

**Dura-Con**  
**High Reliability**  
**MIL-C-83513**

.050" (1.27mm) Density  
 Solder Cup/Wire  
 D-Microminiature

**Cinch**

FEATURES

- All-plastic and metal shell wire versions available in solder cup, gold-plated solid wire, and insulated stranded wire.
- PCB mount "terminal block" type connectors available in straight or right angle.
- Sizes offered - 9, 15, 21, 25, 31, 35, 51, and 100 (metal shell only).
- All products are qualified to the requirements of MIL-C-83513 and marked with the M83513 part number.
- Optional shell platings and insulator materials offer high performance in harsh environments.
- Mounting hardware per MIL-C-83513.

MATERIALS

**Insulator:** UL94V-0 rated glass-filled polyester per MIL-M-24519 or diallyl phthalate (DAP) per MIL-M-14.  
**Contacts:** Pins - Copper alloy, Sockets - Copper alloy  
**Contact Plating:** .000050 in gold per MIL-G-45204  
**Shell Material (Metal Shell Only):** Aluminum alloy  
**Shell Plating (Metal Shell Only):** Yellow chromate over cadmium (std.) or electroless nickel

ENVIRONMENTAL

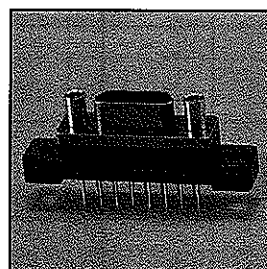
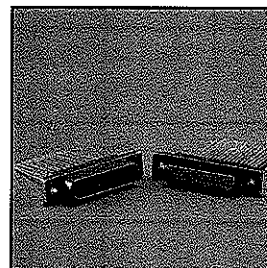
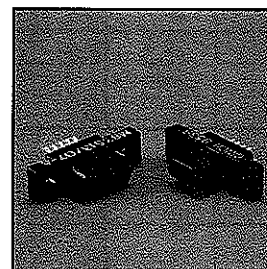
**Operating Temperature:** -55°C to +125°C

ELECTRICAL

**Current Rating:** 3 Amps maximum  
**Withstanding Voltage:** 600 VAC RMS @ sea level  
**Contact Resistance:** 8 milliohms maximum

MECHANICAL

**Durability:** 500 mate/unmate cycles  
**Individual Contact:** Forces 6 oz. (170.40 g) maximum insertion;  
 0.5 oz. (14.20 g) minimum withdrawal  
**Mating / Unmating Force:** See table



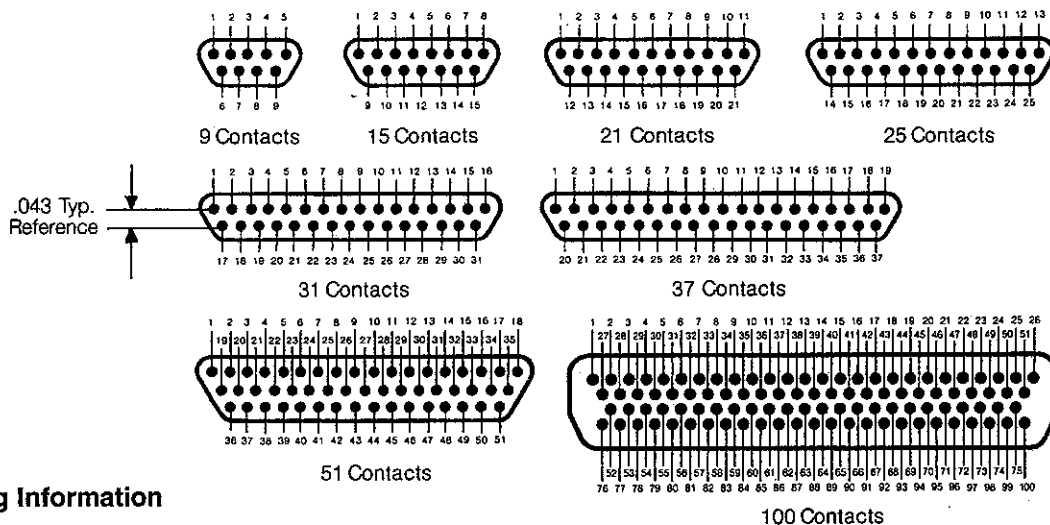
| No. of Contacts | Maximum Mating Force |       | Minimum Unmating Force |     |
|-----------------|----------------------|-------|------------------------|-----|
|                 | Lb.                  | Kg    | Lb.                    | Kg  |
| 9               | 5.63                 | 2.56  | .28                    | .13 |
| 15              | 9.38                 | 4.26  | .47                    | .21 |
| 21              | 13.13                | 5.96  | .66                    | .30 |
| 25              | 15.63                | 7.10  | .78                    | .35 |
| 31              | 19.38                | 8.80  | .97                    | .44 |
| 37              | 23.13                | 10.50 | 1.16                   | .53 |
| 51              | 31.88                | 14.47 | 1.59                   | .72 |

**Metal Shell**

**Contact Arrangements**

(Face view of pin insert)

(Use reverse order for socket side)



**Ordering Information**

**M83513/04 - A 03 C**

**Connector Type**

- 01 - Metal Shell D Plugs with Solder Cup Termination
- 02 - Metal Shell D Sockets with Solder Cup Termination
- 03 - Metal Shell D Plugs with Wire Leads
- 04 - Metal Shell D Sockets with Wire Leads

**Insert Arrangements**  
 (No. of Contacts)

- A = 9
- B = 15
- C = 21
- D = 25
- E = 31
- F = 37
- G = 51
- H = 100

**Shell Finish**

- C = Cadmium
- N = Electroless Nickel

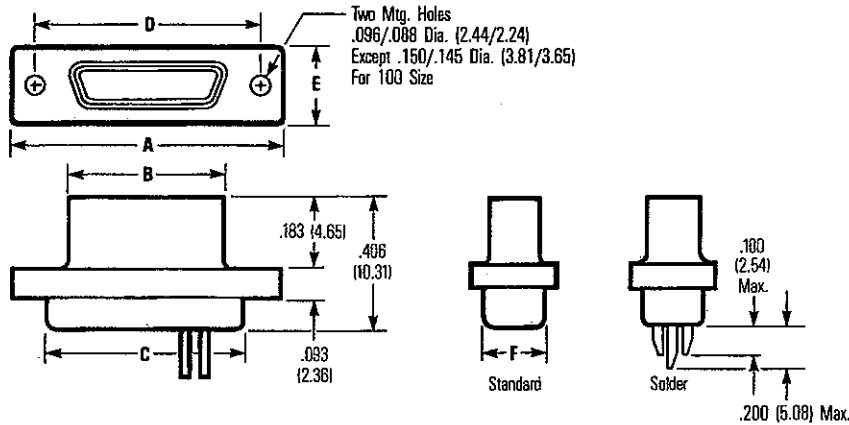
**Wire Type (Use only for /03 & /04, otherwise omit)**

- 01 - M22759/11-26-9, 18 inches, White (see note below)
- 02 - M22759/11-26-9, 36 inches, White (see note below)
- 03 - M22759/11-26-( ), 18 inches, Color Coded (see note below)
- 04 - M22759/11-26-( ), 36 inches, Color Coded (see note below)
- 05 - QQ-W-343, 25 AWG, 0.5 inch, Gold-Plated
- 06 - QQ-W-343, 25 AWG, 1.0 inch, Gold-Plated
- 07 - QQ-W-343, 25 AWG, 0.5 inch, Tin-Plated
- 08 - QQ-W-343, 25 AWG, 1.0 inch, Tin-Plated
- 09 - M22759/33-26-9, 18 inches, White
- 10 - M22759/33-26-9, 36 inches, White
- 11 - M22759/33-26-( ), 18 inches, Color Coded
- 12 - M22759/33-26-( ), 36 inches, Color Coded
- 13 - M22759/11-26-9, 72 inches, White
- 14 - M22759/11-26-( ), 72 inches, Color Coded
- 15 - M22759/33-26-9, 72 inches, White
- 16 - M22759/33-26-( ), 72 inches, Color Coded

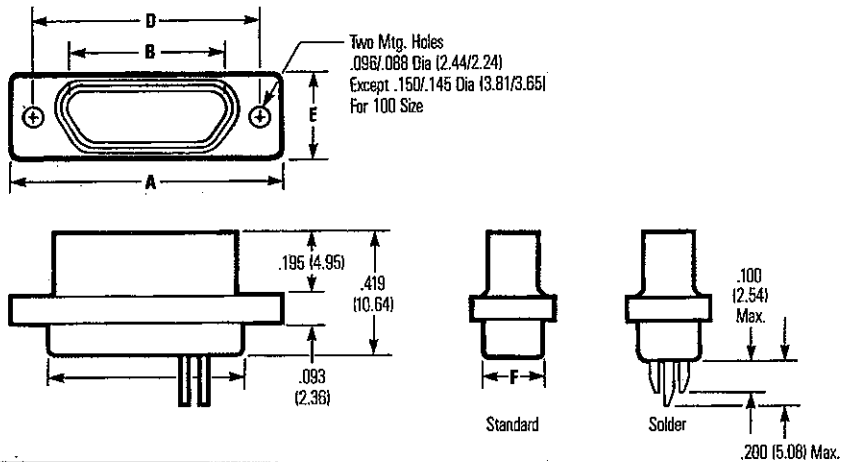
Note: See page 5-31 for M83513 mounting hardware.

**Connector Dimensions - Metal Shell**

**Plug**



**Socket**



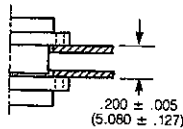
| No. of Contacts | A              |       | B Max. (Plug)<br>Min. (Socket) |       | C<br>+ .010" (.254)<br>- .018" (.457) |       | D              |       | E              |      | F Max. |      |
|-----------------|----------------|-------|--------------------------------|-------|---------------------------------------|-------|----------------|-------|----------------|------|--------|------|
|                 | ± .010" (.254) |       |                                |       |                                       |       | ± .005" (.127) |       | ± .010" (.254) |      |        |      |
|                 | in             | mm    | in                             | mm    | in                                    | mm    | in             | mm    | in             | mm   | in     | mm   |
| 9 Plug          | .775           | 19.68 | .3338                          | 8.48  | .390                                  | 9.91  | .565           | 14.35 | .298           | 7.57 | .270   | 6.68 |
| 9 Socket        | .775           | 19.68 | .3342                          | 8.49  | .390                                  | 9.91  | .565           | 14.35 | .298           | 7.57 | .270   | 6.68 |
| 15 Plug         | .925           | 23.50 | .4838                          | 12.29 | .540                                  | 13.72 | .715           | 18.16 | .298           | 7.57 | .270   | 6.68 |
| 15 Socket       | .925           | 23.50 | .4842                          | 12.30 | .540                                  | 13.72 | .715           | 18.16 | .298           | 7.57 | .270   | 6.68 |
| 21 Plug         | 1.075          | 27.30 | .6338                          | 16.10 | .690                                  | 17.53 | .865           | 21.97 | .298           | 7.57 | .270   | 6.68 |
| 21 Socket       | 1.075          | 27.30 | .6342                          | 16.11 | .690                                  | 17.53 | .865           | 21.97 | .298           | 7.57 | .270   | 6.68 |
| 25 Plug         | 1.175          | 29.84 | .7338                          | 18.64 | .790                                  | 20.07 | .965           | 24.51 | .298           | 7.57 | .270   | 6.68 |
| 25 Socket       | 1.175          | 29.84 | .7342                          | 18.65 | .790                                  | 20.07 | .965           | 24.51 | .298           | 7.57 | .270   | 6.68 |
| 31 Plug         | 1.325          | 33.66 | .8838                          | 22.45 | .940                                  | 23.88 | 1.115          | 28.32 | .298           | 7.57 | .270   | 6.68 |
| 31 Socket       | 1.325          | 33.66 | .8842                          | 22.46 | .940                                  | 23.88 | 1.115          | 28.32 | .298           | 7.57 | .270   | 6.68 |
| 37 Plug         | 1.475          | 37.46 | 1.0338                         | 26.26 | 1.090                                 | 27.69 | 1.265          | 32.13 | .298           | 7.57 | .270   | 6.68 |
| 37 Socket       | 1.475          | 37.46 | 1.0342                         | 26.27 | 1.090                                 | 27.69 | 1.265          | 32.13 | .298           | 7.57 | .270   | 6.68 |
| 51 Plug         | 1.425          | 36.20 | .9838                          | 24.99 | 1.040                                 | 26.42 | 1.215          | 30.86 | .341           | 8.66 | .310   | 7.87 |
| 51 Socket       | 1.425          | 36.20 | .9842                          | 25.00 | 1.040                                 | 26.42 | 1.215          | 30.86 | .341           | 8.66 | .310   | 7.87 |
| 100 Plug        | 2.160          | 54.86 | 1.3838                         | 35.15 | 1.432                                 | 36.38 | 1.800          | 45.71 | .384           | 9.75 | .360   | 9.15 |
| 100 Socket      | 2.160          | 54.86 | 1.3842                         | 35.16 | 1.432                                 | 36.38 | 1.800          | 45.71 | .384           | 9.75 | .360   | 9.15 |

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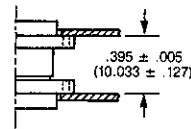
**Panel Mounting Dimensions - Metal Shell**

**Panel Mounting Dimensions**

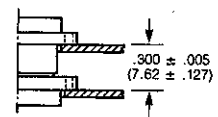
Pin and socket, rear mounted



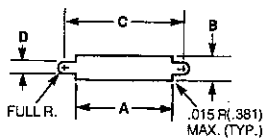
Pin and socket, front mounted



Pin, front mounted  
 Socket, rear mounted

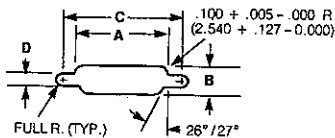


**Panel Cutout Dimensions - Metal Shell**



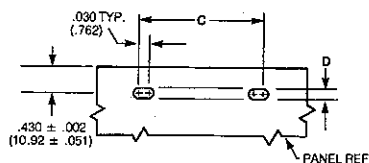
**Front Mounting**

| No. of Contacts | A     |       | B    |      | C     |       | D    |      |
|-----------------|-------|-------|------|------|-------|-------|------|------|
|                 | in    | mm    | in   | mm   | in    | mm    | in   | mm   |
| 9               | .408  | 10.36 | .270 | 6.86 | .570  | 14.48 | .089 | 2.26 |
| 15              | .558  | 14.17 | .270 | 6.86 | .720  | 18.29 | .089 | 2.26 |
| 21              | .708  | 17.98 | .270 | 6.86 | .870  | 22.10 | .089 | 2.26 |
| 25              | .808  | 20.52 | .270 | 6.86 | .970  | 24.64 | .089 | 2.26 |
| 31              | .958  | 24.33 | .270 | 6.86 | 1.120 | 28.45 | .089 | 2.26 |
| 37              | 1.108 | 28.14 | .270 | 6.86 | 1.270 | 32.26 | .089 | 2.26 |
| 51              | 1.058 | 26.87 | .315 | 8.00 | 1.220 | 30.99 | .089 | 2.26 |
| 100             | 1.450 | 36.84 | .361 | 9.17 | 1.805 | 45.86 | .117 | 2.97 |



**Rear Mounting**

| No. of Contacts | A     |       | B    |      | C     |       | D    |      |
|-----------------|-------|-------|------|------|-------|-------|------|------|
|                 | in    | mm    | in   | mm   | in    | mm    | in   | mm   |
| 9               | .408  | 10.36 | .256 | 6.50 | .570  | 14.48 | .089 | 2.26 |
| 15              | .558  | 14.17 | .256 | 6.50 | .720  | 18.29 | .089 | 2.26 |
| 21              | .708  | 17.98 | .256 | 6.50 | .870  | 22.10 | .089 | 2.26 |
| 25              | .808  | 20.52 | .256 | 6.50 | .970  | 24.64 | .089 | 2.26 |
| 31              | .958  | 24.33 | .256 | 6.50 | 1.120 | 28.45 | .089 | 2.26 |
| 37              | 1.108 | 28.14 | .256 | 6.50 | 1.270 | 32.26 | .089 | 2.26 |
| 51              | 1.058 | 26.87 | .300 | 7.62 | 1.220 | 30.99 | .089 | 2.26 |
| 100             | 1.450 | 36.84 | .338 | 8.58 | 1.805 | 45.86 | .117 | 2.97 |



**Edgeboard Mounting**

| No. of Contacts | C     |       | D    |      |
|-----------------|-------|-------|------|------|
|                 | in    | mm    | in   | mm   |
| 9               | .570  | 14.48 | .089 | 2.26 |
| 15              | .720  | 18.29 | .089 | 2.26 |
| 21              | .870  | 22.10 | .089 | 2.26 |
| 25              | .970  | 24.64 | .089 | 2.26 |
| 31              | 1.120 | 28.45 | .089 | 2.26 |
| 37              | 1.270 | 32.26 | .089 | 2.26 |
| 51              | 1.220 | 30.99 | .089 | 2.26 |
| 100             | 1.805 | 45.86 | .117 | 2.97 |