

CONNECTORS & CABLES FOR THERMOCOUPLES & RESISTANCE THERMOMETERS

Europe's leading manufacturer of connectors and supplier of cables
for thermocouples and resistance thermometers.



LABFACILITY

TEMPERATURE & PROCESS TECHNOLOGY

www.labfacility.co.uk

MINIATURE PLUGS & SOCKETS

Types J,K,T,N,E,R/S & Copper



- Range of miniature thermocouple connectors with flat pins having terminal and contact material to suit the thermocouple type
- Socket ideal for general purpose use
- All contacts are polarized to ensure correct connection
- Connectors will accept thermocouple cable up to 4mm diameter
- Cable clamps available for securing cable to plugs and sockets
- Uncompensated copper connectors also available
- Maximum continuous operating temperature 220°C
- Wide range of accessories available, see page 5

MINIATURE TWIN CONTACT SOCKET

Types J,K,T,N,E,R/S & Copper

- Range of miniature thermocouple sockets with "Twin Contacts" designed for applications requiring duty cycle use
- All contacts are polarized to ensure correct connection
- Connectors will accept thermocouple cable up to 4mm diameter
- Cable clamps available for securing cable to socket
- Uncompensated copper connectors also available
- Maximum continuous operating temperature 220°C
- Wide range of accessories available, see page 5

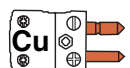
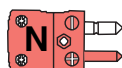
MINIATURE **QUICK WIRE** PLUGS & SOCKETS

Types J,K,T,N,E,R/S & Copper

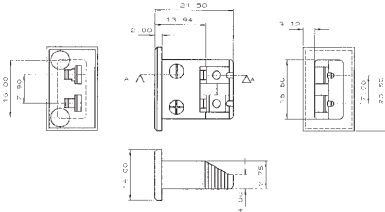
- These quick connect versions allow rapid termination
- Quick, easy "jab-in" connection, just push in wire and tighten screw
- Will accept wide range of wire sizes
- Maximum continuous operating temperature 220°C
- Compatible with the other miniature plugs and sockets

CONTENTS

Miniature Plugs and Sockets.....	2
Standard Plugs and Sockets	4
Connector Accessories	5
Cables	6
Thermocouple Wire Welder.....	8
Fine Wire Thermocouples.....	8
Thermocouple Cable Colour Codes	9
Cable Tidy, Spade Terminals & Solder ...	9
Thermocouple Cable Accuracies	9
Other Labfacility Products	10

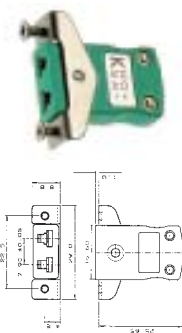


MINIATURE RECTANGULAR PANEL MOUNTING FASCIA SOCKETS Types J,K,T,N,E,R/S & Copper



- Clip mounting
- Quick, simple fixing to panel, see page 5
- Maximum continuous operating temperature 120°C

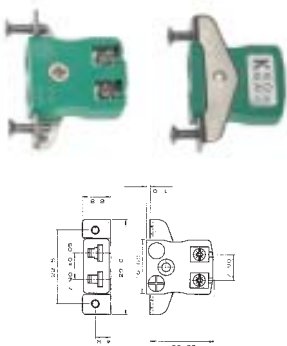
MINIATURE PANEL SOCKET WITH MOUNTING BRACKET Types J,K,T,N,E,R/S & Copper



TYPE	SOCKET
J	IM-J-SSPF
K	IM-K-SSPF
T	IM-T-SSPF
N	IM-N-SSPF
E	IM-E-SSPF
R/S	IM-R-SSPF
Copper	FMT-CU-SSPF

- Miniature socket fitted with stainless steel bracket
- Fully enclosed terminals with cable port seal
- Quick simple fixing to panel
- Maximum continuous operating temperature 220°C

MINIATURE **QUICK WIRE** PANEL SOCKET WITH MOUNTING BRACKET Types J,K,T,N,E,R/S & Copper



TYPE	SOCKET
J	IM-J-SSPFQ
K	IM-K-SSPFQ
T	IM-T-SSPFQ
N	IM-N-SSPFQ
E	IM-E-SSPFQ
R/S	IM-R-SSPFQ
Copper	FMT-CU-SSPFQ

- Miniature socket with quick wire facility – fitted with stainless steel mounting bracket
- Quick, easy “jab-in” connection, just push in wire and tighten screw
- These quick connect versions allow rapid termination
- Maximum continuous operating temperature 220°C

MINIATURE PCB MOUNTING SOCKET TYPES K,T & Copper



- Versatile, high quality, circuit board mounting miniature socket
- Specially designed for PCBs
- Solid pins for direct PCB mounting
- Provision for CJC sensor
- Compatible with flow soldering assembly
- Maximum continuous operating temperature 220°C

MINIATURE HIGH TEMPERATURE, PLASTIC PLUGS AND SOCKETS Types J & K

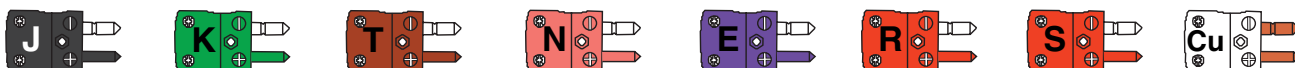
- All connectors have type identification on body
- High temperature polyester bodies for use up to 425°C
- All contacts are polarized to ensure correct connection
- For R,S & B compensating alloys limit the maximum usable temperature to 260°C

MINIATURE VERY HIGH TEMPERATURE, CERAMIC PLUGS & SOCKETS Types J,K & N

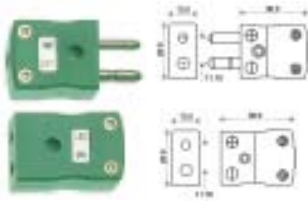
- Heavy duty ceramic body for use up to 560°C
- All connectors are coloured white with type identification on body
- For types R,S & B compensating alloys limit the maximum usable temperature to 260°C

CABLE TIDY THERMOCOUPLE WITH FITTED MINIATURE PLUG

- A complete, precision fine wire, high sensitivity thermocouple
See page 9



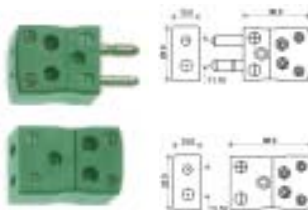
STANDARD PLUGS & SOCKETS Types J,K,T,N,E,R/S & copper



TYPE	PLUG	SOCKET
J	IS-J-M	IS-J-F
K	IS-K-M	IS-K-F
T	IS-T-M	IS-T-F
N	IS-N-M	IS-N-F
E	IS-E-M	IS-E-F
R/S	IS-R-M	IS-R-F
COPPER	FSTC-CU-M	FSTC-CU-F

- A range of standard sized connectors with round pins to suit the thermocouple type being used
- Intended for use in more industrial applications
- Plugs fitted with solid thermocouple pins
- All contacts are polarized to ensure correct connection
- Cable clamps available for securing cable
- Maximum continuous operating temperature 220°C
- Wide range of accessories available, see page 5

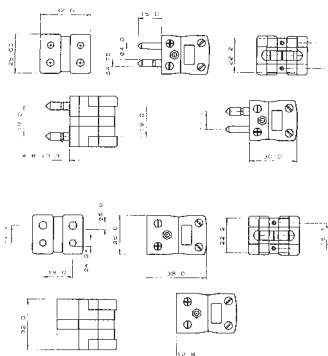
STANDARD QUICK WIRE PLUGS & SOCKETS Types J,K,T,N,E,R/S & copper



TYPE	PLUG	SOCKET
J	IS-J-MQ	IS-J-FQ
K	IS-K-MQ	IS-K-FQ
T	IS-T-MQ	IS-T-FQ
N	IS-N-MQ	IS-N-FQ
E	IS-E-MQ	IS-E-FQ
R/S	IS-R-MQ	IS-R-FQ
COPPER	FSTC-CU-MQ	FSTC-CU-FQ

- Physically compatible with alternative standard, round pin connectors
- These quick connect versions allow rapid termination
- Quick easy "jab-in" connection, just push in wire and tighten screw
- Plugs fitted with solid thermocouple pins
- Suits wide range of wire sizes
- Maximum continuous operating temperature 220°C

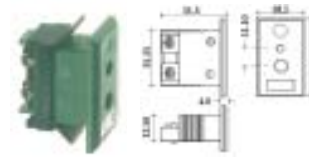
STANDARD DUPLEX PLUGS AND SOCKETS Types J,K,T,N,E,R/S & copper



TYPE	PLUG	SOCKET
J	IS-J-MD	IS-J-FD
K	IS-K-MD	IS-K-FD
T	IS-T-MD	IS-T-FD
N	IS-N-MD	IS-N-FD
E	IS-E-MD	IS-E-FD
R/S	IS-R-MD	IS-R-FD
COPPER	FSTC-CU-MD	FSTC-CU-FD

- Duplex (Two channel) connectors using thermocouple material contacts and pins
- Bodies supplied coloured black with spacer in IEC thermocouple colour coding
- Plugs fitted with solid thermocouple pins
- Rugged glass filled polyester bodies
- All contacts are polarized to ensure correct connection
- Maximum continuous operating temperature 220°C
- Wide range of accessories available, see page 5

STANDARD RECTANGULAR PANEL MOUNTING FASCIA SOCKETS Types J,K,T,N,E,R/S & copper

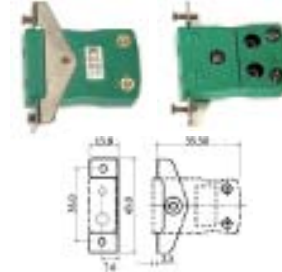


TYPE	SOCKET
J	IS-J-FF
K	IS-K-FF
T	IS-T-FF
N	IS-N-FF
E	IS-E-FF
R/S	IS-R-FF
COPPER	FSTC-CU-FF

- Quick, simple fixing to panel, see page 5
- Clip mounting
- Maximum continuous operating temperature 120°C

STANDARD PANEL OR QUICK WIRE SOCKET WITH MOUNTING BRACKET Types J,K,T,N,E,R/S & copper

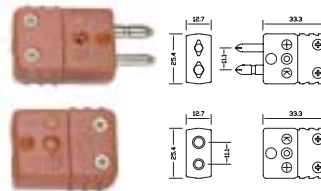
Fully enclosed Quick wire



TYPE	SOCKET	SOCKET (Quick Wire)
J	IS-J-SSPF	IS-J-SSPFQ
K	IS-K-SSPF	IS-K-SSPFQ
T	IS-T-SSPF	IS-T-SSPFQ
N	IS-N-SSPF	IS-N-SSPFQ
E	IS-E-SSPF	IS-E-SSPFQ
R/S	IS-R-SSPF	IS-R-SSPFQ
COPPER	FSTC-CU-SSPF	FSTC-CU-SSPFQ

- Standard sockets with fully enclosed terminals and cable port seal, fitted with stainless steel bracket
- Standard quick wire sockets fitted with stainless steel bracket
- Maximum continuous operating temperature 220°C

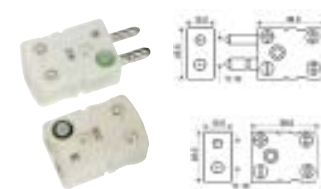
STANDARD HIGH TEMPERATURE PLASTIC PLUGS AND SOCKETS Types J & K



TYPE	PLUG	SOCKET
J	IS-J-M-HTP	IS-J-F-HTP
K	IS-K-M-HTP	IS-K-F-HTP

- High temperature polyester bodies for use up to 425°C
- All contacts are polarised to ensure correct connection
- For R,S & B compensating alloys limit the maximum usable temperature to 260°C
- Hollow pins in plug

STANDARD VERY HIGH TEMPERATURE CERAMIC PLUGS & SOCKETS Types J,K & N



TYPE	PLUG	SOCKET
J	IS-J-M-HTC	IS-J-F-HTC
K	IS-K-M-HTC	IS-K-F-HTC
N	IS-N-M-HTC	IS-N-F-HTC

- Heavy duty ceramic body for use up to 560°C
- All connectors supplied coloured white with coloured dot on body
- For types R,S & Cu compensating alloys limit the maximum usable temperature to 260°C

PLUG & SOCKET CRIMP ON BRASS PROBE SUPPORTS, MINIATURE & STANDARD



To suit 1.5mm & 3.0mm (Blank fittings available for other sizes)

SIZE	Miniature	Standard
0.5mm	CA-160	—
1.0mm	CA-161	CA-171
1.5mm	CA-162	CA-172
2.0mm	POA	CA-176
3.0mm	CA-163	CA-173
4.5mm	—	CA-175
6.0mm	—	CA-174
Blank	CA-033	CA-105

PLUG & SOCKET BRAZE ON BRASS PROBE SUPPORTS, STANDARD



SIZE	Standard
1.5mm	CA-062
3.0mm	CA-064

To suit 1.5mm & 3.0mm

PLUG & SOCKET COMPRESSION CABLE CLAMP, STANDARD



Standard
CA-075

PLUG & SOCKET EXTERNAL CABLE CLAMPS MINIATURE AND STANDARD



Miniature	Standard
CA-087	CA-076

PLUG & SOCKET EXTERNAL CABLE CLAMP, DUPLEX



Standard
CA-077

PLUG & SOCKET BRAZE ON PROBE SUPPORT, DUPLEX



SIZE	Standard
3.0mm	CA-072
4.5mm	CA-073
6.0mm	CA-074

To suit 3.0mm, 4.5mm & 6.0mm

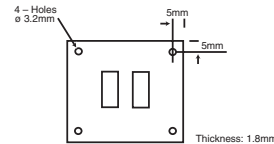
PLUG & SOCKET CABLE STRAIN RELIEF WASHER, MINIATURE & STANDARD



Miniature	Standard
CA-060	CA-061

Supplied in packs of 100
Material: Silicone rubber

PANELS FOR MINIATURE FASCIA SOCKETS (Type FF)



WAY	PART NO
1	CA-001
2	CA-002
3	CA-003
4	CA-004
5	CA-005
6	CA-006
8	CA-007
10	CA-008
12	CA-009
16	CA-010
18	CA-011
20	CA-012
24	CA-013

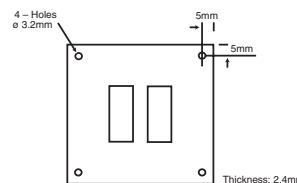
Formula for dimension:

Length = (N x 15) + 25mm (N= Number of ways per row)

Height = 45mm (single row), 75mm (Double row)

Up to 12 ways in a single row, 16 to 24 ways in two rows

PANELS FOR STANDARD FASCIA SOCKETS (Type FF)



WAY	PART NO
1	CA-014
2	CA-015
3	CA-016
4	CA-017
5	CA-018
6	CA-019
8	CA-020
10	CA-021
12	CA-022
16	CA-023
18	CA-024
20	CA-025
24	CA-026

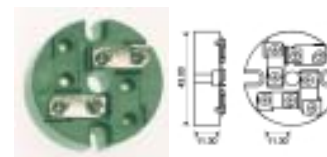
Formula for dimensions:

Length = (N x 19) + 31mm (N = number of ways per row)

Height = 66mm (single row), 111mm (Double row)

Up to 12 ways in a single row, 16 to 24 ways in two rows

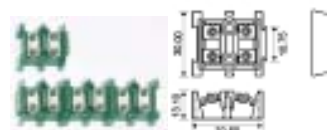
TERMINAL BLOCKS FOR IN-HEAD MOUNTING Types J,K,T & copper



TYPE	SIMPLEX	DUPLEX
J	HT-053	HT-056
K	HT-058	HT-059
T	HT-050	
COPPER	N/A	HT-054

- Colour coded terminal blocks are for in-head mounting
- Connections made from thermocouple material
- Maximum continuous operating temperature 220°C
- Available as Simplex or Duplex

BARRIER TERMINAL BLOCKS Types J,K,T,R/S & copper



TYPES	
J	CA-151
K	CA-135
T	CA-136
R/S	CA-137
COPPER	CA-138

- Colour coded barrier terminal blocks
- Supplied in single interlocking pairs
- Connections in thermocouple material
- Maximum continuous operating temperature 220°C

<i>T/C</i>	<i>Type</i>	<i>Size</i>	<i>(mm)</i>	<i>Item</i>
Type	J	7/5.2	WJ-200	
Type	J	13/5.2	-	
Type	K	7/5.2	WK-150	
Type	K	13/5.2	WK-151	
Type	K	23/5.2	WK-152	
Type	T	7/5.2	WT-200	
Type	T	13/5.2	WT-201	
Type	T	23/5.2	-	
Type	N	7/5.2	WN-100	
Type	N	13/5.2	-	
Type	N	23/5.2	-	
Type	Vx	7/5.2	-V00	
Type	Vx	13/5.2	-V01	
Type	Vx	23/5.2	-V02	
Type	U	7/5.2	WU-100	
Type	U	13/5.2	-	
Lengths	of	10,		50

<i>T/C Type</i>	<i>Size (mm)</i>	<i>IEC PART No.</i>
Type J	1/0.2	WJ-244
Type J	1/0.508	WJ-246
Type J	7/0.2	WJ-243
Type K	1/0.2	WK-200
Type K	1/0.315	WK-201
Type K	1/0.508	WK-202
Type K	7/0.2	WK-303
Type K	10/0.12	XS-699
Type T	1/0.2	WT-300
Type T	1/0.315	WT-301
Type T	7/0.2	WT-303
Type N	1/0.2	WN-120
Type N	7/0.2	WN-140

Lengths of 25 & 120m

pe K

Type T

Type N

Type E

Type R

Type S

L60+ THERMOCOUPLE WIRE AND FINE WIRE WELDER

- Designed for producing thermocouple junctions
- Suitable for wires up to 1.1mm diameter
- Argon gas shield facility
- Can join wires to each other or metal surfaces
- Includes footswitch for convenient operation
- Comes with 1 electrode fitted & 1 spare
- 110/230Vac Power supply

Codes
Welder IL-070
Pkt 5 spare electrodes IL-015



EXPOSED WELDED TIP THERMOCOUPLES



*Also known as naked bead,
fine-wire & exposed junction
thermocouples*

Welded tip, exposed junction, fast response thermocouples in types J,K & T

Specifications

Sensor Type	Thermocouple type J,K or T to IEC 60584. Exposed welded junction
Operating Temperature	PFA/PTFE insulated, 250°C. Fibreglass insulation, 350°C
Insulation	Glassfibre (silicone varnished) or PFA/PTFE
Termination	Bare wire tails

Specifications

Glassfibre Insulated	Type J	Type K	Type T
Wire diameter	1/0.315mm	1/0.315mm	1/0.315mm
Overall diameter	1.5mm	1.5mm	1.5mm
Temperature range	-50°C to +350°C	-50°C to +350°C	-50°C to +350°C
Positive leg	Iron	Nickel chromium	Copper
Negative leg	Constantan	Nickel aluminium	Constantan
PFA/PTFE Insulated			
Wire diameter		1/0.2mm	1/0.2mm
Overall diameter	-	1.3mm	1.3mm
Temperature range	-	-50°C to +250°C	-50°C to 250°C
Positive leg	-	Nickel Chromium	Copper
Negative leg	-	Nickel aluminium	Constantan

Welded tip thermocouple codes

Glassfibre Insulated	Code
Type J, 2m	Z3-J-2
Type K, 1m	Z3-K-1
Type K, 2m	Z3-K-2
Type T, 2m	Z3-T-2
PFA/PTFE Insulated	
Type K, 1m	Z2-K-1
Type K, 2m	Z2-K-2
Type T, 1m	Z2-T-1
Type T, 2m	Z2-T-2

EXPOSED, WELDED TIP THERMOCOUPLES WITH FITTED MINI-PLUGS PFA/PTFE



**Types J,K & T, PFA/PTFE insulated
thermocouple wire with welded
junction and fitted miniature plug**

Specifications

Sensor type	Thermocouple type J,K or T to IEC 60584. Exposed, Welded junction.
Tip temperature Rating	-75°C to 250°C (limited by PFA/PTFE insulation properties)
Wire type	Twin, twist pair, PFA/PTFE insulated over 1/0.2mm conductors
Termination	Colour coded miniature plug

Dimensions & Codes

Type	Code	Type	Code
Type J x 1m	Z2-J-1-MP	Type J x 2m	Z2-J-2-MP
Type K x 1m	Z2-K-1-MP	Type K x 2m	Z2-K-2-MP
Type T x 1m	Z2-T-1-MP	Type T x 2m	Z2-T-2-MP

EXPOSED, WELDED TIP THERMOCOUPLE WITH FITTED MINI-PLUGS, GLASSFIBRE



**Types J & K, Glassfibre insulated
thermocouple wire with welded
junction and fitted miniature plug**

Specifications

Sensor Type	Thermocouple type J or K to IEC60584. Exposed, welded junction.
Tip temperature Rating	-50°C to +350°C (limited by glassfibre insulation properties)
Wire type	Flat pair, silicone varnished glassfibre insulated over 1/0.315mm conductors
Termination	Colour coded miniature plug

Dimension & Codes

Type	Code	Type	Code
Type J x 1m	Z3-J-1-MP	Type J x 2m	Z3-J-2-MP
Type K x 1m	Z3-K-1-MP	Type K x 2m	Z3-K-2-MP

CAB FITTEL

- A complete, precise fitted miniature
- Quick and easy
- Type K & T thermocouples
- Class 1 wire for
- PFA/PTFE insulation
- Rated 220°C continuous
- Ideal & convenient

S

C

EUROPE'S LARGEST RANGE OF TEMPERATURE SENSORS

- Industrial & laboratory thermocouple & PRT probes in configurations to suit any application, ranges from -200°C to 1700°C
- Custom design versions available
- Transmitter-in-head options
- Pt100 elements & thermistors
- Probe fittings & accessories

THE BEST IN THERMOCOUPLE CONNECTORS

- Full range of thermocouple connectors – high quality plugs and sockets in IEC 60584, ANSI, JIS, and other colours
- Comprehensive range of fittings and accessories including mounting panels

All in this brochure

WIDE RANGE OF HIGH QUALITY THERMOCOUPLE & PRT CABLES

- Extension and compensating cables – a wide range of insulation types and configurations in IEC 60584 and BS 1843 colours including PFA, PTFE, PVC and fibreglass

All in this brochure

MARKET LEADING TEMPERATURE & PROCESS INSTRUMENTATION

- Precision digital thermometers
- Multi function digital thermometers
- Calibrators
- Multi-way switches
- Transmitters
- Controllers & Indicators
- Loggers and Scanners
- Digital test Meters

EQUIPMENT & COMPONENT PARTS FOR SENSOR MANUFACTURERS

- Compact thermocouple welder and microwelder
- MI cables, stainless steel sheaths, pots and fittings
- Terminal heads & blocks

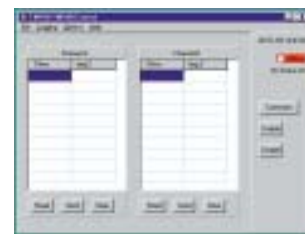
VERSATILE DRY BLOCK CALIBRATORS

- Accurate, stable portable calibrators for -10°C to 1200°C to suit industrial & scientific temperature sensors

UKAS TRACEABLE CALIBRATIONS

- Certified probe calibrations between -10°C and 1200°C

**And our indispensable Temperature
handbook**



LABFACILITY – LEADERS IN TEMPERATURE MEASUREMENT

Labfacility market leading products represent **more than thirty years of design and applications experience** in industrial and laboratory, temperature and process measurement. Labfacility products and services are specified by leading UK and European distributors and manufacturers and are also exported to more than 85 countries.

Quality and Service are key elements in the continued growth of Labfacility; technical support is always freely available from our experienced technical sales teams and the company has ISO9001 accreditation.

Not only do we manufacture temperature sensors and fittings, thermocouple connectors, precision electronic thermometers and thermocouple welders, we also supply thermocouple cables, temperature transmitters, hand held digital thermometers and test instruments, dry block calibrators, loggers, scanners and temperature controllers.

LABFACILITY – MANUFACTURER AND STOCKIST

Applications and Industries include:

- Autoclaves
- Aerospace
- Automotive & Motorsport
- Education
- Energy
- Food
- Heat Treatment
- Medical
- Metallurgy
- μ
-
- In part, Quality Control.
- Plastics & Rubber
- Power Generation



LABFACILITY

TEMPERATURE & PROCESS TECHNOLOGY

www.labfacility.co.uk



Certificate No. 4746

SOUTHERN UK & EXPORT DIVISION: Units 5,6 & 7, Block K, Southern Cross Industrial Estate, Shripney Road,
Bognor Regis, West Sussex PO22 9SD

Export Sales: tel: +44(0)1243 871287 fax: +44(0)1243 871281 email: exportsales@labfacility.co.uk
Southern UK Sales: tel: +44(0)1243 871280 fax: +44(0)1243 871281 email: southernsales@labfacility.co.uk

NORTHERN UK DIVISION: Units 7/8 Abbey Way, North Anston Trading Estate, Dinnington, Sheffield S25 4JL

Northern UK Sales: tel: +44(0)1909 569446 fax: +44(0)1909 550632 email: northernsales@labfacility.co.uk