAS Certificate of Calibration. For regularly checking the accuracy of each Precision thermometer, a range of calibration PT100 test caps complete with a UKAS Certificate of Calibration are available, see page 109 for details.

OPTIONAL ACCESSORY:

- Protective silicone cover - the Precision/Precision Plus thermometers are splashproof to IP64 when used in conjunction with this cover. Various colours are available - see page 14.

0601

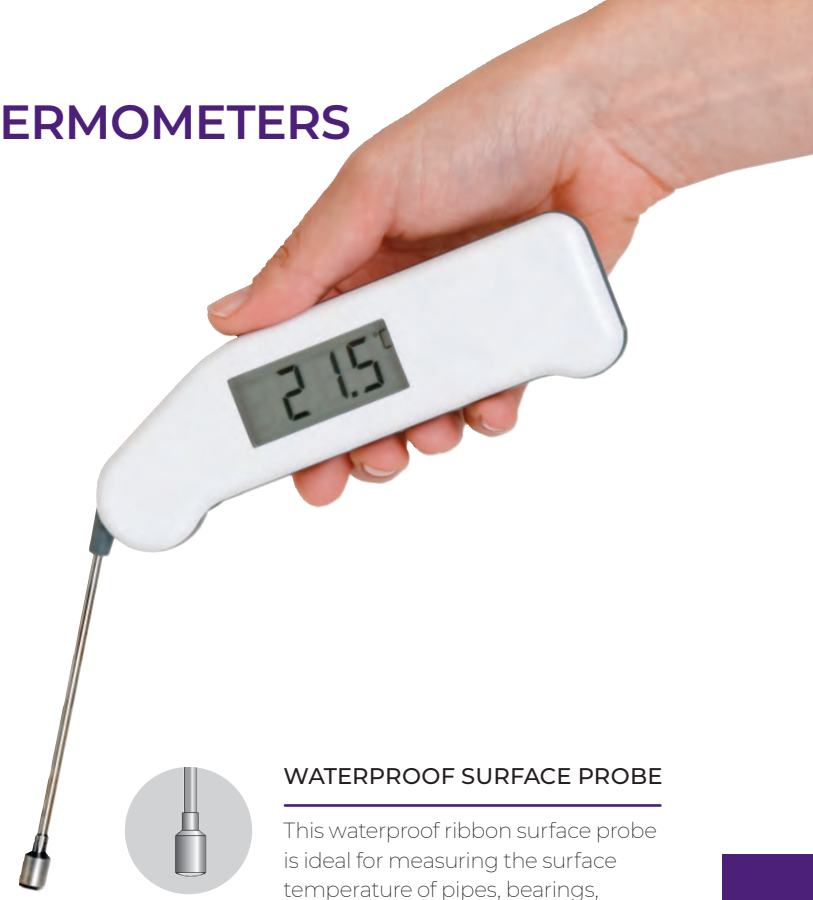
HOLD | MAX/MIN | AUTO OFF | Biomaster | 2 YEAR GUARANTEE | MADE IN BRITAIN

Order code	Description
222-053	Precision thermometer
222-051	Precision Plus thermometer
160-222	PT100 1/10th DIN liquid probe
830-221	Protective silicone cover - white
832-050	S/steel wall bracket & cover
The Precision is exclusive of probe The Precision Plus is inclusive of probe	

Specification	Precision	Precision Plus
Range	-199.9 to 850 °C	-199.99 to 299.99 °C
Resolution	0.1 °C	0.01 °C
Accuracy	±0.2 °C	±0.05 °C
Battery & life	3 x 1.5 volt AAA - 2,000 hours	
Sensor type	PT100	
Display	10 mm LCD	
Dimensions	25 x 56 x 128 mm	
Weight	130 grams	
The Precision includes a traceable certificate of calibration The Precision Plus includes a UKAS Certificate of Calibration		

THERMAPEN® CLASSIC THERMOMETERS

- Choice of air, surface or penetration probe
- Lightweight, compact & easy-to-use
- High accuracy ±0.4 °C
- One-handed operation



The Thermapen classic thermometer incorporates a large digital display with a precise read-out over the range of -49.9 to 299.9 °C with a 0.1 °C resolution. The resolution can be switched to 1 °C, if required, via a switch in the battery compartment.

The thermometer will power off automatically after ten minutes, maximising battery life. This feature can be disabled if not required. Both low battery (icon) and open circuit indication are also displayed, when applicable. Each Thermapen classic is powered by two lithium coin cell batteries with a minimum life expectancy of 1,500 hours.

The probe conveniently folds back through 180° into the side of the instrument when not in use. The casing is washable and includes Biomaster product protection that reduces bacteria growth and the ergonomic rubber seal minimises the risk of the ingress of water, dust or food.

- **Choice of probe styles**
  The Thermapen classic thermometer is available with three styles of probe; surface, air or penetration. The fast response air probe is an invaluable tool in establishing the correct air temperature quickly in HVAC and laboratory applications. The surface probe is particularly useful in determining the temperature of hot plates or pipes etc.
  Please note: the accuracy and speed of response will be dependant on whether the surface is flat and heat transfer compound is used.

WATERPROOF SURFACE PROBE

This waterproof ribbon surface probe is ideal for measuring the surface temperature of pipes, bearings, hotplates and other flat surfaces.

Ø8 x 95 mm

PENETRATION PROBE

This strong and versatile probe incorporates a pointed, general purpose tip, ideal for insertion into liquids and semi-solids.

Ø3.3 x 108 mm

AIR OR GAS PROBE

This fast response air or gas probe is ideal for measuring the air temperature in HVAC applications, laboratories and other temperature sensitive working areas.

Ø3.3 x 95 mm

OPTIONAL ACCESSORIES:

- Protective PVC wallet with belt strap (830-110)
- Protective silicone cover (830-260)
- Glow-in-the-dark silicone cover with magnets (830-265)
- Stainless steel wall bracket (832-002) screws not supplied

AUTO OFF · Biomaster · 2 YEAR GUARANTEE · MADE IN BRITAIN

Order code	Description
231-210	Thermapen Classic - penetration probe
231-212	Thermapen Classic - surface probe
231-214	Thermapen Classic - air probe
830-260	Protective silicone cover
830-265	Silicone cover - glow in dark
830-110	Protective wallet
832-002	Stainless steel wall bracket
The Thermapen is supplied in a zip pouch (830-001)	

Specification	Classic Thermapen
Range	-49.9 to 299.9 °C
Resolution	0.1 °C or 1 °C - user selectable
Accuracy	±0.4 °C (-49.9 to 149.9 °C) or ±1 %
Battery	2 x 3 volt CR2032 lithium coin cell
Battery life	1,500 hours
Sensor type	K thermocouple
Display	14.5 mm LCD
Dimensions	19 x 47 x 153 mm
Weight	97 grams
FREE traceable certificate of calibration included	

THERMAGUARD® PHARM THERMOMETER

- External sensor(s) designed to simulate fridge contents temperature
- Two models available - single or dual external sensors
- Optional UKAS Calibration Certificate available
- Programmable high/low audible alarm

The ThermaGuard Pharm has been specifically designed for use in monitoring the storage and transportation temperatures of perishable items such as food, vaccines and medication. Each thermometer features a large LCD display, which simultaneously displays the current and max/min recorded temperatures.

Both units feature programmable audible alarms allowing the user to preset high and low temperature limits. When the alarm is active the LCD will flash. The alarm can be silenced by pressing any button.

Both ThermaGuard Pharm models feature a CalCheck 0.0 °C (±0.1 °C) function that allows the user to verify the accuracy of the thermometer at any time, giving confidence that measurements are accurate.

Each thermistor probe is encased in a sealed bottle. To begin monitoring, simply unscrew and top up with Glycol solution (50 ml bottle supplied).

- **Two models available with optional UKAS Certificate of Calibration**
  The ThermaGuard Pharm 101 incorporates two temperature sensors; a remote water-resistant thermistor probe with a one metre PVC lead for monitoring the product temperature and an internal sensor to monitor room temperature. The ThermaGuard 102 incorporates two remote water-resistant thermistor probes, both with one metre PVC leads for monitoring dual applications. An optional two-point UKAS Certificate of Calibration is available. Each certificate indicates deviations from standards at -18 and 0 °C.

0601

- **FREE wall bracket included**
  Each ThermaGuard is supplied with an ABS plastic wall bracket that incorporates a built-in foot stand, a hook for hanging and a screw thread for tripod mounting.

MAX/MIN | CAL CHECK | IP54 | 2 YEAR GUARANTEE | MADE IN BRITAIN

OPTIONAL ACCESSORIES:

- Protective silicone cover (830-880)
- Replacement Glycol solution 50 ml (816-035)
- Magnetic mount (830-800)

Order code	Description
226-911	ThermaGuard Pharm 101
891-911	ThermaGuard Pharm 101 & UKAS Cert
226-912	ThermaGuard Pharm 102
891-912	ThermaGuard Pharm 102 & UKAS Cert
830-880	Protective silicone cover - black
832-590	Replacement ABS wall bracket
830-800	Magnetic mount
816-035	Replacement Glycol solution - 50 ml
UKAS certificate applies to remote probe(s) only	

Specification	ThermaGuard Pharm
Range - internal	-19.9 to 49.9 °C (101 model only)
Range - external	-39.9 to 49.9 °C
Resolution	0.1 °C/°F
Accuracy	±0.4 °C
Battery	2 x 1.5 volt AA
Battery life	25,000 hours (without alarm)
Sensor type	Thermistor
Display	Custom LCD
Dimensions	29 x 73 x 96 mm
Weight	165 grams
Optional UKAS certificate of calibration available	

Digital max/min thermometer

These digital max/min thermometers simultaneously display the actual temperature whilst displaying the max and min temperatures.

Each thermometer measures temperature over the range of -20 to 59.9 °C with a 0.1 °C/°F resolution.

The unit is housed in an ABS case measuring 29 x 79 x 187 mm. The instrument incorporates a slot for hanging and is powered by one AA battery (supplied).

Order code	Description
810-120	Digital max/min - white
810-121	Digital max/min - green

Digital max/min thermometer

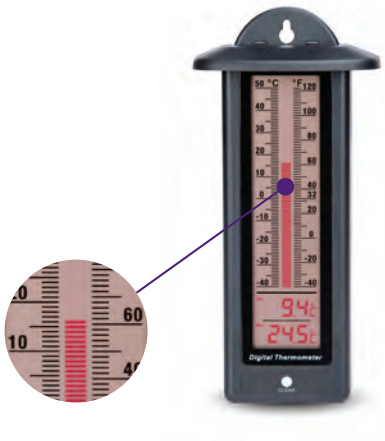
Remote probe

This max/min and alarm thermometer indicates temperature over the range of -24.9 to 69.9 °C with a resolution of 0.1 °C/°F and an accuracy of ±1 °C.

The thermometer features a large, easy to read LCD display, max/min memory function to record the highest and lowest temperatures and a high/low programmable audible alarm, ideal for frost alert. The unit incorporates two temperature sensors, a remote water resistant probe with one metre PVC lead for the appliance temperature and an internal sensor for the room temperature. Dimensions are 16 x 50 x 82 mm.

Order code	Description
810-125	Digital max/min thermometer

LCD bar graph max/min thermometer



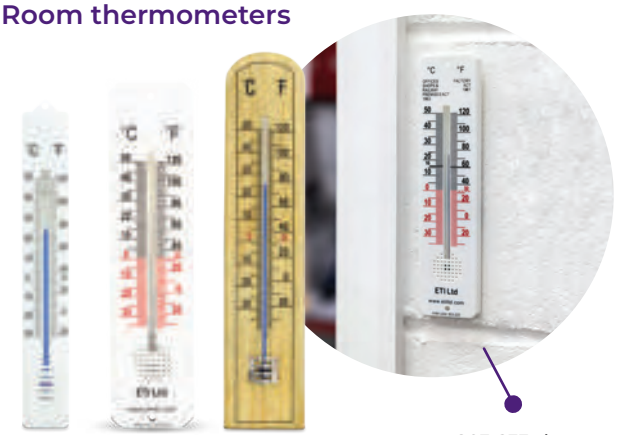
This digital max/min thermometer simultaneously displays the actual temperature whilst displaying the max and min temperatures on a digital LCD bar graph.

Measuring temperature over the range of -19.9 to 49.9 °C with a resolution of 0.1 °C/°F and an accuracy of ±1 °C. To reset the recorded max and min temperatures, simply press the white button on the front of the thermometer.

The unit is housed in a black ABS case measuring 20 x 66 x 212 mm, which incorporates a slot for hanging and is powered by a single AAA battery (supplied).

Order code	Description
810-105	Digital max/min - black

Room thermometers



803-229 803-232 803-292

803-233 shown wall mounted

These spirit-filled, wall-mounted room thermometers display temperature over the range of -30 to 50 °C with an accuracy of ±1 °C and a clearly marked scale in both °C and °F.

Models 803-229, 803-232 and 803-233 are housed in a white, ABS plastic case whereas model 803-292 is housed in a smooth grained, traditional style, beechwood case. Model 803-233 indicates the Factory Act minimum working temperature of 16 °C.

Order code	Description
803-229	White 25 x 175 mm
803-232	White 45 x 195 mm
803-233	White 45 x 195 mm - Factory Act
803-292	Wooden 45 x 205 mm

WALL-MOUNTED THERMOMETERS & HYGROMETERS

- Ideal for offices, warehouses, leisure centres & schools
- Indoor wall mounting
- Clear and precise digital display
- Three sizes available

These large, easy-to-read LED wall-mounted thermometers simultaneously display temperature and humidity over the range of -40 to 80 °C and 0 to 99 %rh with a resolution of 0.1 °C or 0.1 %rh. They are ideal for continuously monitoring air temperature and humidity in numerous commercial environments.

The units come in three different sizes, all of which are designed to be wall-mounted indoors using the rear keyhole slot fixing. **Please note:** these units are not suitable for outdoor locations.

The instruments feature large, bright red LED characters with a height of 45 mm (WM20), 75 mm (WM40), or 100 mm (WM60), which can be read clearly from a distance of over 20 metres.

These wall-mounted thermometers and hygrometers are mains powered via a 5V USB mains adaptor (supplied) and come complete with a FREE temperature traceable certificate of calibration included.

WM40 shown wall mounted (825-884)

WM20 25 x 175 x 210 mm

WM40 30 x 280 x 390 mm

WM60 32 x 400 x 600 mm

Large, bright LED characters which can be read clearly from a distance of over 20 metres.

WM20 shown wall mounted (825-882)

Specification	WM20	WM40	WM60
Range - temperature	-40 to 80 °C		
Range - humidity	0 to 99 %rh		
Resolution - temperature	0.1 °C		
Resolution - humidity	0.1 %rh		
Accuracy - temperature	±0.5 °C (-10 to 50 °C)		
Accuracy - humidity	3 %rh (30 to 80 %rh)		
Power	5v 1A USB mains adaptor		
Display	Custom LED 45 mm, 75 mm & 100 mm high characters		
Dimensions	25 x 170 x 210 mm	30 x 280 x 390 mm	32 x 400 x 600 mm
Weight	500 grams	850 grams	2,340 grams
FREE temperature traceable certificate of calibration included			

Order code	Description
825-882	WM20 wall-mounted thermometer & hygrometer
825-884	WM40 wall-mounted thermometer & hygrometer
825-886	WM60 wall-mounted thermometer & hygrometer

BI-METAL DIAL THERMOMETERS

Ø25 mm bi-metal dials

These pocket-sized Ø25 mm dial thermometers feature a magnified lens and a pointed Ø4 x 130 mm stainless steel stem. Each dial is manufactured in three scales and is supplied with a FREE calibration spanner and probe cover complete with pocket clip.

The thermometer incorporates a calibration adjustment nut, at the rear of the dial to allow easy recalibration.

Order code	Description	Range
800-811	Ø25 mm dial	-40 to 70 °C
800-812	Ø25 mm dial	-10 to 110 °C
800-813	Ø25 mm dial	0 to 250 °C
830-220	Ø4 mm probe holder clip	

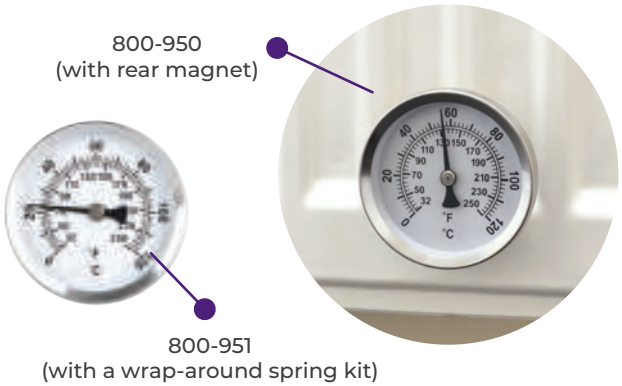
Ø45 mm bi-metal dials

These pocket-sized Ø45 mm dial thermometers feature a pointed Ø4 x 130 mm stainless steel stem. Each dial is manufactured in three scales and is supplied with a FREE calibration spanner and probe cover complete with pocket clip.

The thermometer incorporates a calibration adjustment nut, at the rear of the dial to allow easy recalibration.

Order code	Description	Range
800-801	Ø45 mm dial	-40 to 70 °C
800-802	Ø45 mm dial	-10 to 110 °C
800-803	Ø45 mm dial	0 to 250 °C
830-220	Ø4 mm probe holder clip	

Ø60 mm bi-metal dial thermometers



These easy-to-use surface dial thermometers indicate temperature over the range of 0 to 120 °C or 32 to 250 °F. The Ø60 mm dial face has a clear, graduated scale indicating temperature in 2 °C and 4 °F divisions.

810-951 is supplied with a wrap-around stainless steel spring kit for pipe mounting (two springs - one for up to 15 mm pipes, the other for up to 53 mm pipes).

810-950 incorporates a magnetic sensing pad for mounting on ferrous metals. Ideal for monitoring the temperature of radiators and pipes.

Order code	Description
800-951	Pipe thermometer
800-950	Magnetic thermometer

Heavy-duty bi-metal dial thermometers

These simple-to-use, heavy-duty, Ø50 mm bi-metal dial probe thermometers are reliable and accurate. The dial thermometers feature a Ø6.35 x 300 mm pointed stainless steel stem. Ideal for asphalt, blacktop, soil and other heavy-duty applications.

Each thermometer incorporates a clear acrylic face and a calibration adjustment nut at the rear of the dial. Three temperature scales are available - see below.

Order code	Description	Range
800-060	Ø50 mm dial	-20 to 60 °C
800-120	Ø50 mm dial	0 to 120 °C
800-250	Ø50 mm dial	0 to 250 °C

THERMOCOUPLE, PT100 & THERMISTOR PROBES

Choosing the best probe for your application will make your checks easier and your readings more accurate. Our extensive range of probes is specifically tailored to a variety of needs so you can find the best option for you.

PROBE FEATURES

Some things to consider when selecting a probe are:

RESPONSE TIME

Response time is the time taken for the sensor to reach 2/3rds of the final reading and is the standard means of measuring probe response time. However, it is variable depending on the substance being measured. Therefore, estimating an accurate response time without knowing the application can be difficult. The times quoted in our product descriptions should be used as a general guide.

RANGE AND ACCURACY

Some probes have a wide range, while others have a narrow range. Probes with a narrow range tend to be more accurate within that range. To get the best results, identify the highest and lowest temperatures you'll need to measure using your probe and how accurate you need the measurements to be.

CABLE TEMPERATURE RANGE

PVC 0 to 105 ° C
FEP -100 to 150° C
PTFE -50 to 250 °C
Fibreglass -60 to 350 °C
High Temp Fibreglass -60 to 600 °C

HANDLE TYPES

Our probes feature four types of handles: hexagonal, small rounded, ribbed heavy-duty or T-shaped. Each handle features Biomaster product protection to reduce bacterial growth.

HEXAGONAL

Manufactured from nylon
and available in black.
Maximum temperature is 105 °C.

SMALL ROUNDED

Manufactured from nylon
and available in black.
Maximum temperature is 105 °C.

T-SHAPED

Manufactured from polypropylene
and available in black or white.
Maximum temperature is 105 °C.

RIBBED HEAVY-DUTY

Manufactured from polypropylene
and available in black or white.
Maximum temperature is 85 °C.
Available with colour-coded caps.

PROBE ACCURACY SPECIFICATIONS

K Thermocouple Probes/Sensors
All type K thermocouple probes/sensors are manufactured from Class 1 type K thermocouple wire as detailed in the British Standard BS EN 60584-1:2013, and meet the following accuracy specification:

- ±1.5 °C between -40 & 375 °C
- ±0.4 % between 375 & 1000 °C

T Thermocouple Probes/Sensors
All type T thermocouple probes/sensors are manufactured from Class 1 type T thermocouple wire as detailed in the British Standard BS EN 60584-1:2013, and meet the following accuracy specification:

- ±0.5 °C between -40 & 125 °C
- ±0.4 % between 125 & 400 °C

NTC Thermistor Probes/Sensors
The tolerance specification for all ETI manufactured thermistor probes is as follows:

- ±0.4 °C between -20 & 100 °C
- ±0.2 °C between 0 & 70 °C
- ±0.3 °C between -10 & 0 °C

High Accuracy K Thermocouple Probes/Sensors (indicated in the catalogue with the HIGH ACCURACY icon)
ETI high accuracy type K probes are manufactured from Class 1 type K thermocouple wire which is chosen for improved accuracy and performance and meet the following accuracy specification:

- ±0.5 °C between 0 & 100 °C

High Accuracy T Thermocouple Probes/Sensors (indicated in the catalogue with the HIGH ACCURACY icon)
ETI high accuracy type T probes are manufactured from Class 1 type T thermocouple wire which is chosen for improved accuracy and performance and meet the following accuracy specification:

- ±0.2 °C between -20 & 70 °C

PT100/RTD Probes/Sensors
All PT100/RTD probes/sensors are manufactured from Class A or 1/10DIN PT100/RTD 100 Ω (ohms) detectors as detailed in the IEC 60751 (2008) standard, and meet the following accuracy specification:

- CLASS A ±0.15 °C ±0.2 % between -200 & 600 °C
- 1/10DIN ±0.03 °C ±0.1% between -100 to 200 °C
  Otherwise ±0.2%

Please note: Standard lead length is one metre unless separately specified

HANDHELD TYPE K OR T THERMOCOUPLE PROBES

		Order code
PENETRATION PROBE  Ø3.3 x 130 mm	This stainless steel penetration probe is strong, versatile and ideal for measuring liquids and semi-solids. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	123-160 323-160 (coiled lead)
PENETRATION PROBE  Ø3.3 x 300 mm	This extended, stainless steel penetration probe is strong, versatile and ideal for measuring liquids and semi-solids. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	123-168 323-168 (coiled lead)
FAST RESPONSE PROBE  Ø3.3 x 100 mm	This reduced tip (Ø1.8 x 25 mm), fast response, stainless steel penetration probe is ideal for liquids or semi-solids i.e. soft rubber and other similar materials. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	123-159 323-159 (coiled lead)
NEEDLE PENETRATION PROBE  Ø1.8 x 130 mm	This fast response, stainless steel needle penetration probe is ideal for liquids or semi-solids i.e. soft rubber or plastic. ● Response time less than 1 second ● Probe temperature range -75 to 250 °C	123-100 323-100 (coiled lead)
OVEN PROBE  Ø3.3 x 130 mm	This oven probe has a stainless steel handle and a two metre PFA high temperature lead. An oven probe without a handle is available. ● Response time less than 2 seconds ● Probe and lead temperature range -75 to 250 °C	133-170 133-173 (no handle)
RIGID BETWEEN PACK PROBE  Ø4.5 x 130 or 500 mm	This rigid, stainless steel between pack probe is strong and versatile, designed specifically for accurately measuring the temperature between packets and boxes. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	123-060 (130 mm) 323-060 (coiled lead) 123-080 (500 mm)
HIGH TEMPERATURE PROBE  Ø1.5 x 130 mm	This flexible, mineral insulated (MI) probe can be bent to any shape without affecting its performance. Ideal for measuring high temperatures i.e. fryers or furnaces. ● Response time less than 2 seconds ● Probe temperature range -40 to 1100 °C	123-204 323-204 (coiled lead)
HIGH TEMPERATURE PROBE  Ø3 x 130 mm	This flexible, mineral insulated (MI) probe can be bent to any shape without affecting its performance. Ideal for measuring high temperatures i.e. fryers or furnaces. ● Response time less than 3 seconds ● Probe temperature range -40 to 1100 °C	123-212 323-212 (coiled lead)
HIGH TEMPERATURE PROBE  Ø3 x 300 mm	This extended, flexible, mineral insulated (MI) probe can be bent to any shape without affecting its performance. Ideal for measuring high temperatures i.e. fryers or furnaces. ● Response time less than 4 seconds ● Probe temperature range -40 to 1100 °C	123-213 323-213 (coiled lead)

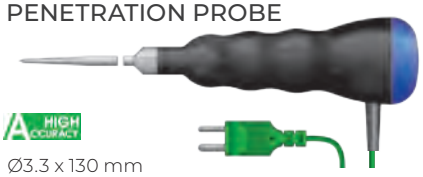
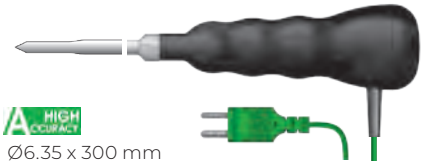
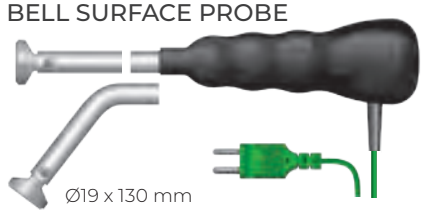
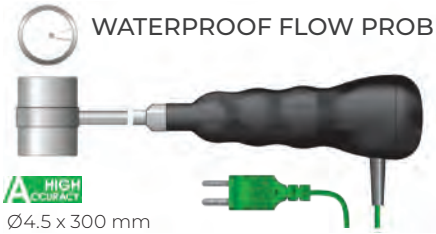
Please note: for handheld type T thermocouple probes, replace the third digit (3) of the order code with the number 7

HANDHELD TYPE K OR T THERMOCOUPLE PROBES

		Order code
BINDER PROBE  Ø3 x 130 mm	This rounded tip, stainless steel probe is designed for inserting into Binder self-sealing glands to measure the temperature of vessels or radiators. ● Response time less than 3 seconds ● Probe temperature range -75 to 250 °C	123-240 323-240 (coiled lead)
AIR OR GAS PROBE  Ø4.5 x 130 mm	This stainless steel, fast response air or gas probe is ideal for measuring air temperature in chill cabinets, fridges, freezers, offices, storage areas and similar. ● Response time less than 1 second ● Probe temperature range -75 to 250 °C	123-300 323-300 (coiled lead)
T-SHAPED AIR OR GAS PROBE  Ø4.5 x 90 mm	This stainless steel T-shaped, shielded fast response air or gas probe is ideal for measuring the temperature in HVAC duct work, offices, storage areas and similar. ● Response time less than 1 second ● Probe temperature range -75 to 250 °C	123-310 323-310 (coiled lead)
RIBBON SURFACE PROBE  Ø15 x 130 mm	This precision, ribbon surface probe utilises flat ribbon technology that ensures a fast, accurate response with minimal heat loss. A right-angled version is also available. ● Response time less than 1 second ● Probe temperature range -75 to 250 °C	123-030 123-032 (right-angled)
RIBBON SURFACE PROBE  Ø8 x 130 mm	This precision, ribbon surface probe utilises flat ribbon technology that ensures a fast, accurate response with minimal heat loss. A right-angled version is also available. ● Response time less than 1 second ● Probe temperature range -75 to 250 °C	123-044 123-052 (right-angled)
WATERPROOF SURFACE PROBE  Ø8 x 130 mm	This waterproof, ribbon surface probe incorporates a moulded mini plug and utilises flat ribbon technology to ensure a fast, accurate response with minimal heat loss. ● Response time less than 1 second ● Probe temperature range -75 to 250 °C	123-046 323-046 (coiled lead)
SURFACE PROBE  Ø6 x 130 mm	This surface probe incorporates a spring-loaded copper disc sensing tip. The probe is ideal for a variety of surface temperature measurements. ● Response time less than 1 second ● Probe temperature range -100 to 600 °C	123-000* 323-000* (coiled lead)
HEAVY-DUTY SURFACE PROBE  Ø12 x 130 mm	This high temperature surface probe is ideal for measuring the temperature of griddles, hotplates etc. A right-angled version is also available ● Response time less than 1 second ● Probe temperature range -100 to 1000 °C	123-020* 123-028* (right-angled)
PENETRATION PROBE  Ø3.3 x 100 mm	This small handled, stainless steel penetration probe is strong, versatile and ideal for measuring liquids and semi-solids. A fast response version with a reduced tip is also available. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	123-162 123-158 (reduced tip)

Please note: for handheld type T thermocouple probes, replace the third digit (3) of the order code with the number 7.
*Order codes 123-000, 123-020, 123-028 & 323-000 are not available in type T thermocouple

WATERPROOF TYPE K THERMOCOUPLE PROBES

		Order code
PENETRATION PROBE  Ø3.3 x 130 mm	This stainless steel, waterproof penetration probe is strong, versatile and incorporates a heavy-duty handle with a colour-coded end cap. Suitable for liquids and semi-solids. • Response time less than 3 seconds • Probe temperature range -75 to 250 °C	143-161 (blue) 143-162 (black) 143-164 (green) 143-165 (red) 143-166 (white) 143-167 (yellow)
REDUCED TIP PROBE  Ø6.35 x 300 mm	This extended, waterproof, stainless steel probe incorporates a reduced tip (Ø4.5 x 25 mm) and heavy-duty ribbed handle, ideal for heavy-duty applications including food processing, asphalt and other similar materials. • Response time less than 7 seconds • Probe temperature range -75 to 250 °C	143-120 343-120 (coiled lead)
BELL SURFACE PROBE  Ø19 x 130 mm	These fast response, waterproof heavy-duty surface probes utilise a bell-shaped housing with a thin, flat, stainless steel measuring disc that ensures a fast, accurate response. Ideal for measuring a variety of surface temperatures. • Response time less than 3 seconds • Probe temperature range -75 to 200 °C	143-080 (straight) 143-084 (45° angle) 143-086 (90° angle)
WATERPROOF FLOW PROBE  Ø4.5 x 300 mm	These fast response, waterproof T-Shaped flow probes, are suitable for measuring air or water flow temperatures in a variety of applications. The shielded exposed junction thermocouple ensures a fast and accurate response to changes in temperature. • Response time less than 1 second • Probe temperature range -75 to 250 °C	143-310 343-310 (coiled lead)

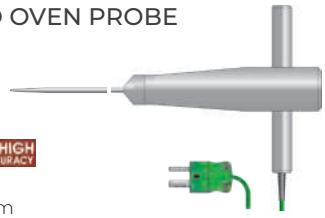
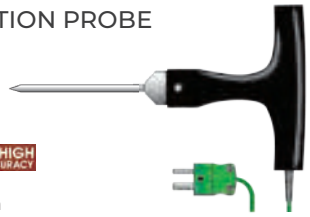
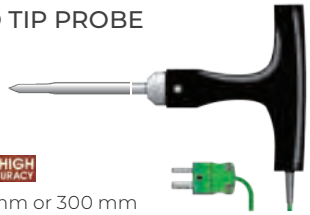
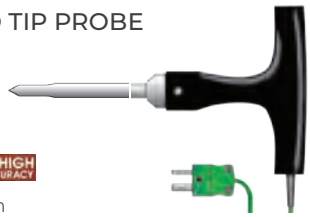
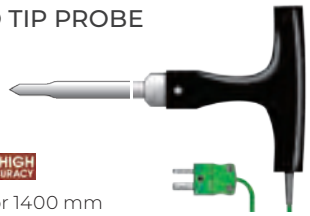
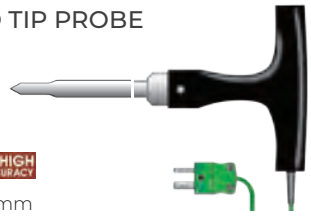
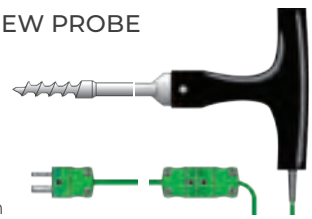
Please note: the above type K thermocouple probes are supplied with a moulded thermocouple connector and are waterproof to IP67 when connected to an instrument

PLUG-MOUNTED TYPE K THERMOCOUPLE PROBES

		Order code
INTERCHANGEABLE PROBE HANDLE  Ø25 x 151 mm	This probe handle incorporates a miniature thermocouple socket, to be used in conjunction with our range of plug-mounted probes. Supplied with a one metre coiled PU lead and miniature plug.	323-950
PENETRATION PROBE  Ø3.3 x 80 or 120 mm	This stainless steel, penetration probe is strong, versatile and ideal for liquids or semi-solids. A fast response version with reduced tip (Ø1.8 x 25 mm) is also available. • Response time less than 2 seconds • Probe temperature range -75 to 250 °C	133-161 (120 mm) 133-153 (120 mm reduced tip) 133-154 (80 mm reduced tip)
SURFACE PROBE  Ø8 x 120 mm	This stainless steel surface probe uses flat ribbon technology ensuring a fast, accurate response with minimal heat loss. A right-angled version is also available. • Response time less than 1 second • Probe temperature range -75 to 250 °C	133-045 133-046 (right-angled)

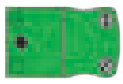
Please note: for handheld type T thermocouple probes, replace the third digit (3) of the order code with the number 7

HEAVY-DUTY TYPE K OR T THERMOCOUPLE PROBES

		Order code
T SHAPED OVEN PROBE  Ø3.3 x 130 mm	This strong oven penetration probe incorporates a stainless steel T-shaped handle, and a two metre PFA high temperature lead. Ideal for continuous monitoring applications or where a nylon or polypropylene handle cannot be used. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	133-174
PENETRATION PROBE  Ø4 x 100 mm	This robust, stainless steel penetration probe incorporates a T-shaped polypropylene handle and is ideal for a variety of heavy-duty applications including food processing and other similar industries. ● Response time less than 3 seconds ● Probe temperature range -75 to 250 °C	133-124
REDUCED TIP PROBE  Ø6.35 x 100 mm or 300 mm	This robust, stainless steel, reinforced probe incorporates a T-shaped polypropylene handle and a reduced sensing tip (Ø4.5 x 25 mm) for faster response. Ideal for a variety of heavy-duty applications including food processing etc. ● Response time less than 9 seconds ● Probe temperature range -75 to 250 °C	133-126 (100 mm) 133-120 (300 mm)
REDUCED TIP PROBE  Ø8 x 500 mm	This extended robust, stainless steel, reinforced probe incorporates a T-shaped polypropylene handle and a reduced sensing tip (Ø6.35 x 25 mm) for faster response. Ideal for a variety of heavy-duty applications including food processing etc. ● Response time less than 20 seconds ● Probe temperature range -75 to 250 °C	133-130
REDUCED TIP PROBE  Ø9.5 x 1000 or 1400 mm	This Ø9.5 mm stainless steel, reinforced probe incorporates a T-shaped polypropylene handle and a reduced sensing tip (Ø6.35 x 25 mm) for faster response. Ideal for applications where a longer probe is required, i.e. grain silos. ● Response time less than 20 seconds ● Probe temperature range -75 to 250 °C	133-136 (1000 mm) 133-135 (1400 mm)
REDUCED TIP PROBE  Ø9.5 x 2000 mm	This extended stainless steel, reinforced probe incorporates a T-shaped polypropylene handle and a reduced sensing tip (Ø6.35 x 25 mm) for faster response. Ideal for applications where a very long probe is required, i.e. grain silos. ● Response time less than 20 seconds ● Probe temperature range -75 to 250 °C	133-133
CORKSCREW PROBE  Ø8 x 100 mm	This stainless steel probe incorporates a heavy-duty T-shaped polypropylene handle and a corkscrew design sensing tip. Ideal for industrial and food processing applications. Supplied with a one metre PU detachable lead. ● Response time less than 9 seconds ● Probe temperature range -75 to 250 °C	133-175

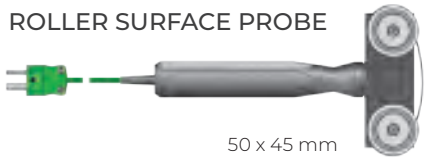
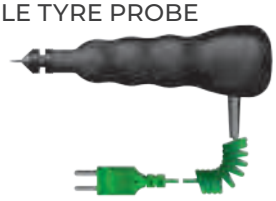
Please note: for handheld type T thermocouple probes, replace the third digit (3) of the order code with the number 7

FAST RESPONSE K OR T THERMOCOUPLE WIRE PROBES

		Order code
PFA WIRE PROBE  Ø1.5 x 1000 or 2000 mm	This PFA insulated, exposed junction wire probe is suitable for measuring the air temperature in fridges, freezers, ovens etc. Extended probe lengths over two metres are available upon request. • Response time less than 1 second • Probe temperature range -75 to 250 °C	133-362 (1000 mm) 133-363 (2000 mm)
HEAVY-DUTY PFA WIRE PROBE  Ø2.4 x 1000 or 2000 mm	This heavy-duty, PFA insulated wire probe is ideal for measuring the air temperature in fridges, freezers, ovens etc. Extended probe lengths over two metres are available upon request. • Response time less than 1 second • Probe temperature range -75 to 250 °C	133-372 (1000 mm) 133-373 (2000 mm)
FIBREGLASS WIRE PROBE  Ø1.5 x 1000 or 2000 mm	This fibreglass, exposed junction wire probe is ideal for measuring the air temperature of ovens, hot cupboards and similar appliances. Extended probe lengths over two metres are available upon request. • Response time less than 1 second • Probe temperature range -60 to 350 °C	133-382 (1000 mm) 133-383 (2000 mm)
HIGH TEMPERATURE WIRE PROBE  Ø3 x 1000 or 2000 mm	This high temperature, fibreglass wire probe is insulated with a stainless steel braid and is ideal for ovens, hot cupboards and similar appliances. Supplied with a one or two metre stainless steel braided lead. • Response time less than 1 second • Probe temperature range -60 to 600 °C	133-387 (1000 mm) 133-389 (2000 mm)
ATTACHMENT PADS  12 x 18 mm	These easy-to-use attachment pads are recommended for attaching small diameter wire thermocouples to surfaces. Supplied in packs of 25. • For use over the range of -50 to 200 °C	600-485
PROBE EXTENSION LEAD - STRAIGHT  1000 or 2000 mm	This probe extension lead enables the user to connect to any ETI thermocouple type K probe, extending reach up to an additional 1000 or 2000 mm. Supplied with a PVC straight lead with MPK to MSK.	627-732 (1000 mm) 627-733 (2000 mm)
PROBE EXTENSION LEAD - COILED  1000 or 2000 mm	This probe extension lead enables the user to connect to any ETI thermocouple type K probe, extending reach up to an additional 1000 or 2000 mm. Supplied with a PU coiled lead with MPK to MSK.	627-740 (1000 mm) 627-741 (2000 mm)
MINIATURE PLUG OR SOCKET  MPK  MSK 16 x 19 mm 16 x 25 mm	Miniature thermocouple plugs and sockets are a must for accurate readings when joining probe cables. The flat pins (plug) and socket are manufactured from compatible thermocouple material and can accommodate wires up to Ø0.5 mm • Temperature range -50 to 105 °C	625-217 (plug) 421-501 (socket)

Please note: for type T thermocouple wire probes, replace the third digit (3) of the order code with the number 7

SPECIALIST TYPE K OR T THERMOCOUPLE PROBES

		Order code
MINIATURE PROBE  Ø1.4 mm reducing to Ø1 mm tip x 50 mm	This miniature, stainless steel needle probe is supplied with a one or two metre PFA lead. Ideal for measuring small semi-solid items and sous vide cooking. • Response time less than 1 second • Probe temperature range -75 to 250 °C	133-180 (1m lead) 133-182 (2m lead)
FAST RESPONSE MEAT PROBE  Ø1 mm tip x 90 mm	This fast response, meat penetration probe is specially designed for measuring burger patties etc. Supplied with a one metre coiled lead. • Response time less than 2 seconds • Probe temperature range -75 to 250 °C	133-150
MAGNET SURFACE PROBE  Ø24 x 28 mm	This magnet probe is supplied with a 500 mm PTFE lead. Ideal for monitoring the surface temperature of ferrous metals, e.g. radiators or hotplates. • Response time less than 30 seconds • Probe temperature range -20 to 80 °C	133-017
ROLLER SURFACE PROBE  50 x 45 mm	These roller surface probes have either stainless steel or PTFE wheels and are designed for measuring moving surfaces. Max. speed 100 m/min. • Response time less than 2 seconds • Probe temperature range -75 to 250 °C	123-038 (s/steel) 123-036 (PTFE)
WEIGHTED GRIDDLE SURFACE PROBE  Ø64 x 120 mm	This griddle probe has been designed with a unique self-retracting fast-responding stainless-steel disc and is supplied with a one metre armoured lead. Measuring Ø64 x 120 mm • Response time less than 2 seconds • Probe temperature range -50 to 250 °C	143-018 (armoured)
VELCRO PIPE PROBE  20 x 500 mm	This 500 mm wrap-around velcro pipe probe is suitable for both medium and large pipe temperature measurement in the HVAC industry. Supplied with a two metre lead. • Response time less than 30 seconds • Probe temperature range -10 to 100 °C	133-080
PIPE CLAMP PROBE NEW DESIGN 	This robust, pipe clamp probe is suitable for measuring the surface temperature of pipes in refrigeration, heating and ventilating systems etc. Simple clamp-on design for simplicity of use, suitable for pipes from Ø6 to Ø30 mm. • Response time less than 4 seconds • Probe temperature range -10 to 100 °C	133-040
ADJUSTABLE TYRE PROBE  Ø1 x 10 mm	This fast response probe has an adjustable depth stop (1 to 10 mm) which the user can manually set. Specifically designed for measuring tyre temperatures, supplied with a one metre coiled lead and moulded thermocouple connector. Type K Only. • Response time less than 2 seconds • Probe temperature range -75 to 250 °C	343-100

Please note: for type T thermocouple wire probes, replace the third digit (3) of the order code with the number 7

THERMADATA® WIFI LOGGER THERMOCOUPLE PROBES

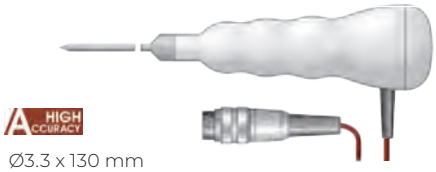
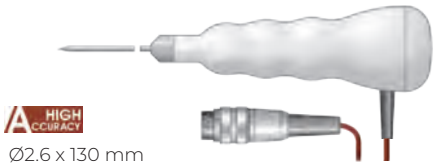
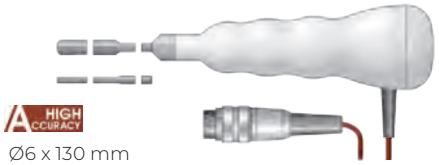
		Order code
GENERAL PURPOSE PROBE  Ø3.3 x 100 mm	This stainless steel probe is suitable for a wide range of applications. Supplied with a one, three or five metre PFA insulated lead and connector. • Response time less than 5 seconds • Probe temperature range -75 to 250 °C	133-158 (1000 mm) 133-220 (3000 mm) 133-222 (5000 mm)
FOOD SIMULANT PROBE  9 x 100 x 100 mm	This polypropylene simulant probe is designed for use in refrigeration, food storage and chill cabinets. Supplied with a one, three or five metre PFA insulated lead and connector. • Probe temperature range -20 to 100 °C	133-350 (1000 mm) 133-352 (3000 mm) 133-354 (5000 mm)
Ø4.8MM STANDARD PROBE  Ø4.8 x 100 mm	This Ø4.8 mm general purpose, stainless steel probe is ideal for a variety of applications. Supplied with a two metre PVC lead. • Response time less than 17 seconds • Probe temperature range -50 to 100 °C	133-453
Ø6MM STANDARD PROBE  Ø6 x 100 mm	This Ø6 mm general purpose, stainless steel probe is ideal for a variety of applications. Supplied with a two metre PVC lead. • Response time less than 20 seconds • Probe temperature range -50 to 100 °C	133-448
Ø6.35MM STANDARD AIR PROBE  Ø6.35 x 150 mm	This Ø6.35 mm stainless steel air or gas probe is ideal for measuring air temperatures in chill cabinets, fridges, freezer, storage areas or similar. Supplied with a two metre PVC lead. • Response time less than 2 seconds • Probe temperature range -50 to 100 °C	133-499
MINERAL INSULATED PROBES  Ø1.5 x 180, 500 or 1000 mm	These Ø1.5 mm high temperature MI probes can be bent to any shape without affecting performance. Supplied with a plain pot seal and a two metre PTFE lead. • Response time less than 2 seconds • Probe temperature range -200 to 1100 °C	133-420 (180 mm) 133-421 (500 mm) 133-422 (1000 mm)
MINERAL INSULATED PROBES  Ø3 x 180, 500 or 1000 mm	These Ø3 mm high temperature MI probes can be bent to any shape without affecting performance. Supplied with a plain pot seal and a two metre PTFE lead. • Response time less than 4 seconds • Probe temperature range -200 to 1100 °C	133-425 (180 mm) 133-428 (500 mm) 133-429 (1000 mm)

Please note: Longer leads are available for the probes above, please contact our technical sales office for more information

CUSTOMISED & SPECIAL TEMPERATURE PROBES

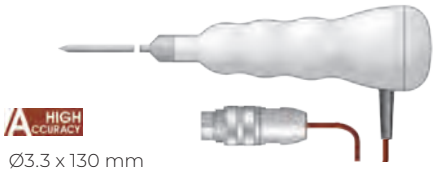
ETI manufactures a wide range of fully interchangeable, fast response and special probes to meet most customer requirements but, if the probe you need is not in our catalogue or on our website, ask a member of our sales team and we will do our best to manufacture the probe to your specification. It is vital to choose the correct probe for a specific purpose. If you have any requirements outside the specifications of our current range, please call our sales office on 01903 202151 or email technical@etiltd.com

LUMBERG CONNECTOR TYPE T THERMOCOUPLE PROBES

		Order code
PENETRATION PROBE  HIGH ACCURACY Ø3.3 x 130 mm	This stainless steel penetration probe is strong, versatile and incorporates a heavy-duty, ribbed, polypropylene handle with a white end cap. Ideal for measuring liquids, semi-solids and granular materials. ● Response time less than 5 seconds ● Probe temperature range -75 to 250 °C	177-166
FAST RESPONSE PROBE  HIGH ACCURACY Ø2.6 x 130 mm	This stainless steel, fast response, needle penetration probe incorporates a heavy-duty ribbed, polypropylene handle. Suitable for liquids and soft semi-solid materials including fish, fruit and other soft or delicate materials. ● Response time less than 4 seconds ● Probe temperature range -75 to 250 °C	177-100
RIGID BETWEEN PACK PROBE  HIGH ACCURACY Ø6 x 130 mm	This rigid, stainless steel, between pack probe is strong, versatile and incorporates a heavy-duty ribbed, polypropylene handle. The probe has been specifically designed to measure between packs or boxes of produce. ● Response time less than 3 seconds ● Probe temperature range -75 to 250 °C	177-060
AIR OR GAS WIRE PROBE  HIGH ACCURACY Ø2.4 x 1000 mm PTFE lead	This fast response, air or gas wire probe is ideal for measuring air temperatures in fridges, freezers, chill cabinets and similar. Supplied complete with a one metre PTFE lead. ● Response time less than 2 seconds ● Probe temperature range -75 to 250 °C	177-372

Please note: the above type T thermocouple probes are suitable for use with the Therma 22 & Therma 22 Plus

WATERPROOF TYPE T THERMOCOUPLE PROBES

		Order code
PENETRATION PROBE  HIGH ACCURACY Ø3.3 x 130 mm	This waterproof, stainless steel, penetration probe with Lumberg connector is strong, versatile and incorporates a heavy-duty, ribbed, polypropylene handle with a white end cap. Ideal for measuring liquids, semi-solids and granular materials. ● Response time less than 5 seconds ● Probe temperature range -75 to 250 °C	177-266
PENETRATION PROBE  HIGH ACCURACY Ø3.3 x 100 mm	This waterproof, stainless steel, plug-mounted probe with Lumberg connector is strong, versatile and ideal for measuring liquids, semi-solids and granular materials. ● Response time less than 4 seconds ● Probe temperature range -75 to 250 °C	177-200

Please note: the above type T thermocouple probes (177-266 & 177-200) are suitable for use with the Therma 22 Plus and are waterproof to IP67 when connected to an instrument

PT100 CLASS A TEMPERATURE PROBES

		Order code
PENETRATION PROBE  Ø3.3 x 130 mm	This stainless steel penetration probe is strong, versatile and ideal for measuring liquids and semi-solids accurately in a variety of applications. ● Response time less than 6 seconds ● Probe temperature range -100 to 200 °C	160-160
AIR OR GAS PROBE  Ø3.3 x 130 mm	This stainless steel air or gas probe is ideal for measuring air or gas temperatures accurately in rooms and ducts in HVAC and industrial applications. ● Response time less than 4 seconds ● Probe temperature range -100 to 200 °C	160-300
LIQUID PROBE  Ø3.3 x 130 mm	This liquid probe features a rigid, stainless steel stem with a flat tip. The probe is suitable for accurate temperature measurement in a wide variety of laboratory applications. ● Response time less than 6 seconds ● Probe temperature range -100 to 200 °C	160-220
AIR OR GAS WIRE PROBE  Ø3.7 x 30 mm with 1000 mm FEP lead	This FEP insulated air or gas wire probe is ideal for measuring air or gas temperatures accurately in a variety of HVAC and industrial applications. ● Response time less than 4 seconds ● Probe temperature range -100 to 200 °C	160-372

Please note: the above PT100 Class A probes are suitable for use with the Precision 0.1 °C thermometer

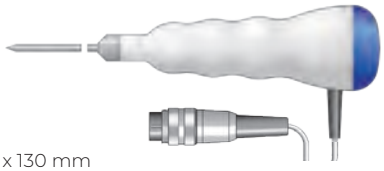
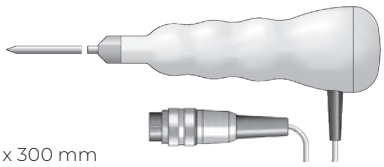
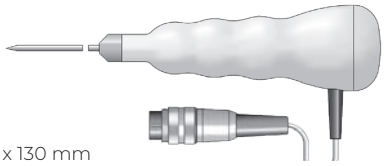
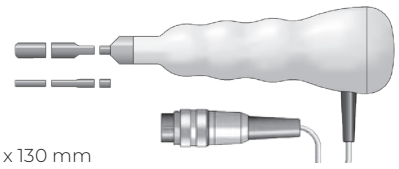
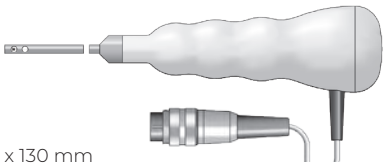
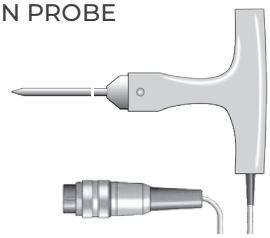
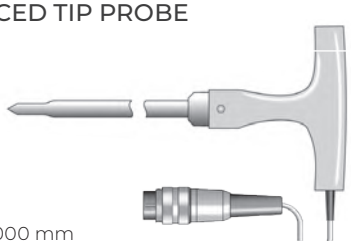
PT100 1/10TH DIN TEMPERATURE PROBES

		Order code
LIQUID PROBE  Ø3.3 x 130 mm	This handheld liquid probe features a rigid, stainless steel stem with a flat tip. Suitable for high accuracy temperature measurement in a wide variety of laboratory applications. ● Response time less than 8 seconds ● Probe temperature range -200 to 300 °C	160-222
LIQUID PROBE  Ø4.8 x 250 mm with 2000 mm PTFE lead	This liquid probe features a rigid, stainless steel stem with a flat tip. Suitable for high accuracy temperature measurement in a wide variety of laboratory applications. ● Response time less than 14 seconds ● Probe temperature range -200 to 300 °C	160-446

Please note: accuracy of the above PT100 1/10th DIN probes is ±0.03 °C ±0.1 % of reading between -100 °C to 200 °C otherwise ±0.2 % of reading. The above probes are suitable for use with the Precision Plus 0.01 °C thermometer

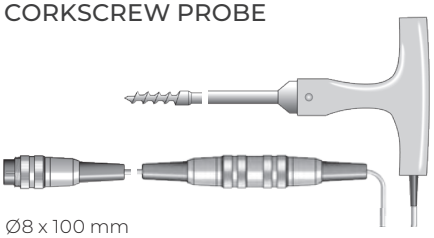
All PT100's listed on this page are fitted with a Binder Plug.

NTC THERMISTOR PROBES WITH LUMBERG CONNECTOR

		Order code
PENETRATION PROBE  Ø3.3 x 130 mm	This stainless steel penetration probe is strong, versatile and incorporates a heavy-duty, ribbed, polypropylene handle with a colour-coded end cap. Ideal for measuring liquids, semi-solids and granular materials. • Response time less than 5 seconds • Probe temperature range -40 to 150 °C	174-161 174-162 174-164 174-165 174-166 174-167
PENETRATION PROBE  Ø3.3 x 300 mm	This extended, stainless steel penetration probe is strong, versatile and incorporates a heavy-duty, ribbed, polypropylene handle with a white end cap. Ideal for measuring liquids, semi-solids and granular materials. • Response time less than 5 seconds • Probe temperature range -40 to 150 °C	174-168
FAST RESPONSE PROBE  Ø2.6 x 130 mm	This stainless steel, fast response, needle penetration probe incorporates a heavy-duty ribbed, polypropylene handle. The probe is suitable for liquids and soft semi-solids including fish, fruit and other delicate materials. • Response time less than 4 seconds • Probe temperature range -40 to 150 °C	174-100
RIGID BETWEEN PACK PROBE  Ø6 x 130 mm	This rigid, stainless steel between pack probe is strong, versatile and incorporates a heavy-duty ribbed, polypropylene handle. The probe has been specifically designed to measure between packs or boxes of produce. • Response time less than 3 seconds • Probe temperature range -40 to 150 °C	174-060
AIR OR GAS PROBE  Ø3.3 x 130 mm	This stainless steel, fast response air or gas probe incorporates a heavy-duty ribbed, polypropylene handle. The probe is ideal for measuring air temperature in refrigeration units, storage areas and other similar applications. • Response time less than 2 seconds • Probe temperature range -40 to 150 °C	174-300
PENETRATION PROBE  Ø4 x 100 mm	This robust, stainless steel penetration probe incorporates a heavy-duty, T-shaped polypropylene handle. The strong, durable probe is suitable for a wide variety of heavy-duty, general purpose industrial or food processing applications. • Response time less than 4 seconds • Probe temperature range -40 to 150 °C	170-169
REDUCED TIP PROBE  Ø9.5 x 1000 mm	This extended, robust Ø9.5 mm stainless steel reinforced probe incorporates a heavy-duty, T-shaped polypropylene handle and a reduced sensing tip (Ø6.35 x 25 mm) for faster response. Ideal for a wide variety of heavy-duty, general purpose industrial or food processing applications. • Response time less than 15 seconds • Probe temperature range -40 to 150 °C	170-136

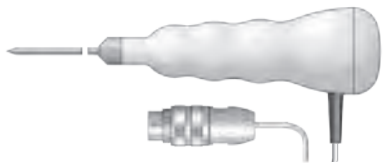
Please note: the above NTC thermistor probes are suitable for use with the Therma 20, 22, 22 Plus & 8100 Plus

NTC THERMISTOR PROBES WITH LUMBERG CONNECTOR

		Order code
CORKSCREW PROBE  Ø8 x 100 mm	This frozen food probe incorporates a heavy-duty T-shaped, polypropylene handle and a corkscrew design sensing tip. Ideal for measuring deep frozen foods or other frozen materials. Supplied with a one metre PVC detachable lead. ● Response time less than 9 seconds ● Probe temperature range -40 to 150 °C	170-175
FOOD SIMULANT PROBE  9 x 100 x 100 mm	This polypropylene probe is designed for use in food storage, chill cabinets and refrigeration where simulation of food temperature is required. The probe incorporates a one metre PUR /PVC lead and compatible Lumberg connector. ● Probe temperature range -20 to 100 °C	170-350
AIR OR GAS WIRE PROBE  Ø3.7 x 30 mm with 1000 mm FEP lead	This fast response, air or gas wire probe is ideal for measuring air temperature in chill cabinets, fridges, freezers, offices, storage areas and similar. Supplied with a one metre FEP lead. ● Response time less than 2 seconds ● Probe temperature range -40 to 150 °C	170-372
FOIL BETWEEN PACK PROBE  40 x 50 mm with 1000 mm FEP lead	This easy-to-use, flexible, fast response, foil between pack probe has been designed to measure between packs or boxes of produce in a variety of applications. ● Response time less than 3 seconds ● Probe temperature range -20 to 75 °C	170-090

Please note: the above NTC thermistor probes are suitable for use with the Therma 20, 22, 22 Plus & 8100 Plus

WATERPROOF NTC THERMISTOR PROBES

		Order code
PENETRATION PROBE  Ø3.3 x 130 mm	This waterproof, stainless steel penetration probe with Lumberg connector is versatile, strong and incorporates a heavy-duty, ribbed, polypropylene handle with a white end cap. Ideal for measuring liquids, semi-solids and granular materials. ● Response time less than 5 seconds ● Probe temperature range -40 to 150 °C	174-266
PENETRATION PROBE  Ø3.3 x 100 mm	This waterproof, stainless steel plug-mounted penetration probe with Lumberg connector is versatile and strong. Ideal for measuring liquids, semi-solids and granular materials in a wide variety of applications. ● Response time less than 4 seconds ● Probe temperature range -40 to 150 °C	172-000

Please note: the above NTC thermistor probes (174-266 & 172-000) are suitable for use with the Therma 22 Plus & 8100 Plus and are waterproof to IP67 when connected to an instrument

INFRARED THERMOMETERS

Infrared thermometers measure the temperature of surfaces. They're quick and easy to use. However, if used incorrectly or for the wrong application, readings could be inaccurate and put people at risk.

INFRARED APPLICATIONS

Infrared thermometers are ideal for applications where a distance needs to be maintained between the person taking the readings and the item being measured. For example:

- Hot surfaces like fires or hotplates
- Hard to reach areas such as pipes

Because infrared thermometers only take the surface reading of the first physical object they come into contact with, they would not provide an accurate reading for the following applications:

- Core food temperatures
- Air temperatures
- Items covered by materials like cling film

EMISSIVITY VALUES

Different surfaces have varying emissivities. If your thermometer has adjustable emissivity, make sure to set it accordingly for your application. See the table opposite for a small selection of emissivity values, or visit etiltd.com/emissivity for a thorough guide.

Aluminium (anodised)	0.77	Plastic (black)	0.95
Brass (oxidised)	0.61	Porcelain (glazed)	0.92
Brick (red)	0.90	Rubber	0.95
Cement	0.54	Skin (human)	0.98
Copper (oxidised)	0.65	Soil (dry)	0.92
Glass	0.92	Stainless steel	0.59
Paper (white)	0.68	Water	0.95
Perspex	0.86	Water (ice)	0.96
Pipe (glazed)	0.83	Water (frost)	0.98
Plastic (white)	0.84	Wood (planed)	0.90

IR THERMOMETER CARE

It's important to use, clean and store your infrared thermometer properly to ensure accurate readings. We recommend following these tips:

- Keep the thermometer lens clean and free of debris
- Give your thermometer plenty of time to acclimatise to hot or cold environments
- Stand straight on and as close as possible to the surface being measured
- Check the accuracy of your readings regularly using a reliable calibration method

THERMAPEN® IR THERMOMETER

- Patented, automatic 360° rotational display
- Adjustable emissivity for different surfaces
- Motion-sensing sleep mode - probe only
- High accuracy - ideal for HACCP procedures

The Thermapen IR is two instruments in one compact unit, combining the advanced technology of two ETI designed and manufactured products: the RayTemp 2 infrared thermometer and Thermapen thermometer. Available in red and white.

Housed in a robust PC/ABS case that includes Biomaster product protection that reduces bacterial growth, the Thermapen IR incorporates a motion-sensing sleep mode (penetration probe only) which automatically turns the instrument on/off when set down or picked up, maximising battery life.

- **Infrared thermometer**
  Simply aim the infrared thermometer at the target and press the scan button to display the surface temperature. **Please Note:** the infrared non-contact function will only measure when the probe is in the closed position.

  The Thermapen IR thermometer incorporates a max/min temperature function accessed via the mode button (IR only). The distance to target ratio is 5:1, therefore the thermometer should be positioned as close to the target as possible. The default emissivity is 0.95 but can be adjusted between 0.1 and 1, if required via the mode button.

- **Penetration probe**
  Opening the probe puts the instrument into probe mode, enabling you to take liquid or the core temperature of semi-solid food products using the fast response, stainless steel penetration probe (Ø3.3 x 110 mm). Displaying the temperature in just 3 seconds. The probe conveniently folds back through 180° into the side of the instrument when not in use.

Thermapen IR with air probe (228-114)

Patented auto-rotating display

Bluetooth®
model available
see page 60

MAX/MIN · AUTO OFF · 360° · Biomaster · 2 YEAR GUARANTEE · MADE IN BRITAIN

Order code	Description
228-065	Thermapen IR - white
228-045	Thermapen IR - red
228-114	Thermapen IR with air probe
830-480	Protective silicone cover
830-001	Zip pouch
832-002	Stainless steel wall bracket
830-485	Silicone cover - glow in dark

Specification	Thermapen IR
Range - infrared	-49.9 to 349.9 °C
Range - probe	-49.9 to 299.9 °C
Resolution	0.1 or 1 °C/°F - user selectable
Accuracy - infrared	±1 °C (0 to 100 °C) otherwise ±2 °C or ±2 % of reading whichever is greater
Accuracy - probe	±0.4 °C (-49.9 to 199.9 °C) otherwise ±1 °C
Field of view	Target ratio 5:1
Emissivity	0.95 default - adjustable 0.1 to 1
Battery	2 x 3 volt CR2032 lithium coin cell
Battery life	1,000 hours - continuous use
Display	12 mm (horizontal) & 10 mm (vertical) LCD
Dimensions	19 x 50 x 157 mm
Weight	125 grams
FREE traceable certificate of calibration included (probe & IR)	

IR-POCKET THERMOMETER

- LED spot alignment - safer than a laser
- Display hold function
- Lock function for continuous measurement
- Max/min memory function

The IR-Pocket thermometer is a non-contact infrared thermometer that has an easy-to-read, LCD display with low battery indication. Simply aim at the target and press the measure button to display the surface temperature instantly. The IR-Pocket indicates temperature over the range of -9.9 to 199.9 °C with an assured accuracy of ±2 % of reading or ±2°C, whichever is greater.

This thermometer features a two-button keypad, pressing the mode button allows the user to access a variety of functions, i.e. max/min, °C/°F, lock and emissivity. The lock function allows for continuous temperature measurement and the emissivity is adjustable so the user can measure a variety of surface types. An auto-power-off facility automatically turns the instrument off after 15 seconds, maximising battery life.

The default emissivity is 0.95 but is adjustable to enable temperature measurement of a variety of surface types.

For some useful infrared thermometer tips, or to download our infrared thermometer guide, please visit our website.

LED spot alignment

The unit incorporates LED spot alignment, which allows the user to precisely target the diameter of the area to be measured. The LED pointer is safer for the eyes than laser pointers. As you move closer or further from the target the LED spot changes diameter indicating the area being measured.

HOLD | LOCK | MAX/MIN | AUTO OFF

Order code	Description
814-060	IR-Pocket

Specification	IR-Pocket
Range	-9.9 to 199.9 °C
Resolution	0.1 °C/°F
Accuracy	±2 °C or ±2 % whichever is greater
Field of view	Target ratio 1:1
Emissivity	0.95 default - adjustable 0.1 to 1
Battery & life	2 x 1.5 volt AAA - 20 hours continuous use
Display	Custom LCD
Dimensions	25 x 52 x 100 mm
Weight	88 grams

RAYTEMP® 2 IR THERMOMETER

- High accuracy ±1 °C over the range 0 to 100 °C
- FREE traceable certificate of calibration
- Displays ambient temperature
- Records the max/min temperatures

Designed and manufactured in the UK, the RayTemp 2 infrared, non-contact thermometer features a large, easy-to-read LCD display and a three-button keypad, incorporating measure, mode and max/min functions. Simply aim at the target and press the measure button to display the surface temperature, over the range of -49.9 to 349.9 °C with a 0.1 °C or 1 °C resolution and assured accuracy of ±1 °C over the range 0 to 100 °C.

Incorporating a 5:1 optic ratio (target distance ratio) and a fixed emissivity of 0.95 making it suitable for a wide range of food and industrial applications, each RayTemp 2 is housed in a robust ABS case that contains Biomaster product protection that reduces bacterial growth.

The unit does not incorporate laser alignment, which will appeal to those who are health and safety conscious and do not require this feature.

In addition, it promotes the user to get closer to the object being measured. Ideal in an environment where accuracy is important.

Bluetooth®
model available
see page 64

OPTIONAL ACCESSORIES:

- Protective silicone cover.
  Various colours are available - see page 14
- Stainless steel wall bracket (832-050)
  & white silicone cover (screws not supplied)

MAX/ MIN | AUTO OFF | Biomaster | 2 YEAR GUARANTEE | MADE IN BRITAIN

Order code	Description
228-020	RayTemp 2
832-050	Therma series s/s wall bracket & cover
830-221	Protective silicone cover - white*

*Various colours are available. See page 14.

Specification	RayTemp 2
Range	-49.9 to 349.9 °C
Resolution	0.1 °C & 1 °C
Accuracy	±1 °C (0 to 100 °C) otherwise ±2 °C or ±2 % of reading whichever is greater
Field of view	Target ratio 5:1
Emissivity	0.95 fixed
Battery & life	3 x 1.5 volt AAA - 5,000 hours continuous use
Display	12 mm LCD
Dimensions	25 x 56 x 128 mm
Weight	130 grams

FREE traceable certificate of calibration included

MINI RAYTEMP® INFRARED THERMOMETER

- Target distance/diameter ratio 12:1
- Laser dot alignment
- Backlit LCD display
- Compact, lightweight & easy-to-use

The Mini RayTemp infrared thermometer is a compact, lightweight and low cost infrared thermometer. Simply aim and pull the trigger to display the surface temperature of the item being measured.

Measuring temperature over the range of -50 to 330 °C with an assured accuracy of ±2 °C over the range of 0 to 330 °C, outside of this range (-50 to 0 °C) accuracy is ±4 °C or ±4 % whichever is greater. The Mini RayTemp has a clear, easy-to-read, LCD display with low battery indication, backlight and an auto-power-off facility that turns the instrument off after ten seconds, maximising battery life.

Ideal for numerous temperature measurement applications where contact with the item to be measured is an issue. The Mini RayTemp features laser assisted alignment as standard, to assist in pin-pointing the area of measurement.

The unit incorporates a 12:1 optic ratio (target distance/diameter ratio) and a fixed emissivity of 0.95 making it suitable for a wide range of food and industrial applications.

- **Low cost calibration checker**
  The Comparator (814-132) provides an inexpensive way of checking the temperature of infrared thermometers when used in conjunction with a Reference thermometer, see pages 103 and 104 for details.

OPTIONAL ACCESSORY:

- Protective nylon pouch with belt strap (830-040)

AUTO OFF

Specification	Mini RayTemp
Range	-50 to 330 °C
Resolution	0.1 °C/°F
Accuracy	±2 °C (0 to 330 °C) otherwise ±4 °C or ±4 % whichever is greater
Field of view	Target ratio 12:1
Emissivity	0.95 fixed
Battery & life	9 volt PP3 - 80 hours continuous use
Display	Custom LCD
Dimensions	36 x 88 x 131 mm
Weight	143 grams

Order code	Description
814-080	Mini RayTemp
830-040	Protective nylon pouch
814-132	Comparator

PIZZA IR THERMOMETER

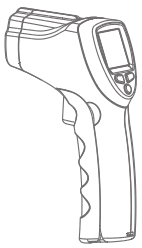
- Circular laser for precise targeting
- Backlit display
- Auto power-off function
- Accurate readings up to 550 °C

The Pizza IR thermometer is a compact, lightweight, and easy-to-use infrared thermometer that provides fast and accurate temperature readings. It is the ideal tool to determine when your pizza oven's floor is ready to cook the perfect pizza.

The device features a 13-dot circular laser that offers precise targeting, with a fixed emissivity of 0.95. To display the surface temperature, simply aim and pull the trigger.

The thermometer is housed in a soft-touch case with a white backlit display and an auto-power off feature that turns the unit off after 10 seconds.

- 13-dot circular laser that offers precise targeting



AUTO OFF

Order code	Description
814-090	Pizza IR thermometer

Specification	Pizza IR thermometer
Range	-50 to 550 °C
Resolution	0.1 °C
Accuracy	±2 % or 2 °C (0 to 550 °C) otherwise ±4 °C
Distance to target	12:1
Emissivity	0.95 fixed
Battery	9V PP3
Battery life	38 hours
Dimensions	42 x 100 x 155 mm
Weight	186 grams

RAYTEMP® 3 INFRARED FOOD THERMOMETER

- High accuracy over the critical food range
- Circular laser for precise targeting
- Temperature range -60 to 500 °C
- Compact, lightweight & easy to use

The RayTemp 3 infrared food thermometer is ideal for use in the food industry. It is compact, lightweight and easy to use. Simply aim and pull the trigger to display the temperature of the item being measured. In addition the LCD will display the maximum temperature.

This instrument measures temperature over the range of -60 to 500 °C with an assured accuracy of ±1 °C over the critical food range of 0 to 65 °C, outside of this range ±2 °C or ±2 % of reading, whichever is greater in an ambient temperature of between 15 °C and 25 °C, with a repeatability of ±1 °C of reading.

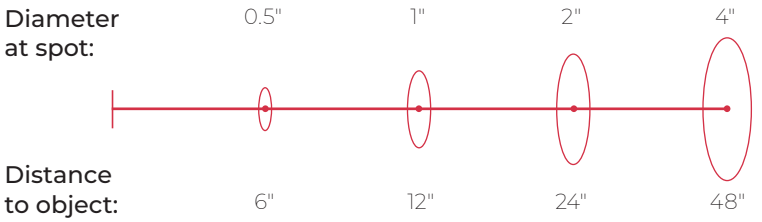
The unit incorporates a clear, easy to read, LCD display with low battery, laser and backlight indication and an auto power off facility that turns the instrument off after 15 seconds, maximising battery life. The RayTemp 3 is ideal for measuring food surface temperatures, eliminating the need to touch or contaminate the food you are measuring, avoiding the risk of cross-contamination. The unit can be used by anyone as there is no need to focus or adjust the instrument.

Each RayTemp 3 features a single push button, allowing the user to select °C or °F. The thermometer also incorporates a circular laser, which allows you to precisely target the diameter of the area to be measured. As you move closer or further from the target the laser circle changes diameter. The unit incorporates a 12:1 optic ratio (target distance/diameter ratio) and a fixed emissivity of 0.97 making it more suitable for chilled and frozen foods, although this thermometer can be used for a wide range of other applications.

OPTIONAL ACCESSORIES:

- Protective nylon pouch with belt strap (830-040)
- ABS carrying case - ideal for transporting and securely storing the RayTemp 3 thermometer (834-740)

Comparator (814-132)



Order code	Description
814-040	RayTemp 3
830-040	Protective nylon pouch
834-740	ABS carrying case
814-132	Comparator

Specification	RayTemp 3
Range	-60 to 500 °C
Resolution	0.1 °C/ °F (-9.9 to 199.9 °C) or 1 °C
Accuracy	±1 °C (0 to 65 °C) otherwise ±2 °C or ±2 % whichever is greater
Field of view	Target ratio 12:1
Emissivity	0.97 fixed
Battery & life	2 x 1.5 volt AAA - 140 hours continuous use
Display	Custom LCD
Dimensions	40 x 66 x 155 mm
Weight	180 grams

RAYTEMP® 8 INFRARED THERMOMETER

- Integral type K thermocouple socket
- Range IR -60 to 500 °C, probe -64 to 1370 °C
- Includes differential & average temperatures
- Target distance/diameter ratio 12:1

The RayTemp 8 portable infrared thermometer is compact, lightweight and easy-to-use. Simply aim and pull the trigger to display the temperature of the item being measured. The thermometer displays temperature over the range of -60 to 500 °C.

Featuring a clear, easy-to-read, LCD display with low battery indication, the RayTemp 8 incorporates an auto-power-off facility that turns the instrument off after 60 seconds, maximising battery life. The unit features a circular laser with centre dot indicator, which allows you to precisely target the diameter of the area to be measured. As you move closer or further from the target the laser circle changes diameter.

The three-button keypad, allows the user to select °C/°F and max/min. Additionally, the difference between the max and min temperature and the average temperature can be displayed.

- **Two instruments in one**
  The RayTemp 8 incorporates a miniature thermocouple type K probe socket that enables a wide range of type K thermocouple probes to be used for a variety of temperature measurement applications, including air, liquid and surface temperatures. For details of compatible type K thermocouple probes, see pages 85 to 91.

RAYTEMP 8 INFRARED KIT

Each kit contains:

- RayTemp 8 infrared thermometer (814-045)
- Penetration probe (123-160)
- FREE Box of 100 Probe Wipes (836-220)
- FREE ABS carrying case (834-740)

MAX/ MIN | AUTO OFF

Order code	Description
814-045	RayTemp 8
860-845	RayTemp 8 kit
830-040	Protective nylon pouch
The RayTemp 8 is exclusive of probe	

Specification	RayTemp 8
Range - infrared	-60 to 500 °C
Range - probe	-64 to 1370 °C
Resolution	0.1 °C/°F (-9.9 to 199.9 °C) or 1 °C
Accuracy - infrared	±2 °C or ±2 % of reading whichever is greater
Accuracy - probe	±1 °C or ±1 % of reading whichever is greater
Field of view	Target ratio 12:1
Emissivity	0.95 default - adjustable 0.1 to 1
Battery & life	2 x 1.5 volt AAA - 180 hours continuous use
Display	Custom LCD
Dimensions	40 x 66 x 155 mm
Weight	185 grams

RAYTEMP® 28 INFRARED THERMOMETER

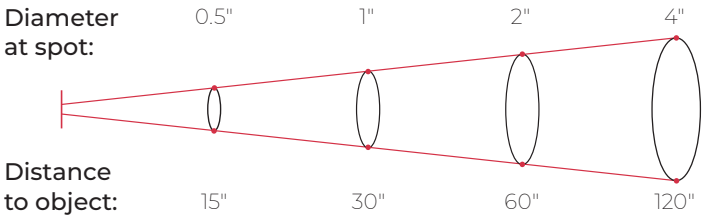
- Integral type K thermocouple socket
- Ideal for high temperature applications
- Dual laser for precise targeting
- Stores the last 12 readings

The RayTemp 28 is a professional infrared, non-contact thermometer with dual laser dot alignment, incorporating a 30:1 optic ratio (target distance/diameter ratio), enabling users to measure small targets from a distance or any item that is difficult to reach.

Featuring a three-button keypad, the RayTemp 28 allows the user to select the mode required, i.e. max, min, differential or average temperatures, view the max/min and configurable high/low alarms. Adjustable emissivity enabling the user to measure a variety of surface types.

The unit has a clear, easy-to-read, custom LCD display that features a backlight for when ambient light levels are low and an auto-power-off facility that turns the instrument off after 35 seconds, maximising battery life. The thermometer is housed in a robust IP54 splashproof case to help reduce the possibility of damage in harsh environments and is supplied in a protective ABS carrying case.

- **Two instruments in one**
  The RayTemp 28 incorporates a miniature thermocouple type K probe socket that enables a wide range of type K thermocouple probes to be used for a variety of temperature measurement applications, including air, liquid and surface temperatures. For details of compatible type K thermocouple probes, see pages 85 to 91.



MAX/MIN | AUTO OFF | IP54

Specification	RayTemp 28
Range - infrared	-50 to 1350 °C
Range - probe	-50 to 1370 °C
Resolution	0.1 °C to 1000 °C thereafter 1 °C
Accuracy - infrared	±2 °C (0 to 1350 °C) otherwise ±4 °C or ±4 % of reading whichever is greater
Accuracy - probe	±1 °C or ±1 % of reading whichever is greater
Field of view	Target ratio 30:1
Emissivity	0.95 default - adjustable 0.1 to 1
Battery & life	9 volt PP3 - 40 hours continuous use
Display	Custom LCD
Dimensions	83 x 95 x 192 mm
Weight	275 grams

Order code	Description
814-028	RayTemp 28
The RayTemp 28 is exclusive of probe	

RAYTEMP® 38 INFRARED THERMOMETER

- Wide temperature range -59.9 to 999.9 °C
- Target distance/diameter ratio 50:1
- Robust housing for durability
- Auto power-off & backlight functions

The RayTemp 38 is a professional infrared, non-contact thermometer with dual laser dot alignment that incorporates a 50:1 optic ratio (target distance/diameter ratio), this enables users to measure small targets from a distance. The user stands a safe and comfortable distance from the target, points the thermometer at the surface to be measured, pulls the trigger and instantly reads the temperature. Ideal for measuring the surface temperature of any item that is difficult to reach. This enables the user to measure most surfaces accurately and quickly.

Measuring the surface temperature over the range of -59.9 to 999.9 °C with a 0.1 °C/°F resolution, the RayTemp 38 incorporates an auto-power-off facility that turns the instrument off after 60 seconds, this function can be disabled, if required. Each unit incorporates a backlit custom LCD display that indicates both the temperature and the emissivity. The thermometer features a four-button keypad, allowing the user to select the mode required, i.e. max, min, differential and average temperatures, view the max/min high and low alarms and adjust the emissivity from 0.1 to 1.0 in 0.01 increments (default set at 0.95).

- **Two instruments in one**
  The RayTemp 38 is two instruments in one as it incorporates a thermocouple socket that will accept a type K thermocouple probe, see pages 85 to 91 for available probes. Each RayTemp 38 is supplied in a protective ABS carrying case. An optional strong magnetic holder is also available. The holder screws into the bottom of the thermometer's housing, allowing the unit to be mounted onto a metal surface for continuous monitoring.

Penetration probe (123-160)

Magnetic holder (814-150)

Order code	Description
814-038	RayTemp 38
123-160	Penetration probe - type K
814-150	Magnetic holder
The RayTemp 38 is exclusive of probe	

Specification	RayTemp 38
Range - infrared	-59.9 to 999.9 °C
Range - probe	-64 to 1400 °C
Resolution	0.1 °C/°F
Accuracy - infrared	±2 °C or ±2 % of reading whichever is greater
Accuracy - probe	±1 °C or ±1 % of reading whichever is greater
Field of view	Target ratio 50:1
Emissivity	0.95 default - adjustable 0.1 to 1
Battery & life	2 x 1.5 volt AAA - 180 hours continuous use
Display	Custom LCD
Dimensions	47 x 170 x 240 mm
Weight	395 grams