

# Labfacility Temperature Sensors and Accessories for Science and Industry



BRAMMER stock over 340 Labfacility products at their Wolverhampton NDC available for immediate despatch.

Labfacility is the UK's leading manufacturer of Temperature Sensors, Thermocouple Connectors and associated Temperature Instrumentation and stockists of Thermocouple Cables. The Company has been trading since 1971, is ISO 9001 accredited, employs over 70 staff over two UK sites – West Sussex and South Yorkshire and exports to over 85 countries. In addition to the stocked items, Labfacility also offers bespoke Temperature Sensors

## Applications and Industries include:

■ Autoclaves ■ Aerospace ■ Automotive & Motorsport ■ Education ■ Energy ■ Food production ■ Chillers & freezers ■ Heat treatment ■ Medical ■ Metallurgy ■ Meteorology ■ Metrology, In particular R&D, Temperature Calibration, Laboratory and QA departments ■ Pharmaceutical ■ Plastics & Rubber ■ Power Generation

Please see below a small selection of the Labfacility products within the Brammer catalogue (section Control Gear + Switch Gear 13 - pages 340 to 353 inclusive).

## **Miniature Connectors**

- A range of miniature IEC thermocouple connectors to suit calibrations K, J & T
- Ideal for general purpose use
- All contacts are polarised to ensure correct connection
- Contacts are made from true thermocouple alloys
- Colour coded in accordance with IEC specification
- Maximum continuous operating temperature 220°C



Order Code	Description
WXL1887	IM-K-M MINI PLUG
WXL1891	IM-K-LCF MINIATURE SOCKET
WXL1897	IM-K-MQ MINIATURE QUICK WIRE PLUG
WXL1900	IM-K-FQ MINIATURE QUICK WIRE SOCKET
WXL1903	IM-K-SSPF MINIATURE STAINLESS STEEL PANEL SOCKET

## Standard Connectors

- A range of standard IEC thermocouple connectors to suit calibrations K, J & T
- Suitable for industrial applications
- All contacts are polarised to ensure correct connection
- Contacts are made from true thermocouple alloys
- Colour coded in accordance with IEC specification
- Maximum continuous operating temperature 220°C

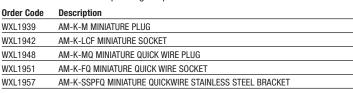


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Order Code	Description
WXL1912	IS-K-M STANDARD LINE PLUG
WXL1915	IS-K-F STANDARD LINE SOCKET
WXL1918	IS-K-MQ STANDARD QUICK WIRE LINE PLUG
WXL1921	IS-K-FQ STANDARD QUICK WIRE LINE SOCKET
WXI 1927	IS-K-SSPE STANDARD PANEL SOCKET WITH STAINLESS STEEL BRACKET

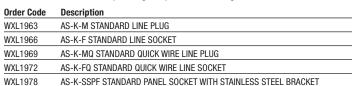
## **Miniature Connectors**

- A range of miniature ANSI thermocouple connectors to suit calibrations K, J & T
- Ideal for general purpose use
- All contacts are polarised to ensure correct connection
- Contacts are made from true thermocouple alloys
- Colour coded in accordance with ANSI specification
- Maximum continuous operating temperature 220°C



## Standard Connectors

- A range of standard ANSI thermocouple connectors to suit calibrations K, J & T
- Suitable for industrial applications
- All contacts are polarised to ensure correct connection
- Contacts are made from true Thermocouple alloys
- Colour coded in accordance with ANSI specification
- Maximum continuous operating temperature 220 deg°C



## Fast Response MI Thermocouple Threaded Pot & Tails - TYPE K

- 0.5mm diameter probe
- Sensor range -100 to 800°C
- Tails 100mm, PFA insulated twin twisted, 7/0.2mm
- Calibration Type K
- M8 x 1.0mm threaded pot seal (200°C)
- 310 Stainless steel or Inconel 600 sheath available
- Choice of insulated or grounded hot junctions

Order Code	Description
WXL2024	150 MM (L) - SS310 (SHEATH MATERIAL) - INSULATED
WXL2026	500 MM (L) - SS310 (SHEATH MATERIAL) - INSULATED

#### Fast Response MI Thermocouple with Fitted Miniature Plug - TYPE K

- 0.5mm diameter probe
- Stainless steel 310 sheath
- Insulated or grounded hot junction available
  - nction available
- Fitted miniature plug termination (220°C) for quick, simple connection
- Sensor range -100 to 800°C

Order Code	Description
WXL2037	PROBE SIZE: 0.5 X 150 MM - INSULATED
WXL2039	PROBE SIZE: 0.5 X 500 MM - INSULATED

## Mineral Insulated Thermocouple with Fitted Connector

- Mineral insulated thermocouple with miniature or standard plug
- Stainless steel 310 sheath
- Calibration Type K
- 1.5, 3.0 & 6.0 mm diameters available
- Miniature plug (MP) or standard plug (SP) termination





## Mineral Insulated Thermocouple with Threaded Pot Seal & Lead

- Mineral insulated thermocouple with threaded pot seal & lead
- Sensor range -100 to 1100°C
- Tails 100mm, PFA insulated twin twisted, 7/0.2mm
- M8 x 1.0mm threaded pot seal (200°C)
- Calibration Type K
- 310 Stainless steel sheath
- 1.0, 1.5, 3.0 & 6.0 mm diameters available

Order Code	Description	
WXL2054	PROBE SIZE: 1.0 X 1000MM	
WXI 2058	PROBE SIZE: 1.5 X 1000MM	

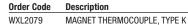
## **Industrial Style Thermocouple with Terminal Head**

- Type K: Stainless steel 310 sheath
- Type J: Stainless steel 321 sheath
- Calibration type K or J
- M20x1.5mm cable entry
- Type K Sensor range -100 to 1100°C
- Type J Sensor range -100 to 760°C
- 6mm diameter
- Weatherproof aluminium IP67 terminal head with screw fit lid
- 100, 150, 200, 300, 400, 500 & 600 mm lengths available

Order Code	Description
WXL2066	TYPE K - PROBE SIZE 6.0 X 150 MM
WXL2068	TYPE K - PROBE SIZE 6.0 X 300 MM

#### **Magnet Thermocouple**

- Strong magnet housing type K thermocouple
- 2 metres stainless steel over-braided PFA Teflon® cable fitted with miniature plug
- Temperature rating -50°C to +250°C
- Grounded measuring junction
- Magnet: 1" diameter (3kg pull)
- Rapid, reliable temperature sensing on ferrous surfaces



## **Button Magnet Thermocouple**

- Button magnet thermocouple
- Ideal for ferrous metal surface measurement
- Spring loaded junction to ensure good contact
- 1 metre long Teflon® insulated twin-twisted wire
- Fitted miniature plug (200°C)
- Sensor range to 250°C

Order Code	Description
10/1 0000	DUITTON MAAON

BUTTON MAGNET THERMOCOUPLE, TYPE K WXL2080

## Leaf Thermocouple

- Thermocouple mounted on a stainless steel shim
- 25x13mm shim
- Junction grounded at tip for fast response
- Rated 350°C
- 2 Metre glass fibre insulated lead with stainless steel over braid, 7/0.2mm
- Type J or K available

Order Code	Description
WXL2081	TYPE K LEAF THERMOCOUPLE
WXI 2082	TYPE JURAE THERMOCOUPLE

## **Heavy Duty Probe Thermocouple**

- Rugged thermocouple with stainless steel sheath
- Stainless steel probe 4.5mm x 150mm
- 2 metres stainless steel over braided cable
- Temperature rating -60°C to +350°C
- Grounded measuring junction





## **Magnetic Strip Thermocouple**

- Magnetic strip thermocouple Type K
- PTFE insulated wires terminated in a 50 x 25 x 1mm magnetic strip
- Twin-twist wires, 2 Metres long
- Fitted miniature plug
- Range 0 to 120°C
- Ideal for ferrous metal surface measurement



MAGNETIC STRIP THERMOCOUPLE TYPE K WXL2084

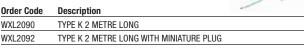
## Pipe Surface Thermocouples

- For pipe temperature measurement up to 350°C
- They are available in a number of sizes to suit your diameter of pipe
- These sensors make direct contact with the pipe for maximum performance and have grounded tips for a fast response
- Stainless steel pipe clamp sensor with adjustable diameter
- Available in thermocouple type K or J
- Fits pipe diameters from 13-20mm, 22-30mm, 30-45mm and 40-55mm
- Grounded tip for fast response
- Rated up to 350°C
- Fitted with 2 metres of glass fibre stainless steel braided extension cable, 7/0.2mm

Order Code	Description
WXL2087	TYPE K, TO FIT PIPE 30-45MM DIA
WXL2088	TYPE K, TO FIT PIPE 40-55MM DIA

## **Exposed Junction Thermocouple - PTFE Insulated**

- Fast response, exposed junction
- PTFE insulated wires
- Twin-twist 1/0.2mm, Class 1
- Range -75 to 250°C
- Ideal for test & development work



## Exposed Junction Thermocouple - PFA Insulated

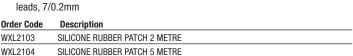
Thermocouple types K & T to IEC 584

- Fast response, welded exposed junction
- 5 metre long Teflon® PFA insulated twintwisted lead
- Conductor size, 1/0 315mm solid or 7/0.2mm stranded
- Miniature plug termination
- Temperature range -75°C to +250°C
- Ideal for test & development



## Self Adhesive Patch PT100 Sensor (RTF4)

- Silicone rubber patch with self adhesive foil backing
- Pt100 class B, 4 wire sensor
- Dimensions L40 x W13 x 5mm thick
- chemicals
- leads, 7/0,2mm









## **External / Cold Store PT100 Temperature Sensor**

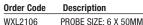
- External / cold store PT100 temperature sensor
- Weatherproof IP67 rated wall mounting Pt100 for accurate outdoor air temperature sensing
- Housing 80 x 74 x 54mm
- Surface mounting Pt100, class B, 4 wire
- Temperature range -50 to 150°C
- Perforated stainless steel probe, 12.7 x 75mm
- M20 cable gland

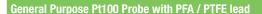
**Order Code** 

EXTERNAL / COLD STORE PT100 TEMPERATURE SENSOR WXL2105



- General purpose Pt100 silicone rubber lead
- Pt100, class B, 4 wire
- Sensor temperature range -50 to 200°C
- 2 Metre silicone rubber insulated screened lead 7/0.2mm
- 6mm diameter, 50 or 100mm long





- Pt100, class B, 4 wire
- Sensor temperature range -50 to 250°C
- 1 metre PTFE insulated screened lead 7/0.1mm for 3mm sheath
- 1 metre PFA insulated screened lead 7/0.2mm for 6mm sheath
- Stainless steel 316 sheath
- 3mm diameter sheath, 150 or 250mm long

Order Code	Description
WXL2107	PROBE SIZE: 3MM X 150MM
WYI 2100	DDORE CIZE: 6MM V 150MM

## **Heavy Duty Pt100 Probe fitted with Terminal Head**

- Heavy duty Pt100 probe fitted with terminal head
- Pt100, class B, 4 wire
- Stainless steel 316 sheath
- Weatherproof aluminium IP67 terminal head with screw fit lid, M20x1.5mm cable entry
- Sensor range -100 to 450°C

Order Code	Description
WXL2114	6MM DIAMETER X 200MM LONG
WXL2115	6MM DIAMETER X 400MM LONG

#### Pt100 precision probe with 2 metre lead

- Pt100 precision probe with 2 metre lead
- High accuracy, +/- 0.06°C at 0°C
- Pt100 1/5th Din, 4 wire
- Sensor temperature range -50 to 250°C
- 2m PTFE insulated screened lead 7/0.2mm
- Stainless steel 316 sheath 6 x 250mm

**Order Code** Description PROBE SIZE: 6 X 250MM WXL2116

## **Mica Nozzle Heaters**

- Best quality mica for high dielectric strength and maximum heat transfer
- High performance wound element for superior heat distribution
- 1 metre long stainless steel braided cable
- Recommended for temperatures up to 300°C
- Wide range of applications including plastic process machinery, injection / blow moulding, rubber moulding, test equipment, food process industry etc

Order Code	Description
WXL2118	1 INCH (D) - 1.5 INCH (L) - 150 (WATTAGE)
WXL2122	40MM (D) - 25MM (L) - 250 (WATTAGE)

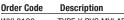


- PTFE insulated, twin twisted pair thermocouple cable
- Single twisted pair
- PTFE insulated cable / wire
- Tolerance class 1
- Insulation rating -75 to 260°C
- IEC584 colour coded
- Available in 25, 50 & 100 metre reels

Order Code	Description
NXL2126	25 METRE REEL
NXL2128	100 METRE REEL

## **PVC Insulated Mylar Screened Thermocouple Cable**

- PVC insulated, mylar screened thermocouple cable
- Single pair PVC insulated twisted cores cable / wire
- Mylar tape screen with bare copper drain wire
- PVC sheathed overall
- Tolerance class 2
- Insulation rating -10 to 105°C
- IEC584 colour coded
- Available in 100 metre Lengths



TYPE K PVC MYLAR 100M WXL2129

#### **PVC Insulated Flat Pair Thermocouple Cable**

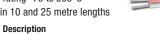
- PVC Insulated flat pair thermocouple cable
- Single pair in types K, J and VX
- PVC insulated cable/wire
- Laid flat, side by side & PVC sheathed
- Tolerance class 2
- Insulation rating -10 to 105°C
- IEC584 colour coded
- Available in 100 metre Lengths

**Order Code** Description

TYPE K PVC FLAT PAIR 100M WXL2131

## PRT Sensor Cable - PTFE Insulated Silver Plated Copper Screen

- PRT sensor cable PTFE insulated, silver plated copper screen
- 7/0.2 SPC copper conductors
- 4 cores PTFE insulated cable / wire
- Silver plated copper screen
- Insulation colours red/white Overall black PTFE insulation
- Insulation rating -75 to 260°C
- Available in 10 and 25 metre lengths





**Order Code** 

WXL2155

## Simple to use thermocouple welder

Designed for the production of commercial grade thermocouple junctions

4 CORE, 25 METRES

- Also suitable for other fine wire work
- Front panel or footswitch operation
- Argon gas shield facility

Order Code Description WXL2170 L60 WELDER



## **Labcal PRO Precision Thermometer** Reference standard thermometer for Pt100

- and thermocouple sensors
- High accuracy ± 0.01°C Pt100, ± 0.18°C thermocouple
- 25 milliKelvin (0.025°C) system accuracy with Pt100
- Simple, fast digital matching to calibrated sensors, up to 10 points per channel retained in memory
- Use selectable resolution 0.001/0.01°C for Pt100 inputs
- Smart sensor capability Pt100 for corrections stored in probe
- Data logging
- Measures Pt100 and thermocouple types J, K, T, E, R, S, B, and N

Order Code	Description
WXL2172	LABCAL PRO PRECISION THERMOMETER



## **Tempmaster PRO Precision Thermometer**

- The Tempmaster PRO (precision thermometer) from Labfacility provides very high precision temperature measurement with Pt100 sensors
- Data can be displayed in °C, °F, K or ohms as required; nine front panel push keys, the only user controls, are used in conjunction with the display screen



- It is this arrangement which makes for very simple and friendly operation
- Reference standard thermometer for Pt100 sensors
- High accuracy ± 0.01°C Pt100
- 40 milliKelvin (0.040°C) system accuracy
- Precise linearisation conformity is realised by a hybrid maths polynomial technique
- Simple, fast digital matching to calibrated sensors, up to 10 points per channel retained in memory
- Additional digital matching to Pt100 sensors using custom constants
- Clear, comprehensive user information on alpha numeric display
- Resolution 0.01°C for Pt100 inputs
- Smart sensor capability Pt100 for corrections stored on probe
- Data logging
- Wide temperature range

Order Code	Description
110// 0470	TELIDIALOTE

WXL2173 TEMPMASTER PRO PRECISION THERMOMETER

## **L200 USB High Precision Digital Thermometer/Data Logger**

- The Labfacility L200 Pt100 and thermocouple thermometer can be used in conjunction with a PC to provide accurate, versatile 8 channel thermocouple and Pt100 temperature measurement, scanning and logging of measured values
- It can also be used as a "stand alone" indicator/logger and incorporates a digital display of measured temperature
- Simple operation
- Low cost high performance
- USB PC interface
- 8 thermocouple inputs, types J, K, T, E, N, R, S & B or Pt100 (3 wire) inputs

Order Code	Description
WXL2174	THERMOCOUPLE INPUT VERSION
WXL2175	PT100 INPUT VERSION

#### **SEM203/TC In-Head RTD Temperature Transmitter**

- The push button temperature transmitter is a cost effective "smart" in head transmitter that accepts thermocouple temperature sensors and converts sensor output over a configured range to a standard industrial (4 to 20) mA transmission signal
- A simple push button operation allows the user to select TC type, burnout direction, select fixed ranges and trim 4 and 20 mA points

Order Code	Description
WXL2179	SEM203TC TRANSMITTER, THERMOCOUPLE
INPLIT	

## 300TXL High Accuracy, Low Profile, 2 Wire Temperature Transmitter

- The 300TXL is a 4-20mA analogue temperature transmitter, which can be housed in a probe terminal head suitable for a DIN standard block
- The overall height is only 23mm allowing it also to be housed in low-profile enclosures
- 4-20mA, 2 wire loop
- High accuracy & stability
- In-head mounting, DIN standard fixing
- Pt100 or thermocouple type J and K
- Effective input 'noise' rejection
- CE compliant
- RoHS compliant

Order Code	Description	
WXL2185	PT100 INPUT, 0° TO 100°C , -0.1° TO 0.1° ACCURACY	
WXL2191	TYPE K INPUT, 0° TO 200°C, -0.2° TO 0.2° ACCURACY	



- 100 Ohm flat film detectors
- Pt100 to IEC751
- Thin film construction
- Resists vibration & shock
- Temperature range -50 to 500°C



Order Code Description

WXL2196 PT100 2 X 2.3MM CLASS B

#### **100 Ohm Wire Wound Detectors**

- Pt100 single element
- Wire wound construction for optimum performance and stability
- Temperature range -200 to 650°C
- Class B or A to IEC 60751



Order Code Description

WXL2204 PT100 1.5 X 15 WIRE WOUND CLASS A

## **Surface Temperature Spring Loaded Thermocouple with Copper Disc Tip**

- Stainless steel sheath with a moulded handle and 1.50 metres of coiled extension cable terminated in a miniature thermocouple plug #
- Surface temperature spring loaded thermocouple with copper disc tip
- Maximum temperature: +850°C
- Probe 4.7mm Ø x 80mm long
- Tip 4mm Ø

Order Code Description

WXL2224 K TYPE SPRING LOADED THERMOCOUPLE WITH COPPER DISC TIP

## Surface Temperature Fast Response Thermocouple with Ceramic Tip and Coiled Element

- Stainless steel sheath with a moulded handle and 1.50metres of coiled extension cable terminated in a miniature thermocouple plug
- Surface temperature fast response thermocouple with ceramic tip and coiled element
- Maximum temperature: +900°C
- Probe 7.9mm Ø x 100mm long
- Coiled element diameter 5.5mm

Order Code Description

WXL2226 K TYPE THERMOCOUPLE WITH CERAMIC TIP AND COILED ELEMENT

## **K Type Penetration Temperature Probe**

- Stainless steel sheath with a moulded handle and 1.50 metres of coiled extension cable terminated in a miniature thermocouple plug
- Heavy duty penetration thermocouple with pointed tip for pushing into solid material
- Maximum temperature: +350°C
- Probe 6mm Ø x 150mm long



Order Code Description

WXL2228 K TYPE PENETRATION TEMPERATURE PROBE

This represents just some of the 340 Labfacility products stocked by BRAMMER

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