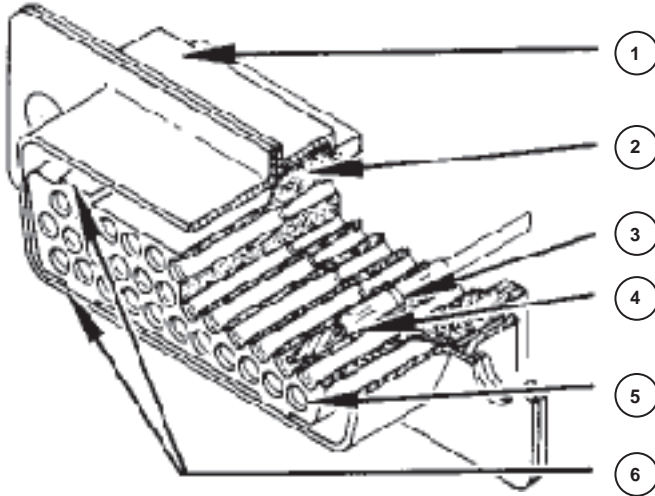


The Double Density D is a rectangular connector in the popular D Subminiature shell configuration featuring double the contact density in the same insert area. The Double Density D connector can thus accommodate up to 100 contacts instead of 50. This double contact density is achieved by using field-proven, highly reliable Centipin™/Centisocket™ contacts on .075 (1.91) centers, in the positive contact alignment design. In this design contact

positions are reversed; the flexible Centipin™ contacts are recessed in the insulator and the more rugged Centisocket™ contacts are exposed. This reversal of positions, and the chamfered-entry of the sockets, assures positive mating even under severe misalignment conditions. The contacts are retained in the monobloc insulator by a resilient internal shoulder that snaps into a locking groove in the contact. The chamfered front of the contact will

not damage the internal shoulder in the insulator. Contacts are crimp removable type.

The Double Density D connector is available in the five popular shell and insert sizes accommodating up to 100 contacts. These connectors mate exclusively with other Double Density D connectors. A wide range of accessories can be used, including junction shells, potting cups, switching shells, guide pin plates, and dust caps.



1. STANDARD D HARDWARE-

Including full range of D Subminiature accessories

2. ONE PIECE TYPE INSULATOR-

glass-filled nylon material

3. CONTACT RETENTION-

thermoplastic internal shoulder snaps into a locking groove in the contact.

Retention Force: 8 lbs. min. initially, 4 lbs. min. after 10 cycle.

4. TWIST PIN CONTACTS-

seven outer wiping surfaces assure electrical continuity even under severe shock and vibration

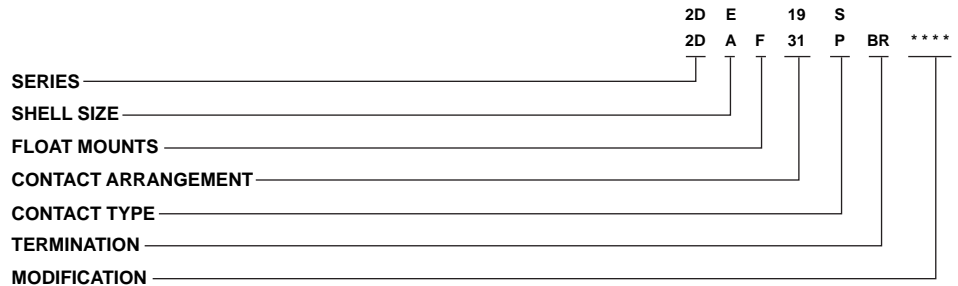
5. POSITIVE CONTACT ALIGNMENT-

flexible pin is recessed in insulator cavity and rugged socket is exposed

6. GUIDE-IN KEYS AND KEYWAYS-

assure alignment during mating and prevent scooping

How to Order



SERIES

2D - Double Density D - ITT Cannon prefix

SHELL SIZE

E, A, B, C and D

FLOAT MOUNTS

Omit if not required

NOTE: Connectors may be ordered less contacts by adding the mod callout "FO" at end of number. Contacts are then supplied in bulk form. For type of contacts and installation/assembly tools refer to page 13.

CONTACT ARRANGEMENT

19, 31, 52, 79 and 100

CONTACT TYPE*

P - Pin
S - Socket

TERMINATION

BR - 90° PCB mounting
(For BR Series use "P" to designate jackpost)

MODIFICATION

F171 - Jackpost assembly
F172 - Standard jackscrew
F173 - Low profile jackscrew
For other modifications consult factory

* Accommodates AWG #26 thru #22

Performance and Material Specifications

WEIGHT

| Part Number by shell size | Weight (in gr.) | | Weight (in oz.) | |
|------------------------------|--------------------|--------------------|--------------------|--------------------|
| | Less With Contacts | Less With Contacts | Less With Contacts | Less With Contacts |
| 2DE19P | 4.05 | 5.02 | .142 | .177 |
| 2DE19S | 3.75 | 5.17 | .133 | .182 |
| 2DA31P | 5.20 | 6.78 | .183 | .239 |
| 2DA31S | 4.90 | 7.22 | .173 | .255 |
| 2DB52P | 8.75 | 11.40 | .308 | .402 |
| 2DB52S | 7.15 | 11.05 | .252 | .390 |
| 2DC79P | 11.70 | 15.73 | .413 | .555 |
| 2DC79S | 9.70 | 15.62 | .342 | .551 |
| 2DD100P | 12.85 | 17.95 | .453 | .633 |
| 2DD100S | 10.95 | 18.45 | .386 | .651 |

MATERIALS AND FINISHES

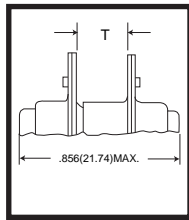
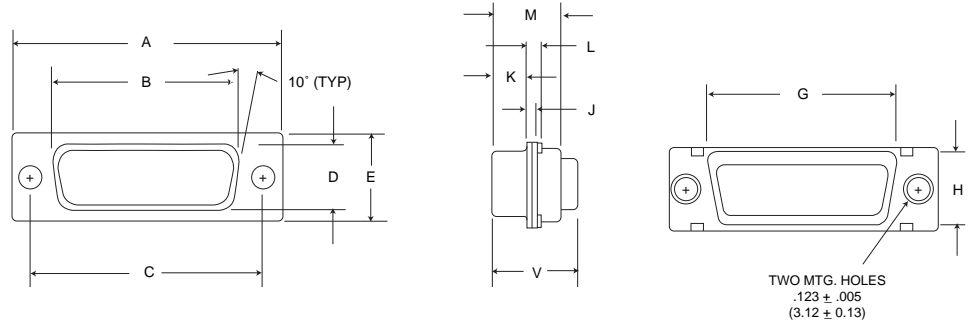
| | |
|------------------------------------|--|
| *Shell | - Steel, cadmium plated with yellow chromate supplementary coating |
| Mounting Hardware and Float Mounts | - Stainless steel |
| Insulator | - Glass-filled nylon |
| Contacts | - Copper alloy, gold plate |
| Alternate finish, | - A106 Gold over brass |
| Modification Code | A156 Gold over brass A197 Tin/Lead over steel |

*Brass non-magnetic also available

MECHANICAL FEATURES

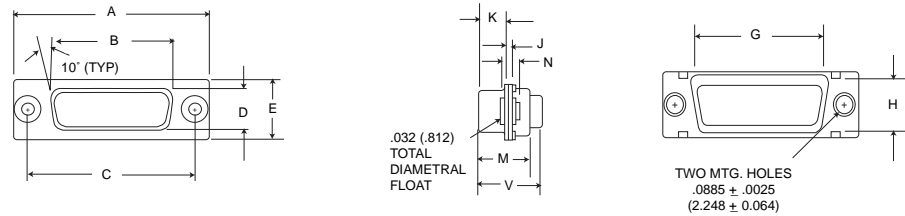
| | |
|---------------------|---------------------------------------|
| Sizes | - Five shell sizes: E, A, B, C, and D |
| Coupling | - Friction or jackscrew |
| Polarization | - Keystone-shaped shells |
| Contact Spacing | - .075 (1.91) |
| Contact Termination | - Crimp snap-in |

Standard Shell



| Part Number by Shell Size | T + .020 (0.51) - .000 (0.00) | Part Number by Shell Size | T + .020 (0.51) - .000 (0.00) |
|---------------------------|-------------------------------------|---------------------------|-------------------------------------|
| 2DE19P | .250 (6.35) | 2DB52S | .236 (5.99) |
| 2DE19S | .250 (6.35) | 2DC79P | .236 (5.99) |
| 2DA31P | .250 (6.35) | 2DC79S | .236 (5.99) |
| 2DA31S | .250 (6.35) | 2DD100P | .236 (5.99) |
| 2DB52P | .236 (5.99) | 2DD100S | .236 (5.99) |

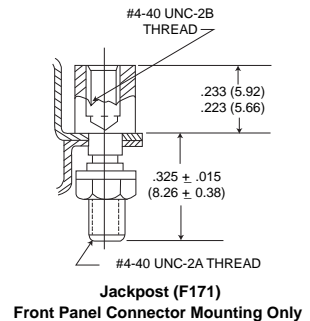
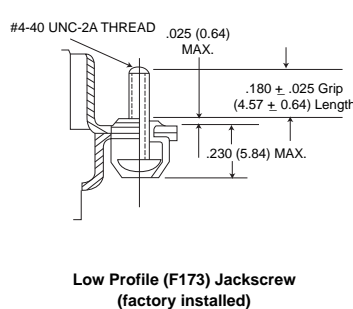
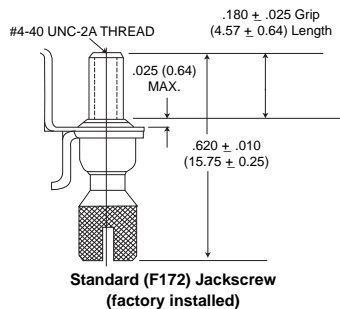
Float Mount



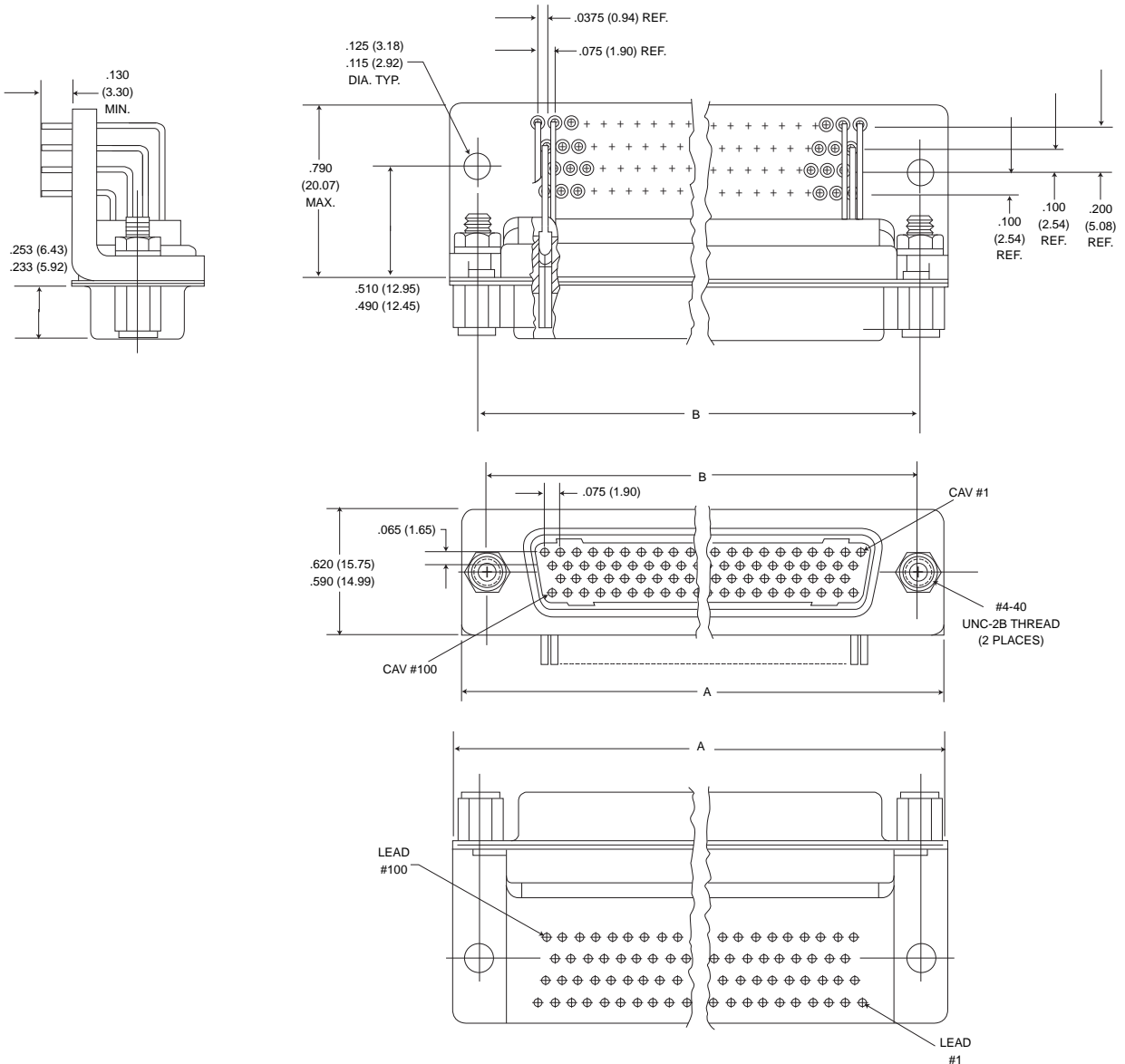
| Part Number by Shell Size | A ± .015 (0.38) | B ± .010 (0.25) | C ± .010 (0.25) | D ± .010 (0.25) | E ± .015 (0.38) | G ± .010 (0.25) | H ± .010 (0.25) | J ± .010 (0.25) | K ± .010 (0.25) | L ± .010 (0.25) | M ± .010 (0.25) | N ± .010 (0.25) | V Max. |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------|
| 2DE19P | 1.213 (30.81) | .697 (17.70) | .984 (24.99) | .360 (9.14) | .494 (12.55) | .759 (19.28) | .422 (10.72) | .036 (.914) | .236 (5.99) | .055 (1.40) | .422 (10.72) | .120 (3.05) | .555 (14.10) |
| 2DE19S | 1.213 (30.81) | .640 (16.26) | .984 (24.99) | .308 (7.82) | .494 (12.55) | .759 (19.28) | .422 (10.72) | .032 (.812) | .243 (6.17) | .047 (1.19) | .429 (10.90) | .120 (3.05) | .555 (14.10) |
| 2DA31P | 1.541 (39.14) | 1.025 (26.03) | 1.312 (33.32) | .360 (9.14) | .494 (12.55) | 1.083 (27.51) | .422 (10.72) | .036 (.914) | .236 (5.99) | .055 (1.40) | .422 (10.72) | .120 (3.05) | .555 (14.10) |
| 2DA31S | 1.541 (39.14) | .968 (24.58) | 1.312 (33.32) | .308 (7.82) | .494 (12.55) | 1.083 (27.51) | .422 (10.72) | .032 (.812) | .243 (6.17) | .047 (1.19) | .429 (10.90) | .120 (3.05) | .555 (14.10) |
| 2DB52P | 2.088 (53.03) | 1.583 (40.21) | 1.852 (47.04) | .378 (9.60) | .494 (12.55) | 1.625 (41.27) | .422 (10.72) | .036 (.914) | .231 (5.87) | .055 (1.40) | .426 (10.82) | .129 (3.28) | .555 (14.10) |
| 2DB52S | 2.088 (53.03) | 1.508 (38.30) | 1.852 (47.04) | .308 (7.82) | .494 (12.55) | 1.625 (41.27) | .422 (10.72) | .032 (.812) | .243 (6.17) | .047 (1.19) | .429 (10.90) | .120 (3.05) | .555 (14.10) |
| 2DC79P | 2.729 (69.31) | 2.231 (56.67) | 2.500 (63.50) | .378 (9.60) | .494 (12.55) | 2.272 (57.71) | .422 (10.72) | .036 (.914) | .231 (5.87) | .055 (1.40) | .426 (10.82) | .129 (3.28) | .555 (14.10) |
| 2DC79S | 2.729 (69.31) | 2.156 (54.76) | 2.500 (63.50) | .308 (7.82) | .494 (12.55) | 2.272 (57.71) | .422 (10.72) | .032 (.812) | .243 (6.17) | .047 (1.19) | .429 (10.90) | .120 (3.05) | .555 (14.10) |
| 2DD100P | 2.635 (66.92) | 2.127 (54.02) | 2.406 (61.11) | .484 (12.29) | .605 (15.37) | 2.178 (55.32) | .534 (13.56) | .036 (.914) | .231 (5.87) | .055 (1.40) | .426 (10.82) | .129 (3.28) | .555 (14.10) |
| 2DD100S | 2.635 (66.92) | 2.062 (52.37) | 2.406 (61.11) | .420 (10.67) | .605 (15.37) | 2.178 (55.32) | .534 (13.56) | .032 (.812) | .243 (6.17) | .047 (1.19) | .429 (10.90) | .120 (3.05) | .555 (14.10) |

For shell with float mounts, add letter F after shell size, e.g., 2DEF19P.

JackscREW/Jackpost Assembly



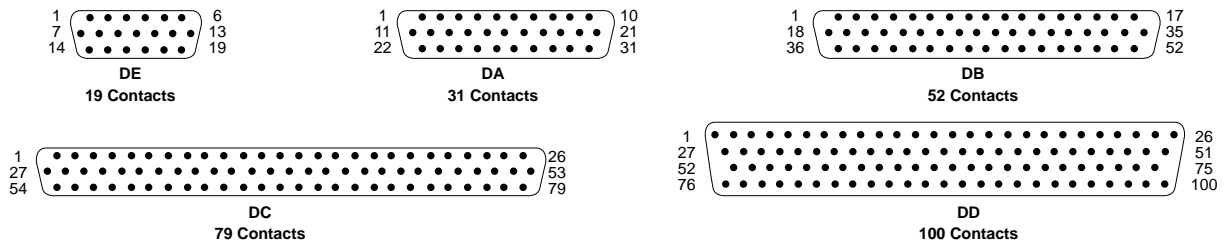
90° PCB Mounting - 4 Row



| Part Number by Shell Size | A ± .015 (0.38) | B ± .010 (0.25) | C Max. |
|---------------------------|--------------------|--------------------|--------------|
| 2DD100SBRP | 2.635 (66.93) | 2.406 (61.11) | .790 (20.07) |

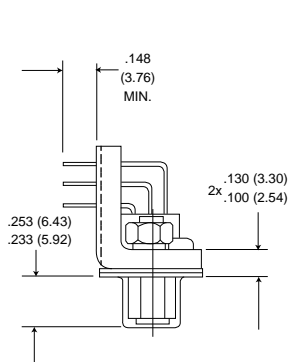
Contact Arrangements

All views are pin front face. Use reverse order for socket side.



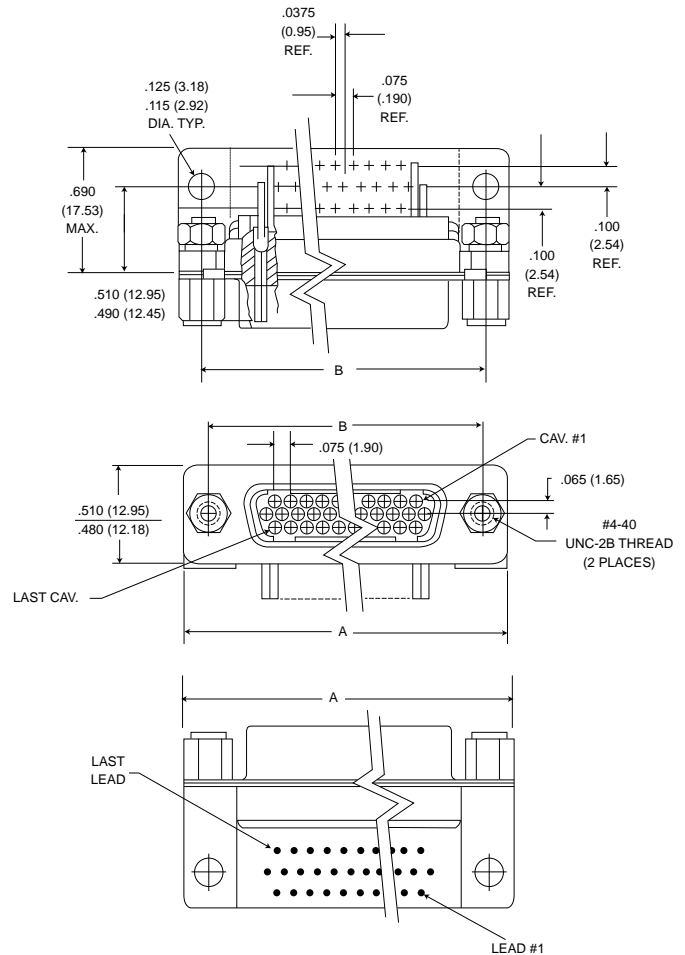
Cavity identification numbers are shown for reference only and do not appear on insulator front face. However they do appear on rear of insulator.

90° PCB Mounting - 3 Row



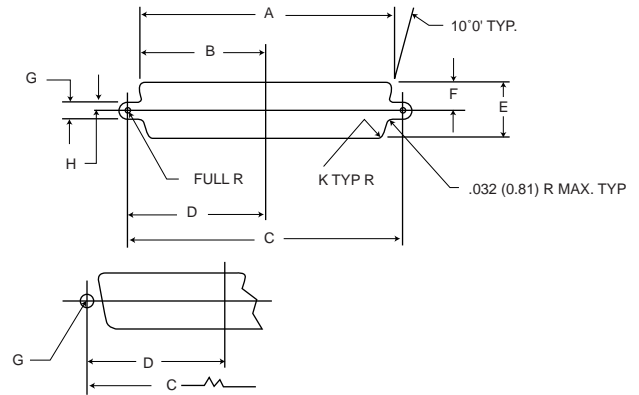
PCB Termination Leads
(all contact arrangements)
.024 (6.10) to .028 (7.11).

Suggested finished PC hole
Size .033 (8.38) ± .003 (0.08)



| Part Number by Shell Size | A ± .015 (0.38) | B ± .010 (0.25) | C Max. |
|------------------------------|--------------------|--------------------|--------------|
| 2DE19SBRP | 1.215 (30.86) | .984 (24.99) | .690 (17.53) |
| 2DA31SBRP | 1.540 (39.12) | 1.312 (33.32) | .690 (17.53) |
| 2DB52SBRP | 2.090 (53.09) | 1.852 (47.04) | .690 (17.53) |
| 2DC79SBRP | 2.730 (69.34) | 2.500 (63.50) | .690 (17.53) |

Panel Cutouts

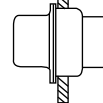


| Conn. | Mtg. Method | A ± .005 (0.13) | B ± .005 (0.13) | C ± .005 (0.13) | D ± .005 (0.13) | E ± .005 (0.13) | F ± .005 (0.13) | G ± .002 (0.05) | H ± .002 (0.05) | K ± .002 (0.05) |
|-------|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 2DE | Front | .874 (22.20) | .437 (11.10) | .984 (24.99) | .492 (12.50) | .513 (13.03) | .257 (6.53) | .120 (3.05) | .060 (1.52) | .083 (2.11) |
| | Rear | .806 (20.47) | .403 (10.24) | .984 (24.99) | .492 (12.50) | .449 (11.40) | .225 (5.71) | .120 (3.05) | .060 (1.52) | .132 (3.35) |
| 2DA | Front | 1.202 (30.53) | .601 (15.26) | 1.312 (33.32) | .656 (16.66) | .513 (13.03) | .257 (6.53) | .120 (3.05) | .060 (1.52) | .083 (2.11) |
| | Rear | 1.134 (28.80) | .567 (14.40) | 1.312 (33.32) | .656 (16.66) | .449 (11.40) | .225 (5.71) | .120 (3.05) | .060 (1.52) | .132 (3.35) |
| 2DB | Front | 1.743 (44.27) | .872 (22.15) | 1.852 (47.04) | .926 (23.52) | .513 (13.03) | .257 (6.53) | .120 (3.05) | .060 (1.52) | .083 (2.11) |
| | Rear | 1.674 (42.52) | .837 (21.26) | 1.852 (47.04) | .926 (23.52) | .449 (11.40) | .225 (5.71) | .120 (3.05) | .060 (1.52) | .132 (3.35) |
| 2DC | Front | 2.391 (60.73) | 1.196 (30.38) | 2.500 (63.50) | 1.250 (31.75) | .513 (13.03) | .257 (6.53) | .120 (3.05) | .060 (1.52) | .083 (2.11) |
| | Rear | 2.326 (59.08) | 1.163 (29.54) | 2.500 (63.50) | 1.250 (31.75) | .449 (11.40) | .225 (5.71) | .120 (3.05) | .060 (1.52) | .132 (3.35) |
| 2DD | Front | 2.297 (58.34) | 1.149 (29.18) | 2.406 (61.11) | 1.203 (30.56) | .623 (15.82) | .312 (7.92) | .120 (3.05) | .060 (1.52) | .083 (2.11) |
| | Rear | 2.218 (56.34) | 1.109 (28.17) | 2.406 (61.11) | 1.203 (30.56) | .555 (14.10) | .278 (7.06) | .120 (3.05) | .060 (1.52) | .132 (3.35) |

For contact part numbers, termination tooling and assembly see pages 288-290.

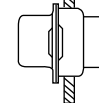
Panel Mounting

→ 3/32 THICKNESS (REF.)
RECOMMENDED

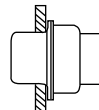


Front Mounting
Standard

→ RIVET THICKNESS



Front Mounting
Float



Rear Mounting
Standard

→ RIVET THICKNESS



Rear Mounting
Float