

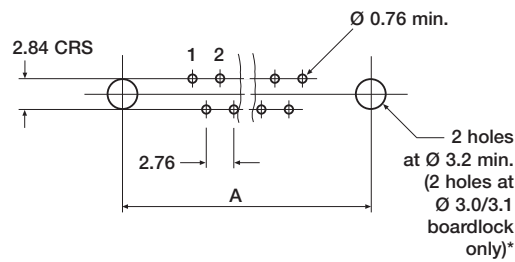
# PCB layouts

Plug viewed from above,  
socket viewed from below.

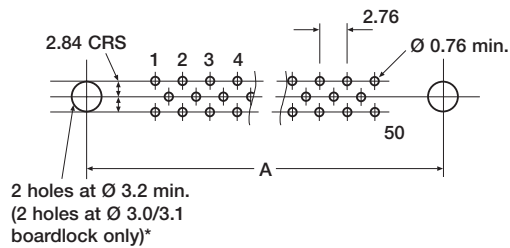
## High Density D only

Plug viewed from above,  
socket viewed from below.

### Straight p.c. 9-37 way



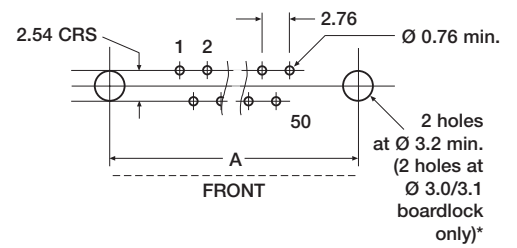
### 50 way



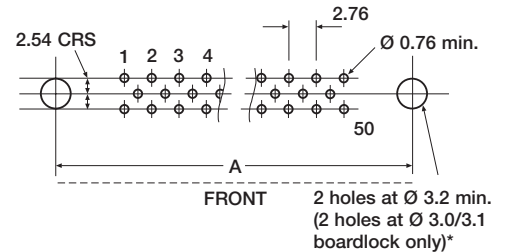
#### DIMENSIONS

| Contact Arrangement | A crs |
|---------------------|-------|
| 9                   | 25.00 |
| 15                  | 33.32 |
| 25                  | 47.04 |
| 37                  | 63.50 |
| 50                  | 61.10 |

### 90° p.c. 9-37 way

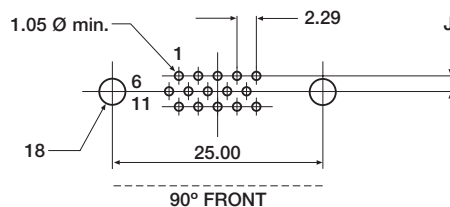


### 50 way

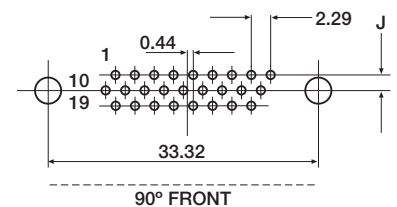


\*Special D only

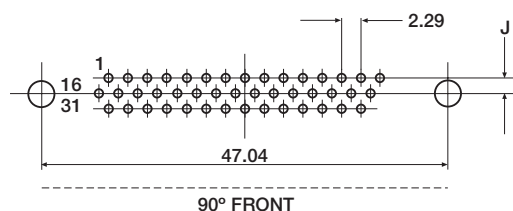
### 15 way High Density D



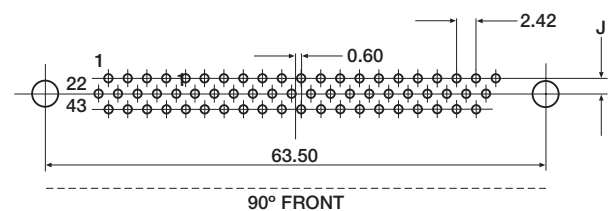
### 26 way High Density D



### 44 way High Density D



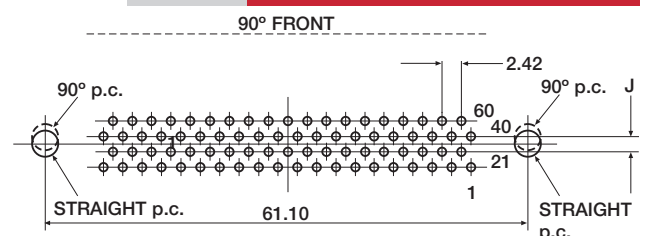
### 62 way High Density D



#### DIMENSIONS

| Contact Arrangement | Straight p.c. J | 90° p.c. J |
|---------------------|-----------------|------------|
| 15                  | 1.98            | 2.54       |
| 26                  | 1.98            | 2.54       |
| 44                  | 1.98            | 2.54       |
| 62                  | 1.98            | 2.54       |
| 78                  | 2.08            | 2.54       |

### 78 way High Density D



# ORDERING information

## for CONNECTORS

### Series

D – Standard/Budget/Crimp  
SD – Special D  
LD – Special D 90° p.c. alternative  
HD-High Density

### Shell size

E, A, B, C and D

### Mounting options/crimp select

No designator – Standard fixing holes  
B – 90° brackets and stabiliser rivetted (fitted on 50 and 90° p.c. as standard)  
F – Float mount for rear panel mounting  
R – Reverse float mounting  
G – MP501 rivetted  
H – 4-40 UNC threaded inserts fitted  
K – MP625 and screwlock fitted  
L – MP501-2 screw mounted  
N – 90° brackets and stabiliser with screwlock fitted  
S – Screwlock fitted  
T – Boardlocks fitted  
X – Screwlocks and Boardlocks fitted  
C-Crimp (contacts ordered separately)

### Shell finish

No designator – Zinc/yellow passivate  
T – Tinned (socket only)  
TD – Tinned and dimpled (plug only)

### Performance code

No designator – standard, HD, special, crimp  
B – Budget

### Termination type

No designator – Solder bucket (and crimped when selector code has been used)  
N – 90° p.c.  
OL – Straight p.c.  
W – Wire wrapping

### Contact type

P – Plug S – Socket

### Contact arrangement

9, 15, 25, 37 and 50  
High Density 15, 26, 44, 62 and 78

## CONTACT ORDERING INFORMATION

### Contact/Wire Gauge

MP642-Pin, 24/28 A.W.G (HD only)  
MP643-Socket, 24/28 A.W.G (HD only)  
MP647-Pin, 24/28 A.W.G (crimp D only)  
MP648-Socket, 24/28 A.W.G (crimp D only)  
MP649-Pin, 20/24 A.W.G (crimp D only)  
MP650-Socket, 20/24 A.W.G (crimp D only)

MP642

R

06

### Method of supply

No designator – in packs of 100  
R – 10,000 on a reel

### Performance Code

#### High Density

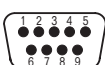
05-Pin, 200 operations  
06-Pin, 50 operations  
15-Socket, 200 operations  
16-Socket, 50 operations

#### Crimp D

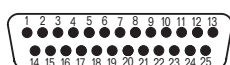
45-Pin, standard 500 operations  
46-Pin, budget 300 operations  
55-Socket, standard 500 operations  
56-Socket, budget 300 operations

## CONTACT ARRANGEMENT (viewed from mating face of male connector)

### Special, Standard and Crimp D



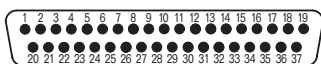
E - 9 contacts



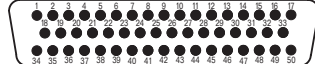
B - 25 contacts



A - 15 contacts

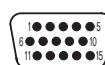


C - 37 contacts

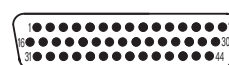


D - 50 contacts

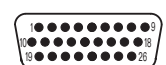
### High Density D



E - 15 contacts



B - 44 contacts



A - 26 contacts



C - 62 contacts



D - 78 contacts

## Accessories

A range of accessories are available including automatic and hand crimp tools, insertion and extraction tools – ask our sales office for details.

Due to our policy of continuous product development, ITW McMurdo Connectors retain the right to change the specification at any time without prior notice. Designed & printed in the UK.

### ITW McMurdo Connectors

Division of ITW Limited  
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Hilsea  
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e-mail: [info@itwmcmurdo.co.uk](mailto:info@itwmcmurdo.co.uk)  
[www.itwmcmurdo.co.uk](http://www.itwmcmurdo.co.uk)

**ITW McMurdo Connectors**



# D range connectors

## Special D

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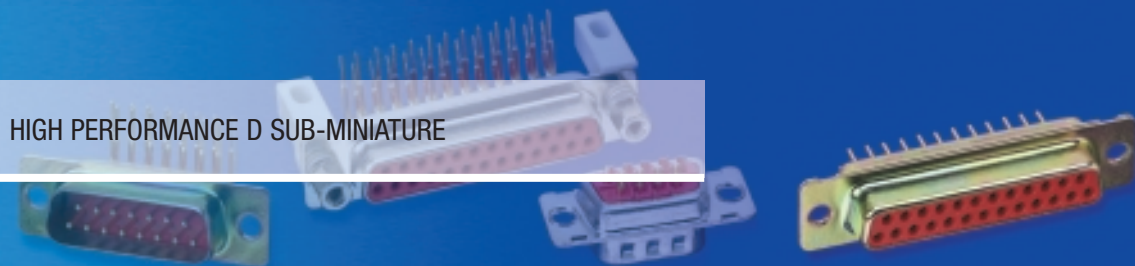
COMMERCIAL D SUB-MINIATURE



## Standard D

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HIGH PERFORMANCE D SUB-MINIATURE



## Crimp D

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FLEXIBLE AND FAST ASSEMBLY D SUB-MINIATURE



## High Density D

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INCREASED DENSITY D SUB-MINIATURE



## D Accessories

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## Special D

A range of D connectors utilising stamped and formed or turned contacts to provide a low cost option for commercial applications.

### COMMERCIAL D SUB-MINIATURE

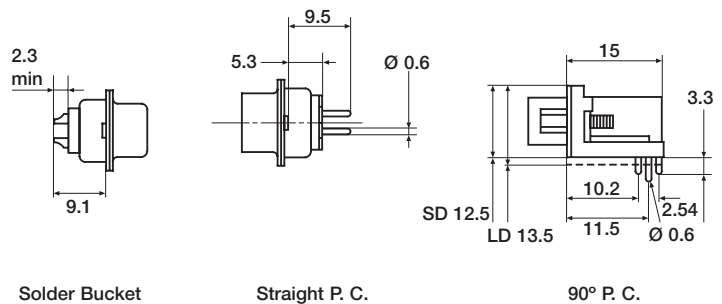
#### FEATURES

Choice of three termination styles – solder bucket, straight p.c. and 90° p.c.

Threaded inserts on 90° p.c. versions as standard – accepts a wide range of mounting hardware.

Tinned and dimpled shell options – for EMI/RFI shielding.

Optional solderable boardlock features for 90° p.c. types – reduces installation time.



## Standard D

Designed for demanding industrial applications, McMurdo's D connectors offer precision turned contacts in two performance levels: Standard D offers a minimum of 500 operations. Budget D has been developed for harsh industrial applications offering 300 operations.

### HIGH PERFORMANCE D SUB-MINIATURE

#### FEATURES

Standard D meets the most demanding requirements.

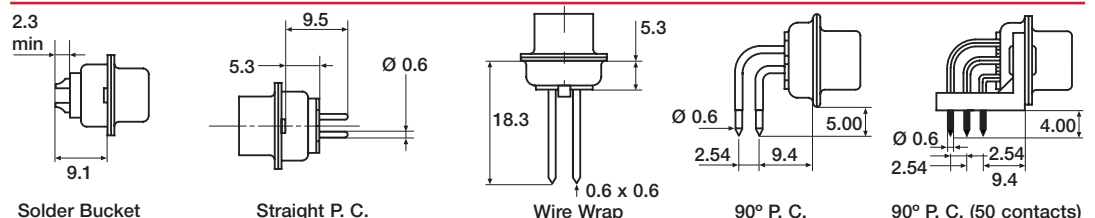
Precision turned contacts.

Available in five shell sizes, providing up to 50 contacts.

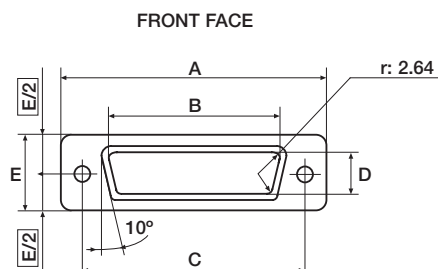
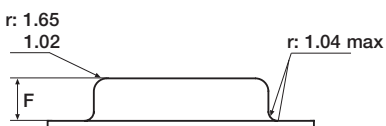
Solder bucket, straight p.c., 90° p.c. and wire wrapping termination styles – to suit all your applications.

Tinned and dimpled shell options – for EMI/RFI shielding.

Wide range of accessories – greater user flexibility.



## All ranges: male



| No. of contacts | A              | B              | C              | D              | E              | F            |
|-----------------|----------------|----------------|----------------|----------------|----------------|--------------|
| 9               | 31.19<br>30.43 | 17.04<br>16.79 | 25.12<br>24.87 | 8.48<br>8.23   | 12.93<br>12.17 | 6.12<br>5.82 |
| 15              | 39.52<br>38.76 | 25.37<br>25.12 | 33.45<br>33.20 | 8.48<br>8.23   | 12.93<br>12.17 | 6.12<br>5.82 |
| 25              | 53.42<br>52.65 | 39.09<br>38.84 | 47.17<br>46.91 | 8.48<br>8.23   | 12.93<br>12.17 | 5.99<br>5.69 |
| 37              | 69.70<br>68.94 | 55.55<br>55.30 | 63.63<br>63.37 | 8.48<br>8.23   | 12.93<br>12.17 | 5.99<br>5.69 |
| 50              | 67.34<br>66.55 | 52.93<br>52.68 | 61.24<br>60.99 | 11.33<br>10.95 | 15.75<br>14.99 | 5.99<br>5.69 |



## Technical Data

### FEATURES

- Shell
- Insulator
- Contact
- Termination – solder bucket
- straight PC
- 90° PC
- CRIMP

### MECHANICAL

Operations

Temperature range

### ELECTRICAL

Current – individual contact  
(in isolation) at 70°C

– All contacts  
(simultaneously) at 70°C

Working voltage (DC or AC  
PEAK)

Proof voltage (DC or AC PEAK)

Contact resistance

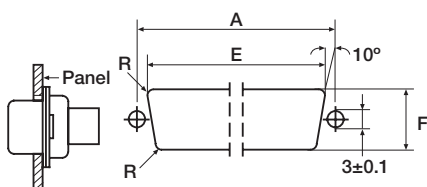
Insulation resistance

# D range connectors

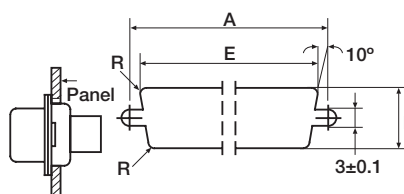
| Special D  | Standard D                                | Crimp D                        | High Density D         |
|------------|-------------------------------------------|--------------------------------|------------------------|
|            | Steel plated zinc/yellow passivate or tin |                                |                        |
|            | Thermoplastic rated UL94V-0               |                                |                        |
|            | Copper alloy plated hard acid gold        |                                |                        |
| Tin        | Gold                                      | –                              | Tin                    |
| Tin        | Gold                                      | –                              | Tin                    |
| Tin        | Gold                                      | –                              | Tin                    |
| –          | –                                         | Tin or Gold                    | Tin                    |
| 100        | 300 (budget)<br>500 (standard)            | 300 (budget)<br>500 (standard) | 100<br>50 or 200 crimp |
|            | -55°C to +105°C                           |                                |                        |
| 3A         | 6.5A                                      | 3A                             | 3A                     |
| 2A         | 3.3A                                      | 2A                             | 2A                     |
| 350V       | 500V                                      | 350V                           | 300V                   |
| 1500V      | 1500V                                     | 1500V                          | 1000V                  |
| 15mΩ max   | 10mΩ max                                  | 15mΩ max                       | 15mΩ max               |
| 5000mΩ min | 1000mΩ min                                | 5000mΩ min                     | 1000mΩ min             |

## All ranges: panel mounting options

| Contact Arrangement |                           |    |       | Rear Panel Mounting |       |       |       |      | Front Panel Mounting |       |       |       |      |
|---------------------|---------------------------|----|-------|---------------------|-------|-------|-------|------|----------------------|-------|-------|-------|------|
| Shell size          | No of Contacts<br>D,SD,LD | HD | A     | Std                 | E     | Float | F     | R    | Std                  | E     | Float | F     | R    |
| E                   | 9                         | 15 | 25.00 | 20.32               | 21.16 | 11.30 | 12.09 | 3.50 | 22.07                | 22.88 | 12.90 | 13.71 | 2.25 |
| A                   | 15                        | 26 | 33.32 | 28.70               | 29.49 | 11.30 | 12.09 | 3.50 | 30.40                | 31.22 | 12.90 | 13.71 | 2.25 |
| B                   | 25                        | 44 | 47.04 | 42.42               | 43.20 | 11.30 | 12.09 | 3.50 | 44.14                | 44.96 | 12.90 | 13.71 | 2.25 |
| C                   | 37                        | 62 | 63.50 | 58.93               | 59.77 | 11.30 | 12.09 | 3.50 | 60.60                | 61.42 | 12.90 | 13.71 | 2.25 |
| D                   | 50                        | 78 | 61.10 | 56.26               | 57.02 | 13.97 | 14.78 | 3.50 | 58.21                | 59.44 | 15.69 | 16.51 | 2.25 |



Rear Panel Mounting



Front Panel Mounting

## Crimp D

Maximum flexibility and reduced assembly costs are achieved through full or partial loading of selectively plated stamped and formed contacts.

### FLEXIBLE AND FAST ASSEMBLY D SUB-MINIATURE



#### FEATURES

Replaceable contacts – no connector wastage.

Two contact performance levels – Budget for commercial and Standard for industrial applications.

Accepts wire sizes of 20 to 28 AWG – offers greater flexibility.

Tinned and dimpled shell options – for effective EMI/RFI shielding.

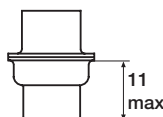
Complete selection of crimp tooling enables quick assembly.

Wire strip length 2.4 ± 0.2mm.

#### ASSEMBLY TOOLS AND HAND TOOLS



Hand Crimp Tool MP600-D/HD  
Insertion/extraction tool MP601-D or MP601-HD



Crimp

## High Density D

Increased contact density is provided in five industry standard shell sizes providing up to 78 contacts. A choice of four termination styles including crimp are available making this range one of the most versatile.

### INCREASED DENSITY D SUB-MINIATURE



#### FEATURES

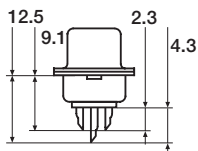
Tinned and dimpled shell as standard for enhanced electrical continuity and effective EMI/RFI shielding.

Threaded inserts – enable quick assembly of mounting hardware to 90° p.c. versions.

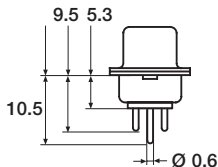
Solder bucket, straight p.c. 90° p.c. and crimp termination styles.

Optional screwlocks and solderable boardlocks fitted to 90° p.c. versions.

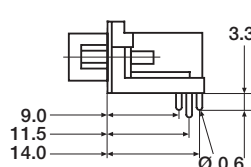
Compatible with Standard D range accessories.



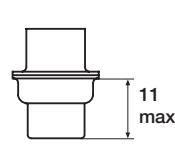
Solder Bucket



Straight P. C.

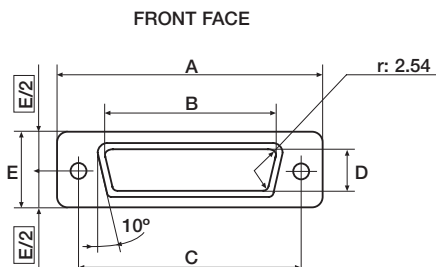
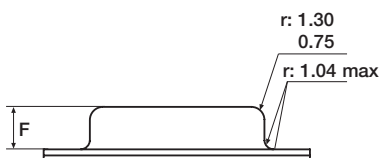


90° P. C.



Crimp

## All ranges: female



| No. of contacts | A      | B     | C     | D     | E     | F    |
|-----------------|--------|-------|-------|-------|-------|------|
| 9               | 31.19  | 16.46 | 25.12 | 8.03  | 12.93 | 6.30 |
|                 | 30, 43 | 16.21 | 24.87 | 7.77  | 12.17 | 6.05 |
| 15              | 39.52  | 24.79 | 33.45 | 8.03  | 12.93 | 6.30 |
|                 | 38.76  | 24.54 | 33.20 | 7.77  | 12.17 | 6.05 |
| 25              | 53.42  | 38.51 | 47.17 | 8.03  | 12.93 | 6.30 |
|                 | 52.65  | 38.25 | 46.91 | 7.77  | 12.17 | 6.05 |
| 37              | 69.70  | 54.97 | 63.63 | 8.03  | 12.93 | 6.30 |
|                 | 68.94  | 54.71 | 63.37 | 7.77  | 12.17 | 6.05 |
| 50              | 67.34  | 52.56 | 61.24 | 10.87 | 15.75 | 6.30 |
|                 | 66.55  | 52.30 | 60.99 | 10.62 | 14.99 | 6.05 |