

**LABFACILITY**  
TEMPERATURE TECHNOLOGY

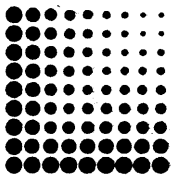
**THERMOCOUPLE  
CONNECTORS &  
ACCESSORIES**

TEMPERATURE  
SENSING

A comprehensive range of miniature and standard connectors, accessories and barrier terminal blocks.



- ◆ Choice of IEC or ANSI colour coding from stock
- ◆ Special colours for order
- ◆ Miniature and standard connectors, in-line and panel mounting
- ◆ Duplex connectors
- ◆ New improved design miniature range to CENELEC specifications
- ◆ Compensated connections ensure high accuracy
- ◆ Types J,K,T,E,N,R and S or Copper-Copper
- ◆ Compatible with all other makes of equivalent connectors
- ◆ Polarised connector pins guarantee correct polarity
- ◆ Withstand high temperature, 220°C continuous
- ◆ Rugged construction with solid pins
- ◆ **British made, our own design and manufacture**
- ◆ Single and multi-way panels
- ◆ PCB mounting versions
- ◆ Barrier terminal strips



The sockets can be supplied as in-line or panel mounting versions with rectangular or circular fascias. Miniature connectors can be rigidly "banked" together for high density looming. The rugged connectors are made of glass filled polyester for reliable operation up to 220°C sustained temperature.

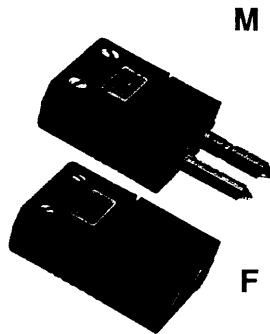
The use of thermocouple compatible material eliminates measurement error due to interconnection and the IEC 584 or ANSI MC96.1 colour coded body ensures clear identity of the type of thermocouple in use. Other body colours are available to special order.

**Modular Barrier Terminals** are also moulded in colour coded polyester material for easy identification; the conductors are made from the appropriate alloys for high accuracy as with the other connectors.



## STANDARD SIZE CONNECTORS

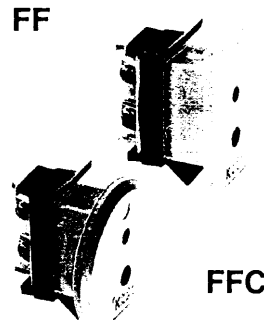
### PLUG/SOCKET



#### Order Codes

ANSI PLUG FSTC - \* - M  
ANSI SOCKET FSTC - \* - F  
IEC PLUG IS - \* - M  
IEC SOCKET IS - \* - F

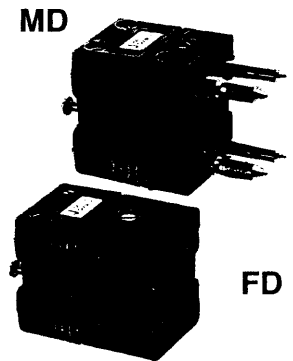
### FASCIA SOCKET



#### Order Codes

ANSI SOCKET FSTC - \* - FF  
ANSI SOCKET FSTC - \* - FFC  
IEC SOCKET IS - \* - FF  
IEC SOCKET IS - \* - FFC

### DUPLEX PLUG/SOCKET



#### Order Codes

ANSI PLUG FSTC - \* - MD  
ANSI SOCKET FSTC - \* - FD  
IEC PLUG IS - \* - MD  
IEC SOCKET IS - \* - FD

\* State K, J, T, E, N, R, S or Cu

### Accessories Available

- External cable clamp
- Internal cable clamp
- Extended brass inserts
- Blank mini hexagon
- Strain relief washer
- S/S crimp-on adaptor
- S/S braze-on adaptor
- Brass crimp/braze-on adaptor
- Compression tube adaptor

- 1 FSTC-EXCL
- 4 FSTC-CL
- 6 FSTC-XBI
- 
- 9 FSTC-SRW
- 11 FSTC-SS-CA-\*  
\* 1.5, 3, 4.5 or 6mm
- 12 FSTC-SSI-\*  
\* 1.5, 2, 3, 4.5 or 6mm
- 14 FSTC-BI-\*  
\* 1.5, 2, 3, 4.5 or 6mm
- 

Numbers refer to CONNECTOR ACCESSORIES illustration on right side.

Panels - see back page

- 2 FSTC-D-EXCL
- 5 FSTC-D-ADPCL
- 
- 
- 
- 13 FSTC-D-BAD-\*  
\* 3, 4.5 or 6mm
- 
- 15 FSTC-D-TA-\*  
\* 3 or 6mm

Numbers refer to CONNECTOR ACCESSORIES illustration on right side.

### Thermocouple Types and Colour Codes

Thermocouple Type	Thermocouple designation	Positive (small pin)	Negative (large pin)	Body Colour ANSI MC96.1	Body Colour IEC 584-3
Iron-Constantan	J	Iron*	Constantan	BLACK	BLACK
Chromel-Alumel	K	Chromel†	Alumel*†	YELLOW	GREEN
Copper-Constantan	T	Copper	Constantan	BLUE	BROWN
Chromel-Constantan	E	Chromel†	Constantan	VIOLET	VIOLET
Nicrosil-Nisil	N	Nicrosil	Nisil	ORANGE	PINK
Pt13%Rh-Pt	R	Copper	Alloy 11	GREEN	ORANGE
Pt 10%Rh-Pt	S	Copper	Alloy 11	GREEN	ORANGE
Copper-Copper (Cu)	B (uncomp)	Copper	Copper	WHITE	GREY

\* magnetic † Trade name

The conductors for types R and S are made from the appropriate compensating materials.

**Note:** With effect from 1.12.98 colour codes to IEC 584-3 (1989 mod) /BS 4937 Part 30: 1993 must be complied with by all manufacturers.

### PCB Mounting Socket



The PCB miniature socket is designed specially for mounting directly on to printed circuit boards used in temperature instruments. Copper pins are used and provision is made for a CJC temperature sensor within the moulding.

# ACCESSORIES AND ORDER CODES

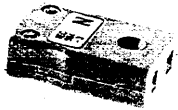
## MINIATURE SIZE CONNECTORS

### PLUG/SOCKET

M



F

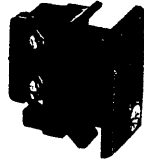


#### Order Codes

ANSI PLUG **F**MTC - \* - M  
 ANSI SOCKET **F**MTC - \* - F  
 IEC PLUG **IM** - \* - M  
 IEC SOCKET **IM** - \* - F

### FASCIA SOCKET

FF



FFC

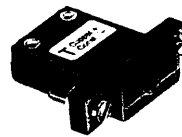
#### Order Codes

ANSI SOCKET **F**MTC - \* - FF  
 ANSI SOCKET **F**MTC - \* - FFC  
 IEC SOCKET **IM** - \* - FF  
 IEC SOCKET **IM** - \* - FFC

\* State K, J, T, E, N, R, S or Cu

### SOCKET WITH LUGS

PF



#### Order Codes

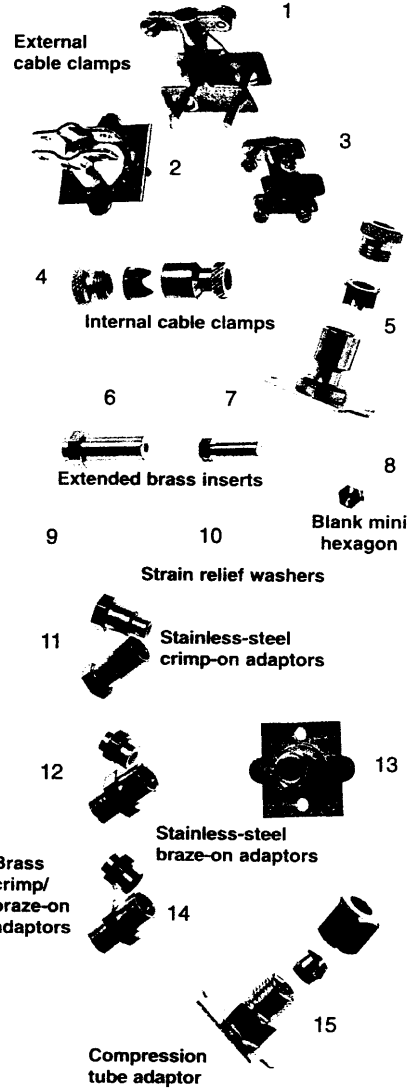
ANSI SOCKET **F**MTC - \* - PF  
 IEC SOCKET **IM** - \* - PF

3 FMTC-EXCL  
 -  
 7 FMTC-XBI  
 8 FMTC-BI  
 10 FMTC-SRW  
 -  
 -  
 -  
 -

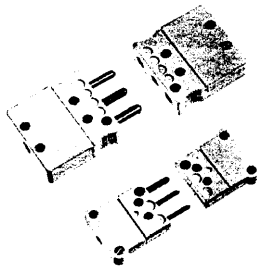
Numbers refer to CONNECTOR ACCESSORIES illustration on right side.

Panels - see back page

## CONNECTOR ACCESSORIES



### Type 3STC + 3MTC Standard & Miniature 3-Pin Connectors

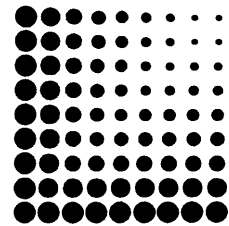


Three pin connectors for use up to 175°C. Versions are available for thermocouple types J, K, T and R/S and uncompensated Cu (copper/copper). The colour coded bodies, in glass-filled nylon are polarity marked.

### Type HTC Heavy Duty Ceramic Connectors



Heavy duty ceramic bodied connectors for use up to 650°C (type K). Standard and miniature versions are available for all thermocouple types and uncompensated Cu (copper/copper). **Note:** For types R and S, compensating alloys limit the maximum usable ambient temperature to 260°C.

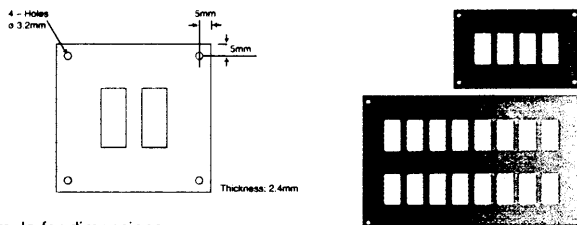


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# PANELS AND ORDERING CODES

## Panels for Standard Connectors



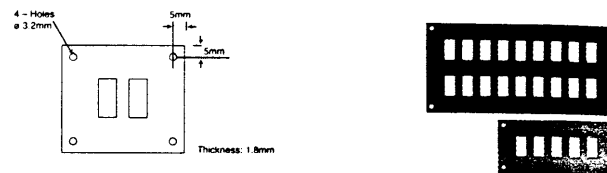
Formula for dimensions:  
Standard - FSP: length = (Nx19) + 31mm N=number of ways per row;  
height = 66mm (single row), 111mm (two rows).

### Ordering Codes

FSP - 1	1 way	FSP - 10	10 way
FSP - 2	2 way	FSP - 12	12 way
FSP - 3	3 way	FSP - 16	16 way
FSP - 4	4 way	FSP - 18	18 way
FSP - 5	5 way	FSP - 20	20 way
FSP - 6	6 way	FSP - 24	24 way
FSP - 8	8 way	Up to 12 ways in a single row. 16 to 24 ways in two rows.	

**Note:** Sockets are not included and rectangular fascia versions must be specified.

## Panels for Miniature Connectors



Formula for dimensions:  
Miniature - FMP: length = (Nx15) + 25mm N=number of ways per row;  
height = 45mm (single row), 75mm (two rows).

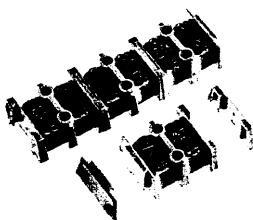
### Ordering Codes

FMP - 1	1 way	FMP - 10	10 way
FMP - 2	2 way	FMP - 12	12 way
FMP - 3	3 way	FMP - 16	16 way
FMP - 4	4 way	FMP - 18	18 way
FMP - 5	5 way	FMP - 20	20 way
FMP - 6	6 way	FMP - 24	24 way
FMP - 8	8 way	Up to 12 ways in a single row. 16 to 24 ways in two rows.	

**Note:** Sockets are not included and rectangular fascia versions must be specified FMP Panels are for use only with FMTC-FF / IM-FF sockets and not the alternative FMTC-PF / IM - PF type.

## Barrier Terminals

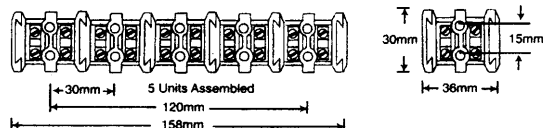
The Barrier Terminals consist of a single pair of the positive and negative legs of the appropriate thermocouple which can be interlocked to produce the required number of channels. The substrate is of polyester material, able to withstand continuous temperatures of up to 220°C. It is also colour coded to ANSI standards; IEC colours can be supplied to special order.



### Ordering Code

Description	Code	Ordering Code	Strip colour
Iron/Constantan	J	CA050 -J	Black
Nickel Chromium/Nickel Aluminium	K	CA051-K	Yellow
Copper/Constantan	T	CA052-T	Blue
Platinum Rhodium/Platinum	R & S	CA053-U	Green
Copper/copper	Cu	CA054-Cu	White

N = Number of units (pairs)  
Overall length = (N x 31mm) + 3mm Hole centres = (N - 1) x 30mm



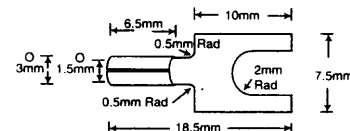
## Thermocouple Spade Terminals

The crimp-on spade terminals use compatible thermocouple material, with the identifying code stamped on, and are available in nickel-chromium, nickel aluminium, iron, constantan, copper and copper-nickel. They will accommodate wire sizes between 0.5 and 1mm diameter (25-19 SWG, area 0.2 to 0.65mm²), and will fit the barrier terminal strips



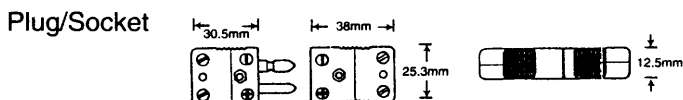
Terminal Alloy	Ordering Code	Identifying Stamp
+ Nickel Chromium	TST - CH	CH
- Nickel Aluminium	TST - AL	AL
+ Iron	TST - IR	IR
- Constantan	TST - CO	CO
+ Copper	TST - CP	CP
- Copper Nickel (Alloy 11)	TST - 11	11

**Note:** Copper and Copper Nickel (Alloy 11) are used as compensating materials for Platinum. Rhodium/Platinum Types R and S.

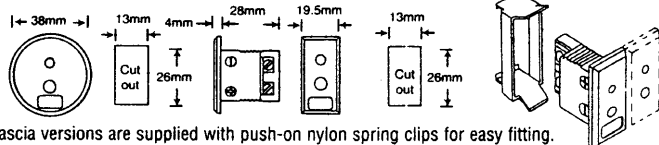


## CONNECTOR DIMENSIONS

### Standard Size Connectors

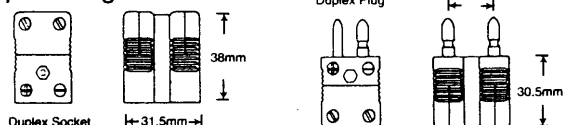


### Fascia Sockets

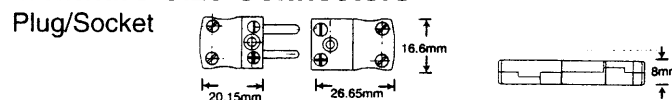


Fascia versions are supplied with push-on nylon spring clips for easy fitting.

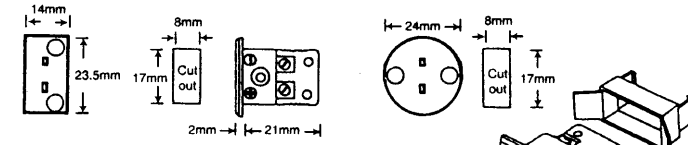
### Duplex Plug/Socket



### Miniature Size Connectors

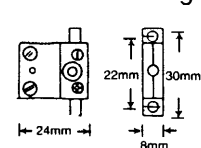


### Fascia Sockets



Fascia versions are supplied with push-on nylon spring clips for easy fitting.

### Socket with lugs



ISO 9002 Certificate No. 4746



Specifications and availability may be subject to change

## LABFACILITY LIMITED

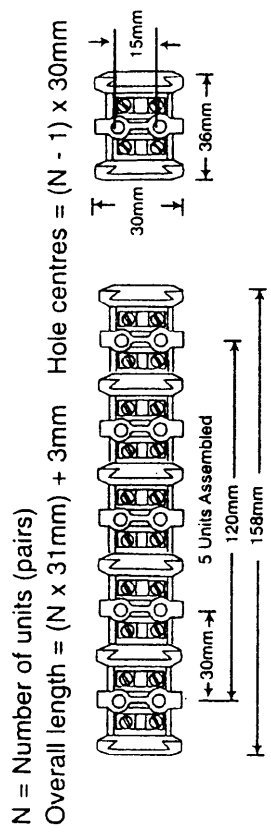
Tel: 0181 943 5331 Fax: 0181 943 4351

HEADQUARTERS: LABFACILITY LTD, 99 Waldegrave Road, Teddington, Middlesex TW11 8LR, UK. Tel: 0181 943 5331 Telex: 8952151 Intemp G Fax: 0181 943 4351  
NORTHERN DIVISION: LABFACILITY LTD, Unit 7 Abbey Way, North Anston Trading Estate, Dinnington, Sheffield S31 7LJ, UK. Tel: 01909 569446 Fax: 01909 550632

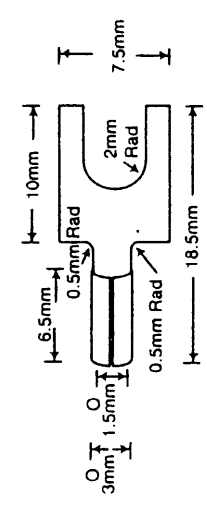
Internet address: <http://www.labfacility.co.uk/temperature/> E-mail: [info@labfacility.co.uk](mailto:info@labfacility.co.uk)

Platinum Rhodium/Platinum  
R & S CA053-U Green  
Copper/copper  
Cu CA054-Cu White

+ Copper  
- Copper Nickel  
TST - CP  
TST - 11

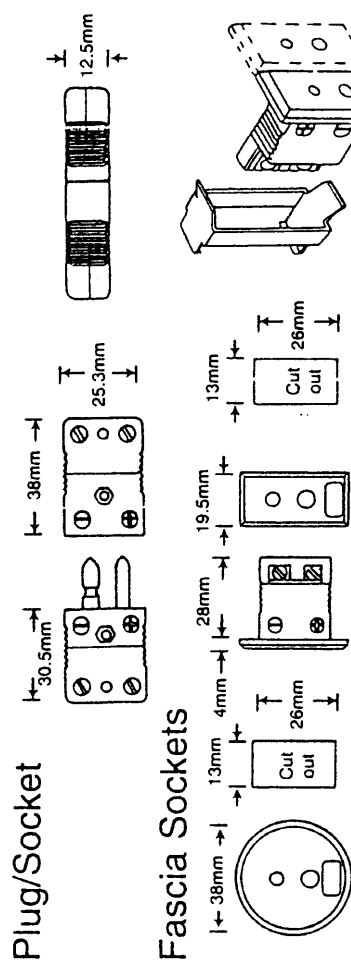


**Note:** Copper and Copper Nickel (Alloy 11) are used as compensating materials for Platinum, Rhodium/Platinum Types R and S.



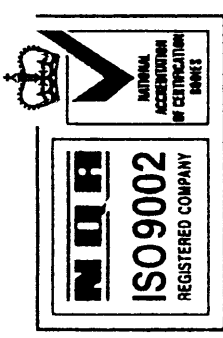
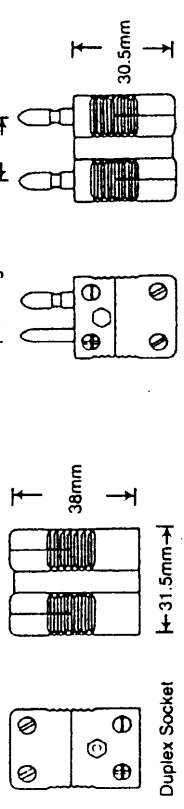
## CONNECTOR DIMENSIONS

### Standard Size Connectors



Fascia versions are supplied with push-on nylon spring clips for easy fitting.

### Duplex Plug/Socket



ISO 9002 Certificate No. 4746

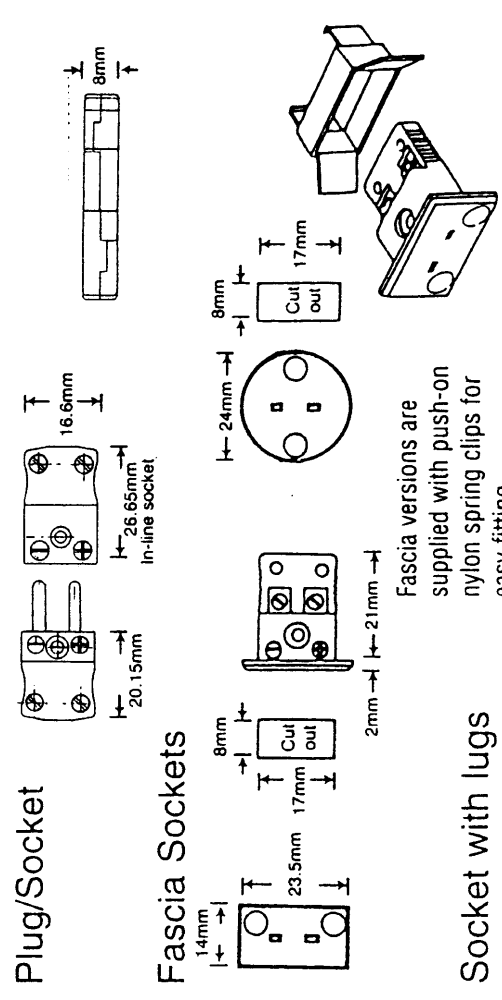
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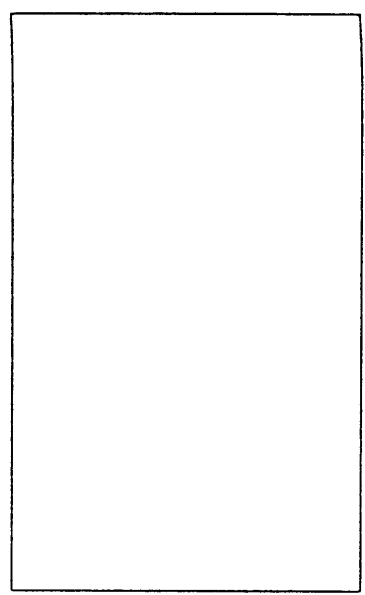
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Internet address: <http://www.labfacility.co.uk/temperature/> E-mail: [info@labfacility.co.uk](mailto:info@labfacility.co.uk)

## Miniature Size Connectors

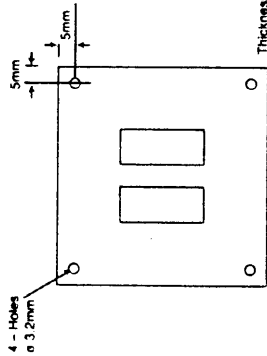


Fascia versions are supplied with push-on nylon spring clips for easy fitting.



# PANELS AND ORDERING CODES

## Panels for Standard Connectors



Formula for dimensions:  
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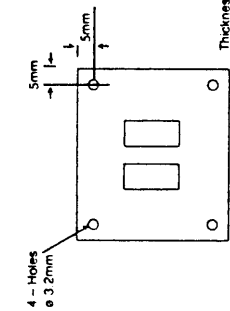
### Ordering Codes

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- FSP - 4 4 way
- FSP - 5 5 way
- FSP - 6 6 way
- FSP - 8 8 way

- FSP - 10 10 way
- FSP - 12 12 way
- FSP - 16 16 way
- FSP - 18 18 way
- FSP - 20 20 way
- FSP - 24 24 way

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

**Note:** Sockets are not included and rectangular fascia versions must be specified.



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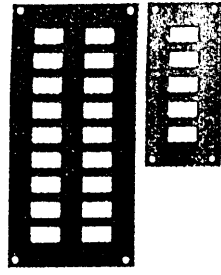
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- FMP - 5 5 way
- FMP - 6 6 way
- FMP - 8 8 way

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FMP Panels are for use only with FMTC-FF / IM-FF sockets and not the  
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## Panels for Miniature Connectors



## Barrier Terminals

The Barrier Terminals consist of a single pair of the positive and negative legs of the appropriate thermocouple which can be interlocked to produce the required number of channels. The substrate is of polyester material, able to withstand continuous temperatures of up to 220°C. It is also colour coded to ANSI standards; IEC colours can be supplied to special order.

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Description	Code	Ordering Code	Strip colour
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Copper/Constantan	T	CA052-T	Blue

## Thermocouple Spade Terminals

The crimp-on spade terminals use compatible thermocouple material, with the identifying code stamped on, and are available in nickel-chromium, nickel aluminium, iron, constantan, copper and copper-nickel. They will accommodate wire sizes between 0.5 and 1mm diameter (25-19 SWG, area 0.2 to 0.65mm<sup>2</sup>), and will fit the barrier terminal strips



Terminal Alloy	Ordering Code	Identifying Stamp
+ Nickel Chromium	TST - CH	CH
- Nickel Aluminium	TST - AL	AL
+ Iron	TST - IR	IR
- Constantan	TST - CO	CO

