

Hand Held Instrumentation

A selection of hand held instruments for many applications including a large range of digital thermometers, light level meter, stroboscope and a range of great value handheld sensors.



Hand Held Instrumentation– Contents

1. Digital Light Meters

A selection of digital light meters including the GM1010, GM1020 and LX101 pocket light level meter

2. IR Infrared Thermometers

Includes the GM300 and GM700, a great Value Hand Held Instrument in hard case with battery included. Also includes the RayTemp 2 and IR Micro Thermometer.

3. Digital Thermometers

A large selection of digital thermometers including the Master Class Folding Cooking Thermometer, GM1311, GM1312 general purpose digital thermometer, Therma1, Therma Plus waterproof, Therma differential, Therma Hygrometer and Digitron range.

4. Calibrators and Precision Calibration Checkers

Products include the Calog multi-function calibrator as well as the Microcal and Microcal Plus calibration checkers. Also, the °Cal-check Precision Thermocouple Calibration Checkers offer a unique, novel concept for rapid, simple and convenient in-house traceable calibration checking of thermocouple instrumentation.

5. Hot Wire Anemometer

Ideal for industrial and home purposes such as measuring wind speed and temperature of CPU, computer fans, air-conditioners, air blowers, etc.

6. Stroboscope / Tachometer

Mains powered microprocessor based stroboscope/tachometer with a digital display, ideal for the measurement of rotational speeds of motors, pumps, fans, etc.

Digital Light Meters

A selection of digital light meters including the GM1010, GM1020 and LX101 pocket light level meter



Digital Light Meters



Digital Light Meter GM1010

XE-4005-001

- Designed with low-power consumption and self-determination software for high-precision and reliability
- Backlight allows the device to work in a dark environment
- Fit for home, work shop, office, light monitoring usage
- Digital Updates: 2 Times/Second
- Photometric Sensor: Silicon Diode
- Battery Life: Over 60 hours



Digital Light Meters



General Description	Auto Power Off: 5 minutes without any operating
Type	Digital Lux /Light Meter
Accuracy	$\pm 3\%$ RDG $\pm 0.5\%$ FS (10,000lux) $\pm 4\%$ RDG ± 10 digits ($>10,000$ lux)
Ambient Operating Temperature	0 to 40°C, 10-90% RH
Dimensions	166 x 52.5 x 35.5 mm
Input / Ranges	0-200,000lux/0 Fc-185, 806 Fc
Operating Temperature	0 to 40°C, 10-90% RH
Weight	146.1g (including battery)
Power Consumption	Battery Life: More than 60 hours
Power Supply	9V battery
Storage Temperature	-20 to 40°C, 10-90% RH

Digital Light Meter GM1020

XE-4006-001

Widely used in electro-optical sources, research, teaching, metallurgy building, industry inspection as well as agriculture researching and illumination control.

- Powerful measurement functions: It can measure not only current values, maximums and minimums of illuminance and temperature, but also illuminance difference, integrating illuminance, and average integrating illuminance.
- Support for automatic storage of illuminance data (up to 1900 groups) and manual storage of illuminance data (up to 60 groups)
- Wide measuring range (0 to 200,000 lux) and support of automatic range shift
- Delivered with computer-based analysis software, allowing users to operate the meter with ease
- Quick response, high portability, and operable by a single hand
- The sensor can be rotated



General Description	Backlight function Maximum and minimum measurements Low battery indication
Type	Digital Lux / Light Meter
Accuracy	±3% rdg: (below 10,000Lux)
Dimensions	150 x 55 x 30 mm
Input / Ranges	0 Lux - 200,000 Lux
Operating Temperature	0°C - 40°C, 10%RH - 90%RH
Weight	150.4g
Power Consumption	Battery life:10 hours (continuous operation with a USB connection)
Power Supply	2 AAA battery
Storage Temperature	-20°C - 50°C, 10%RH - 90%RH

Digital Light Meters

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Pocket Light Level Meter (LX-101)

XE-6320-001

The LX-101 pocket light level meter is easy to use, Compact, light-weight, and excellent value.

- Built-in low battery indicator
- LSI-circuit use provides high reliability and durability
- Sensor COS correction factor meets standard
- Precise and easy readout, wide range
- High accuracy in measuring
- LCD display provides low power consumption
- Compact, light-weight, and excellent operation
- Operating humidity Less than 80% R.H.



General Description	Compact and lightweight with a precise and easy readout, a wide range and high accuracy in measuring. LCD display provides low power consumption.
Type	Pocket Light Level Meter
Accuracy	Zero adjustment Internal adjustment. Over-input Indication of " 1 "
Input / Ranges	0-50,000 Lux. 3 Ranges
Operating Temperature	0°C to 50°C
Display	13mm (0.5") LCD
Dimensions	Main instrument : 108 x 73 x 23mm. Sensor probe: 82 x 55 x 7mm
Power Consumption	Approx. DC 2mA
Power Supply	DC 9V battery. 006P, MN1604 (PP3) or equivalent

IR Infrared Thermometers

Includes the GM300 and GM700, a great Value Hand Held Instrument in hard case with battery included. Also includes the RayTemp 2 and IR Micro Thermometer.



IR Infrared Thermometers



IR GM300E Infrared Thermometer

XE-4000-001

This infrared thermometer is used for measuring the temperature of the object's surface, which is applicable for various hot, hazardous or hard-to-touch objects without contact safely and quickly.

- Measuring range: -50-420°C (-58-788°F)
- Accuracy: +/- 1.5°C / +/- 1.5%
- Resolution: 0.1°C or 0.1°F
- Distance spot ratio: 12:1
- Emissivity: 0.10-1.00 Adjustable (0.95 Preset)
- MAX / MIN / AVG / DIF reading
- °C / °F unit selectable
- Auto Power off & Data Hold
- High / Low Temperature Alarm setup
- Laser ON / OFF selectable
- Backlight ON / OFF selectable
- Requires one standard 9V battery (included)



IR Infrared Thermometers



General Description	MAX / MIN / AVG / DIF reading, °C / °F unit selectable, Auto Power off & Data Hold, High / Low Temperature Alarm setup, Laser ON / OFF selectable, Backlight ON / OFF selectable
Accuracy	+/- 1.5°C / +/- 1.5%
Resolution	0.1°C or 0.1°F
Emissivity	0.10-1.00 Adjustable (0.95 Preset)
Distance to Spot Size	12:1
Input / Ranges	Measuring range: -50-420°C (-58-788°F)
Power Supply	Requires one standard 9V battery (included)

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IR GM700 Infrared Thermometer with Hard Case

XE-4001-001

This infrared thermometer is used for measuring the temperature of the object's surface, which is applicable for various hot, hazardous or hard-to-touch objects without contact safely and quickly.

- Precise non-contact thermometer, highly accurate and reliable.
- Compact size, one-handed design for simple and convenient operation.
- Simply point to an object and read its temperature.
- LED back light design for operation under poor illumination
- °C / °F selection and laser target pointer ON /OFF selection.
- Supports MAX / MIN / AVG / DIF reading.
- Supports high / low temperature alarm setup.
- Laser pointer for accurate target aiming.
- With data store recall function and data hold function
- The measure distance is 12:1, this is object distance ratio, it means if the diameter of object tested is 10cm, the distance between thermometer and object is 12*10=120cm.
- Laser on/off switch, Auto power off & temperature data hold.

Applications

hot water pipes, hot engine parts, cooking surfaces, hot tubes insulation, electrical connection, ballasts in electric lights, electric motors, bearings, wine coolers hot asphalt, swimming pools, fish tanks, hot cold food products, heating air conditioning, etc

IR Infrared Thermometers



General Description	Precise non-contact thermometer, highly accurate and reliable. Compact size, one-handed design for simple and convenient operation.
Accuracy	-50 to 700°C +/-1.5% or +/-1.5°C
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Spectral Response	8-14 um
Emissivity	0.95 preset
Distance to Spot Size	12:1
Dimensions	Approx 175 x 100 x 50mm
Operating Temperature	0-40°C (32-104°F)
Power	9V Alkaline or NiCd Battery

IR RayTemp 2 Infrared Thermometer

XE-3941-001

Simply aim the thermometer 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 $\pm 1^\circ\text{C}$ over the range 0 to 100°C.

- Free traceable certificate of calibration
- Records the max/min temperatures
- Displays ambient temperature



General Description	The RayTemp® 2 incorporates a 5:1 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.
Type	infrared
Accuracy	$\pm 1^\circ\text{C}$ (0 to 100 °C) otherwise $\pm 2^\circ\text{C}$ or $\pm 2\%$ of reading, whichever is greater
Resolution	0.1°C & 1°C
Emissivity	0.95 fixed
Dimensions	25 x 56 x 128mm
Input / Ranges	-49.9 to 349.9°C
Weight	130 grams
Power Consumption	5000 hours continuous use

IR Infrared Thermometers

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IR Micro Infrared Thermometer

XE-3944-001

The IR-Micro is a pocket-sized, low cost infrared thermometer. Simply aim the unit at the target and press the button to display the surface temperature instantly.

The distance to target ratio is 1:1 and therefore the unit should be positioned as close to the target as possible. A fixed emissivity of 0.95 makes this thermometer suitable for a wide range of food and industrial applications.

Each unit incorporates a °C/°F button, display hold feature and an auto-power off facility that automatically turns the instrument off after fifteen seconds, maximising battery life. Supplied with batteries and integral pocket clip.

- Range -50 to 260 °C
- Resolution 0.1 °C/°F
- Display hold
- Compact, lightweight & easy to use



Sensor Type	Infrared thermometer
General Description	Simply aim the unit at the target and press the button to display the surface temperature instantly.
Max. Temperature	260°C
Min. Temperature	-50°C
Tolerance	Emissivity 0.95 fixed
Accuracy	Infrared accuracy $\pm 2\%$ or $\pm 2\text{ }^{\circ}\text{C}$ (0 to 260 $^{\circ}\text{C}$) otherwise $\pm 4\text{ }^{\circ}\text{C}$
Dimensions	18 x 90mm
Power Supply	2 x 1.5 volt LR44 button cell (included)

Digital Thermometers

A large selection of digital thermometers including the Master Class Folding Cooking Thermometer, GM1311, GM1312 general purpose digital thermometer, Therma1, Therma Plus waterproof, Therma differential, Therma Hygrometer and Digitron range.



Digital Thermometers

Digital Thermometers- Contents

- 1. GM1312 General Purpose Digital Thermometer (K,J,T,E,N,R/S)**
- 2. Temptest 1 Smart Thermometer (Type K)**
- 3. Industrial Thermometer Therma 1 (Type K)**
- 4. Therma Plus Waterproof Thermometer (Type K)**
- 5. Therma Hygrometer and Thermometer**
- 6. Therma Differential Thermometer (Type K)**
- 7. Digitron FM45 Digital Thermometer (Type K)**
- 8. Digitron 2029T Digital Thermometer (Types K, T, J, N, R, S)**
- 9. Digitron 2024T Digital Thermometer (Pt100)**
- 10. Food Thermometers**

GM1312 General Purpose Digital Thermometer (K,J,T,E,N,R/S)

XE-3999-001

- K, J, T, E, N, R/S modes.
- 2 temperature modes: ° C, ° F and
- One push button to switch between ° F/° C mode as well to switch between MAX/MIN/AVG
- 2 temperature channels: T1 / T2
- Differential temperature measurement
- Overload display alert if input exceeds the selected measurement range
- Comes with rubber holster that protects the meter from impact Portable and compact design

General Description	One push button to switch between ° F/° C mode as well to switch between MAX/MIN/AVG . 2 temperature channels: T1 / T2. Differential temperature measurement .
Type	K, J, T, E, N, R/S modes.
Accuracy	± 0.4° C ± 1%
Resolution	0.1° C or 0.1°
Air Temp: Range	0-40° C (32-104° F)
Input / Ranges	J-TYPE: -210°C to 1200°C (-346°F to 2192°F) K-TYPE: -200°C to 1372°C (-328°F to 2501°F) T-TYPE: -250°C to 400°C (-418°F to 752°F) E-TYPE: -150°C to 1000°C (-238°F to 1832°F) N-TYPE: -200°C to 1300°C (-328 °F to 2372°F) R-AND S-TYPE: 0°C to 1767°C (32°F to 3212°F)



TempTest 1 Smart Thermometer (Type K)

XE-3987-001

TempTest® smart thermometers with unique rotating display.

The TempTest® thermometer is housed in a waterproof IP67 case with an ergonomic rubber seal, both include 'Biomaster' additive to reduce bacterial growth. As well as being waterproof, it is 'probably' one of the fastest reading contact thermometers on the market today. The true temperature of a product can be measured in just three seconds.

Both low battery (icon) and open circuit indication are displayed, when applicable. Each TempTest is powered by two AAA batteries with a minimum life expectancy of 5000 hours in normal use without the backlight. The backlight function features Smart Technology - only coming on when the light level requires it.

The TempTest 1 is supplied with an integral, permanently attached, stainless steel food penetration probe (Ø3.3 x 80 mm) with fast response tip.



General Description	Fast response probe, reaches temperature in just 3 seconds! Patented, automatic 360° rotational display Small, compact, waterproof (IP67) design Intelligent backlit display
Type	The TempTest 1 is supplied with an integral, permanently attached, stainless steel food penetration probe (Ø3.3 x 80 mm) with fast response tip
Thermocouple Type	Type K
Accuracy	±0.4°C (-49.9 to 200 °C) otherwise ±1 °C
Resolution of data display	Resolution 0.1 °C/°F
Dimensions	17 x 47 x 120mm
Max. Temperature	299.9°C
Min. Temperature	-49.9°C

Digital Thermometers

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Industrial Thermometer Therma 1 (Type K)

XE-3988-001

The Therma 1 features large, easy to read, LCD displays with open circuit 'Err' and low battery indication. Each thermometer is powered by three 1.5-volt AAA batteries that gives a minimum of five years battery life.

The units will power off automatically after ten minutes, maximising battery life. This feature can be disabled by the user, if required.



General Description	Housed in a robust ABS case that contains 'Biomaster' additive that helps to reduce bacterial growth.
Type	Industrial Digital Thermometer
Thermocouple Type	Type K
Accuracy	±0.4°C ±0.1%
Input / Ranges	0.1°C -99.9 to 299.9°C. 1°C 300 to 1372°C
Resolution of data display	0.1°C & 1°C
Dimensions	25 x 56 x 128mm
Power Supply	Battery 3 x 1.5 volt AAA. Battery life 10000 hours/min 5 years

Digital Thermometers

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Therma Plus Waterproof Thermometer (Type K)

XE-3984-001

The Therma Plus hand held thermometer is housed in a robust extruded aluminium waterproof case with a white anti-bacterial/salt resistant powder coated finish offering IP66/67 protection.

The ThermaPlus incorporates the latest microprocessor technology with improved durability, designed for reliability and ease of use in routine day-to-day food processing and industrial applications.



General Description	FREE traceable certificate of calibration included. Waterproof case offering IP66/67 protection. Salt resistant. 2 year guarantee
Type	Type K Waterproof Thermometer
Accuracy	$\pm 0.4^{\circ}\text{C} \pm 0.1\%$ of reading
Resolution	0.1 $^{\circ}\text{C}$ resolution then auto-ranging to 1 $^{\circ}\text{C}$ resolution over the range of 300 to 1372 $^{\circ}\text{C}$
Dimensions	35 x 60 x 115mm
Max. Temperature	1372 $^{\circ}\text{C}$
Min. Temperature	-99.9 $^{\circ}\text{C}$

Digital Thermometers

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Therma Hygrometer and Thermometer

XE-3985-001

The British Made low cost 6500 therma-hygrometer measures both relative humidity and air temperature. The instrument displays %rh over the range of 0 to 100%rh with a resolution of 0.1 %rh and temperature over the range of -20 to 70 °C with a resolution of 0.1 °C.

- Dew point calculation & max/min function
- Fixed remote %rh & temperature probe
- 2-year guarantee

ATTENTION

The Humidity Sensors housed in this product are susceptible to contamination from pollutants such as solvents and exposure to saturated air and therefore are not covered under the 2-year warranty. Furthermore, it is expected that the sensor's readings will drift by up to 0.5% per year.



General Description	The 6500 therma-hygrometer incorporates a clear custom LCD with °C, %rh, max/min, hold and dew point indication. An auto power-off facility turns the instrument off after 10 minutes' non-use.
Accuracy	Temperature: ± 1 °C over the range 5 to 45 °C otherwise ± 1.7 °C Humidity: $\pm 3\%$ (20 to 80 %rh)
Resolution	Temperature: 0.1°C/°F Humidity: 0.1%rh
Dimensions	25 x 56 x 128mm
Max. Temperature	70°C
Min. Temperature	-20°C
Weight	160 grams
Power Supply	3 x 1.5-volt AAA. Battery life: 10000 hours
Sensor Type	temperature: silicone bandgap – humidity: capacitance polymer

Digital Thermometers

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Therma Differential Thermometer (Type K)

XE-3989-001

The Therma Differential digital thermometer allows the user to use 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 to be measured.

Each thermometer is 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.

Therma Differential Thermometer two channel, T1 or T2 or T1 minus T2 differential (Probe in images not included, please pick from the wide Labfacility range of probes to suit this product).



General Description	Therma Differential Thermometer two channel, T1 or T2 or T1 minus T2 differential Robust waterproof case offering IP66/67 protection Ideal for radiator balancing or HVAC applications Designed for plumbers, reliable & easy to use Backlight, max/min & hold functions
Thermocouple Type	Type K
Accuracy	±0.4 °C ±0.1 % of reading
Input / Ranges	Range 0.1°C -99.9 to 299.9°C Range 1°C 300 to 1372°C
Resolution of data display	0.1 °C to 299.9°C thereafter 1°C
Dimensions	32 x 71 x 141mm
Power Supply	Battery 3 x 1.5 volt AAA Battery life 7500 hours
Weight	220 grams

Digitron FM45 Digital Thermometer (Type K)

XE-3994-001

The FM45 is a simple-to-use hand-held thermometer featuring a large liquid crystal display, rubber boot and on/ off key making it ideal for use in any environment.

The FM45's protective rubber boot can prevent accidental damage if the instrument is dropped, and is an essential part of any busy environment.

- Water resistant – operates in any environment
- Auto power off - Instrument automatically shuts off after 20 minutes of inactivity
- Field calibration – perform ice bath calibration via the front keypad
- Update rate: 2.5 times per second
- Storage temperature: -13° to 158°F (-25° to 70°C)
- °C/°F - selects Centigrade or Fahrenheit
- Min/Max - selects min or max reading measured
- T1/T2/ΔT - selects probe and differential mode
- HOLD - freezes the reading on the LCD



General Description	This instrument can be used with an option to include general and air probes to enable the user to quickly and accurately measure different temperature requirements. These are connected via a simple dual 2-pin plug.
Thermocouple Type	Type K
Accuracy	58° to 32°F (-50° to 0°C) ±3°F (1.6°C) 32° to 1100°F (0° to 600°C) ±(0.3% of reading, + 1.8°F (1°C)) 1100° to 2462°F (600° to 1350°C) ±(0.4% of reading, + 1.8°F (1°C))
Input / Ranges	K-type thermocouple probe range and accuracy
Resolution of data display	Display LCD, 4 digits, 9999 counts
Dimensions	(HxLxW): 40mm x 190mm x 65mm (1.5" x 7.25" x 2.5")
Max. Temperature	50°C (122°F)

Digitron 2029T Digital Thermometer (Types K, T, J, N, R, S)

XE-3992-001

The rugged 2029T provides precise, stable readings and high accuracy even in the harshest of environments. Optional coloured rubber boots add protection and style to these multi-functional instruments.

- K, T, J, N, R/S Type Sensors
- 2 Pin Mini
- C/F Function
- Max/Min
- Hold Function
- Ranges vary according to sensor type, please see datasheet
- Simple to operate
- 2-year standard warranty
- Long battery life: typically, 500 hours
- Standard splash-proof IP65/waterproof IP67 option
- Robust case for long life in harsh environments
- Accuracy exceeds European food regulations
- Ergonomic design
- Magnified backlit digital display
- Display: 12.7mm / 0.5" custom L.C.D.
- Sensor Open Circuit: Indicated by 'O-C' on display
- Over range/Under range: 'Out' displayed
- Cold Junction Compensation: Yes
- Auto Switch-Off Time: 12 minutes



Thermocouple Type	Sensor Type: K, T, J, N, R/S
Accuracy	0.1% rdg $\pm 0.2^{\circ}\text{C}/0.4^{\circ}\text{F}$ above $-100^{\circ}\text{C}/-148^{\circ}\text{F}$ 0.5% rdg $\pm 0.2^{\circ}\text{C}/0.4^{\circ}\text{F}$ below
Connector Type	Connector Type: 2 pin mini
Resolution of data display	0.1° from -199.9°C to $+199.9^{\circ}\text{C}/-199.9^{\circ}\text{F}$ to $+392.0^{\circ}\text{F}$ 1°C elsewhere
Dimensions	155 x 67 x 40mm/6.1 x 2.6 x 1.6"
Max. Temperature	50°C (122°F)
Min. Temperature	-10°C (14°F)
Power Consumption	Battery Life: Typically 500 hours. Low Battery Check: Symbol appears on display

Digitron 2024T Digital Thermometer (Pt100)

XE-3993-001

The rugged 2024T provides precise, stable readings and high accuracy even in the harshest of environments. They are simple to operate, fast, reliable and built to last. Optional coloured rubber boots add protection and style to these multi-functional instruments.

- Pt100 Type Sensor
- TCM Screw Connector
- °C/°F Function
- Hold Function
- Range Lock
- Max/Min
- Averaging
- -150°C to +800°C/ -238°F to +1472°F
- 2-year standard warranty
- Long battery life: typically, 500 hours
- Standard splash-proof IP65
- Robust case for long life in harsh environments
- Magnified backlit digital display
- Display: 12.7mm / 0.5" custom L.C.D.
- Sensor Open Circuit: Indicated by 'O-C' on display
- Over range/Under range: 'Out' displayed
- Cold Junction Compensation: Yes



Type	Pt100 - Connector Type: TCM screw
Accuracy	±0.2% rdg ±0.1°C/0.2°F over range -150°C to +800°C/ -238°F to +1472°F
Input / Ranges	Over range/Under range: 'Out' displayed
Resolution of data display	0.1° from -199.9°C to +199.9°C/-199.9°F to +392.0°F 1°C elsewhere
Dimensions	155 x 67 x 40mm/6.1 x 2.6 x 1.6"
Max. Temperature	50°C (122°F)
Min. Temperature	-10°C (-14°F)
Power Consumption	Battery Life: Typically 500 hours Low Battery: Check Symbol appears on display

Food Thermometers

XE-3991-001

GM1311 High Performance Professional Digital Food Thermometer



XE-3966-001

Master Class Folding Cooking Thermometer



Perfect for precise cooking of beef, veal, lamb, pork, chicken and turkey, ensure you have a delicious roast joint of meat for your Sunday lunch, impressing both friends and family.

General Description	LCD display. Temperature lock. Max/Min measuring. Conversion between Celsius degree and Fahrenheit degree. Auto power off
Accuracy	-10 - 100°C: +/-1°C 100 - 200°C: +/-1.5°C
Resolution	0.1°C/°F
Colour	White
Dimensions	9.29 in x 1.34 in x 0.71 in (23.6 cm x 3.4 cm x 1.8 cm). Display dimension:44x18mm
Max. Temperature	300°C (572°F)
Min. Temperature	-50°C (-58°F)
Probe Length	149.5 x 6mm
Weight	Weight: 0.95 oz (27 g)

Sensor Type	Folding Stainless Steel Probe
General Description	The easy to read LCD display clearly shows the internal temperature measured by the stainless steel probe
Max. Temperature	200°C (392°F)
Min. Temperature	-45°C (-49°F)
Dimensions	25.8 x 8.8 x 2.2 cm
Power Supply	1 x LR44 battery (included)
Weight	100g

Digital Thermometers

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Calibrators and Precision Calibration Checkers

Products include the Calog multi function calibrator as well as the Microcal and Microcal Plus calibration checkers. Also, the °Cal-check Precision Thermocouple Calibration Checkers offer a unique, novel concept for rapid, simple and convenient in-house traceable calibration checking of thermocouple instrumentation.



Multi-Function Temperature Calibrator

XE-6080-001

The Calog TEMP Calibrator is ideal for testing, measuring and calibration of all Thermocouple and RTD based systems. In addition, it contains functions to install and maintain all powered and non-powered milliamp loops.

The Calog TEMP is a high precision, multi-functional, hand-held calibrator suitable for the process control industry. Its speciality is Thermocouple (TC) and Resistance Temperature Detector (RTD) based instruments which it can measure and source.

Simultaneous measuring of Milliamps whilst sourcing Millivolts or Ohms or TC or RTD is possible. The Trend feature is ideal for graphing temperature profiles and PID controller optimization. Datalogging is done by using the SD card facility and can be downloaded via the USB port.

- Measure, source or simulate 0 to 24 mA
- Measure and source -10 to 100 mV
- Measure and source 0 to 400.00 Ω and 0 to 2200.0 Ω
- Measure and source types K, J, T, B, R, S, E, N, U and L thermocouples with configurable internal, external or manual cold-junction compensation in either $^{\circ}\text{C}$, $^{\circ}\text{F}$, Kelvin or Rankine
- Measure and source Pt50, Pt100, Pt200, Pt500, Pt1000, Ni100 and Ni120 type RTD sensors



- Continuity test function
- Increment, step, ramp or valve stroking with built-in 24V power supply for mA loops
- Datalogging facility via SD card which is downloadable using the USB port
- Trend logging feature with programmable time base
- Carry case, protective rubber boot, Li-ion battery, charger, test leads, CJ Compensation box and SD card supplied as standard

°Cal-check Hand Held Precision Thermocouple Calibration Checker

°Cal-check

Cold Chain / Catering / Baking & Cooking / General Industrial

The °Cal-check is a unique, novel concept for rapid, simple and convenient in-house calibration checking of thermocouple instrumentation, eliminating the need to send it away for laboratory calibration.

The compact, low cost device, terminated with miniature, male pins is simply plugged into the input port of the instrument. Comparison of the displayed reading is compared with the value stated on the °Cal-check label to indicate the accuracy of the test instrument.

The °Cal-check is switched on after insertion and automatically switches off after 60 seconds resulting in a long battery life. If the checker is inadvertently left connected to the instrument, it will go into sleep mode to minimise power consumption. A LED indicates if the checker is operational or if the battery needs replacing; the checker will not produce a reading if the battery is 'low'.

Nine Type K & T thermocouple ranges are available to suit a wide range of applications including food production & storage, dairy and brewing processes and ovens.

- Quick, accurate calibration checking of thermocouple instruments
- Plug-in, press button & read – no PC needed
- No more need to send instruments away for calibration
- No wiring or range setting –simple checking by anyone



Type	Type K or T available
Accuracy	+/-0.25°C at 23°C ambient temperature
Resolution	0.1°C
Host Instrument Input Impedance	10k Ohm minimum
Temperature Coefficient	18-28°C ambient temperature, better than +/-0.5°C. 0-50°C ambient temperature, +/-0.5 °C
Storage Temperature Range	-20 to 70°C
Ambient Operating Temperature	0 to 50°C, 18 to 28°C recommended
Power	Battery life: typically 2400 operations; 5 years' shelf life

MicroCal 1 Thermocouple Simulator (Types K, J, T, R, N, S, E)

XE-3981-001

The MicroCal 1 thermocouple simulator helps ensure that the frequent checking of thermometer accuracies is a routine operation. The calibrator is designed to simulate a chosen temperature to test thermocouple type K, J, T, R, N, S and E thermometers without the need for specialised equipment or conversion tables. The MicroCal 1 Plus calibrator also measures and simulates temperature.

The MicroCal 1 features a custom 10mm LCD display with alpha-numeric display line to prompt the user when changing parameters. Selectable parameters include: °C/°F, auto power off - enable/disable, CJC - internal/external and display contrast adjustment.

Each MicroCal is supplied with a one metre PVC type K thermocouple lead with miniature connectors and a five point UKAS Certificate of Calibration which indicates deviations from standards at the various points.

Thermocouple type K - range -200 to 1372°C
Thermocouple type J - range -200 to 1200°C
Thermocouple type T - range -270 to 400°C
Thermocouple type R - range 0 to 1768°C
Thermocouple type N - range -200 to 1300°C
Thermocouple type S - range 0 to 768°C
Thermocouple type E - range -140 to 1000°C

All thermocouple types are based on BS EN 60584-2:1993



- 12 adjustable temperature points
- Allows frequent checking of thermometer accuracies
- Tests thermocouple type K, J, T, R, N, S & E thermometers
- Microcal 1 plus also measures temperature as well as simulates
- Probe in images not included, please pick from the wide Labfacility range of probes to suit this product

MicroCal 1 Plus Simulator Thermometer (Types K, J, T, R, N, S, E)

XE-3982-001

The MicroCal 1 Plus thermocouple simulator and thermometer helps ensure that the frequent checking of thermometer accuracies is a routine operation. The calibrator is designed to simulate a chosen temperature to test thermocouple type K, J, T, R, N, S and E thermometers without the need for specialised equipment or conversion tables. The MicroCal 1 Plus calibrator both measures and simulates temperature.

The simulator features a custom 10mm LCD display with alpha-numeric display line to prompt the user when changing parameters. Selectable parameters include: °C/°F, auto power off - enable/disable, CJC - internal/external and display contrast adjustment.

An optional lead set is also available, that comprises of seven leads, one for each thermocouple type K, J, T, R, N, S and E. Each PVC lead is one metre long and incorporates two miniature thermocouple plugs.

Each MicroCal 1 Plus is supplied with a one metre PVC type K thermocouple lead with miniature connectors and a five point UKAS Certificate of Calibration which indicates deviations from standards at the various points.



Thermocouple type K - range -200 to 1372°C

Thermocouple type J - range -200 to 1200°C

Thermocouple type T - range -270 to 400°C

Thermocouple type R - range 0 to 1768°C

Thermocouple type N - range -200 to 1300°C

Thermocouple type S - range 0 to 1768°C

Thermocouple type E - range -140 to 1000°C

Anemometers

Ideal for industrial and home purposes such as measuring wind speed and temperature of CPU, computer fans, air-conditioners, air blowers, etc.



GM816 Hot Wire Anemometer Wind Meter Anemometer / Digital Anemometer

XE-4003-001

Ideal for industrial and home purposes such as measuring wind speed and temperature of CPU, computer fans, air-conditioners, air blowers, etc.

- Measure wind speed and temperature
- The wind speed measuring range is from 0 to 30m/s
- Current and average wind speed measuring
- Maximum and minimum wind speed measuring
- Temperature display in °C/°F
- LCD white backlight display



Anemometer



Accuracy	+/- 5%
Air Temp: Accuracy	+/- 2°C, +/- 3.6F
Air Temp: Range	-10~45°C, 14~113°F
Air Temp: Resolution	Resolution 0.2°C, 0.36°F
Air Velocity: Range	0.3 - 30m/s, 0 - 90km/h, 0 - 5860ft/min, 0 - 65mph, 0 - 55Knots
Air Velocity: Resolution	0.1m/s, 0.3km/h, 19ft/min, 0.2mph, 0.2Knots
Air Velocity: Threshold	0.1m/s, 0.3km/h, 39ft/min, 0.2mph, 0.1Knots
Colour	Yellow / Black
Current Consumption	3mA Approx.
Dimensions	10.5 x 4.5 x 2 cm / (4.13 x 1.77 x 0.79)
Operating Humidity	less than or equal to 90%RH

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Stroboscope / Tachometer

A mains powered microprocessor based stroboscope/tachometer with a digital display, ideal for the measurement of rotational speeds of motors, pumps, fans, etc.



Stroboscope / Tachometer DT2239-2

XE-6317-001

Mains powered microprocessor based stroboscope/tachometer with a digital display, ideal for the measurement of rotational speeds of motors, pumps, fans, etc.



General Description	A mains powered microprocessor based stroboscope/tachometer with a digital display, ideal for the measurement of rotational speeds of motors, pumps, fans, etc.
Type	STROBOSCOPE / TACHOMETER
Accuracy	Accuracy: $\pm(0.05\% + 1 \text{ digit})$
Operating Temperature	0° to 50°C
Display	0.3" LED, 4 digits
Stroboscope Flash Rate	100 to 10,000 flashes per minute (FPM)
Tachometer Flash Rate	100 to 10,000 revolutions per minute (RPM)
Flash Duration	Approximately 60 to 100 microseconds
Dimensions	21 x 12 x 12cm (8.3 x 4.8 x 4.8")

Stroboscope / Tachometer

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