

# Micro-D Plastic Shell - .050" Contact Spacing

MD\*\*

## Microminiature Rectangular Connectors with MICRO-Pin Contacts on .050 (1.27) centers.

MICRO-D microminiature rack/panel connectors are used in applications requiring highly reliable, extremely small, lightweight connectors. These connectors are available in 2 insulator materials, 2 mounting variations, 7 shell sizes accommodating from 9 to 51 contacts and a special arrangement of 5 micro contacts and 2 coaxials. The insulator materials listed give the MICRO-D connector wide versatility in most applications required by industry.

ITT can also terminate a wide variety of stranded or solid wire directly to MICRO-D contacts, which is often desirable in high density arrangements.

MICRO-D connectors can also be custom harnessed to meet any customer requirement of single or multiple connectors. Pigtail lead and harness description must be given by the customer. A typical description would be: .5" #25 AWG, gold plated copper leads or 18" of #26 yellow, Teflon-insulated, Type E wire. Shown below are various methods of termination. Consult customer service for any routine or complex harnessing of MICRO-D connectors.

- Glass-filled diallyl phthalate thermoset material used in high temperature applications that is immune to cleaning solvents. It also has excellent dielectric properties. Temperature range: -65°F to +300°F (-55°C to +149°C).
- Glass-filled polyester thermoplastic that is not affected by cleaning solvents and exhibits excellent dielectric properties. Temperature range: -55°F to +257°F (-65°C to +125°C).

## Specifications

### MATERIALS AND FINISHES

Shell/Insulator (One Piece)	MD/MDB: Glass-filled thermoset plastic MDV/MDVB: Thermoplastic
Contacts	- Copper alloy, gold plate

### ELECTRICAL DATA

No of Contacts	- 9 to 51: (1 arrangement of 5 contacts and 2 coaxials - for screw mount only)
Coaxial Cable	- RG-178/U (Not available for MD clip mount)
Wire Size	- #24 thru #32 AWG
Contact Termination	- Multi-indent crimp

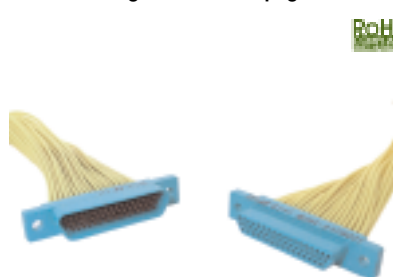
### MECHANICAL FEATURES

Size or Length	- 7 sizes
Coupling	- Friction/jackscrews
Polarization	- Keystone-shaped shells
Contact Spacing Centers	-.050 (1.27mm)
Shell Styles	- Plug and receptacle

Consult factory for availability.

## How to Order

PCB ordering information - page 30



RoHS COMPLIANCE

SERIES-INSULATOR STYLE-MATERIAL

CONTACT SPACING

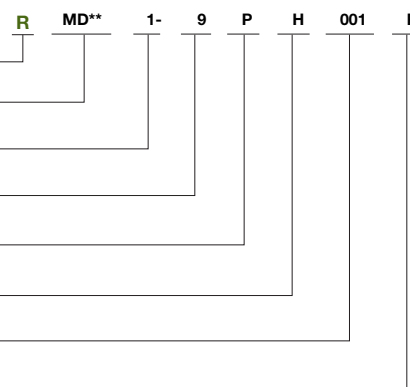
CONTACT ARRANGEMENT

CONTACT TYPE

TERMINATION TYPE

TERMINATION CODE

LOCKING HARDWARE



### SERIES-INSULATOR STYLE-MATERIAL

MDB - Screw mounting-Diallyl phthalate  
MDVB - Screw mounting-Polyester

### CONTACT SPACING

1 - .050 (1.27) centers

### CONTACT ARRANGEMENT

9-15-21-25-31-37-51. See page 9

### CONTACT TYPE

P - Pin S - Socket

### TERMINATION TYPE

H - Insulated solid or stranded wire  
L - Uninsulated solid wire  
S - Solder pot to accept #26 AWG max. harness wire.

### TERMINATION CODE

See page 79 and 81 for additional codes  
(H) 001 - 18", 7/34 strand, #26 AWG, MIL-W-16878/4, Type E Teflon, Yellow.  
(H) 003 - 18", 7/34 strand, #26 AWG, MIL-W-16878/4, Type E Teflon, color coded to MIL-STD-681 System I.  
(L) 1 - 1/2" uninsulated solid #25 AWG gold plated copper.  
(L) 2 - 1" uninsulated solid #25 AWG gold plated copper.

### LOCKING HARDWARE (SCREW MOUNTING ONLY)

P - Jackpost  
K - Jackscrew-standard  
L - Jackscrew-low profile  
F - Float mount  
M - Military specification hardware, see page 13.

No designator - No hardware - standard mounting  
.091 (2.31) hole diameter



Dimensions shown in inch (mm)  
Specifications and dimensions subject to change

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## Standard Wire Termination Codes

The following termination codes are listed for your information. For additional codes please refer to Appendix on page 79 and 81. **All wire lengths are minimum.**

### Harness Type (H)

#26 AWG per MIL-W-16878 Type E Teflon, stranded.

Length	All Yellow	Color Coded*
3 (76.2)	H020	H027
6 (152.4)	H019	H016
8 (203.2)	H026	H034
10 (254.0)	H029	H025
12 (304.8)	H028	H002
18 (457.2)	H001	H003
20 (508.0)	H038	H023
24 (609.6)	H009	H004
30 (762.0)	H010	H005
36 (914.4)	H011	H006
48 (1219.2)	H013	H048
72 (1828.8)	H017	H046
120 (3048.0)	H042	H041

\*Cavity #1 black

### Solid Uninsulated Type (L)

#25 AWG Gold Plated Copper

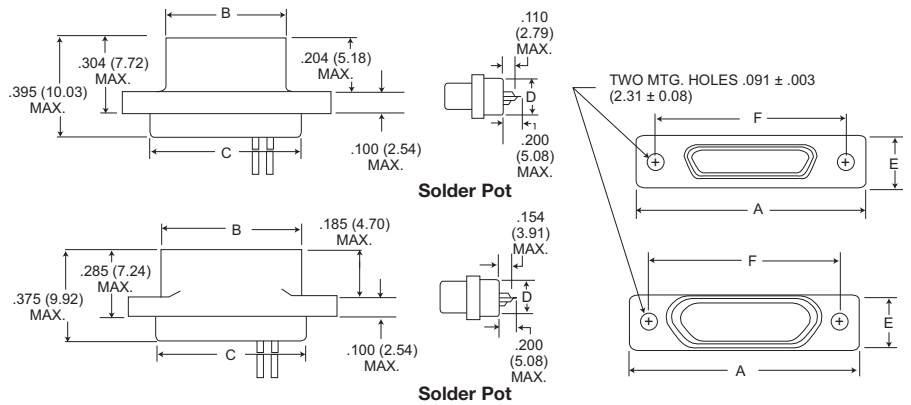
Termination Code	Length
L61	.125 (3.18)
L56	.150 (3.81)
L57	.190 (4.83)
L39	.250 (6.35)
L58	.375 (9.52)
L1	.500 (12.70)
L14	.750 (19.05)
L2	1.000 (25.40)
L7	1.500 (38.10)
L6	2.000 (50.80)
L16	2.500 (63.50)
L10	3.000 (76.20)

## With Screw Mounting Holes (Conforms to MIL-DTL-83513)



**MDB** Glass-filled Diallyl Phthalate Plastic Insulator

**MDVB** Glass-filled Polyester Plastic Insulator



Part Number by Shell Size	A Max.	B Max.	C Max.	D Max.	E Max.	F ±.005	Avg. Weight*** ±5% (oz.) ±5% (gm.)
<b>MDB1-9P**</b> <b>MDVB1-9P**</b>	.788 (20.02)	.292 (7.42)	.408 (10.36)	.173 (4.39)	.218 (5.54)	.565 (14.35)	.026 (0.73)
<b>MDB1-9S**</b> <b>MDVB1-9S**</b>	.788 (20.02)	.380 (9.65)	.408 (10.36)	.173 (4.39)	.218 (5.54)	.565 (14.35)	.025 (0.70)
<b>MDB1-15P**</b> <b>MDVB1-15P**</b>	.938 (23.82)	.442 (11.23)	.588 (14.17)	.173 (4.39)	.218 (5.54)	.715 (18.16)	.038 (1.10)
<b>MDB1-15S**</b> <b>MDVB1-15S**</b>	.938 (23.82)	.530 (13.46)	.588 (14.17)	.173 (4.39)	.218 (5.54)	.715 (18.16)	.035 (1.00)
<b>MDB1-21P**</b> <b>MDVB1-21P**</b>	1.088 (27.64)	.592 (15.04)	.708 (17.98)	.173 (4.39)	.218 (5.54)	.865 (21.97)	.053 (1.50)
<b>MDB1-21S**</b> <b>MDVB1-21S**</b>	1.088 (27.64)	.680 (17.27)	.708 (17.98)	.173 (4.39)	.218 (5.54)	.865 (21.97)	.050 (1.40)
<b>MDB1-25P**</b> <b>MDVB1-25P**</b>	1.188 (30.18)	.692 (17.58)	.808 (20.56)	.173 (4.39)	.218 (5.54)	.965 (24.51)	.063 (1.80)
<b>MDB1-25S**</b> <b>MDVB1-25S**</b>	1.188 (30.18)	.780 (19.81)	.808 (20.56)	.173 (4.39)	.218 (5.54)	.965 (24.51)	.056 (1.60)
<b>MDB1-31P**</b> <b>MDVB1-31P**</b>	1.338 (33.98)	.842 (21.39)	.958 (24.33)	.173 (4.39)	.218 (5.54)	1.115 (28.32)	.080 (2.30)
<b>MDB1-31S**</b> <b>MDVB1-31S**</b>	1.338 (33.98)	.930 (23.62)	.958 (24.33)	.173 (4.39)	.218 (5.54)	1.115 (28.32)	.073 (2.10)
<b>MDB1-37P**</b> <b>MDVB1-37P**</b>	1.488 (37.80)	.992 (25.20)	1.108 (28.14)	.173 (4.39)	.218 (5.54)	1.265 (32.13)	.086 (2.45)
<b>MDB1-37S**</b> <b>MDVB1-37S**</b>	1.488 (37.80)	1.080 (27.43)	1.108 (28.14)	.173 (4.39)	.218 (5.54)	1.265 (32.13)	.076 (2.15)
<b>MDB1-51P**</b> <b>MDVB1-51P**</b>	1.438 (36.52)	.942 (23.93)	1.058 (26.87)	.220 (5.59)	.260 (6.60)	1.215 (30.86)	.109 (3.10)
<b>MDB1-51S**</b> <b>MDVB1-51S**</b>	1.438 (36.52)	1.030 (26.16)	1.058 (26.87)	.220 (5.59)	.260 (6.60)	1.215 (30.86)	.093 (2.64)

\*\* Add lead type and length, see Part Number Explanation.

\*\*\* Weight given is with 1/2", uninsulated solid #25 AWG gold plated copper pigtailed.

Dimensions shown in inch (mm)

Specifications and dimensions subject to change

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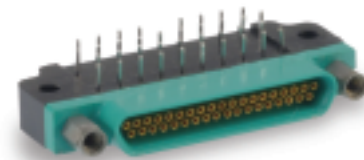


MD\*B-PCB connectors use standard MD\*B all plastic shells and are designed for use with flex circuitry, printed circuit and multi-layer boards. They are easily mounted and soldered and provide high density/high reliability in board-to-board and board-to-cable applications. While being similar to the MDM-PCB connectors, the MD\*B-PCB connectors are all plastic, extremely small, and lightweight yet rugged enough for use in the most demanding applications.

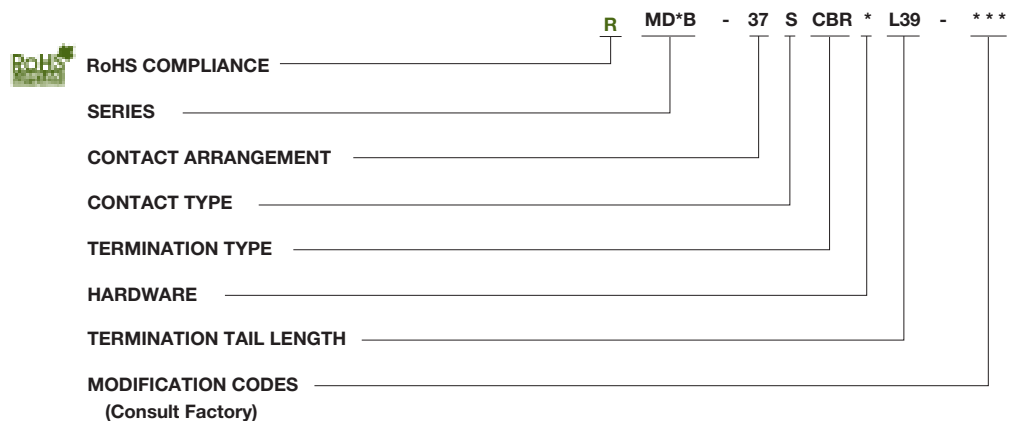
MD\*B-PCB connectors are available in seven shell sizes with 9 to 51 contacts in the popular 90° narrow profile PCB termination, with a variety of tail lengths for varying board thickness.

Jackpost mounting for use with locking hardware is also available.

If the connectors shown in the catalog do not meet the requirements of your applications, a special shape, size or layout using the basic all plastic shell can be made available. For further technical and applications information, contact customer service.



## How to Order



**CONNECTOR SERIES**  
MDVB, MDB

**CONNECTOR ARRANGEMENT**  
9, 15, 21, 25, 31, 51

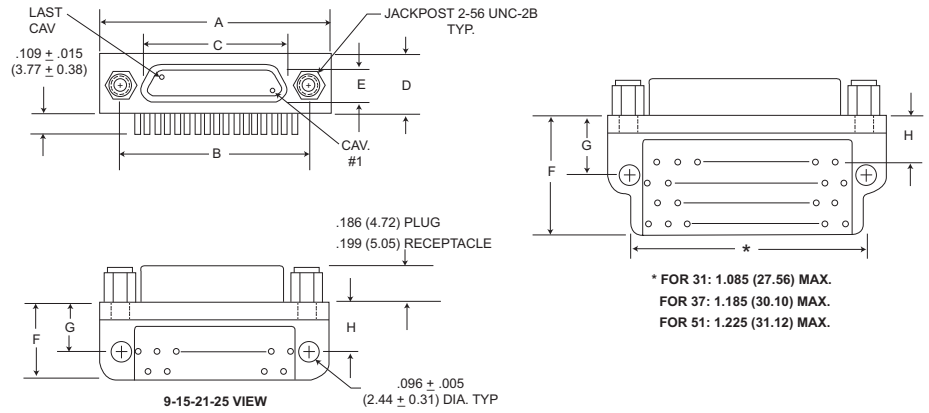
**CONTACT TYPE**  
S = Socket  
P = Pin

**TERMINATION TYPE**  
CBR = 90° Narrow Profile PCB Terminations

**HARDWARE**  
P = Jackpost  
M7 = Jackposts, M635135-07  
No Letter = Less Hardware

**TERMINATION TAIL LENGTH CODES**  
NONE - .109 (2.77) ± 0.15 (0.38) Standard  
L61 - .125 (3.18)  
L66 - .150 (3.81)  
L57 - .190 (4.83)  
L39 - .250 (6.35)  
L58 - .375 (9.52)

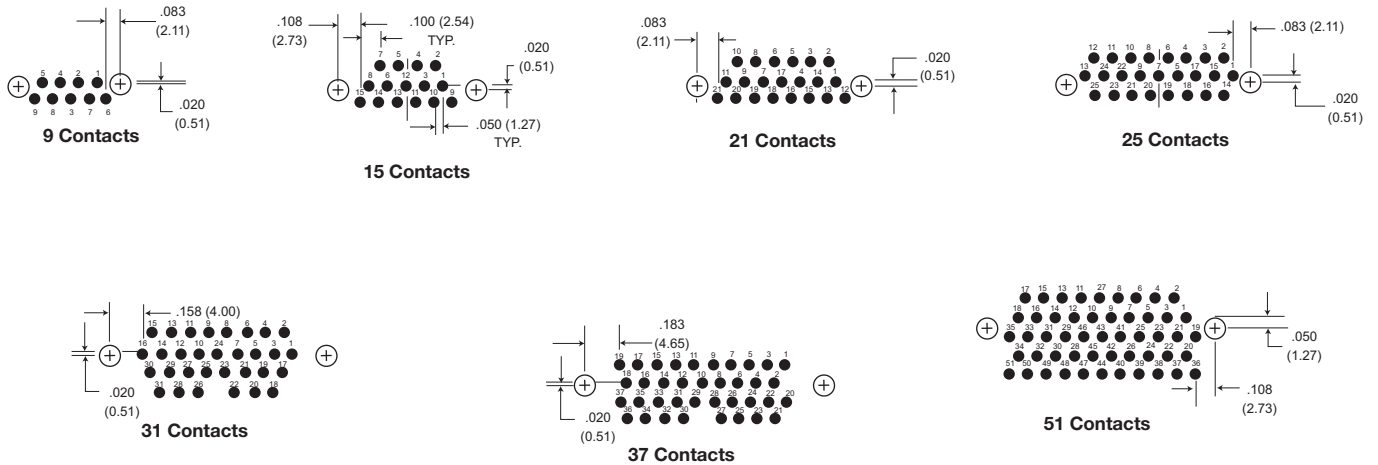
CBR Series (90° Mounting Narrow Profile)



\* FOR 31: 1.085 (27.56) MAX.  
 FOR 37: 1.185 (30.10) MAX.  
 FOR 51: 1.225 (31.12) MAX.

### PCB Termination Arrangements (Viewed from bottom of connector, on PCB solder side.)

Identification number shown for plug connector, use reverse order for socket connector.



All Termination Configurations .100 (2.54) x .100 (2.54) Grid Pattern, Offset .050 (1.27)

Part Number By Shell Size	A Max.	B ± .005 (0.13)	C Max.	D Max.	E Max.	F Max.	G ± .010 (0.25)	H ± .010 (0.25)
MD*B-9PCBR*	.788 (20.01)	.565 (14.35)	.292 (7.42)	.218 (5.54)	.134 (3.40)	.420 (10.67)	.250 (6.35)	.230 (5.84)
MD*B-9SCBR*	.788 (20.01)	.565 (14.35)	.375 (9.52)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.230 (5.84)
MD*B-15PCBR*	.938 (23.82)	.715 (18.16)	.442 (11.23)	.218 (5.54)	.134 (3.40)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-15SCBR*	.938 (23.82)	.715 (18.16)	.525 (13.34)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-21PCBR*	1.088 (27.63)	.865 (21.97)	.592 (15.04)	.218 (5.54)	.134 (3.40)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-21SCBR*	1.088 (27.63)	.865 (21.97)	.675 (17.14)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-25PCBR*	1.188 (30.17)	.965 (24.51)	.692 (17.58)	.218 (5.54)	.134 (3.40)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-25SCBR*	1.188 (30.17)	.965 (24.51)	.775 (19.68)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-31PCBR*	1.338 (33.98)	1.115 (28.32)	.842 (21.39)	.218 (5.54)	.134 (3.40)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-31SCBR*	1.338 (33.98)	1.115 (28.32)	.925 (23.50)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
MD*B-37PCBR*	1.488 (37.79)	1.265 (32.13)	.994 (25.25)	.218 (5.54)	.134 (3.40)	.520 (13.21)	.250 (6.35)	.130 (3.30)
MD*B-37SCBR	1.488 (37.79)	1.265 (32.13)	1.075 (27.30)	.218 (5.54)	.218 (5.54)	.520 (13.21)	.250 (6.35)	.130 (3.30)
MD*B-51PCBR*	1.438 (36.52)	1.215 (30.86)	.942 (23.93)	.258 (6.55)	.177 (4.50)	.550 (13.97)	.300 (7.62)	.150 (3.81)
MD*B-51SCBR	1.438 (36.52)	1.215 (30.86)	1.026 (26.06)	.258 (6.55)	.258 (6.55)	.550 (13.97)	.300 (7.62)	.150 (3.81)

\* For jackpost locking add letter "P" or "M7".

**NOTE: Standard lead termination is #24 AWG, solid copper, solder or tin dipped.**

Dimensions shown in inch (mm)  
 Specifications and dimensions subject to change

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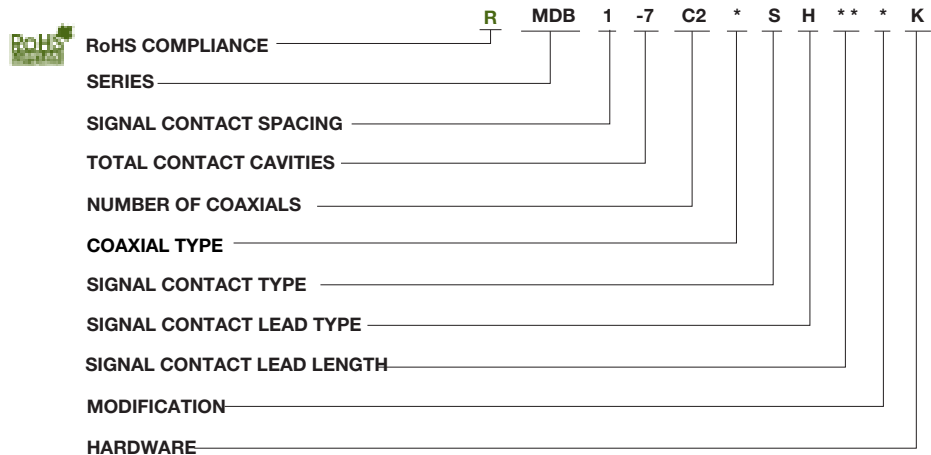


## MDB Coaxial Series with Screw Mounting Holes

MDB connectors with two coaxial and five MICRO-PIN™/MICROSOCKET™ contacts. Crimp-type coaxial contacts accommodate RG-178/U cables. A plastic insertion/extraction tool is supplied with each connector assembly having removable coaxial assembly.



## How to Order - MDB Coaxial



### SERIES

Micro-D Coaxial

### SIGNAL CONTACT SPACING

1 - .050 (1.27) centers

### TOTAL CONTACT CAVITIES

### NUMBER OF COAXIALS

### COAXIAL TYPE

No Letter - Coaxial assembly installed and nonremovable  
 RO - coaxial assembly ordered separately  
 RA - Coaxial shipped assembled but uninstalled

### SIGNAL CONTACT TYPE

P - Pin  
 S - Socket

### SIGNAL CONTACT LEAD TYPE

L - Uninsulated, solid wire  
 H - Insulated, solid or stranded  
 S - Solder pot\*

### SIGNAL CONTACT LEAD LENGTH

See Standard Wire Termination  
 Code on page 29. Coaxial cable will be RG-178U unless otherwise specified; length will be same as wire modification.

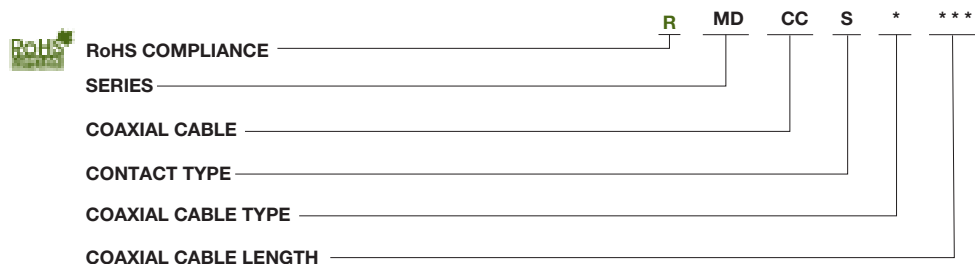
### MODIFICATION

Consult customer service

### HARDWARE

No letter - No hardware standard mounting. .091 (2.31) hole diameter  
 F - Float  
 K - Jackscrew (standard)  
 L - Jackscrew (low profile)  
 P - Jackpost  
 \* Not available with removalbe coax cable type connectors RO and RA.

## How to Order - Coaxial Cable Assemblies



### SERIES

MD

### COAXIAL CABLE

CC

### CONTACT TYPE

P - Pin (used with socket side connection)  
 S - Socket (used with pin type connection)

### COAXIAL CABLE TYPE

1 - RG178/U

### COAXIAL CABLE LENGTH

See Standard Wire Termination  
 Codes on page 29. Coaxial cable will be RG-178U unless otherwise specified; length will be the same as wire modification.



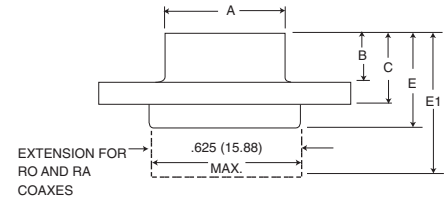
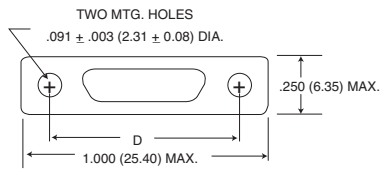
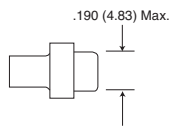
Dimensions shown in inch (mm)

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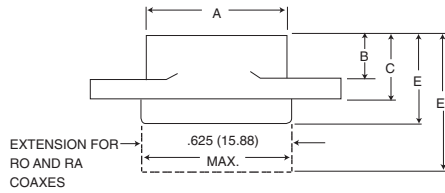
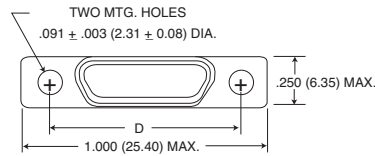
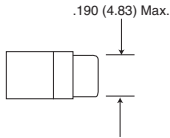
## Dimension - MDB Coaxial Series

(See page 9 for layouts)

### Plug



### Receptacle



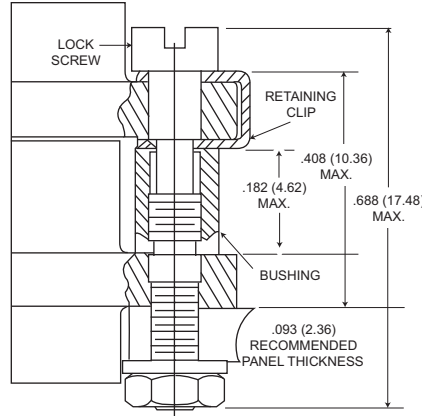
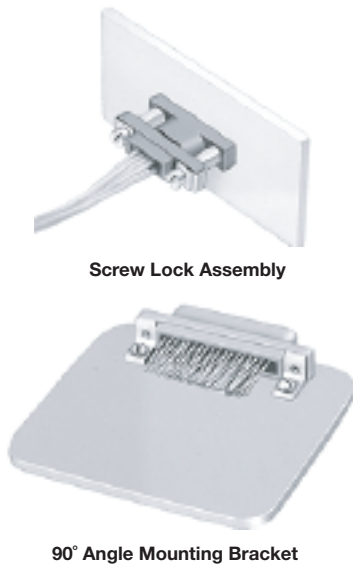
Part Number by Shell Size	A Max.	B Max.	C Max.	D ± .005 (0.13)	E Max.	E1 Max.	Avg. Weight** (oz) ± 5% (gm.) ± 5%
<b>MDB1-7C2P*</b>	.510 (12.95)	.204 (5.18)	.298 (7.57)	.782 (19.86)	.395 (10.03)	.510 (12.95)	.290 (8.30)
<b>MDB1-7C2S*</b>	.602 (15.29)	.185 (4.70)	.279 (7.09)	.782 (19.86)	.375 (9.52)	.540 (13.72)	.273 (7.80)

\* Add lead type and length, see Part Number Explanation.

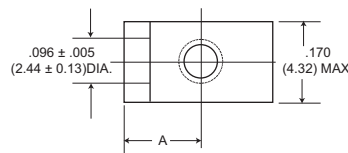
\*\* Weight given is with 7 inch (177.80) insulated leads, #26 AWG silver plated copper pigtailed and RG178/U coaxials.

## Mounting Hardware Views (Sizes 9-51)

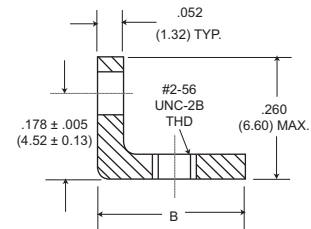
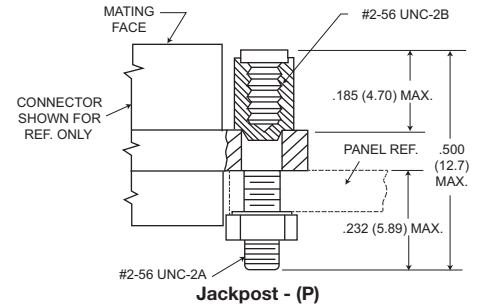
This hardware supplied unassembled.



**Screw Lock Assembly\***



**90° Angle Mounting Bracket**

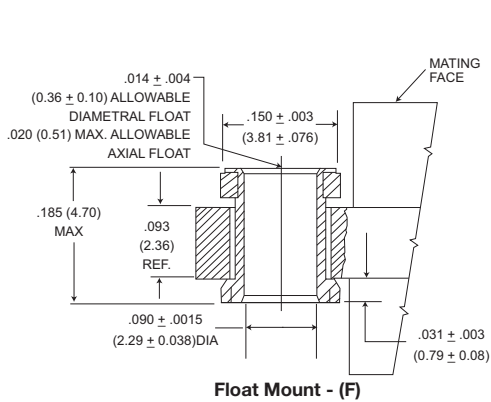


\*NOTE: Torque value is 4.0 in/lbs max.

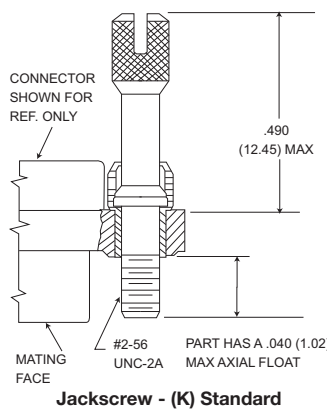
Description	Part Number	A ± .005 (0.13)	B Max.
Screw Lock Assembly	322-9500-000		
Jackpost Kit	320-9505-000		
Mounting Bracket, 90° Angle- MD*1 for 9 thru 37 Shell Sizes	015-9516-000	.100 (2.54)	.215 (5.46)
MD*1 for 51 Shell Size	015-9516-000	.122 (3.10)	.257 (6.53)

NOTES: Screw lock assembly (322-9500-000) can be used for front front mounting. Jackpost kit (320-9505-000) consists of 2 assemblies, shipped unassembled.

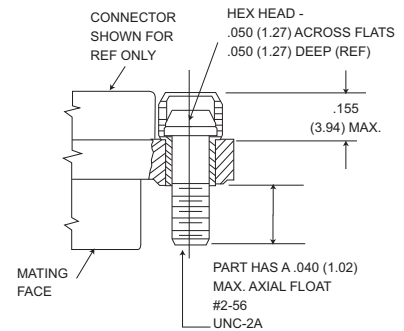
This hardware is factory installed.



**Float Mount - (F)**



**Jackscrew - (K) Standard**



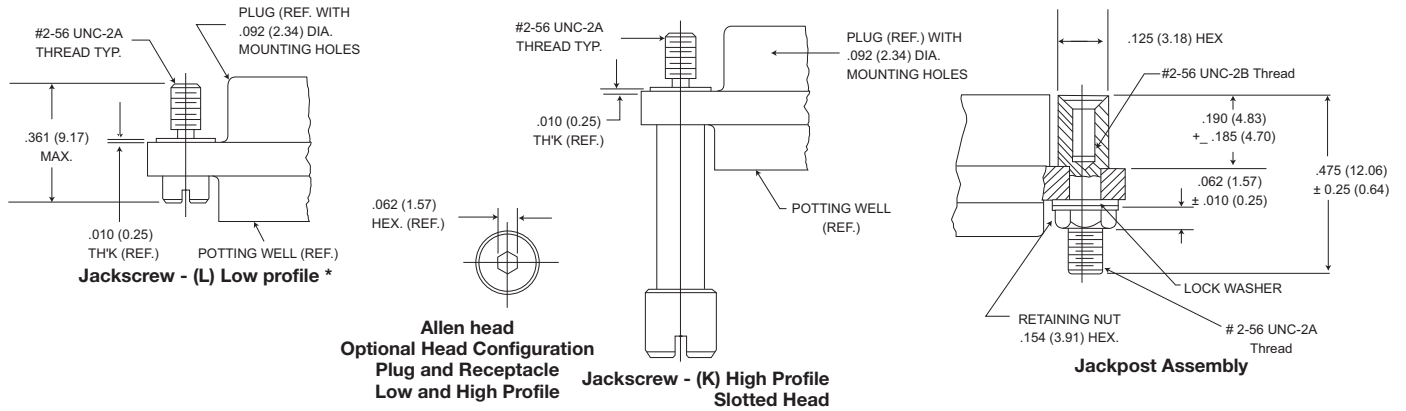
**Jackscrew - (L) Low Profile**

Shown here is a cutaway view of the float mount for the MD connector. The basic shell dimensions are the same for the float mount and the screw mounting hole configurations. View shown is for standard float mount front panel mounting. Reverse mounting is available on request.

\* NOTE: Torque values are as follows:  
Low Profile Jackscrew (L)-2.5 in/lbs  
Standard Jackscrew (K)-2.5 in/lbs

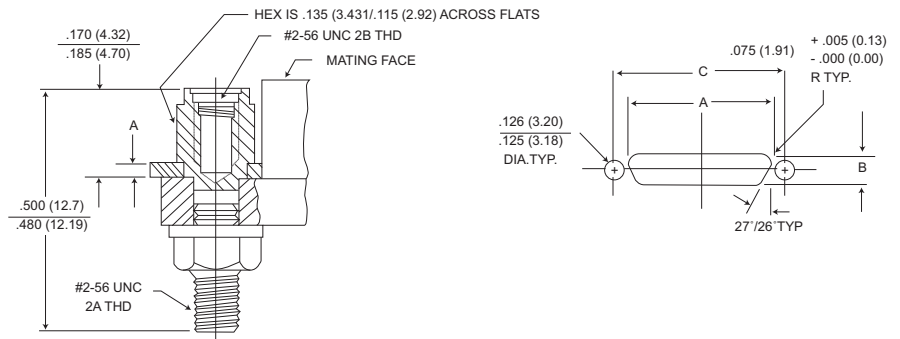
## Mounting Hardware to Military Specification (Sizes 9 - 51) PER MIL-DTL-83513/5

This hardware supplied unassembled.



Description	M83513/5	Mode Code	Part Number
Slotted Head Jackscrew Assy Low Profile	-05	M5	320-9508-025
Slotted Head Jackscrew Assy High Profile	-06	M6	320-9508-027
Allen Head Jackscrew Assy Low Profile	-02	M2	320-9508-026
Allen Head Jackscrew Assy High Profile	-03	M3	320-9508-028
Jackpost Assy	-07	M7	320-9505-033

## Jackpost Bushing (For Rear Panel Mounting)

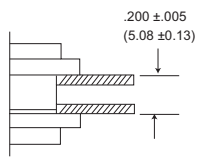


Panel Thickness	A Dim.	Jackpost Kit Number*
3/32 (2.4)	.092/.087 (2.34/2.21)	320-9505-007
1/16 (1.6)	.061/.056 (2.34/1.42)	320-9505-006
3/64 (1.2)	.047/.042 (1.19/1.07)	320-9505-005
1/32 (0.8)	.030/.025 (0.76/0.64)	320-9505-004

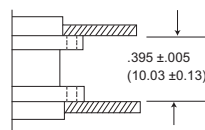
\*2 Jackposts, 2 nuts, 2 washers.  
NOTE: Torque value for jackpost 2.5 in/lbs

Shell Size	Plug and Receptacle Dimensions		
	A	B	C
	+.004 (0.10) -.000 (0.00)	+.004 (0.10) -.000 (0.00)	±.005 (0.13)
9	.379 (9.63)	.219 (5.56)	.565 (14.35)
15	.529 (13.44)	.219 (5.56)	.715 (18.16)
21	.679 (17.25)	.219 (5.56)	.865 (21.97)
25	.779 (19.79)	.219 (5.56)	.965 (24.51)
31	.929 (23.60)	.219 (5.56)	1.115 (28.32)
37	1.079 (27.41)	.219 (5.56)	1.265 (32.13)
51	1.029 (26.14)	.261 (6.63)	1.215 (30.86)

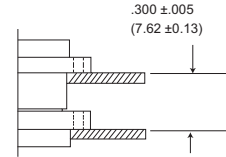
## Panel Mounting Dimensions



Plug and Receptacle Rear Mounted



Plug and Receptacle Front Mounted



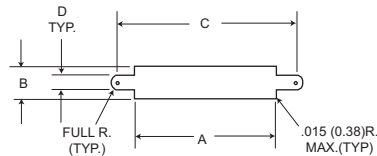
Plug Front Mounted Receptacle Rear Mounted

Dimensions shown in inch (mm)  
Specifications and dimensions subject to change

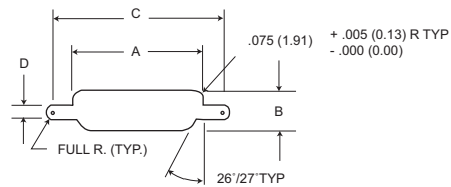
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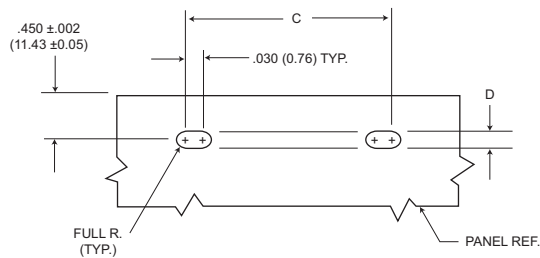




**Figure 1**  
**Front Mounting**



**Figure 2**  
**Rear Mounting**



**Figure 3**  
**Edgeboard Mounting**

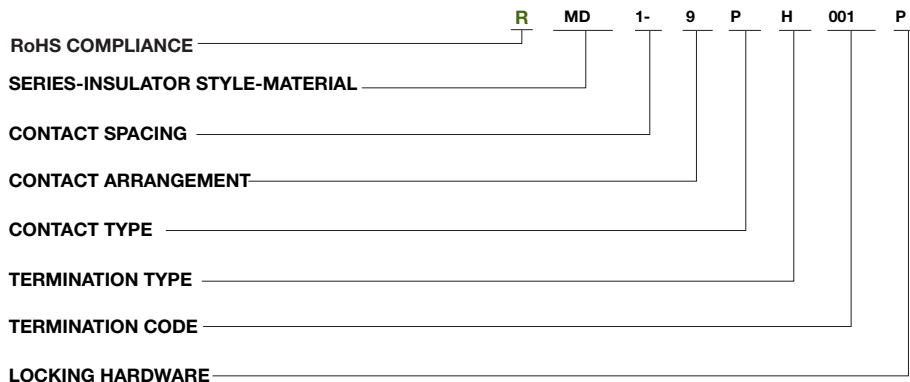
Size	Cutout Figure	A		B		C		D	
		+ .004 (0.10)	- .000 (0.00)	+ .004 (0.10)	- .000 (0.00)	+ .005 (0.13)	- .000 (0.00)	+ .005 (0.13)	- .000 (0.00)
9	1	.409 (10.39)		.172 (4.37)		.570 (14.48)		.089 (2.26)	
	2	.379 (9.63)		.219 (5.56)		.570 (14.48)		.089 (2.26)	
	3	-		-		.570 (14.48)		.089 (2.26)	
15	1	.559 (14.20)		.172 (4.37)		.720 (18.29)		.089 (2.26)	
	2	.529 (13.44)		.219 (5.56)		.720 (18.29)		.089 (2.26)	
	3	-		-		.720 (18.29)		.089 (2.26)	
21	1	.709 (18.00)		.172 (4.37)		.870 (22.10)		.089 (2.26)	
	2	.679 (17.25)		.219 (5.56)		.870 (22.10)		.089 (2.26)	
	3	-		-		.870 (22.10)		.089 (2.26)	
25	1	.809 (20.55)		.172 (4.37)		.970 (24.64)		.089 (2.26)	
	2	.779 (19.79)		.219 (5.56)		.970 (24.64)		.089 (2.26)	
	3	-		-		.970 (24.64)		.089 (2.26)	
31	1	.959 (24.36)		.172 (4.37)		1.120 (28.45)		.089 (2.26)	
	2	.929 (23.60)		.219 (5.56)		1.120 (28.45)		.089 (2.26)	
	3	-		-		1.120 (28.45)		.089 (2.26)	
37	1	1.109 (28.17)		.172 (4.37)		1.270 (32.26)		.089 (2.26)	
	2	1.079 (27.41)		.219 (5.56)		1.270 (32.26)		.089 (2.26)	
	3	-		-		1.270 (32.26)		.089 (2.26)	
51	1	1.059 (26.90)		.215 (5.46)		1.220 (30.99)		.089 (2.26)	
	2	1.029 (26.14)		.261 (6.63)		1.220 (30.99)		.089 (2.26)	
	3	-		-		1.220 (30.99)		.089 (2.26)	

**NOTES:**

1. Front mounting (figure 1) and rear mounting (figure 2) accommodates #2-56 screws.
2. Front mounting is preferred. However, when rear mounting is necessary, use detail on previous page.
3. Edgeboard mounting bracket (figure3) uses #2-56 screws. Dimension .450 ± .002 (11.43 ± 0.05) locates the MD receptacle flush with the end of the board.

## How to Order

PCB ordering information - page 30



### SERIES-INSULATOR STYLE-MATERIAL

MD - Clip mounting -Diallyl phthalate  
MDV - Clip mounting-Polyester

### CONTACT SPACING

1 - .050 (1.27) centers

### CONTACT ARRANGEMENT

9-15-21-25-31\*-37-51. See page 7

### CONTACT TYPE

P - Pin S - Socket

### TERMINATION TYPE

H - Insulated solid or stranded wire  
L - Uninsulated solid wire  
S - Solder pot to accept #26 AWG max. harness wire.

### TERMINATION CODE\*\*

(H) 001 - 18", 7/34 strand, #26 AWG, MIL-W-16878/4, Type E Teflon, Yellow.  
(H) 003 - 18", 7/34 strand, #26 AWG, MIL-W-16878/4, Type E Teflon, color coded to MIL-STD-681 System I.  
(L) 1 - 1/2" uninsulated solid #25 AWG gold plated copper.  
(L) 2 - 1" uninsulated solid #25 AWG gold plated copper.  
No designator - No hardware - standard mounting  
.091 (2.31) hole diameter

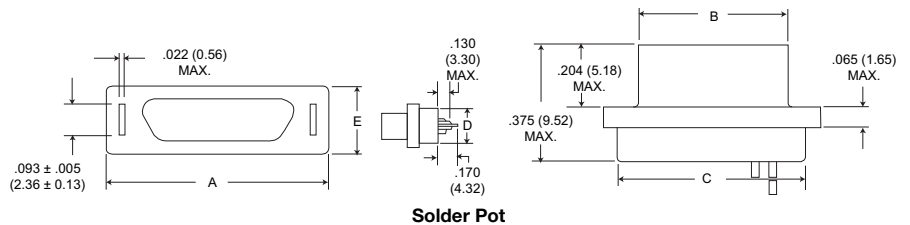
\* Not available in clip mounting.  
\*\* See page 79 and 81 for additional codes.

## With Clip Mounting Slots

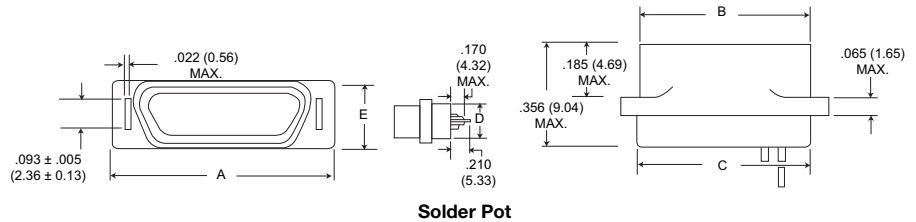
### Plug

**MD** Glass-filled Diallyl Phthalate Plastic Insulator

**MDV** Glass-filled Polyester Plastic Insulator



### Receptacle



Part Number by Shell Size	A Max.	B Max.	C Max.	D Max.	E Max.	Avg. Weight*** ±5% (oz.)/±5% (gm.)
MD1-9P** MDV1-9-P**	.512 (13.00)	.292 (7.42)	.405 (10.29)	.170 (4.32)	.215 (5.46)	.026 (0.73)
MD1-9S** MDV1-9S**	.512 (13.00)	.376 (9.55)	.405 (10.29)	.170 (4.32)	.215 (5.46)	.026 (0.73)
MD1-15P** MDV1-15P**	.662 (16.81)	.442 (11.23)	.555 (14.10)	.170 (4.32)	.215 (5.46)	.038 (1.10)
MD1-15S** MDV1-15S**	.662 (16.81)	.526 (13.36)	.555 (14.10)	.170 (4.32)	.215 (5.46)	.035 (1.00)
MD1-21P** MDV1-21P**	.812 (20.62)	.592 (15.04)	.705 (17.91)	.170 (4.32)	.215 (5.46)	.053 (1.50)
MD1-21S** MDV1-21S**	.812 (20.62)	.676 (17.17)	.705 (17.91)	.170 (4.32)	.215 (5.46)	.050 (1.40)
MD1-25P** MDV1-25P**	.912 (23.16)	.692 (17.58)	.805 (20.45)	.170 (4.32)	.215 (5.46)	.063 (1.80)
MD1-25S** MDV1-25S**	.912 (23.16)	.776 (19.71)	.805 (20.45)	.170 (4.32)	.215 (5.46)	.056 (1.60)
MD1-37P** MDV1-37P**	1.212 (30.78)	.992 (25.20)	1.105 (28.07)	.170 (4.32)	.215 (5.46)	.086 (2.45)
MD1-37S** MDV1-37S**	1.212 (30.78)	1.076 (27.33)	1.105 (28.07)	.170 (4.32)	.215 (5.46)	.076 (2.15)
MD1-51P** MDV1-51P**	1.162 (29.51)	.942 (23.93)	1.055 (26.80)	.213 (5.41)	.258 (6.55)	1.09 (3.10)
MD1-51S** MDV1-51S**	1.162 (29.51)	1.026 (26.06)	1.055 (26.80)	.213 (5.41)	.258 (6.55)	.093 (2.65)

\*\* Add lead type and length, see Part Number Explanation. \*\*\* Weight given is with 1/2", uninsulated solid #25 AWG gold plated copper pigtailed.

Dimensions shown in inch (mm)

Specifications and dimensions subject to change

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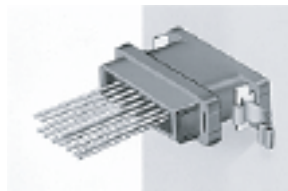


## Panel Mounting Hardware

### Clip Mounting

Illustrated is the recommended method of front mounting with metal panel mounting keys. Panel mounting keys are available with or without coupling retention clips.

For front mounting, place the rear of the connector thru the panel cutout. With the mounting flange against the panel, fully insert the panel mounting keys thru the slots in the flange and thru the panel cutout. Retaining the keys in this position, bend them outward against the rear of the panel. When mating a front mounted connector with an unmounted connector, a coupling retention clip assembly may be used to securely lock the two together. Mounting screw brackets are available and may be used instead of the panel mounting keys.



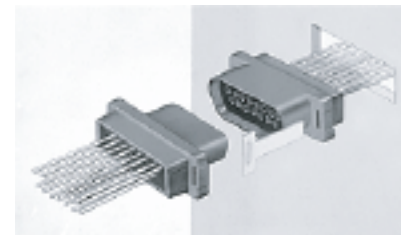
**Coupling Retention Clip**  
(see Figure 2)



**Mounting Screw Brackets**  
(see Figures 1 and 3)



**Edgeboard Mounted**  
(see Figure 4)



**Panel Mounting Key**

Description	Part Number
Panel Mounting Key	201-9100-000
Mounting Key and Coupling Clip Assembly	294-9100-000
Mounting Screw Bracket	015-9100-000
* Edgeboard Mounting Bracket	015-5009-000

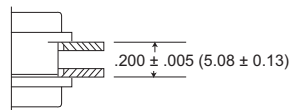
\*\* Edgeboard Mounting Bracket and

Coupling Clip Assembly **MD51428-1**

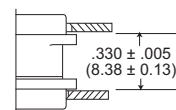
\* Must be ordered separately; specify left and right hand for complete assembly.

\*\* Must be ordered separately; assembly contains set of left and right hand types.

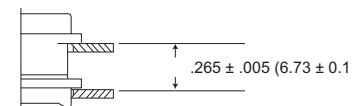
### Dimensions (Clip Mounting Only)



**Plug and Receptacle Rear Mounted**

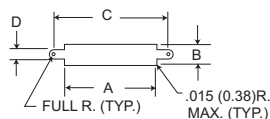


**Plug and Receptacle Front Mounted**



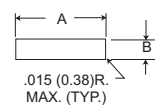
**Plug Front Mounted Receptacle Rear Mounted**

## Panel Cutouts



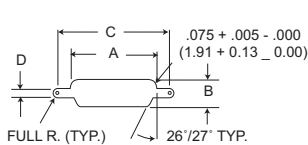
**Figure 1**

### Front Mounting



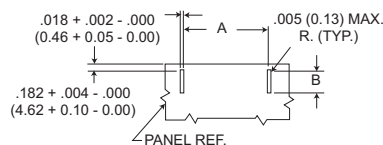
**Figure 2**

### Edgeboard Mounting



**Figure 3**

### Rear Mounting



**Figure 4**

### Edgeboard Mounting

1. A panel thickness of 1/8" (3.17mm) maximum is recommended for ease of tab bending when a panel mounting key & clip assembly or edgeboard mounting brackets are used.
2. Front mounting is preferred. However, when rear mounting is necessary, use figure 3 for dimensions.
3. Figure 4 is for edge board mounting bracket or edgeboard clip assembly. The .184 + .002 (2.67 + .05) dimension locates the MD socket insulator flush with the end of the board.
4. Screw brackets (015-9100-000) will accommodate #2-56 screws.
5. Front mounting (Figure 1) and rear mounting (Figure 3) accommodate #2-56 screws.

Shell Size	Cutout Figure	A	B	C	D
		+ .004 (0.10) - .000 (0.00)	+ .004 (0.10) - .000 (0.00)	+ .004 (0.10) - .000 (0.00)	+ .005 (0.13) - .000 (0.00)
9	1	.408 (10.36)	.172 (4.37)	.650 (16.51)	.089 (2.26)
	2	.408 (10.36)	.172 (4.37)	-	-
	3	.378 (9.60)	.217 (5.51)	.650 (16.51)	.089 (2.26)
	4	.400 (10.16)	.091 (2.31)	-	-
15	1	.588 (14.94)	.172 (4.37)	.795 (20.19)	.089 (2.26)
	2	.588 (14.94)	.172 (4.37)	-	-
	3	.528 (13.28)	.217 (5.51)	.795 (20.19)	.089 (2.26)
	4	.550 (13.97)	.091 (2.31)	-	-
21	1	.738 (18.75)	.172 (4.37)	.945 (24.00)	.089 (2.26)
	2	.738 (18.75)	.172 (4.37)	-	-
	3	.678 (17.27)	.217 (5.51)	.945 (24.00)	.089 (2.26)
	4	.700 (17.78)	.091 (2.31)	-	-
25	1	.838 (21.29)	.172 (4.37)	1.045 (26.54)	.089 (2.26)
	2	.838 (21.29)	.172 (4.37)	-	-
	3	.778 (19.76)	.217 (5.51)	1.045 (26.54)	.089 (2.26)
	4	.800 (20.32)	.091 (2.31)	-	-
37	1	1.138 (28.91)	.172 (4.37)	1.345 (34.16)	.089 (2.26)
	2	1.138 (28.91)	.172 (4.37)	-	-
	3	1.078 (27.38)	.217 (5.51)	1.345 (34.16)	.089 (2.26)
	4	1.100 (27.94)	.091 (2.31)	-	-
51	1	1.088 (27.64)	.215 (5.46)	1.295 (32.89)	.089 (2.26)
	2	1.088 (27.64)	.215 (5.46)	-	-
	3	1.028 (26.11)	.260 (6.60)	1.295 (32.89)	.089 (2.26)
	4	1.050 (26.67)	.091 (2.31)	-	-



Dimensions shown in inch (mm)  
Specifications and dimensions subject to change

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