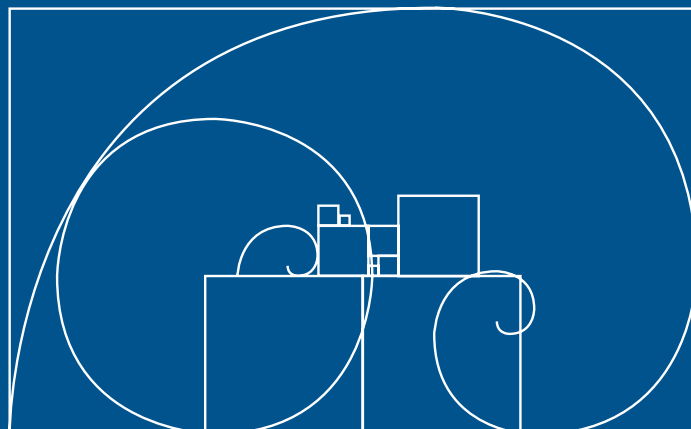


# COMMERCIAL

Barrier Blocks  
Circular Mini DIN  
BNC

Jones Plugs  
Edge Connectors



**Cinch**

Cinch Commercial Products, consisting of Jones Plugs and Sockets, Barrier Blocks, Edge Cards, Two-Piece Commercial Dins, Mini Din Plugs, and their newest addition the 75Ω Press-Fit BNC Receptacle, provide a wide variety of connectors for the purchaser and designer to choose from.

The Jones Plugs and Sockets have been utilized for decades and provide a quick, reliable, and economical means of solving your higher current-carrying capacity needs. Available in two series (300 and 2,400), these connectors can be found in data processing controls; amusement and vending machines; medical, communication, and test equipment; as well as industrial controls and heavy-duty, battery-powered equipment. Both series are available in a variety of cable and panel mounting options.

Cinch Barrier Blocks are designed to simplify wiring work by reducing splicing, preventing current leaks and short circuits, and increasing insulation. Available in a variety of densities, these barrier blocks can be found in applications ranging from industrial controls to switching systems.

Designed specially for applications where space is at a premium, the Cinch Mini Din family is ideal for personal computers, keyboard-mouse interface, hand-held electronic equipment, office-automation equipment, and audio and video equipment. Available in sizes 3 through 8 contact, the Cinch Mini Din family includes a fully shielded cable mounted plug in various cable lengths or cable mounted plug components for customers with high-volume assembly and overmold capabilities.

Cinch Edge Card Connectors are available in a variety of styles on both .100 or .156 center spacing.

The newest addition to the commercial family, the 75Ω Press-Fit BNC Receptacle is designed around a unique patented press-fit design that allows for multiple insertion into a backplane without loss of mechanical retention or electrical performance.

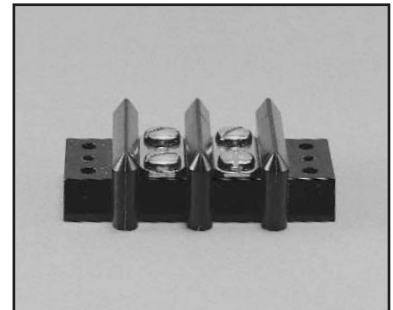
When looking for time reliability to solve your commercial interconnect needs, look no further than Cinch Connectors. Whether it's a Jones Plug and Socket, Barrier Block, Edge Card, Mini Din plug, or our newest addition, the 75Ω BNC Press-Fit connector, you will always know years of customer satisfaction stand behind the product you choose.

FEATURES

- *Interposing barriers between terminals yield higher electrical ratings and provide additional protection against frayed wire shorting.*
- *A wide variety of barrier blocks makes it possible to select the combination of mechanical and electrical characteristics that best meet the exact requirements of your application.*
- *A wide selection of optional terminals and fanning strips permits the equipment designer to choose the method of termination most suitable for his environmental specifications and manufacturing requirements.*

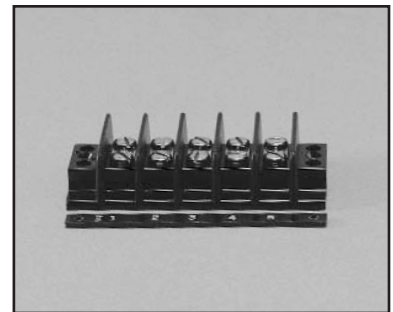
MATERIALS

**Insulation Material:** Molded monoblock, general purpose phenolic, black, UL Rated 94V-1  
**Eyelets:** Material - Brass  
Plating - Nickel  
**Screws:** Material - Steel  
Plating - Nickel over copper flash  
**Solder Terminals:** Material - Brass  
Plating - Electro-Tin  
**Marker Strip Material:** Nema Grade XPC, UL Rated 94V-O



ENVIRONMENTAL

**Operating Temperature:** -55° to +300°F  
**Certifications:** UL Recognized - File E61245  
CSA - LR 31996



Marketed exclusively through distribution.

## TERMINAL BLOCK QUICK REFERENCE

Series	Center-to-Center Spacing	Number of Terminals	Single or Double Row	Screw Size	Operating Voltage	Current Rating	Max. Wire Size	Max. Watts/Terminal	Voltage Rating w/Marker	Voltage Rating w/o Marker	Marker Strip Mounting
140	.375	1-25	Double	5-40	250 Volts	15 Amps	#16	3750	2000	1100	Bottom
141	.438	1-20	Double	6-32	250 Volts	20 Amps	#14	5000	2400	1100	Bottom
142	.563	1-17	Double	8-32	250 Volts	30 Amps	#10	7500	2600	1600	Bottom
150	.688	1-10	Double	10-32	250 Volts	40 Amps	#10	10,000	2400	1500	Bottom
151	.875	1-8	Double	12-32	250 Volts	50 Amps	#8	12,500	3400	1800	Bottom
152	1.125	1-6	Double	1/4-28	250 Volts	70 Amps	#6	54,000	3800	2100	Bottom
164	.375	1-21	Double	6-32	250 Volts	15 Amps	#14	3750	2000	1100	Bottom
540	.375	2-31	Double	5-40	600 Volts	15 Amps	#16	3750	2300	2300	Top
541	.438	2-30	Double	6-32	600 Volts	20 Amps	#14	5000	2800	2800	Top
542	.563	2-26	Double	8-32	600 Volts	30 Amps	#10	7500	4000	4000	Top
176	.375	2-10	Single	5-40	250 Volts	15 Amps	#16	3750	N/A	1100	N/A

Marketed exclusively through distribution.

# Barrier Blocks Series 140

.375 Density, 5-40 x 3/16"  
BH Screw, Open Bottom,  
Double Row

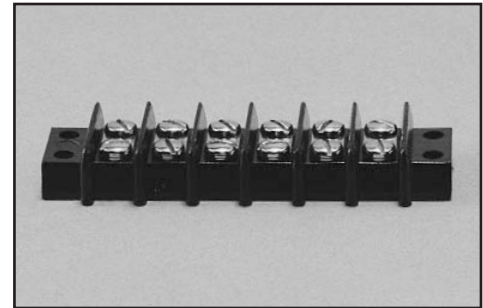


### Electrical Characteristics

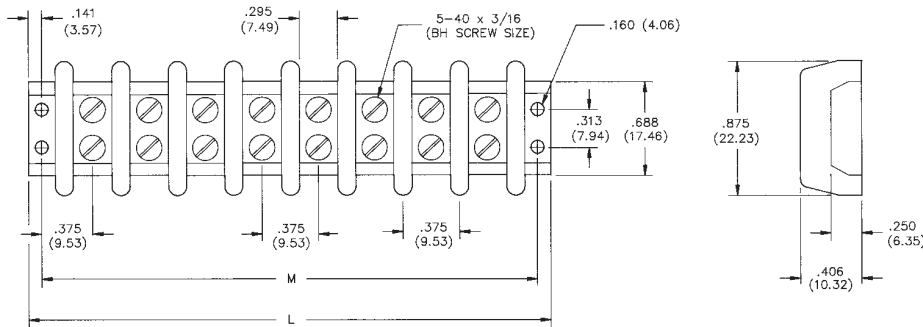
**Voltage Rating:** 250 VAC RMS maximum  
**Current Rating:** 15 Amps maximum  
**Maximum Watts Per Terminal:** 3750

### Mechanical Characteristics

**Maximum Wire Size:** #16 AWG  
**Recommended Tightening Torque:** 9 lb.-in.



### Dimensions



### Ordering Information

No. of Terminals	Standard Screw Catalog No.	"M" Dim.	"L" Dim.
1	1-140	.750	1.032
2	2-140	1.125	1.407
3	3-140	1.500	1.782
4	4-140	1.875	2.157
5	5-140	2.250	2.532
6	6-140	2.625	2.907
7	7-140	3.000	3.282
8	8-140	3.375	3.657
9	9-140	3.750	4.032
10	10-140	4.125	4.407
11	11-140	4.500	4.782
12	12-140	4.875	5.157
13	13-140	5.250	5.532
14	14-140	5.625	5.907
15	15-140	6.000	6.282
16	16-140	6.375	6.657
17	17-140	6.750	7.032
18	18-140	7.125	7.407
19	19-140	7.500	7.782
20	20-140	7.875	8.157
21	21-140	8.250	8.532
22	22-140	8.625	8.907
23	23-140	9.000	9.282
24	24-140	9.375	9.657
25	25-140	9.750	10.032

# Barrier Blocks Series 140

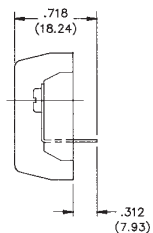
.375 Density, 5-40 x 3/16"  
BH Screw, Open Bottom,  
Double Row



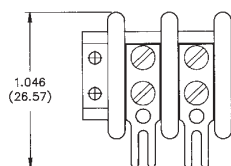
## Solder Terminal Options

### Dimensions

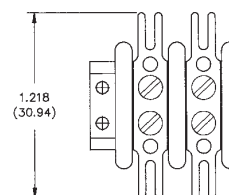
"Y" Terminals



"3/4W" Terminals



"W" Terminals



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.	Catalog No.
1	1-140-Y	1-140-3/4W	1-140-W
2	2-140-Y	2-140-3/4W	2-140-W
3	3-140-Y	3-140-3/4W	3-140-W
4	4-140-Y	4-140-3/4W	4-140-W
5	5-140-Y	5-140-3/4W	5-140-W
6	6-140-Y	6-140-3/4W	6-140-W
7	7-140-Y	7-140-3/4W	7-140-W
8	8-140-Y	8-140-3/4W	8-140-W
9	9-140-Y	9-140-3/4W	9-140-W
10	10-140-Y	10-140-3/4W	10-140-W
11	11-140-Y	11-140-3/4W	11-140-W
12	12-140-Y	12-140-3/4W	12-140-W
13	13-140-Y	13-140-3/4W	13-140-W
14	14-140-Y	14-140-3/4W	14-140-W
15	15-140-Y	15-140-3/4W	15-140-W
16	16-140-Y	16-140-3/4W	16-140-W
17	17-140-Y	17-140-3/4W	17-140-W
18	18-140-Y	18-140-3/4W	18-140-W
19	19-140-Y	19-140-3/4W	19-140-W
20	20-140-Y	20-140-3/4W	20-140-W
21	21-140-Y	21-140-3/4W	21-140-W
22	22-140-Y	22-140-3/4W	22-140-W
23	23-140-Y	23-140-3/4W	23-140-W
24	24-140-Y	24-140-3/4W	24-140-W
25	25-140-Y	25-140-3/4W	25-140-W

Solder Terminals can be ordered separately.

Terminal Type	Catalog No.
"Y"	Y-140
"3/4W"	3/4W-140
"W"	W-140

Marketed exclusively through distribution.

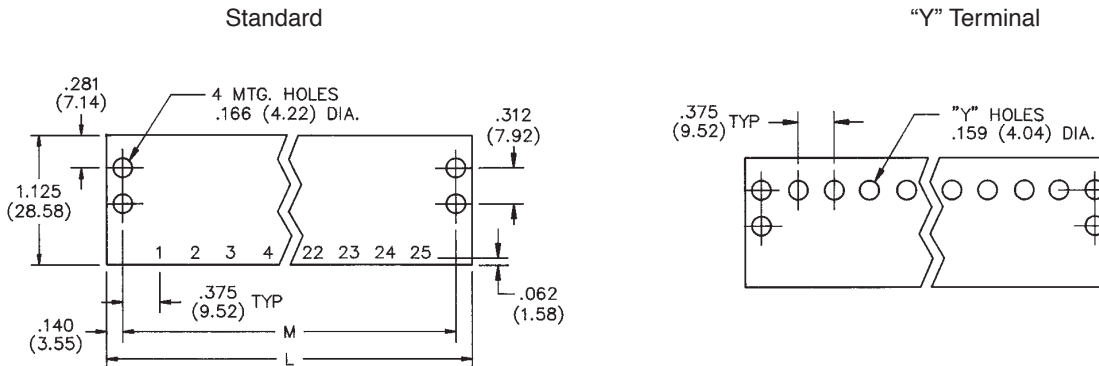
# Barrier Blocks Series 140

.375 Density, 5-40 x 3/16"  
BH Screw, Open Bottom,  
Double Row



## Marker Strips

### Dimensions



### Ordering Information

No. of Terminals	Catalog No.	Catalog No.
1	MS-1-140	MS-1-140-Y
2	MS-2-140	MS-2-140-Y
3	MS-3-140	MS-3-140-Y
4	MS-4-140	MS-4-140-Y
5	MS-5-140	MS-5-140-Y
6	MS-6-140	MS-6-140-Y
7	MS-7-140	MS-7-140-Y
8	MS-8-140	MS-8-140-Y
9	MS-9-140	MS-9-140-Y
10	MS-10-140	MS-10-140-Y
11	MS-11-140	MS-11-140-Y
12	MS-12-140	MS-12-140-Y
13	MS-13-140	MS-13-140-Y
14	MS-14-140	MS-14-140-Y
15	MS-15-140	MS-15-140-Y
16	MS-16-140	MS-16-140-Y
17	MS-17-140	MS-17-140-Y
18	MS-18-140	MS-18-140-Y
19	MS-19-140	MS-19-140-Y
20	MS-20-140	MS-20-140-Y
21	MS-21-140	MS-21-140-Y
22	MS-22-140	MS-22-140-Y
23	MS-23-140	MS-23-140-Y
24	MS-24-140	MS-24-140-Y
25	MS-25-140	MS-25-140-Y

Use Standard Marker Strips for "3/4W" and "W" Solder Terminals.

### Accessories

- Jumpers
- Fanning Strips

Marketed exclusively through distribution.

# Barrier Blocks Series 141

.438 Density, 6-32 x 1/4"  
BH Screw, Open Bottom,  
Double Row



### Electrical Characteristics

**Voltage Rating:** 250 VAC RMS maximum

**Current Rating:** 20 Amps maximum

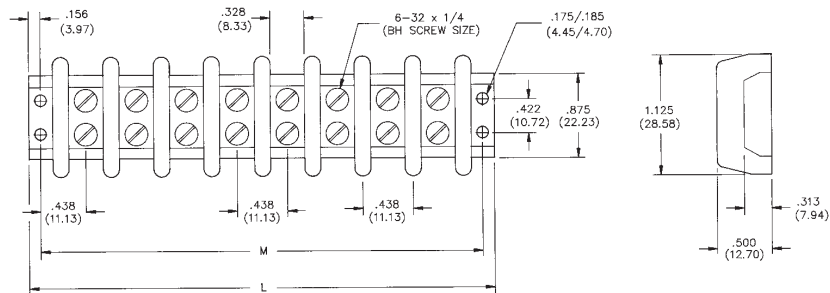
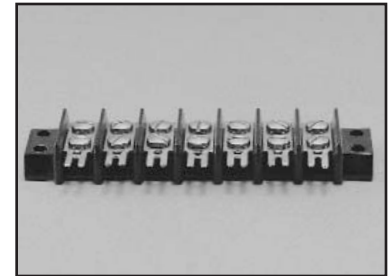
**Maximum Watts Per Terminal:** 5000

### Mechanical Characteristics

**Maximum Wire Size:** #14 AWG

**Recommended Tightening Torque:** 12 lb.-in.

### Dimensions



### Ordering Information

No. of Terminals	Standard Screw Catalog No.	"M" Dim.	"L" Dim.
1	1-141	.875	1.187
2	2-141	1.312	1.625
3	3-141	1.750	2.062
4	4-141	2.187	2.500
5	5-141	2.625	2.938
6	6-141	3.062	3.375
7	7-141	3.500	3.812
8	8-141	3.938	4.250
9	9-141	4.375	4.687
10	10-141	4.813	5.125
11	11-141	5.250	5.562
12	12-141	5.687	6.000
13	13-141	6.125	6.437
14	14-141	6.562	6.875
15	15-141	7.000	7.312
16	16-141	7.437	7.750
17	17-141	7.875	8.187
18	18-141	8.312	8.625
19	19-141	8.750	9.062
20	20-141	9.187	9.500

Marketed exclusively through distribution.



# Barrier Blocks Series 141

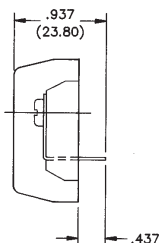
.438 Density, 6-32 x 1/4"  
BH Screw, Open Bottom,  
Double Row



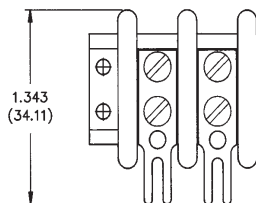
## Solder Terminal Options

### Dimensions

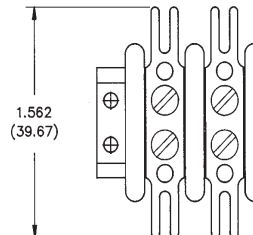
"Y" Terminals



"3/4W" Terminals



"W" Terminals



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.	Catalog No.
1	1-141-Y	1-141-3/4W	1-141-W
2	2-141-Y	2-141-3/4W	2-141-W
3	3-141-Y	3-141-3/4W	3-141-W
4	4-141-Y	4-141-3/4W	4-141-W
5	5-141-Y	5-141-3/4W	5-141-W
6	6-141-Y	6-141-3/4W	6-141-W
7	7-141-Y	7-141-3/4W	7-141-W
8	8-141-Y	8-141-3/4W	8-141-W
9	9-141-Y	9-141-3/4W	9-141-W
10	10-141-Y	10-141-3/4W	10-141-W
11	11-141-Y	11-141-3/4W	11-141-W
12	12-141-Y	12-141-3/4W	12-141-W
13	13-141-Y	13-141-3/4W	13-141-W
14	14-141-Y	14-141-3/4W	14-141-W
15	15-141-Y	15-141-3/4W	15-141-W
16	16-141-Y	16-141-3/4W	16-141-W
17	17-141-Y	17-141-3/4W	17-141-W
18	18-141-Y	18-141-3/4W	18-141-W
19	19-141-Y	19-141-3/4W	19-141-W
20	20-141-Y	20-141-3/4W	20-141-W

Solder Terminals can be ordered separately.

**Terminal Type**  
"Y"  
"3/4W"  
"W"

**Catalog No.**  
Y-141  
3/4W-141  
W-141

Marketed exclusively through distribution.

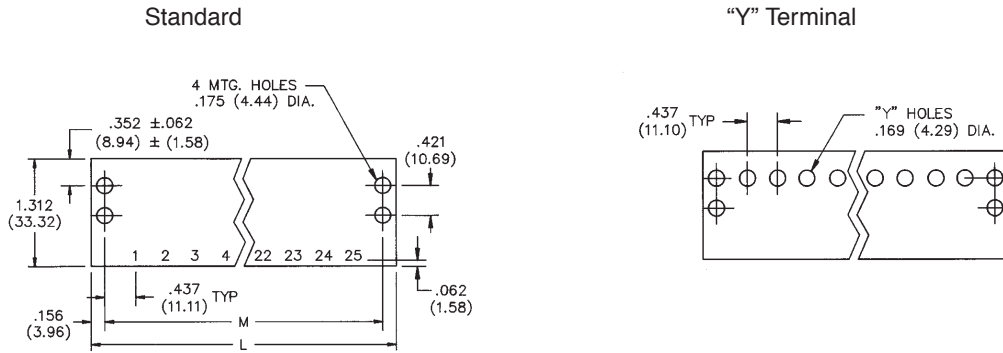
# Barrier Blocks Series 141

.438 Density, 6-32 x 1/4"  
BH Screw, Open Bottom,  
Double Row



## Marker Strips

## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.
1	MS-1-141	MS-1-141-Y
2	MS-2-141	MS-2-141-Y
3	MS-3-141	MS-3-141-Y
4	MS-4-141	MS-4-141-Y
5	MS-5-141	MS-5-141-Y
6	MS-6-141	MS-6-141-Y
7	MS-7-141	MS-7-141-Y
8	MS-8-141	MS-8-141-Y
9	MS-9-141	MS-9-141-Y
10	MS-10-141	MS-10-141-Y
11	MS-11-141	MS-11-141-Y
12	MS-12-141	MS-12-141-Y
13	MS-13-141	MS-13-141-Y
14	MS-14-141	MS-14-141-Y
15	MS-15-141	MS-15-141-Y
16	MS-16-141	MS-16-141-Y
17	MS-17-141	MS-17-141-Y
18	MS-18-141	MS-18-141-Y
19	MS-19-141	MS-19-141-Y
20	MS-20-141	MS-20-141-Y

Use Standard Marker Strip for "3/4W" and "W" Solder Terminals.

## Accessories

- Jumpers
- Fanning Strips

Marketed exclusively through distribution.

# Barrier Blocks Series 142

.563 Density, 8-32 x 5/16"  
BH Screw, Open Bottom,  
Double Row



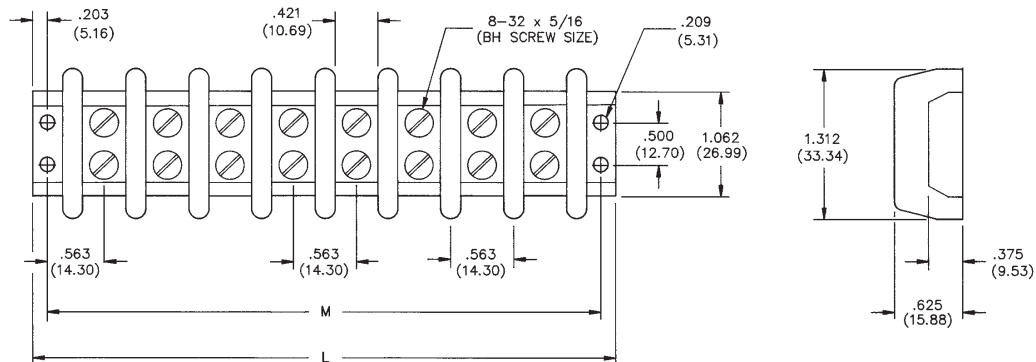
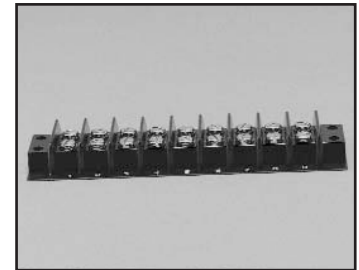
### Electrical Characteristics

**Voltage Rating:** 250 VAC RMS maximum  
**Current Rating:** 30 Amps maximum  
**Maximum Watts Per Terminal:** 7500

### Mechanical Characteristics

**Maximum Wire Size:** #10 AWG  
**Recommended Tightening Torque:** 16 lb.-in.

### Dimensions



### Ordering Information

No. of Terminals	Standard Screw Catalog No.	"M" Dim.	"L" Dim.
1	1-142	1.125	1.531
2	2-142	1.687	2.094
3	3-142	2.250	2.656
4	4-142	2.812	3.219
5	5-142	3.375	3.781
6	6-142	3.937	4.344
7	7-142	4.500	4.906
8	8-142	5.062	5.468
9	9-142	5.625	6.031
10	10-142	6.187	6.594
11	11-142	6.750	7.156
12	12-142	7.312	7.719
13	13-142	7.875	8.281
14	14-142	8.437	8.844
15	15-142	9.000	9.406
16	16-142	9.562	9.969
17	17-142	10.125	10.531

Marketed exclusively through distribution.

# Barrier Blocks Series 142

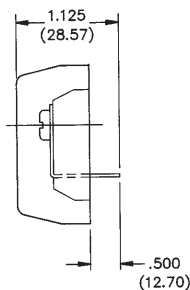
.563 Density, 8-32 x 5/16"  
BH Screw, Open Bottom,  
Double Row



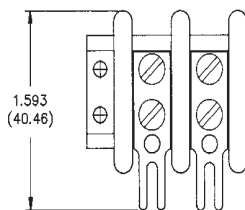
## Solder Terminal Options

### Dimensions

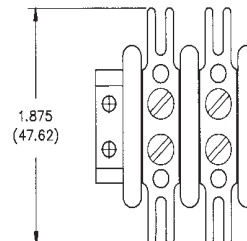
“Y” Terminals



“3/4W” Terminals



“W” Terminals



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.	Catalog No.
1	1-142-Y	1-142-3/4W	1-142-W
2	2-142-Y	2-142-3/4W	2-142-W
3	3-142-Y	3-142-3/4W	3-142-W
4	4-142-Y	4-142-3/4W	4-142-W
5	5-142-Y	5-142-3/4W	5-142-W
6	6-142-Y	6-142-3/4W	6-142-W
7	7-142-Y	7-142-3/4W	7-142-W
8	8-142-Y	8-142-3/4W	8-142-W
9	9-142-Y	9-142-3/4W	9-142-W
10	10-142-Y	10-142-3/4W	10-142-W
11	11-142-Y	11-142-3/4W	11-142-W
12	12-142-Y	12-142-3/4W	12-142-W
13	13-142-Y	13-142-3/4W	13-142-W
14	14-142-Y	14-142-3/4W	14-142-W
15	15-142-Y	15-142-3/4W	15-142-W
16	16-142-Y	16-142-3/4W	16-142-W
17	17-142-Y	17-142-3/4W	17-142-W

Solder Terminals can be ordered separately.

### Terminal Type

“Y”  
“3/4W”  
“W”

### Catalog No.

Y-142  
3/4W-142  
W-142

Marketed exclusively through distribution.

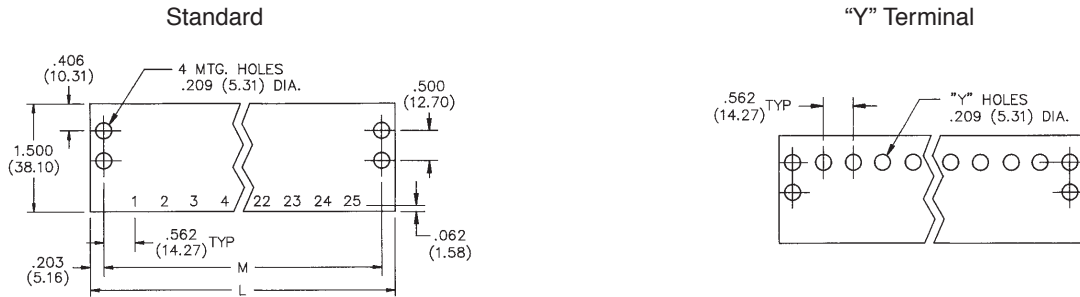
# Barrier Blocks Series 142

.563 Density, 8-32 x 5/16"  
BH Screw, Open Bottom,  
Double Row



## Marker Strips

## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.
1	MS-1-142	MS-1-142-Y
2	MS-2-142	MS-2-142-Y
3	MS-3-142	MS-3-142-Y
4	MS-4-142	MS-4-142-Y
5	MS-5-142	MS-5-142-Y
6	MS-6-142	MS-6-142-Y
7	MS-7-142	MS-7-142-Y
8	MS-8-142	MS-8-142-Y
9	MS-9-142	MS-9-142-Y
10	MS-10-142	MS-10-142-Y
11	MS-11-142	MS-11-142-Y
12	MS-12-142	MS-12-142-Y
13	MS-13-142	MS-13-142-Y
14	MS-14-142	MS-14-142-Y
15	MS-15-142	MS-15-142-Y
16	MS-16-142	MS-16-142-Y
17	MS-17-142	MS-17-142-Y

Use Standard Marker Strips for "3/4W" and "W" Solder Terminals.

## Accessories

- Jumpers
- Fanning Strips

Marketed exclusively through distribution.

# Barrier Blocks Series 150

.688 Density, 10-32 x 5/16"  
BH Screw, Open Bottom,  
Double Row



### Electrical Characteristics

**Voltage Rating:** 250 VAC RMS maximum

**Current Rating:** 40 Amps maximum

**Maximum Watts Per Terminal:** 10,000

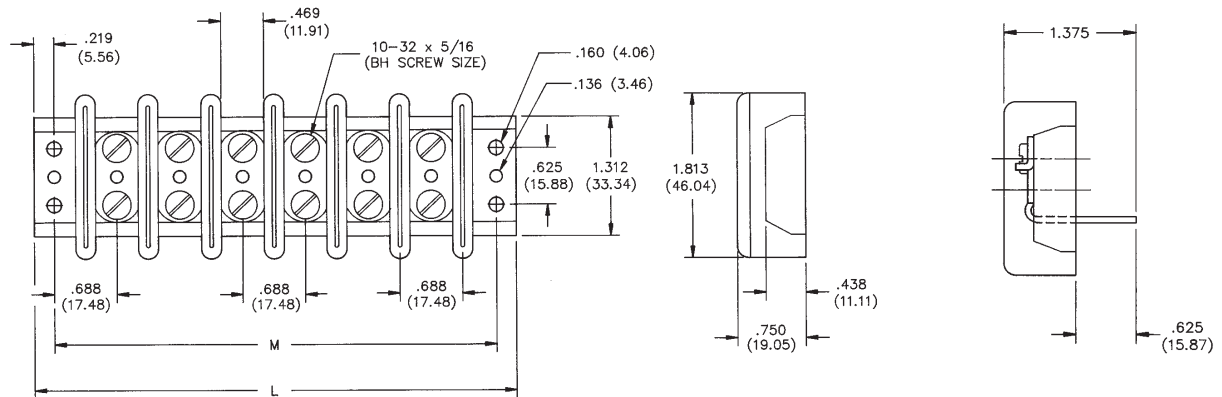
### Mechanical Characteristics

**Maximum Wire Size:** #10 AWG

**Recommended Tightening Torque:** 20 lb.-in.



### Dimensions



### Ordering Information

No. of Terminals	Standard Screw Catalog No.	Y-Terminals Catalog No.	"M" Dim.	"L" Dim.
1	1-150	1-150-Y	1.375	1.812
2	2-150	2-150-Y	2.062	2.500
3	3-150	3-150-Y	2.750	3.187
4	4-150	4-150-Y	3.437	3.875
5	5-150	5-150-Y	4.125	4.562
6	6-150	6-150-Y	4.812	5.250
7	7-150	7-150-Y	5.500	5.938
8	8-150	8-150-Y	6.187	6.625
9	9-150	9-150-Y	6.875	7.312
10	10-150	10-150-Y	7.562	8.000

Marketed exclusively through distribution.

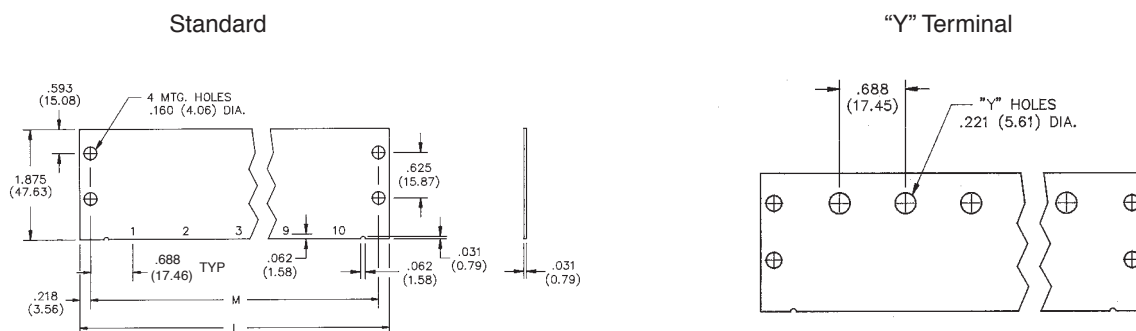
# Barrier Blocks Series 150

.688 Density, 10-32 x 5/16"  
BH Screw, Open Bottom,  
Double Row



## Marker Strips

## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.
1	MS-1-150	MS-1-150-Y
2	MS-2-150	MS-2-150-Y
3	MS-3-150	MS-3-150-Y
4	MS-4-150	MS-4-150-Y
5	MS-5-150	MS-5-150-Y
6	MS-6-150	MS-6-150-Y
7	MS-7-150	MS-7-150-Y
8	MS-8-150	MS-8-150-Y
9	MS-9-150	MS-9-150-Y
10	MS-10-150	MS-10-150-Y

## Accessories

None Available for 150 Series.

Marketed exclusively through distribution.

# Barrier Blocks Series 151

.875 Density, 12-32 x 3/8"  
BH Screw, Open Bottom,  
Double Row



## Electrical Characteristics

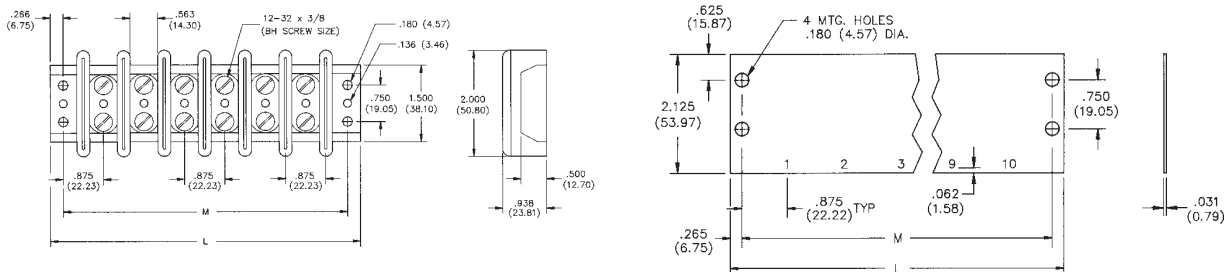
**Voltage Rating:** 250 Volts maximum  
**Current Rating:** 50 Amps maximum  
**Maximum Watts Per Terminal:** 12,500

## Mechanical Characteristics

**Maximum Wire Size:** #8  
**Recommended Tightening Torque:** 40 lb.-in.



## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	"M" Dim. (in)	"L" Dim. (in)	Marker Strip Catalog No.
1	1-151	1.750	2.282	N/A
2	2-151	2.625	3.157	MS-2-151
3	3-151	3.500	4.032	MS-3-151
4	4-151	4.375	4.907	MS-4-151
5	5-151	5.250	5.782	MS-5-151
6	6-151	6.125	6.657	MS-6-151
7	7-151	7.000	7.532	MS-7-151
8	8-151	7.875	8.407	MS-8-151

Solder Terminals can be ordered separately.

**Terminal Type** "W"  
**Catalog No.** W-151

Marketed exclusively through distribution.



# Barrier Blocks Series 152

1.25 Density, 1/4-28 x 1/2"  
BH Screw, Open Bottom,  
Double Row

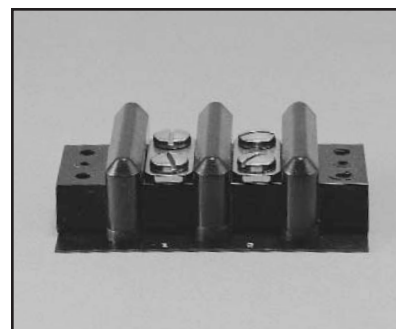


## Electrical Characteristics

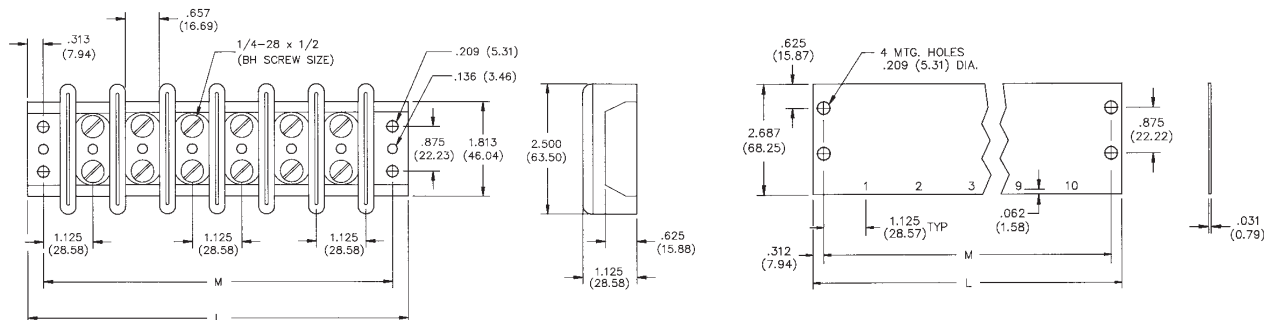
**Voltage Rating:** 250 Volts maximum  
**Current Rating:** 70 Amps maximum  
**Maximum Watts Per Terminal:** 54,000

## Mechanical Characteristics

**Maximum Wire Size:** #6  
**Recommended Tightening Torque:** 75 lb.-in.



## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	"M" Dim. (in)	"L" Dim. (in)	Marker Strip Catalog No.
1	1-152	2.250	2.876	N/A
2	2-152	3.375	4.001	MS-2-152
3	3-152	4.500	5.126	MS-3-152
4	4-152	5.625	6.251	MS-4-152
5	5-152	6.750	7.376	MS-5-152
6	6-152	7.875	8.501	MS-6-152

## Accessories

None Available for 152 Series.

Marketed exclusively through distribution.

# Barrier Blocks Series 164

.375 Density, 6-32 x 5/16"  
BH Screw, Open Bottom,  
Double Row



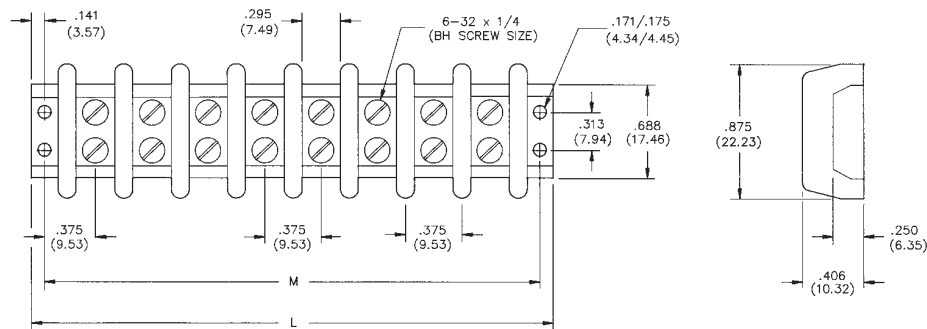
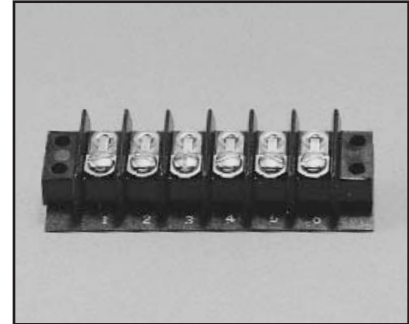
## Electrical Characteristics

**Voltage Rating:** 250 Volts maximum  
**Current Rating:** 15 Amps maximum  
**Maximum Watts Per Terminal:** 3750

## Mechanical Characteristics

**Maximum Wire Size:** #14  
**Recommended Tightening Torque:** 12 lb.-in.

## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	"M" Dim. (in)	"L" Dim. (in)
1	1-164	0.750	1.032
2	2-164	1.125	1.407
3	3-164	1.500	1.782
4	4-164	1.875	2.157
5	5-164	2.250	2.532
6	6-164	2.625	2.907
7	7-164	3.000	3.282
8	8-164	3.375	3.657
9	9-164	3.750	4.032
10	10-164	4.125	4.407
11	11-164	4.500	4.782
12	12-164	4.875	5.157
13	13-164	5.250	5.532
14	14-164	5.625	5.907
15	15-164	6.000	6.282
16	16-164	6.375	6.657
17	17-164	6.750	7.032
18	18-164	7.125	7.407
19	19-164	7.500	7.782
20	20-164	7.875	8.157
21	21-164	8.250	8.532

Marketed exclusively through distribution.

# Barrier Blocks Series 164

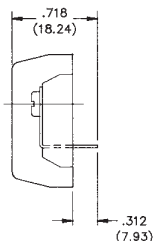
.375 Density, 6-32 x 1/4"  
BH Screw, Open Bottom,  
Double Row



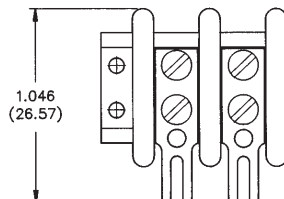
## Solder Terminal Options

## Dimensions

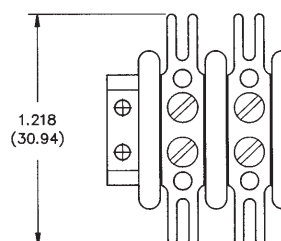
“Y” Terminals



“3/4W” Terminals



“W” Terminals



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.	Catalog No.
1	1-164-Y	1-164-3/4W	1-164-W
2	2-164-Y	2-164-3/4W	2-164-W
3	3-164-Y	3-164-3/4W	3-164-W
4	4-164-Y	4-164-3/4W	4-164-W
5	5-164-Y	5-164-3/4W	5-164-W
6	6-164-Y	6-164-3/4W	6-164-W
7	7-164-Y	7-164-3/4W	7-164-W
8	8-164-Y	8-164-3/4W	8-164-W
9	9-164-Y	9-164-3/4W	9-164-W
10	10-164-Y	10-164-3/4W	10-164-W
11	11-164-Y	11-164-3/4W	11-164-W
12	12-164-Y	12-164-3/4W	12-164-W
13	13-164-Y	13-164-3/4W	13-164-W
14	14-164-Y	14-164-3/4W	14-164-W
15	15-164-Y	15-164-3/4W	15-164-W
16	16-164-Y	16-164-3/4W	16-164-W
17	17-164-Y	17-164-3/4W	17-164-W
18	18-164-Y	18-164-3/4W	18-164-W
19	19-164-Y	19-164-3/4W	19-164-W
20	20-164-Y	20-164-3/4W	20-164-W
21	21-164-Y	21-164-3/4W	21-164-W

Marketed exclusively through distribution.

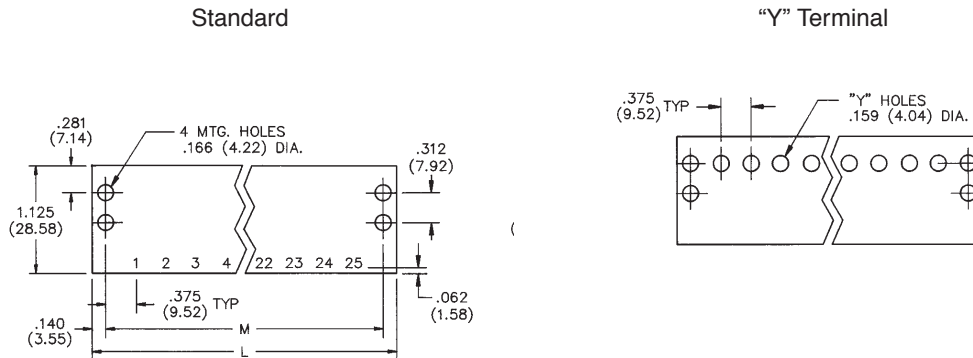
# Barrier Blocks Series 164

.375 Density, 6-32 x 1/4"  
BH Screw, Open Bottom,  
Double Row



## Marker Strips

### Dimensions



## Ordering Information

No. of Terminals	Catalog No.	Catalog No.
1	N/A	N/A
2	MS-2-140	MS-2-140-Y
3	MS-3-140	MS-3-140-Y
4	MS-4-140	MS-4-140-Y
5	MS-5-140	MS-5-140-Y
6	MS-6-140	MS-6-140-Y
7	MS-7-140	MS-7-140-Y
8	MS-8-140	MS-8-140-Y
9	MS-9-140	MS-9-140-Y
10	MS-10-140	MS-10-140-Y
11	MS-11-140	MS-11-140-Y
12	MS-12-140	MS-12-140-Y
13	MS-13-140	MS-13-140-Y
14	MS-14-140	MS-14-140-Y
15	MS-15-140	MS-15-140-Y
16	MS-16-140	MS-16-140-Y
17	MS-17-140	MS-17-140-Y
18	MS-18-140	MS-18-140-Y
19	MS-19-140	MS-19-140-Y
20	MS-20-140	MS-20-140-Y
21	MS-21-140	MS-21-140-Y

Use Standard Marker Strips for "3/4W" and "W" Solder Terminals.

Marketed exclusively through distribution.

# Barrier Blocks Series 540

.375 Density, 5-40 x 1/4"  
BH Screw, Closed Bottom,  
Double Row



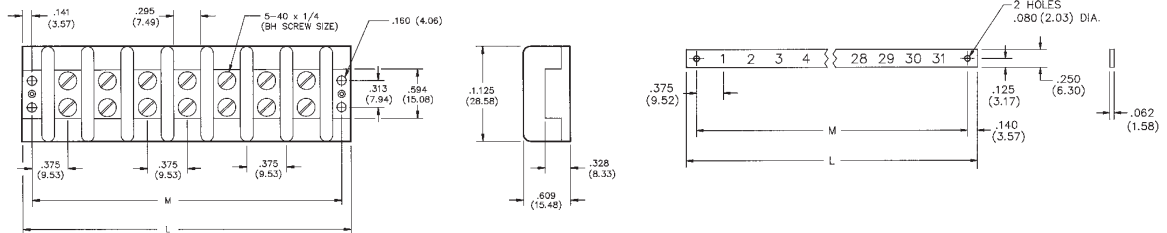
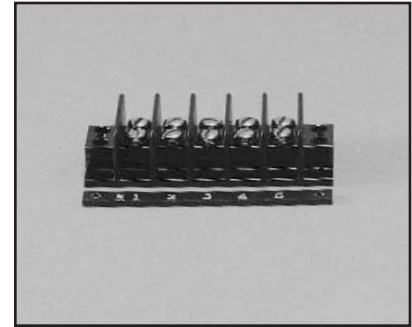
## Electrical Characteristics

**Voltage Rating:** 600 Volts maximum  
**Current Rating:** 15 Amps  
**Maximum Watts Per Terminal:** 3750

## Mechanical Characteristics

**Maximum Wire Size:** #16  
**Recommended Tightening Torque:** 9 lb.-in.

## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	"M" Dim. (in)	"L" Dim. (in)	Marker Strip Catalog No.
2	2-540	1.125	1.407	MSX-2-540
3	3-540	1.500	1.782	MSX-3-540
4	4-540	1.875	2.157	MSX-4-540
5	5-540	2.250	2.532	MSX-5-540
6	6-540	2.625	2.907	MSX-6-540
7	7-540	3.000	3.282	MSX-7-540
8	8-540	3.375	3.657	MSX-8-540
9	9-540	3.750	4.032	MSX-9-540
10	10-540	4.125	4.407	MSX-10-540
11	11-540	4.500	4.782	MSX-11-540
12	12-540	4.875	5.157	MSX-12-540
13	13-540	5.250	5.532	MSX-13-540
14	14-540	5.625	5.907	MSX-14-540
15	15-540	6.000	6.282	MSX-15-540
16	16-540	6.375	6.657	MSX-16-540
17	17-540	6.750	7.032	MSX-17-540
18	18-540	7.125	7.407	MSX-18-540
19	19-540	7.500	7.782	MSX-19-540
20	20-540	7.875	8.157	MSX-20-540
21	21-540	8.250	8.532	MSX-21-540
22	22-540	8.625	8.907	MSX-22-540
23	23-540	9.000	9.282	MSX-23-540
24	24-540	9.375	9.657	MSX-24-540
25	25-540	9.750	10.032	MSX-25-540
26	26-540	10.125	10.407	MSX-26-540
27	27-540	10.500	10.782	MSX-27-540
28	28-540	10.875	11.157	MSX-28-540
29	29-540	11.250	11.532	MSX-29-540
30	30-540	11.625	11.907	MSX-30-540
31	31-540	12.000	12.282	MSX-31-540

Marketed exclusively through distribution.

# Barrier Blocks Series 541

.438 Density, 6-32 x 1/4"  
BH Screw, Closed Bottom,  
Double Row



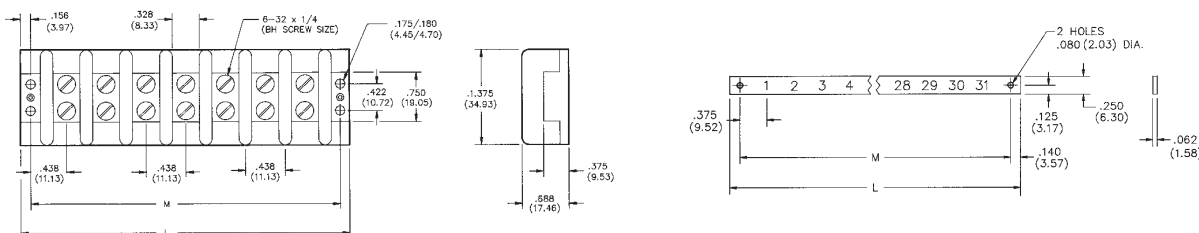
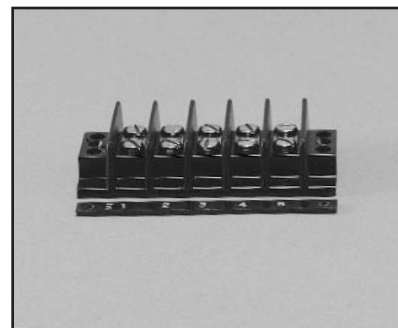
## Electrical Characteristics

**Voltage Rating:** 600 Volts maximum  
**Current Rating:** 20 Amps  
**Maximum Watts Per Terminal:** 5000

## Mechanical Characteristics

**Maximum Wire Size:** #14  
**Recommended Tightening Torque:** 12 lb.-in.

## Dimensions



## Ordering Information

No. of Terminals	Catalog No.	"M" Dim. (in)	"L" Dim. (in)	Marker Strip Catalog No.
2	2-541	1.314	1.626	MSX-2-541
3	3-541	1.752	2.064	MSX-3-541
4	4-541	2.190	2.502	MSX-4-541
5	5-541	2.628	2.940	MSX-5-541
6	6-541	3.066	3.378	MSX-6-541
7	7-541	3.504	3.816	MSX-7-541
8	8-541	3.942	4.254	MSX-8-541
9	9-541	4.380	4.692	MSX-9-541
10	10-541	4.818	5.130	MSX-10-541
11	11-541	5.256	5.568	MSX-11-541
12	12-541	5.694	6.006	MSX-12-541
13	13-541	6.132	6.444	MSX-13-541
14	14-541	6.570	6.882	MSX-14-541
15	15-541	7.008	7.320	MSX-15-541
16	16-541	7.446	7.758	MSX-16-541
17	17-541	7.884	8.196	MSX-17-541
18	18-541	8.322	8.634	MSX-18-541
19	19-541	8.760	9.072	MSX-19-541
20	20-541	9.198	9.510	MSX-20-541
21	21-541	9.636	9.948	MSX-21-541
22	22-541	10.074	10.386	MSX-22-541
23	23-541	10.512	10.824	MSX-23-541
24	24-541	10.950	11.262	MSX-24-541
25	25-541	11.388	11.700	MSX-25-541
26	26-541	11.826	12.138	MSX-26-541
27	27-541	12.264	12.576	MSX-27-541
28	28-541	12.702	13.014	MSX-28-541
29	29-541	13.140	13.452	MSX-29-541
30	30-541	13.578	13.890	MSX-30-541

Marketed exclusively through distribution.

# Barrier Blocks Series 542

.563 Density, 8-32 x 5/16"  
BH Screw, Closed Bottom,  
Double Row

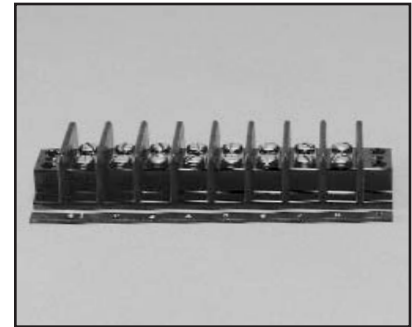


### Electrical Characteristics

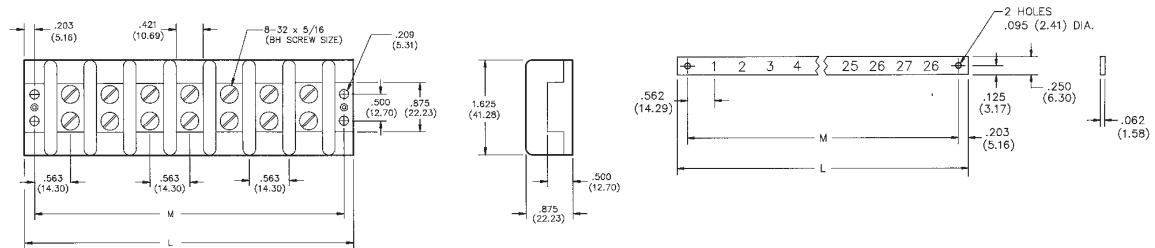
**Voltage Rating:** 600 Volts maximum  
**Current Rating:** 30 Amps  
**Maximum Watts Per Terminal:** 7500

### Mechanical Characteristics

**Maximum Wire Size:** #10  
**Recommended Tightening Torque:** 16 lb.-in.



### Dimensions



### Ordering Information

No. of Terminals	Catalog No.	"M" Dim. (in)	"L" Dim. (in)	Marker Strip Catalog No.
2	2-542	1.689	2.095	MSX-2-542
3	3-542	2.252	2.658	MSX-3-542
4	4-542	2.815	3.221	MSX-4-542
5	5-542	3.378	3.784	MSX-5-542
6	6-542	3.941	4.347	MSX-6-542
7	7-542	4.504	4.910	MSX-7-542
8	8-542	5.067	5.473	MSX-8-542
9	9-542	5.630	6.036	MSX-9-542
10	10-542	6.193	6.599	MSX-10-542
11	11-542	6.756	7.162	MSX-11-542
12	12-542	7.319	7.725	MSX-12-542
13	13-542	7.882	8.288	MSX-13-542
14	14-542	8.445	8.851	MSX-14-542
15	15-542	9.008	9.414	MSX-15-542
16	16-542	9.571	9.977	MSX-16-542
17	17-542	10.134	10.540	MSX-17-542
18	18-542	10.697	11.103	MSX-18-542
19	19-542	11.260	11.666	MSX-19-542
20	20-542	11.823	12.229	MSX-20-542
21	21-542	12.386	12.792	MSX-21-542
22	22-542	12.949	13.355	MSX-22-542
23	23-542	13.512	13.918	MSX-23-542
24	24-542	14.075	14.481	MSX-24-542
25	25-542	14.638	15.044	MSX-25-542
26	26-542	15.201	15.607	MSX-26-542

Marketed exclusively through distribution.

# Barrier Blocks Series 176

.375 Density, 5-40 x 3/16"  
BH Screw, Dip Solder,  
Single Row

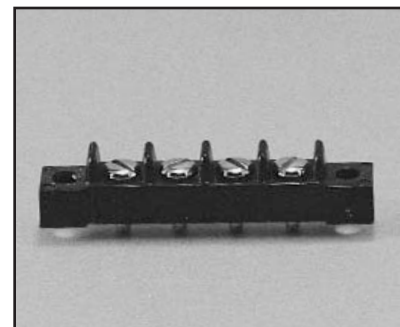


## Electrical Characteristics

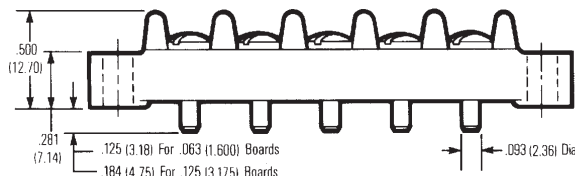
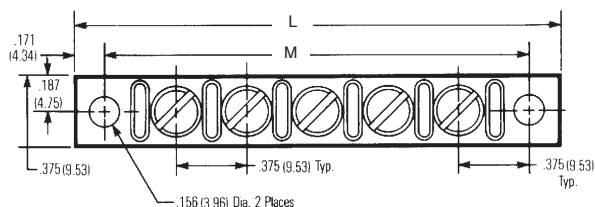
**Voltage Rating:** 250 Volts maximum  
**Current Rating:** 15 Amps maximum  
**Maximum Watts Per Terminal:** 3750

## Mechanical Characteristics

**Maximum Wire Size:** 16 AWG  
**Recommended Tightening Torque:** 16 lb.-in.



## Dimensions



## Ordering Information

No. of Terminals	With Mounting Ears		"M" Dimension	"L" Dimension
	Catalog No. .125 Tail Lgth	Catalog No. .184 Tail Lgth		
2	2-176-2	2-176-3	1.125	1.469
3	3-176-2	3-176-3	1.500	1.844
4	4-176-2	4-176-3	1.875	2.219
5	5-176-2	5-176-3	2.250	2.594
6	6-176-2	6-176-3	2.625	2.969
7	7-176-2	7-176-3	3.000	3.344
8	8-176-2	8-176-3	3.375	3.719
9	9-176-2	9-176-3	3.750	4.094
10	10-176-2	10-176-3	4.125	4.469

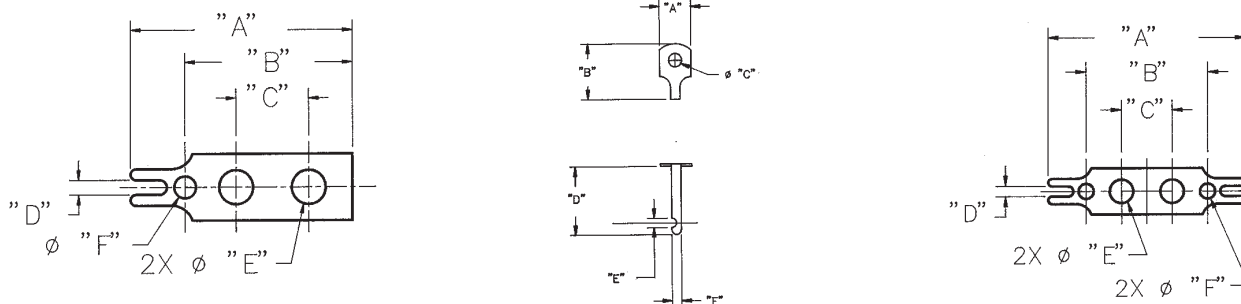
No. of Terminals	Without Mounting Ears		"L" Dimension
	Catalog No. .125 Tail Lgth	Catalog No. .184 Tail Lgth	
2	2-176-2A	2-176-3A	.719
3	3-176-2A	3-176-3A	1.094
4	4-176-2A	4-176-3A	1.469
5	5-176-2A	5-176-3A	1.844
6	6-176-2A	6-176-3A	2.219
7	7-176-2A	7-176-3A	2.594
8	8-176-2A	8-176-3A	2.969
9	9-176-2A	9-176-3A	3.344
10	10-176-2A	10-176-3A	3.719
11	11-176-2A	11-176-3A	4.094
12	12-176-2A	12-176-3A	4.469

Marketed exclusively through distribution.



## Solder Terminals 3/4W, Y, and W

Optional Terminals for use with Cinch terminal blocks.  
See chart for type and dimensions. (Below)



## Ordering Information

### "3/4 W" Terminals - Dimensions

Catalog Number	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
3/4W-140	.953	24.21	.719	18.20	.312	7.92	.062	1.57	.146	3.71	.094	2.39
3/4W-141	1.156	29.36	.680	17.27	.422	10.72	.078	1.98	.152	3.86	.125	3.18
3/4W-142	1.422	36.11	.797	20.24	.500	12.70	.094	2.39	.177	4.50	.125	3.18

### "Y" Terminals - Dimensions

Catalog Number	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Y-140	.281	7.14	.500	12.70	.136	3.45	.593	15.06	.093	2.36	.091	2.31
Y-141	.312	7.92	.625	15.88	.152	3.86	.781	19.83	.125	3.18	.103	2.62
Y-142	.421	10.69	.734	18.64	.177	4.50	.906	23.01	.125	3.18	.126	3.20

### "W" Terminals - Dimensions

Catalog Number	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
W-140	1.219	30.96	.750	19.05	.312	7.92	.063	1.60	.146	3.71	.094	2.39
W-141	1.563	39.70	.938	23.83	.422	10.72	.078	1.98	.152	3.86	.125	3.18
W-142	1.875	47.63	1.094	27.79	.500	12.70	.094	2.39	.177	4.50	.125	3.18

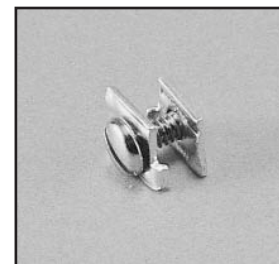
Marketed exclusively through distribution.

# Barrier Blocks Accessories



## Quick Clamp Terminals

Simplifies engaging of wires to barrier blocks. Wire is inserted into flared opening and screw is tightened. Screws are brass binder head type with nickel plating. Terminals are brass type with tin plating. Includes two mating clamps and one screw.



QC-1  
Shown

## Ordering Information

Barrier Block Series	Catalog No.	Screw Size	Wire Gauge Range AWG
141, 541	QC-1	6-32x5/16"	12 thru 22
142, 542	QC-2	8-32x3/8"	10 thru 16

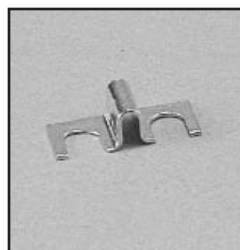
## Jumpers

For connecting between adjacent terminals or alternate terminals. All jumpers are brass with nickel plating.

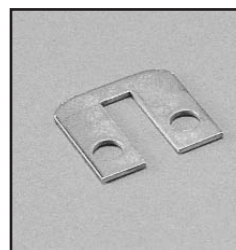
## Ordering Information

Barrier Block Series	Type	Catalog No.
140	A	140J-1
141	B	141J-1
141	F	141J
142	F	95B
142, 542	D	142J-1*
142, 542	E	142J-2
540	C	540J
541	C	541J
542	C	542J

\* Connects two alternate terminals



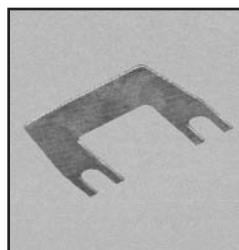
Type A



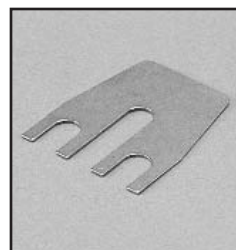
Type B



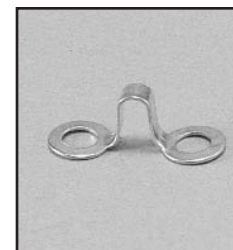
Type C



Type D



Type E



Type F

Marketed exclusively through distribution.

FEATURES

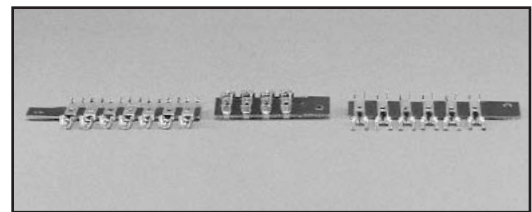
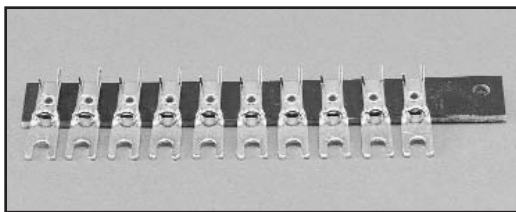
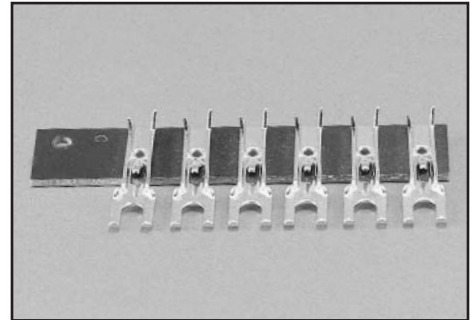
- *Minimize wiring errors.*
- *Available in straight and right-angle styles.*
- *Available with cable clamp hole on right or left side, designated by "L" or "R" at end of catalog number.*
- *Cable clamp hole for securing cable/wires with lacing twine or ty-wrap.*

MATERIALS

**Insulation Material:** UL 94HB rated XPC, chocolate

**Contact Material:** Brass

**Contact Plating:** Cadmium

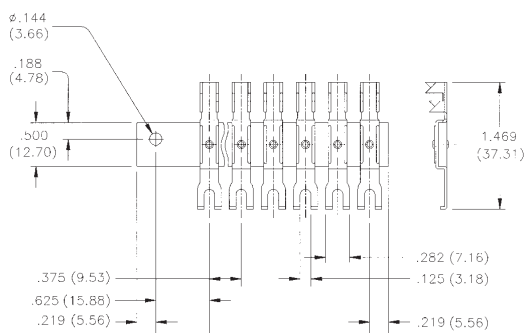


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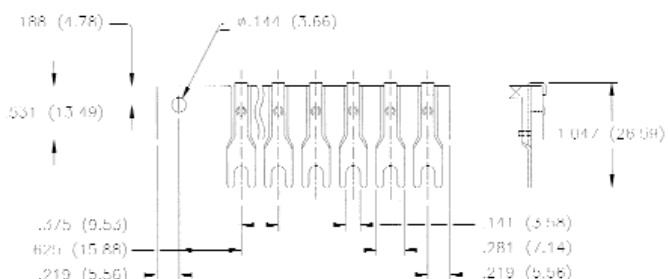
### Catalog Numbers and Dimensions for Fanning Strips for 140 Series Terminal Blocks

#### Straight Type

#### Dimensions



Catalog No. 6-160-R



Catalog No. 6-160B-R

#### Ordering Information

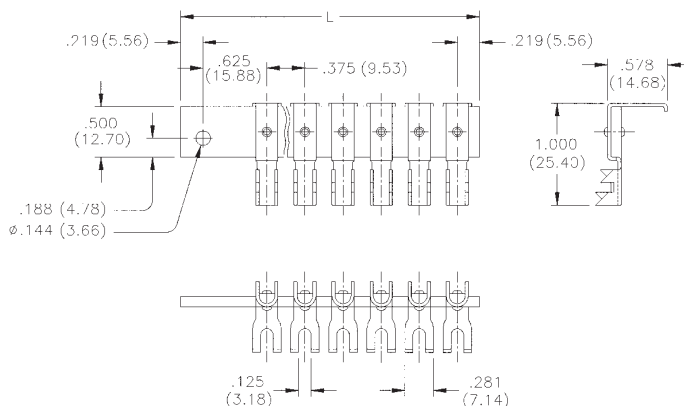
No. of Terminals	Catalog No.	Catalog No.	Catalog No.	Catalog No.
2	2-160-R	2-160-L	2-160B-R	2-160B-L
3	3-160-R	3-160-L	3-160B-R	3-160B-L
4	4-160-R	4-160-L	4-160B-R	4-160B-L
5	5-160-R	5-160-L	5-160B-R	5-160B-L
6	6-160-R	6-160-L	6-160B-R	6-160B-L
7	7-160-R	7-160-L	7-160B-R	7-160B-L
8	8-160-R	8-160-L	8-160B-R	8-160B-L
9	9-160-R	9-160-L	9-160B-R	9-160B-L
10	10-160-R	10-160-L	10-160B-R	10-160B-L
11	11-160-R	11-160-L	11-160B-R	11-160B-L
12	12-160-R	12-160-L	12-160B-R	12-160B-L
13	13-160-R	13-160-L	13-160B-R	13-160B-L
14	14-160-R	14-160-L	14-160B-R	14-160B-L
15	15-160-R	15-160-L	15-160B-R	15-160B-L
16	16-160-R	16-160-L	16-160B-R	16-160B-L
17	17-160-R	17-160-L	17-160B-R	17-160B-L
18	18-160-R	18-160-L	18-160B-R	18-160B-L
19	19-160-R	19-160-L	19-160B-R	19-160B-L
20	20-160-R	20-160-L	20-160B-R	20-160B-L
21	21-160-R	21-160-L	21-160B-R	21-160B-L

Marketed exclusively through distribution.

Catalog Numbers and Dimensions for Fanning Strips for 140 Series Terminal Blocks, Continued

Right-Angle Type

Dimensions



Catalog No. 6-160A-R

Ordering Information

No. of Terminals	Catalog No.	Catalog No.
2	2-160A-R	2-160A-L
3	3-160A-R	3-160A-L
4	4-160A-R	4-160A-L
5	5-160A-R	5-160A-L
6	6-160A-R	6-160A-L
7	7-160A-R	7-160A-L
8	8-160A-R	8-160A-L
9	9-160A-R	9-160A-L
10	10-160A-R	10-160A-L
11	11-160A-R	11-160A-L
12	12-160A-R	12-160A-L
13	13-160A-R	13-160A-L
14	14-160A-R	14-160A-L
15	15-160A-R	15-160A-L
16	16-160A-R	16-160A-L
17	17-160A-R	17-160A-L
18	18-160A-R	18-160A-L
19	19-160A-R	19-160A-L
20	20-160A-R	20-160A-L
21	21-160A-R	21-160A-L

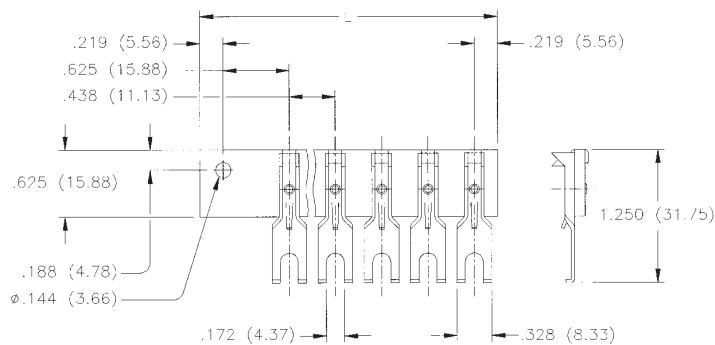
Marketed exclusively through distribution.

**Catalog Numbers and Dimensions for Fanning Strips for 141 Series Terminal Blocks**

**Straight Type**

No. of Terminals	Catalog No.	Catalog No.
2	2-161-R	2-161-L
3	3-161-R	3-161-L
4	4-161-R	4-161-L
5	5-161-R	5-161-L
6	6-161-R	6-161-L
7	7-161-R	7-161-L
8	8-161-R	8-161-L
9	9-161-R	9-161-L
10	10-161-R	10-161-L
11	11-161-R	11-161-L
12	12-161-R	12-161-L
13	13-161-R	13-161-L
14	14-161-R	14-161-L
15	15-161-R	15-161-L
16	16-161-R	16-161-L
17	17-161-R	17-161-L
18	18-161-R	18-161-L
19	19-161-R	19-161-L
20	20-161-R	20-161-L

**Dimensions**

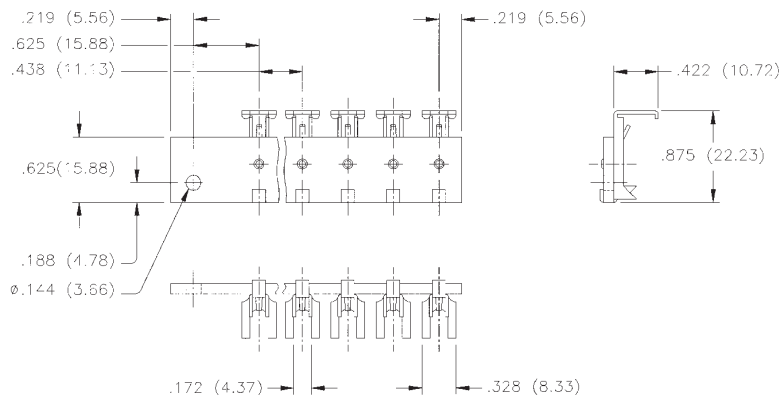


Catalog No. 5-161-R

**Right-Angle Type**

No. of Terminals	Catalog No.	Catalog No.
2	2-161A-R	2-161A-L
3	3-161A-R	3-161A-L
4	4-161A-R	4-161A-L
5	5-161A-R	5-161A-L
6	6-161A-R	6-161A-L
7	7-161A-R	7-161A-L
8	8-161A-R	8-161A-L
9	9-161A-R	9-161A-L
10	10-161A-R	10-161A-L
11	11-161A-R	11-161A-L
12	12-161A-R	12-161A-L
13	13-161A-R	13-161A-L
14	14-161A-R	14-161A-L
15	15-161A-R	15-161A-L
16	16-161A-R	16-161A-L
17	17-161A-R	17-161A-L
18	18-161A-R	18-161A-L
19	19-161A-R	19-161A-L
20	20-161A-R	20-161A-L

**Dimensions**



Catalog No. 5-161A-R

Marketed exclusively through distribution.

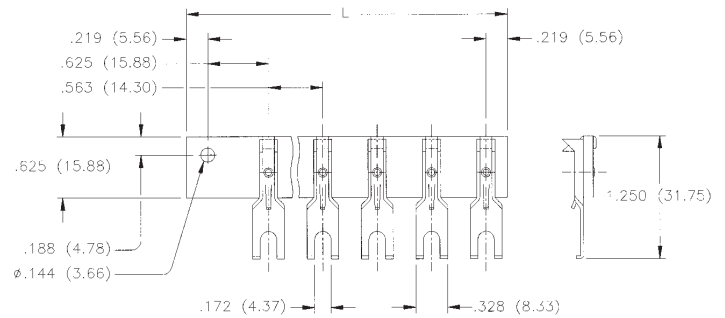
**Catalog Numbers and Dimensions for Fanning Strips for 142 Series Barrier Blocks**

**Straight Type**

**Ordering Information**

No. of Terminals	Catalog No.	Catalog No.
2	2-162-R	2-162-L
3	3-162-R	3-162-L
4	4-162-R	4-162-L
5	5-162-R	5-162-L
6	6-162-R	6-162-L
7	7-162-R	7-162-L
8	8-162-R	8-162-L
9	9-162-R	9-162-L
10	10-162-R	10-162-L
11	11-162-R	11-162-L
12	12-162-R	12-162-L
13	13-162-R	13-162-L
14	14-162-R	14-162-L
15	15-162-R	15-162-L
16	16-162-R	16-162-L
17	17-162-R	17-162-L

**Dimensions**



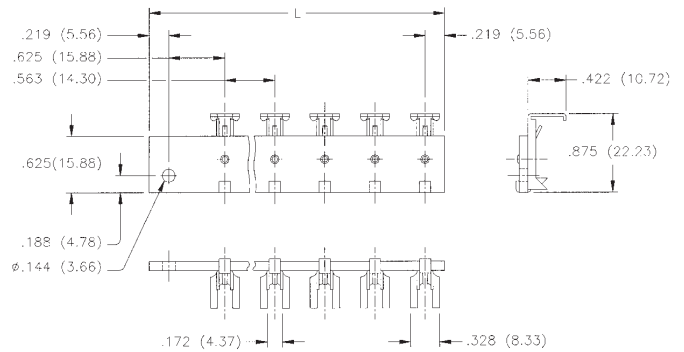
Catalog No. 5-162-R

**Right-Angle Type**

**Ordering Information**

No. of Terminals	Catalog No.	Catalog No.
2	2-162A-R	2-162A-L
3	3-162A-R	3-162A-L
4	4-162A-R	4-162A-L
5	5-162A-R	5-162A-L
6	6-162A-R	6-162A-L
7	7-162A-R	7-162A-L
8	8-162A-R	8-162A-L
9	9-162A-R	9-162A-L
10	10-162A-R	10-162A-L
11	11-162A-R	11-162A-L
12	12-162A-R	12-162A-L
13	13-162A-R	13-162A-L
14	14-162A-R	14-162A-L
15	15-162A-R	15-162A-L
16	16-162A-R	16-162A-L
17	17-162A-R	17-162A-L

**Dimensions**



Catalog No. 5-162A-R

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### Materials

**Insulation Material:** UL 94 HB rated XPC, chocolate

**Contact Material:** Steel

**Contact Plating:** Cadmium

### Mechanical Characteristics

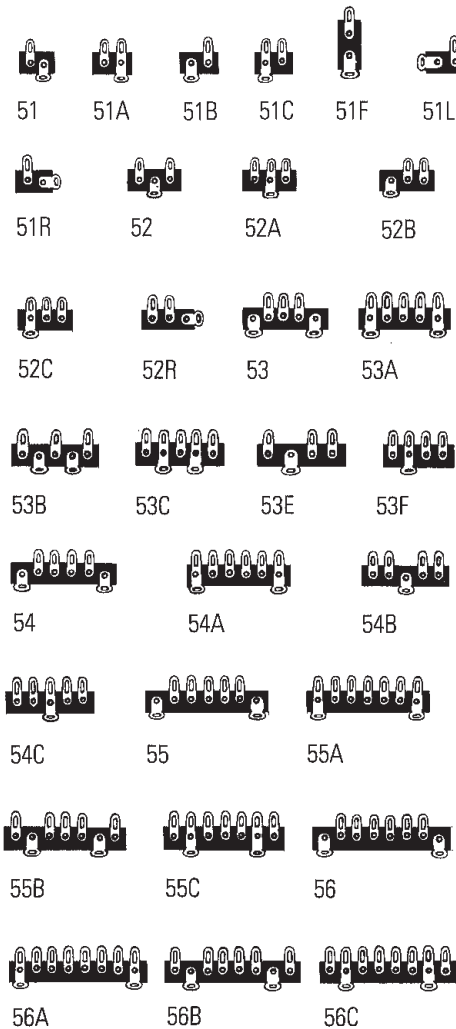
**Mounting Hole:** .140" (3.56mm) diameter

**Strip Dimension:** .0625" (1.59mm) thick x .375" (9.53mm) wide

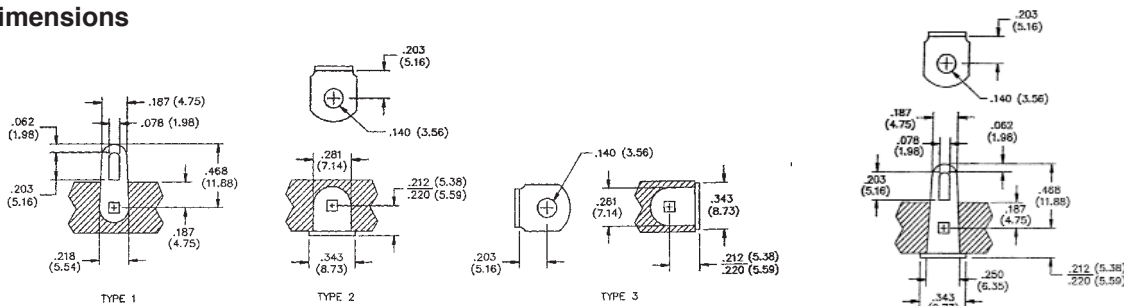
**Lug Density:** .375" (9.53mm)

### Ordering Information

Catalog No.	Mounting Centers	Lug Type Used In Position							
		1	2	3	4	5	6	7	8
51	-	1	2						
51A	-	1	4						
51B	-	2	1						
51C	-	4	1						
51F	-	1/2							
51L	-	3	1						
51R	-	1	3						
52	-	1	2	1					
52A	-	1	4	1					
52B	-	2	1	1					
52C	-	4	1	1					
52R	-	1	1	3					
53	1.500 (38.10)	2	1	1	1	2			
53A	1.500 (38.10)	4	1	1	1	4			
53B	.750 (19.05)	1	2	1	2	1			
53C	.750 (19.05)	1	4	1	4	1			
53E	-	1	2	1	1				
53F	-	1	4	1	1				
54	1.875 (47.63)	2	1	1	1	1	2		
54A	1.875 (47.63)	4	1	1	1	1	4		
54B	-	1	1	2	1	1			
54C	-	1	1	4	1	1			
55	2.250 (57.15)	2	1	1	1	1	1	2	
55A	2.250 (57.15)	4	1	1	1	1	1	4	
55B	1.500 (38.10)	1	2	1	1	1	2	1	
55C	1.500 (38.10)	1	4	1	1	1	4	1	
56	2.625 (66.68)	2	1	1	1	1	1	1	2
56A	2.625 (66.68)	4	1	1	1	1	1	1	4
56B	1.875 (47.63)	1	2	1	1	1	1	2	1
56C	1.875 (47.63)	1	4	1	1	1	1	1	4



### Dimensions



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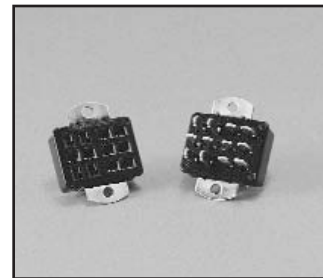


FEATURES

- *Solder lug terminals with .093" x .062" (2.36mm x 1.57mm) wiring holes.*
- *Two-contact "Jones" connector is round, all others are rectangular.*
- *For use in cable-to-panel and cable-to-cable applications.*
- *Designed for light and medium duty.*
- *Plug prongs are .156" (3.96mm) wide and .047" (1.19mm) thick.*
- *Polarized to prevent wrong-way insertion.*
- *Plugs have projecting flat blades, sockets have recessed twin bellows.*
- *Cable clamps of zinc and clear irridite-plated steel used for strain relief.*
- *UL Recognized-file E170218 (UL 1977), E130965 (UL1863).*
- *CSA-LR31996.*
- *See Panel Cutout dimension on page (2-38).*

MATERIALS

**Insulation Material:** Molded monoblock, general purpose phenolic, black UL94V-1  
**Contact Material:** Plug: Brass  
 Socket: Phosphor bronze  
**Contact Plating:** Cadmium  
**Operating Temperature:** Up to +105°C  
**Hood Material:** UL 94V-0 rated thermoplastic



ELECTRICAL

**Operating Voltage:** 250 VAC RMS maximum  
**Current Rating:** 10 Amps  
**Contact Resistance:** 16 Milliohms maximum

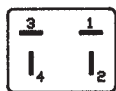


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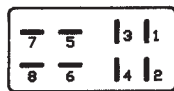
Polarizing Patterns - 300 Series



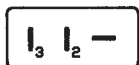
302



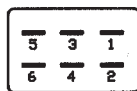
304



308



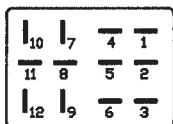
303



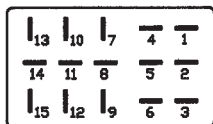
306



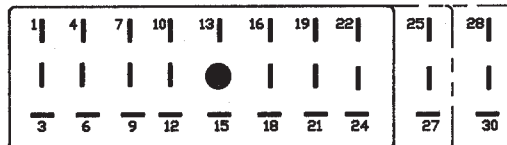
310



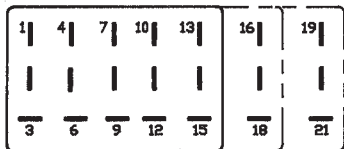
312



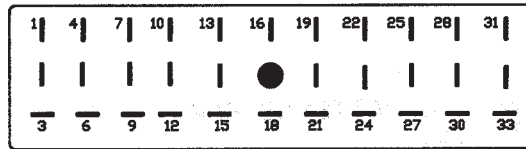
315-12



324,327,330



315,318,321

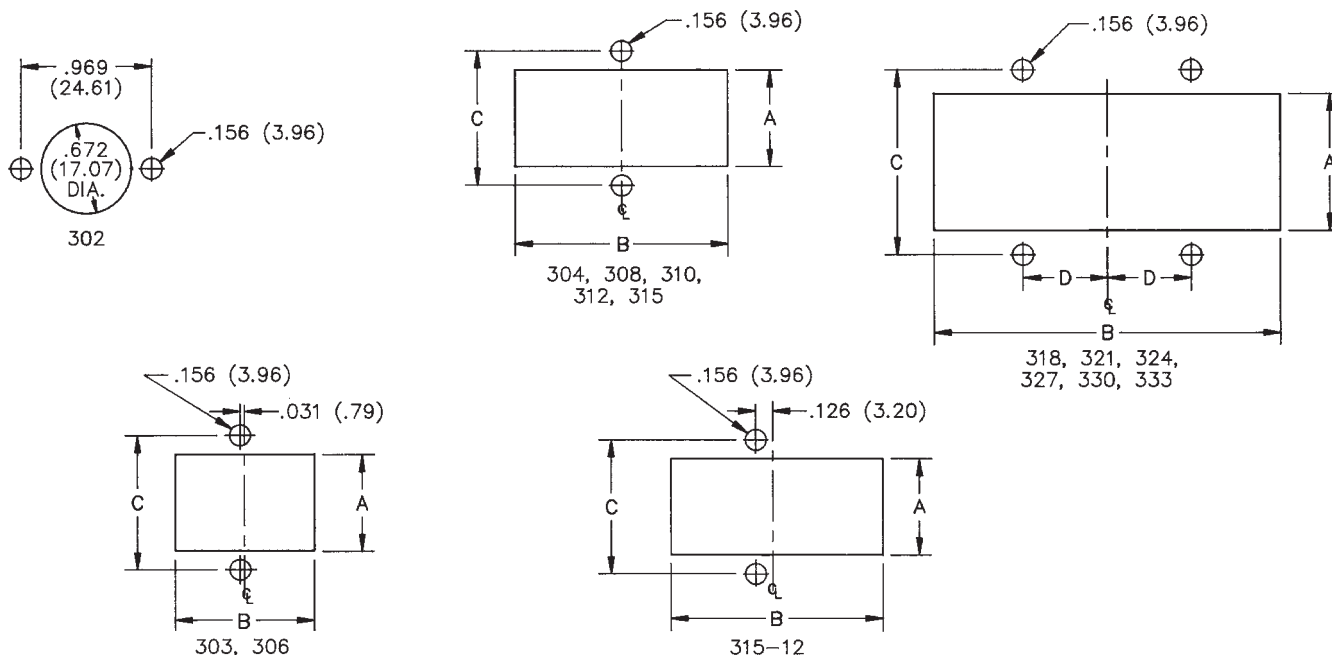


333

**Mounting Dimensions**

Reference	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
303	.453	11.51	1.016	25.81	.750	19.05	-	-
304	.719	18.26	.781	19.84	1.000	25.40	-	-
306	.719	18.26	1.031	26.19	1.000	25.40	-	-
308	.719	18.26	1.281	32.54	1.000	25.40	-	-
310	.719	18.26	1.578	40.08	1.000	25.40	-	-
312	.953	24.21	1.266	32.16	1.250	31.75	-	-
315-12	.953	24.21	1.516	38.51	1.250	31.75	-	-
315	1.016	25.81	1.641	41.68	1.375	34.93	-	-
318	1.016	25.81	1.953	49.61	1.375	34.93	.625	15.88
321	1.016	25.81	2.266	57.56	1.375	34.93	.469	11.91
324	1.016	25.81	2.578	65.48	1.375	34.93	.625	15.88
327	1.016	25.81	2.891	73.43	1.375	34.93	.781	19.84
330	1.016	25.81	3.203	81.36	1.375	34.93	.938	23.83
333	1.016	25.81	3.516	89.31	1.375	34.93	1.094	27.79

NOTE: For 300 Series 2 through 33 contact angle bracket connectors. All mounting holes are .156" (3.96mm) dia. Maximum chassis thickness is .063" (1.59mm) for bottom mounting. Mounting holes are located on center line unless otherwise shown.



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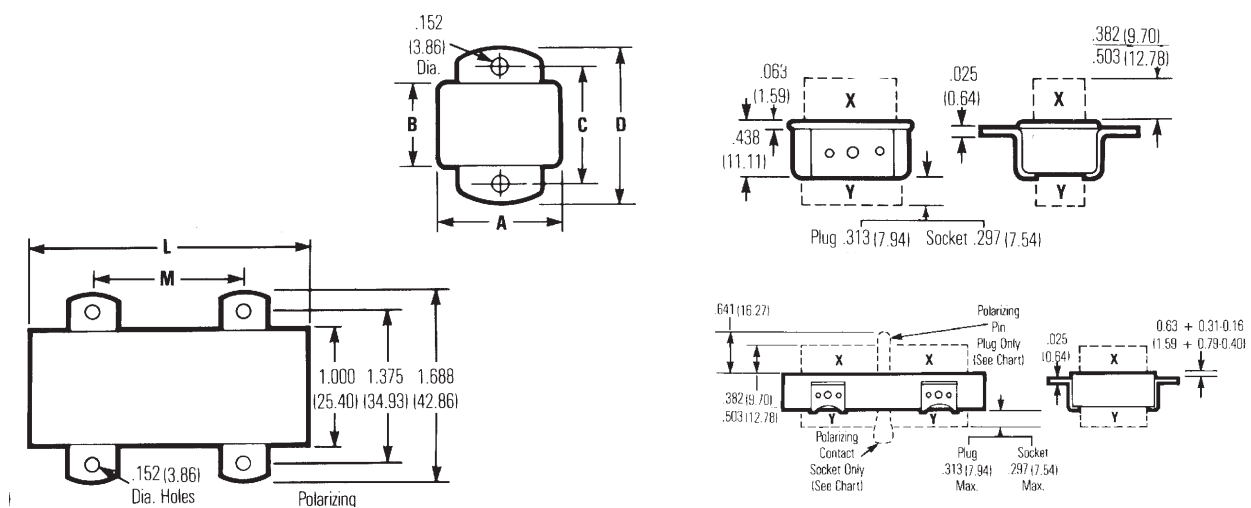
**Jones  
Plugs/Sockets  
Series 300**

Multiple Density  
Solder Eyelet With Angle  
Bracket/Less Angle Bracket



No. of Contacts	With Angle Bracket		No. of Contacts	Less Angle Bracket	
	Catalog No. Plug	Catalog No. Socket		Catalog No. Plug	Catalog No. Socket
2	P-302-AB	S-302-AB	2	P-302-LAB	S-302-LAB
3	P-303-AB	S-303-AB	3	P-303-LAB	S-303-LAB
4	P-304-AB	S-304-AB	4	P-304-LAB	S-304-LAB
6	P-306-AB	S-306-AB	6	P-306-LAB	S-306-LAB
8	N/A	N/A	8	N/A	N/A
10	P-310-AB	N/A	10	P-310-LAB	N/A
12	P-312-AB	N/A	12	P-312-LAB	N/A
15*	N/A	S-315-12-AB	15	N/A	S-315-12-LAB
15	P-315-AB	S-315-AB	15	P-315-LAB	S-315-LAB
18	P-318-AB	S-318-AB	18	P-318-LAB	S-318-LAB
21	P-321-AB	S-321-AB	21	P-321-LAB	S-321-LAB
24	P-324-AB	S-324-AB	24	P-324-LAB	S-324-LAB
27	P-327-AB	S-327-AB	27	P-327-LAB	S-327-LAB
30	P-330-AB	S-330-AB	30	P-330-LAB	S-330-LAB
33	P-333-AB	S-333-AB	33	P-333-LAB	S-333-LAB

X = length of plug contacts. This dimension does not apply to sockets.  
Y = length of plug or socket tails.



No. of Contacts	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
2	.656	16.67	-	-	.969	24.61	1.219	30.96
3	1.000	25.40	.438	11.11	.750	19.05	1.062	26.99
4	.750	19.05	.688	17.46	1.000	25.40	1.312	33.34
6	1.000	25.40	.688	17.46	1.000	25.40	1.312	33.34
8	--	--	--	--	--	--	--	--
10	1.562	39.69	.688	17.46	1.000	25.40	1.312	33.34
12	1.250	31.75	.938	23.81	1.250	31.75	1.562	39.69
15*	1.500	38.10	.938	23.81	1.250	31.75	1.562	39.69

\*Special 15 contact arrangement to allow 12-position mating.

Reference	L		M		Polarizing Pin
	in	mm	in	mm	
15	1.625	41.28	See note	-	NO
18	1.938	49.23	1.250	31.75	NO
21	2.250	57.15	.938	23.81	NO
24	2.563	65.10	1.250	31.75	14
27	2.875	73.03	1.562	39.69	14
30	3.188	80.98	1.875	47.63	14
33	3.500	88.90	2.188	55.58	17

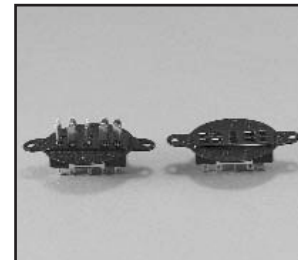
NOTE: 15-position plug and socket require only two mounting brackets, mounted on center of connector.

Marketed exclusively through distribution.

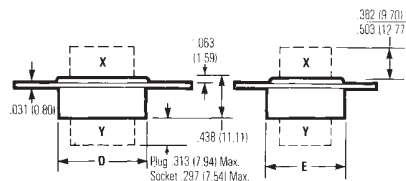
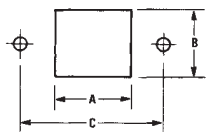
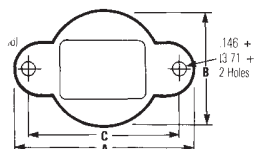
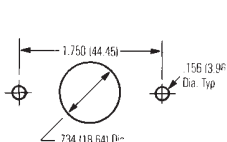
**300 Series with Flush Plate (FP)**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	P-302-FP	S-302-FP
3	P-303-FP	S-303-FP
4	P-304-FP	S-304-FP
6	P-306-FP	S-306-FP
8	N/A	N/A
10	P-310-FP	N/A
12	P-312-FP	N/A

NOTE: Not available in contact sizes 15-33.



X = length of plug contacts. This dimension does not apply to sockets.  
Y = length of plug or socket tails.



**Dimensions - Plug or Socket**

No. of Contacts	A		B		C		D		E Max.	
	in	mm	in	mm	in	mm	in	mm	in	mm
2	2.063	52.40	1.250	31.75	1.750	44.45	-	-	.719	18.26
3	2.063	52.40	1.250	31.75	1.750	44.45	.938	23.81	.500	12.70
4	2.063	52.40	1.250	31.75	1.750	44.45	.688	17.46	.750	19.05
6	2.063	52.40	1.250	31.75	1.750	44.45	.938	23.81	.750	19.05
8	--	--	--	--	--	--	--	--	--	--
10	2.563	65.10	1.750	44.45	2.250	57.15	1.500	38.10	.750	19.05
12	2.563	65.10	1.750	44.45	2.250	57.15	1.188	30.16	1.000	25.40

**Panel Cutout Dimensions**

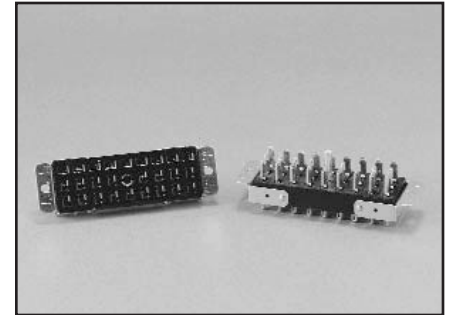
Reference	A		B		C	
	in	mm	in	mm	in	mm
303-FP	.953	24.21	.516	13.11	1.750	44.45
304-FP	.703	17.86	.766	19.46	1.750	44.45
306-FP	.953	24.21	.766	19.46	1.750	44.45
308-FP	--	--	--	--	--	--
310-FP	1.516	38.51	.766	19.46	2.250	57.15
312-FP	1.203	30.56	1.016	25.81	2.250	57.15

Marketed exclusively through distribution.

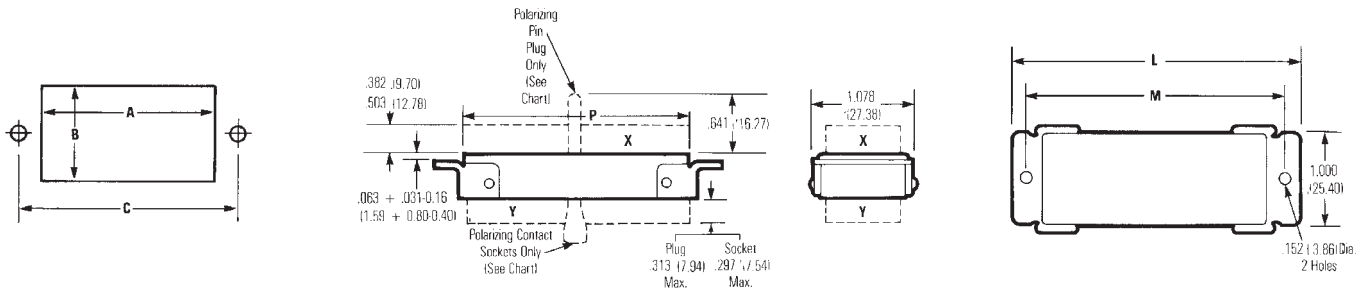
**300 Series with End Brackets (EB)**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
15	P-315-EB	S-315-EB
18	P-318-EB	S-318-EB
21	P-321-EB	S-321-EB
24	P-324-EB	S-324-EB
28	P-328-EB	S-328-EB
30	P-330-EB	S-330-EB
33	P-333-EB	S-333-EB

NOTE: Not available in contact sizes 2-12.



X = length of plug contacts. This dimension does not apply to sockets.  
Y = length of plug or socket tails.



**Dimensions**

No. of Contacts	L		M		P		Polarizing Pin
	±.031 (.79mm)		±.031 (.79mm)		±.063 (1.59mm)		
15	2.313	58.75	2.000	50.80	1.625	41.28	NO
18	2.625	66.68	2.313	58.75	1.938	49.23	NO
21	2.938	74.63	2.625	66.68	2.250	57.15	NO
24	3.250	82.55	2.938	74.63	2.563	65.10	14
27	3.563	90.50	3.250	82.55	2.875	73.03	14
30	3.875	98.43	3.563	90.50	3.188	80.98	14
33	4.188	106.38	3.875	98.43	3.500	88.90	17

**Panel Cutout Dimensions**

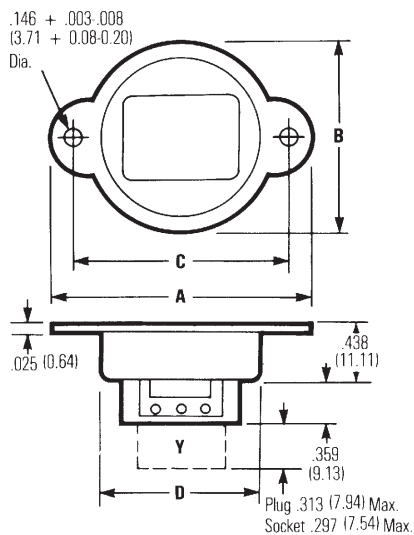
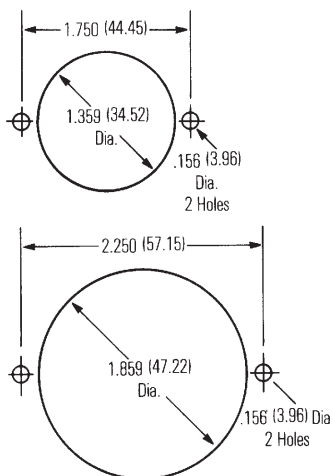
Reference	A		B		C	
	in	mm	in	mm	in	mm
315-EB	1.641	41.68	1.016	25.81	2.000	50.80
318-EB	1.953	49.61	1.016	25.81	2.313	58.75
321-EB	2.266	57.56	1.016	25.81	2.625	66.68
324-EB	2.578	65.48	1.016	25.81	2.938	74.63
327-EB	2.891	73.43	1.016	25.81	3.250	82.55
330-EB	3.203	81.36	1.016	25.81	3.563	90.50
333-EB	3.516	89.31	1.016	25.81	3.875	98.43

Marketed exclusively through distribution.

**300 Series with Recessed Plate (RP)**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	P-302-RP	S-302-RP
3	P-303-RP	S-303-RP
4	P-304-RP	S-304-RP
6	P-306-RP	S-306-RP
8	N/A	N/A
10	P-310-RP	N/A
12	P-312-RP	N/A

NOTE: Not available in contact sizes 15-33.



Y = length of plug or socket tails.

**Dimensions**

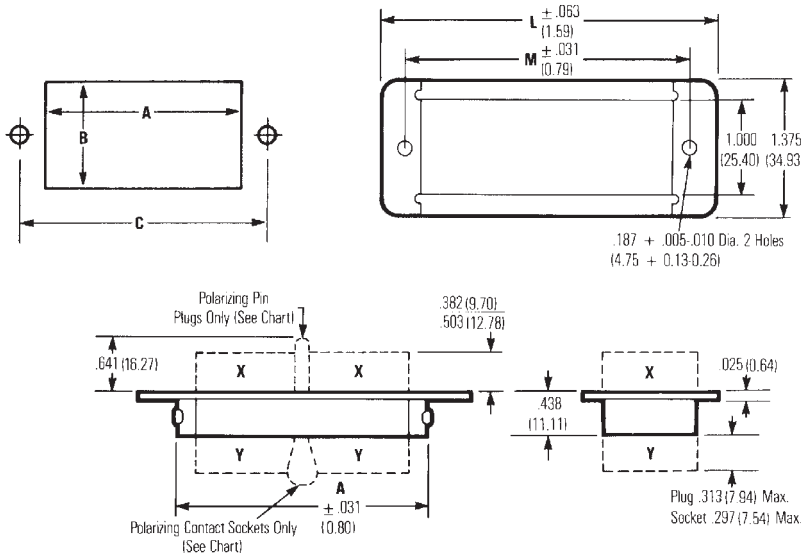
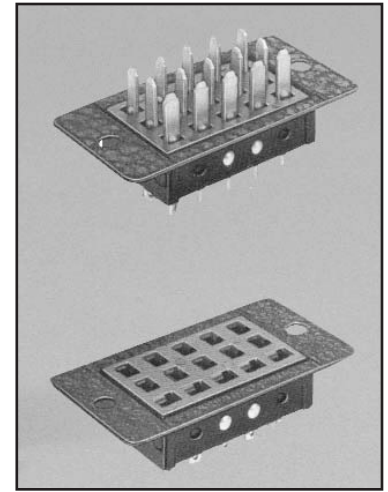
No. of Contacts	A		B		C		D Max.	
	in	mm	in	mm	in	mm	in	mm
2	2.063	52.40	1.500	38.10	1.750	44.45	1.350	34.29
3	2.063	52.40	1.500	38.10	1.750	44.45	1.350	34.29
4	2.063	52.40	1.500	38.10	1.750	44.45	1.350	34.29
6	2.063	52.40	1.500	38.10	1.750	44.45	1.350	34.29
8	--	--	--	--	--	--	--	--
10	2.563	65.10	2.000	50.80	2.250	57.15	1.850	46.99
12	2.563	65.10	2.000	50.80	2.250	57.15	1.850	46.99

Marketed exclusively through distribution.

**300 Series with Shallow Bracket (SB)**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
15	P-315-SB	S-315-SB
18	P-318-SB	S-318-SB
21	P-321-SB	S-321-SB
24	P-324-SB	S-324-SB
27	P-327-SB	S-327-SB
30	P-330-SB	S-330-SB
33	P-333-SB	S-333-SB

NOTE: Not available in contact sizes 2-12.



X = length of plug contacts. This dimension does not apply to sockets.  
Y = length of plug or socket tails.

**Dimensions**

No. of Polarizing Contacts	A		M		L		Polarizing Pin
	$\pm .031$ in	(.79mm) mm	$\pm .031$ in	(.79mm) mm	$\pm .063$ in	(1.59mm) mm	
15	1.688	42.86	2.125	53.98	2.547	64.69	NO
18	2.000	50.80	2.438	61.93	2.859	72.62	NO
21	2.313	58.75	2.750	69.85	3.172	80.57	NO
24	2.625	66.68	2.063	52.40	3.484	88.49	14
27	2.938	74.63	3.375	85.73	3.797	96.44	14
30	3.250	82.55	3.688	93.68	4.109	104.38	14
33	3.563	90.50	4.000	101.60	4.422	112.32	17

**Panel Cutout Dimensions**

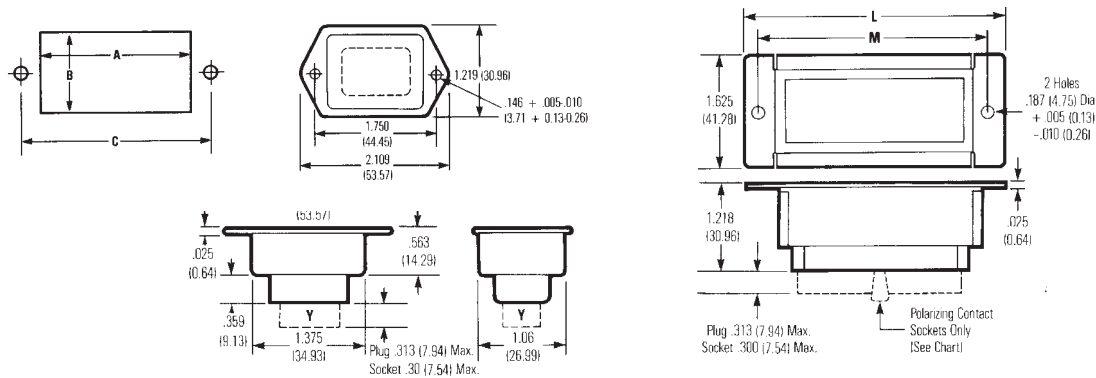
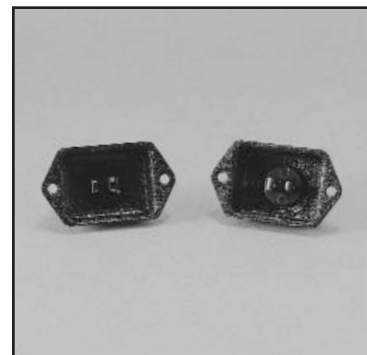
Reference	A		B		C	
	in	mm	in	mm	in	mm
315-SB	1.750	44.45	1.156	29.36	2.125	53.98
318-SB	2.063	52.40	1.156	29.36	2.438	61.93
321-SB	2.375	60.33	1.156	29.36	2.750	69.85
324-SB	2.688	68.28	1.156	29.36	3.062	77.77
327-SB	3.000	76.20	1.156	29.36	3.376	85.75
330-SB	3.313	84.15	1.156	29.36	3.688	93.68
333-SB	3.625	92.08	1.156	29.36	4.000	101.60

Marketed exclusively through distribution.



300 Series Deep Bracket (DB)

No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	P-302-DB	S-302-DB
3	P-303-DB	S-303-DB
4	P-304-DB	S-304-DB
6	P-306-DB	S-306-DB
8	N/A	N/A
10	N/A	N/A
12	P-312-DB	N/A
15	P-315-DB	S-315-DB
18	P-318-DB	S-318-DB
21	P-321-DB	S-321-DB
24	P-324-DB	S-324-DB
27	P-327-DB	S-327-DB
30	P-330-DB	S-330-DB
33	P-333-DB	S-333-DB



Dimensions

Y = length of plug or socket tails.

No. of Contacts	L ±.063 (1.60mm)		M ±.031 (.79mm)		Polarizing Pin
	in	mm	in	mm	
15	2.813	71.44	2.375	60.33	NO
18	3.125	79.38	2.688	68.28	NO
21	3.437	87.31	3.000	76.20	NO
24	3.750	95.25	3.313	84.15	14
27	4.063	103.19	3.625	92.08	14
30	4.375	111.13	3.938	100.03	14
33	4.688	119.06	4.250	107.95	17

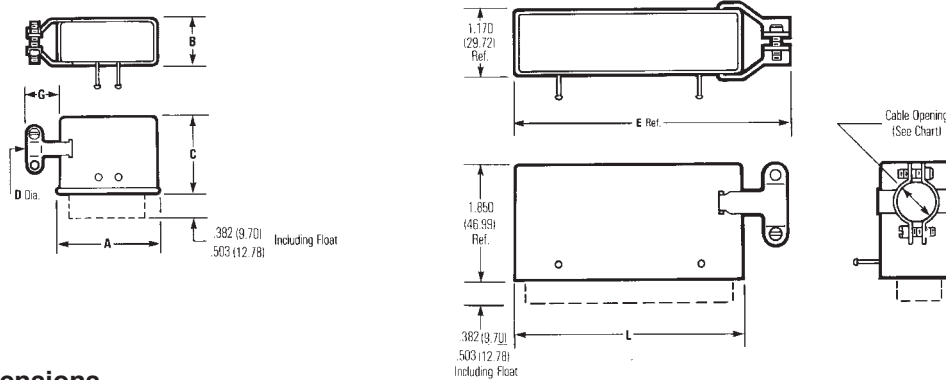
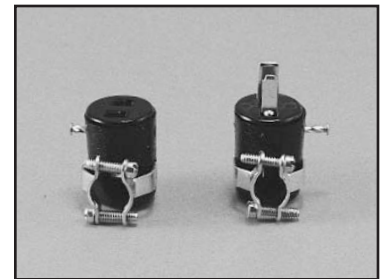
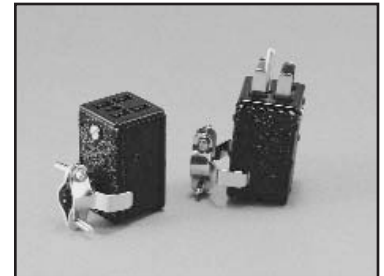
Panel Cutout Dimensions

Reference	A		B		C	
	in	mm	in	mm	in	mm
302-DB thru						
312-DB	1.453	36.91	1.125	28.58	1.750	38.10
315-DB	2.000	50.80	1.438	36.53	2.376	60.35
318-DB	2.313	58.75	1.438	36.53	2.688	68.28
321-DB	2.625	66.68	1.438	36.53	3.000	76.20
324-DB	2.938	74.63	1.438	36.53	3.312	84.12
327-DB	3.250	82.55	1.438	36.53	3.626	92.10
330-DB	3.562	90.47	1.438	36.53	3.938	100.03
333-DB	3.875	98.43	1.438	36.53	4.250	107.95

Marketed exclusively through distribution.

**300 Series with Hood and 90° Cable Clamp (CCE)**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	P-302-CCE	S-302-CCE
3	P-303-CCE	S-303-CCE
4	P-304-CCE	S-304-CCE
6	P-306-CCE	S-306-CCE
8	N/A	N/A
10	P-310-CCE	N/A
12	P-312-CCE	N/A
15	P-315-CCE	S-315-CCE
18	P-318-CCE	S-318-CCE
21	P-321-CCE	S-321-CCE
24	P-324-CCE	S-324-CCE
27	P-327-CCE	S-327-CCE
30	P-330-CCE	S-330-CCE
33	P-333-CCE	S-333-CCE



**Dimensions**

No. of Contacts	A ±.016 (.41mm)		B ±.016 (.41mm)		C ±.031 (.79mm)		G		Cable "D" Opening	
	in	mm	in	mm	in	mm	in	mm	in	mm
2	.691	17.55	-	-	.953	24.21	.313	7.95	.313	7.95
3	1.034	26.26	.472	11.99	.953	24.21	.344	8.74	.250	6.35
4	.786	19.96	.724	18.39	.953	24.21	.453	11.51	.375	9.53
6	1.036	26.31	.724	18.39	.078	27.38	.469	11.91	.438	11.13
8	--	--	--	--	--	--	--	--	--	--
10	1.592	40.44	.720	18.29	1.203	30.56	.359	9.12	.500	12.70
12	1.286	32.66	.974	24.74	1.203	30.56	.422	10.72	.563	14.30

No. of Contacts	E		L		Cable Opening		Polarizing Pin
	in	mm	in	mm	in	mm	
15	2.514	63.85	1.795	45.59	.563	14.30	NO
18	2.826	71.78	2.107	53.52	.563	14.30	NO
21	3.139	79.73	2.420	61.47	.625	15.88	NO
24	3.451	87.66	2.732	69.39	.625	15.88	14
27	3.764	95.61	3.045	77.34	.625	15.88	14
30	4.076	103.53	3.357	85.27	.750	19.05	14
33	4.389	111.48	3.670	93.22	.750	19.05	17

Marketed exclusively through distribution.

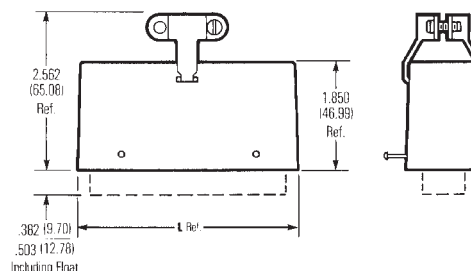
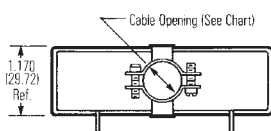
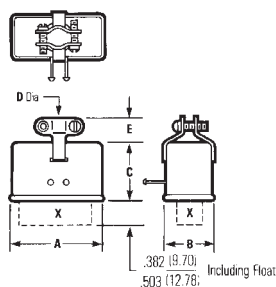
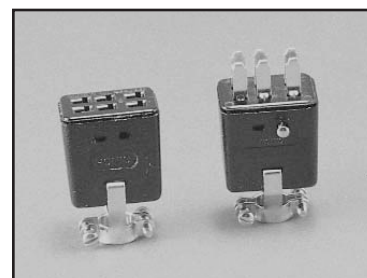
**Jones  
Plugs/Sockets  
Series 300**

Multiple Density  
Solder Eyelet  
With Hood & 180° Clamp



**300 Series with Hood and 180° Cable Clamp (CCT)**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	P-302-CCT	S-302-CCT
3	P-303-CCT	S-303-CCT
4	P-304-CCT	S-304-CCT
6	P-306-CCT	S-306-CCT
8	N/A	N/A
10	P-310-CCT	N/A
12	P-312-CCT	N/A
15	P-315-CCT	S-315-CCT
18	P-318-CCT	S-318-CCT
21	P-321-CCT	S-321-CCT
24	P-324-CCT	S-324-CCT
27	P-327-CCT	S-327-CCT
30	P-330-CCT	S-330-CCT
33	P-333-CCT	S-333-CCT



**Dimensions**

No. of Contacts	A ±.016 (.41mm)		B ±.016 (.41mm)		C ±.031 (.79mm)		"D" Cable Opening		E ±.031 (.79mm)	
	in	mm	in	mm	in	mm	in	mm	in	mm
2	.691	17.55	-	-	.953	24.21	.375	9.53	.359	9.12
3	1.034	26.26	.472	11.99	.953	24.21	.313	7.95	.359	9.12
4	.786	19.96	.724	18.39	.953	24.21	.375	9.53	.469	11.91
6	1.036	26.31	.724	18.39	1.078	27.38	.438	11.13	.484	12.29
8	--	--	--	--	--	--	--	--	--	--
10	1.592	40.44	.720	18.29	1.203	30.56	.500	12.70	.500	12.70
12	1.286	32.66	.974	24.74	1.203	30.56	.563	14.30	.469	11.91

No. of Contacts	L		Cable Opening		Polarizing Pin
	in	mm	in	mm	
15	1.795	45.59	.563	14.30	NO
18	2.107	53.52	.563	14.30	NO
21	2.420	61.47	.625	15.88	NO
24	2.732	69.39	.625	15.88	14
27	3.045	77.34	.625	15.88	14
30	3.357	85.27	.750	19.05	14
33	3.670	93.22	.750	19.05	17

Marketed exclusively through distribution.

2

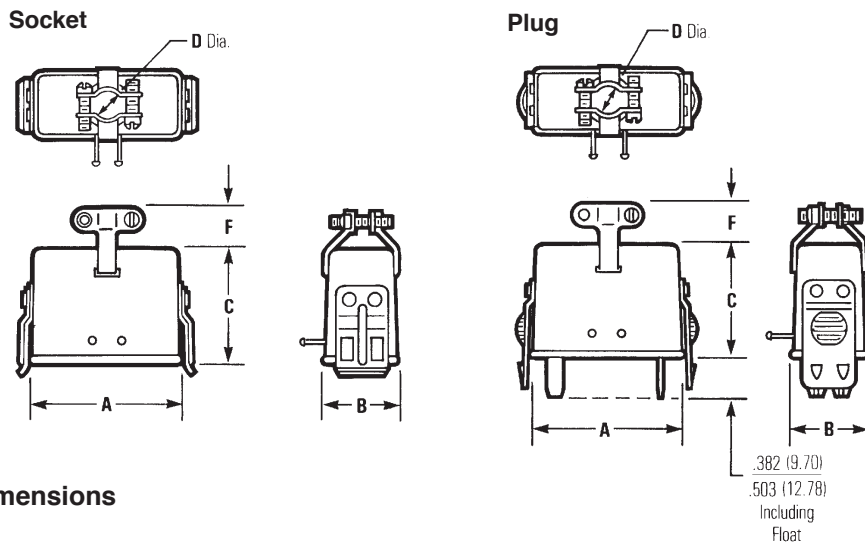
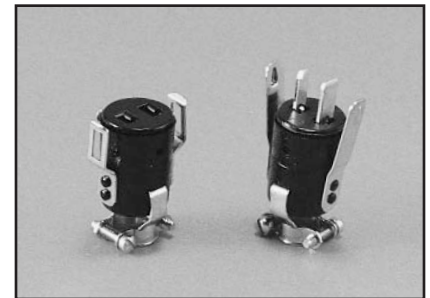
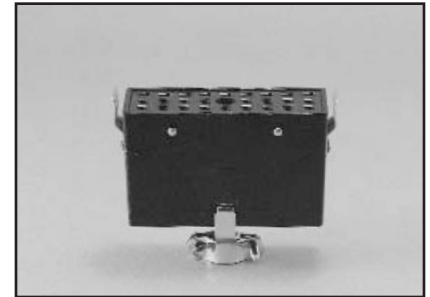
**Jones  
Plugs/Sockets  
Series 300**

Multiple Density  
Solder Eyelet  
180° Clamp w/Locks



**300 Series Plug with Hood and Lock (CCT-L) and Socket with Hood and Keeper (CCT-K)**

No. of Contacts	Catalog No. Plug w/ Lock	Catalog No. Socket w/ Keeper
2	P-302-CCT-L	S-302-CCT-K
3	P-303-CCT-L	S-303-CCT-K
4	P-304-CCT-L	S-304-CCT-K
6	P-306-CCT-L	S-306-CCT-K
8	N/A	N/A
10	P-310-CCT-L	N/A
12	P-312-CCT-L	N/A
15	P-315-CCT-L	S-315-CCT-K
18	P-318-CCT-L	S-318-CCT-K
21	P-321-CCT-L	S-321-CCT-K
24	P-324-CCT-L	S-324-CCT-K
27	P-327-CCT-L	S-327-CCT-K
30	P-330-CCT-L	S-330-CCT-K
33	P-333-CCT-L	S-333-CCT-K



**Dimensions**

No. of Contacts	A ±.016 (.41mm)		B ±.016 (.41mm)		C ±.031 (.79mm)		F		"D" Cable Opening		Polarizing Pin
	in	mm	in	mm	in	mm	in	mm	in	mm	
2	.691	17.5	-	-	.953	24.21	.359	9.12	.375	9.53	--
3	1.034	26.26	.472	11.99	.953	24.21	.359	9.12	.313	7.94	--
4	.786	19.96	.724	18.39	.953	24.21	.469	11.91	.375	9.53	--
6	1.036	26.31	.724	18.39	1.078	27.38	.484	12.29	.438	11.13	--
8	--	--	--	--	--	--	--	--	--	--	--
10	1.592	40.44	.720	18.29	1.203	30.56	.500	12.70	.500	12.70	--
12	1.286	32.66	.974	24.74	1.203	30.56	.469	11.91	.563	14.30	--
15	1.795	45.59	1.100	27.94	1.850	46.99	.712	18.08	.563	14.30	NO
18	2.107	53.52	1.100	27.94	1.850	46.99	.712	18.08	.563	14.30	NO
21	2.420	61.47	1.100	27.94	1.850	46.99	.712	18.08	.625	15.88	NO
24	2.732	69.39	1.100	27.94	1.850	46.99	.712	18.08	.625	15.88	14
27	3.045	77.34	1.100	27.94	1.850	46.99	.712	18.08	.625	15.88	14
30	3.357	85.27	1.100	27.94	1.850	46.99	.712	18.08	.750	19.05	14
33	3.670	93.22	1.100	27.94	1.850	46.99	.712	18.08	.750	19.05	17

Marketed exclusively through distribution.

**JONES PLUGS AND SOCKETS 300 SERIES MATING CHART**

PLUGS

MOUNTING CONFIG.	PLUGS										
	AB	DB	FP	RP	EB	SB	CCE	CCT	CCT-L	CCT-K	LAB
AB	**		**		**	**	•	•			•
DB								•			•
FP	**		**		**		•	•			•
RP							•	•			•
EB	**		**		**		•	•			•
SB	**				**	**	•	•			•
CCE	•		•	•	•	•	•	•			•
CCT	•	•	•	•	•	•	•	•			•
CCT-L										•	
CCT-K									•		
LAB	•	•	•	•	•	•	•	•	•	•	•

SOCKETS

2

- These are recommended configurations.
- \*\* These are possible configurations, but not normally recommended.

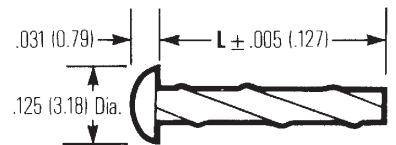
NOTE: Cinch layout S315-12 is available only in "AB" or "LAB".

**Replacement Drive Pins for Series 300 Plugs and Sockets with Cable Caps and Clamps**

**Dimensions**

**Ordering Information**

No. of Contacts	Dim. L + .005 (.13mm)		No. of Contacts	Catalog No.
	in	mm		
2	.687	17.45	2	302R
3	.468	11.89	3	303R
4,6,8,10*	.718	18.24	4,6,8,10*	304R
12	.953	28.58	12	312R
15-33*	1.125	28.58	15-33*	333R



\*10 contact size and 15 through 33 contact sizes require two pins per unit; all other sizes require only one.

Marketed exclusively through distribution.

FEATURES

- *For use in cable-to-cable and cable-to-panel applications.*
- *Designed for medium duty.*
- *Plug prongs are .250" (6.35mm) wide and .055" (1.40mm) thick.*
- *Socket contacts have solder eyelet contacts of .093" diameters.*
- *Polarized to prevent wrong-way insertion.*
- *Plugs have projecting flat blades, sockets have recessed twin bellows.*
- *Cable clamps of zinc and clear irridite-plated steel are used for strain relief.*
- *Bifurcated bellows socket contact provides four individual flexing surfaces for maximum contact with the blade.*
- *Plugs and sockets have recessed pockets with barriers around the contacts.*
- *A shoulder extends around the face (mating) side of both plug and socket presenting a finished appearance when mounted in bracket or cap.*
- *Intermates with existing 400 Series Products on the market.*
- *UL Recognized - file - E17021B (UL1977) E130965 (1863).*
- *CSA - LR31996-2.*
- *Panel cutout dimensions (See page 2-57).*

MATERIALS

**Insulation Material:** Molded monoblock, general purpose phenolic, black  
**Contact Material:** Plug: Brass  
 Socket: Phosphor bronze  
**Contact Plating:** Cadmium  
**Operating Temperature:** Up to +105°C  
**Hood Material:** Formed metal with dielectric liner in hood to prevent shorting

ELECTRICAL

**Operating Voltage:** 250 VAC RMS  
**Current Rating:** 15 Amps  
**Current Resistance:** 1.0 Milliohms maximum

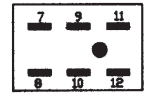
POLARIZING PATTERNS FOR SERIES 2400



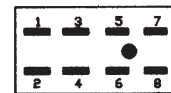
2402



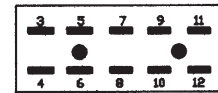
2404



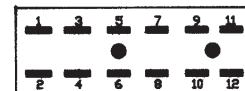
2406



2408



2410

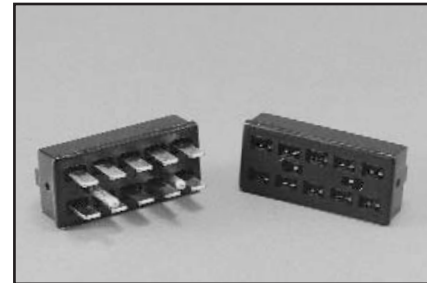


2412

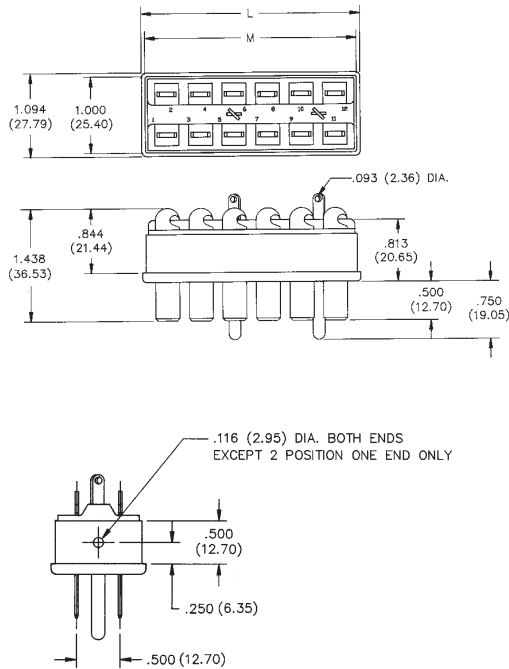
Marketed exclusively through distribution.

**2400 Series Less Angle Bracket**

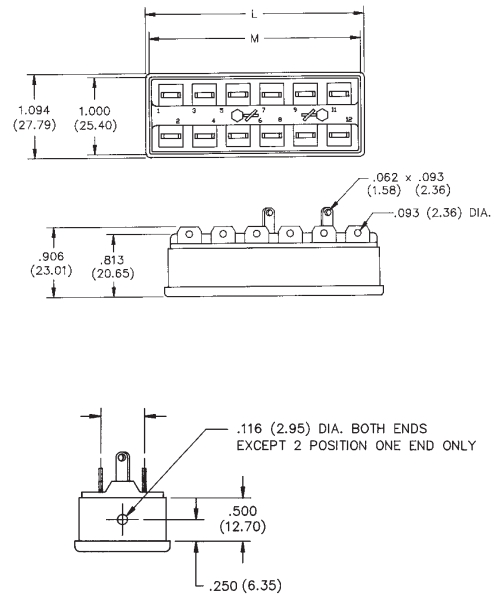
No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	N/A	S-2402-LAB
4	P-2404-LAB	S-2404-LAB
6	P-2406-LAB	S-2406-LAB
8	P-2408-LAB	S-2408-LAB
10	P-2410-LAB	S-2410-LAB
12	P-2412-LAB	S-2412-LAB



**Plug**



**Socket**



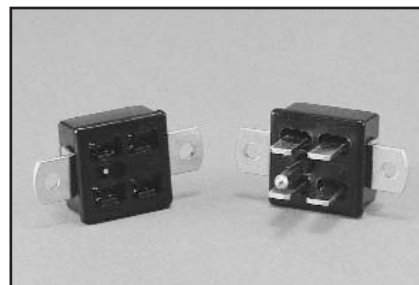
**Dimensions - Plug or Socket**

No. of Contacts	M		L	
	in	mm	in	mm
2	.563	14.29	.656	16.67
4	1.000	25.40	1.094	27.78
6	1.438	36.51	1.531	38.89
8	1.875	47.63	1.969	50.01
10	2.313	58.74	2.406	61.12
12	2.750	69.85	1.844	46.83

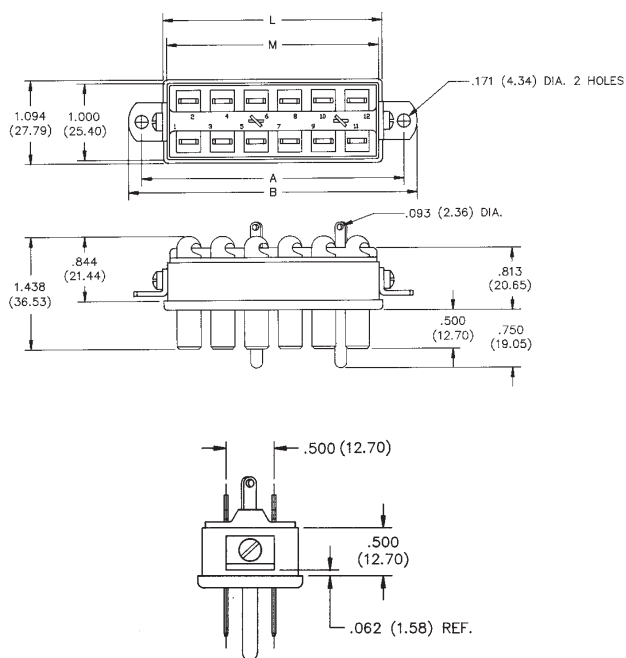
Marketed exclusively through distribution.

**2400 Series with Angle Bracket**

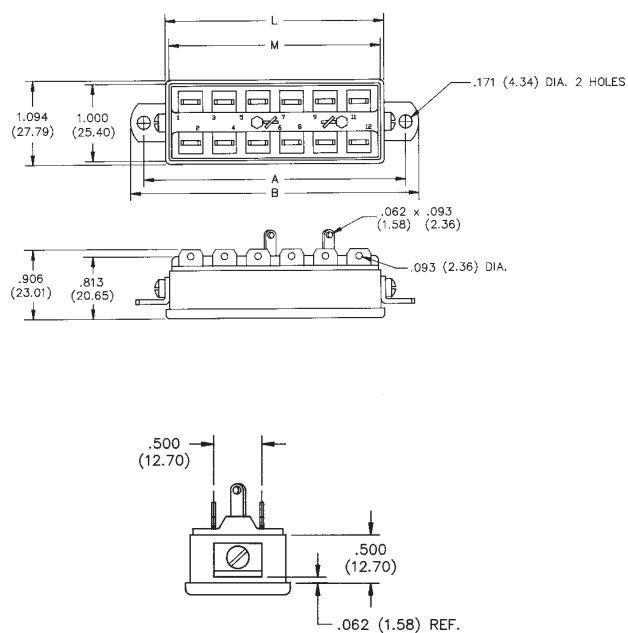
No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	N/A	S-2402-AB
4	P-2404-AB	S-2404-AB
6	P-2406-AB	S-2406-AB
8	P-2408-AB	S-2408-AB
10	P-2410-AB	S-2410-AB
12	P-2412-AB	S-2412-AB



**Plug**



**Socket**



**Dimensions - Plug or Socket**

No. of Contacts	M		L	
	in	mm	in	mm
2	.563	14.29	.656	16.67
4	1.000	25.40	1.094	27.78
6	1.438	36.51	1.531	38.89
8	1.875	47.63	1.969	50.01
10	2.313	58.74	2.406	61.12
12	2.750	69.85	2.844	72.24

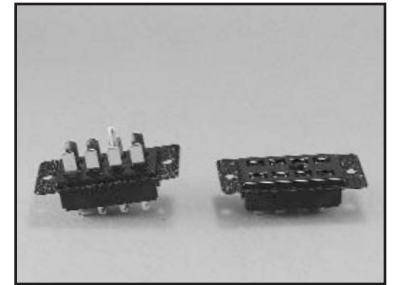
Panel Cutout dimensions are on page 2-61.

Marketed exclusively through distribution.



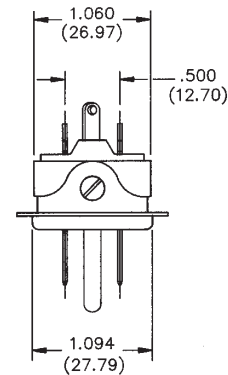
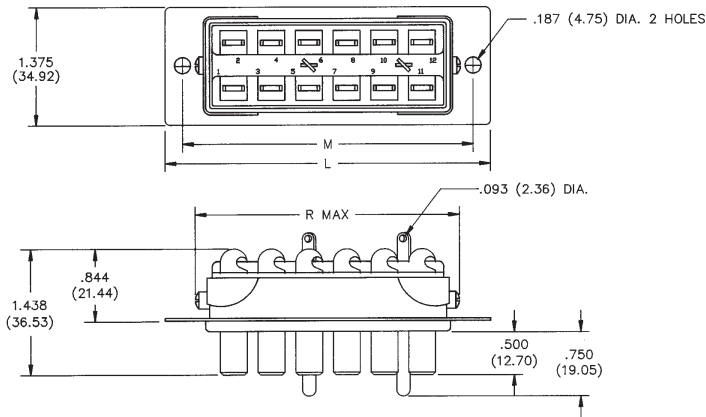
**2400 Series with Shallow Bracket**

No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	N/A	S-2402-SB
4	P-2404-SB	S-2404-SB
6	P-2406-SB	S-2406-SB
8	P-2408-SB	S-2408-SB
10	P-2410-SB	S-2410-SB
12	P-2412-SB	S-2412-SB

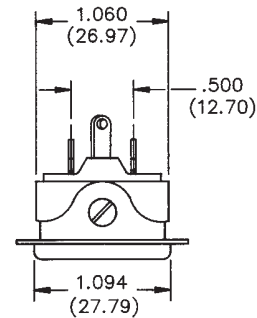
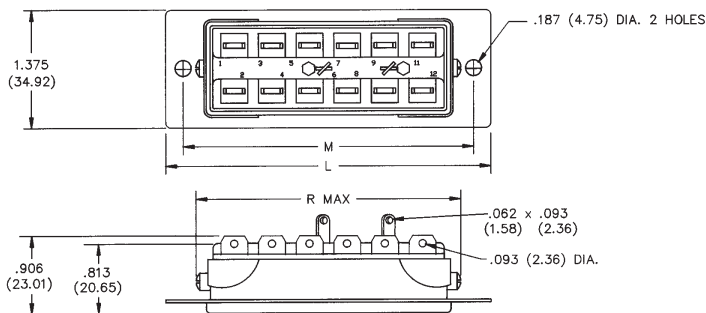


2

**Plug**



**Socket**



**Dimensions - Plug or Socket**

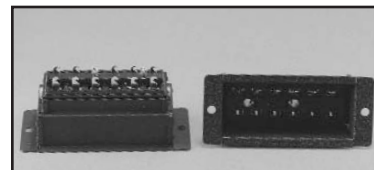
No. of Contacts	L		M		R. Max.	
	in	mm	in	mm	in	mm
2	1.500	38.10	1.062	26.99	1.766	19.45
4	1.937	49.21	1.500	38.10	1.234	31.34
6	2.375	60.33	1.938	49.23	1.672	42.47
8	2.813	71.45	2.375	60.33	2.109	53.57
10	3.250	82.55	2.813	71.45	2.547	64.69
12	3.688	93.68	3.250	82.55	2.984	75.80

Panel Cutout dimensions are on page 2-61.

Marketed exclusively through distribution.

2400 Series with Deep Bracket

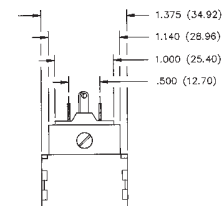
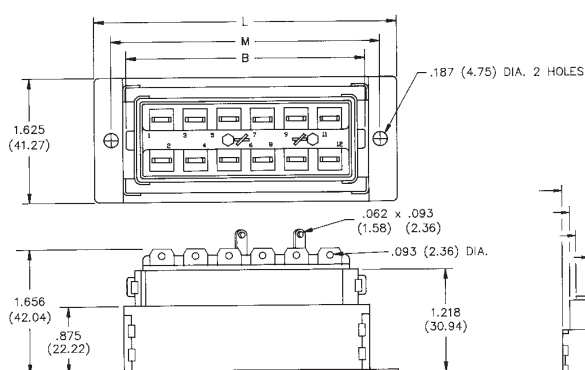
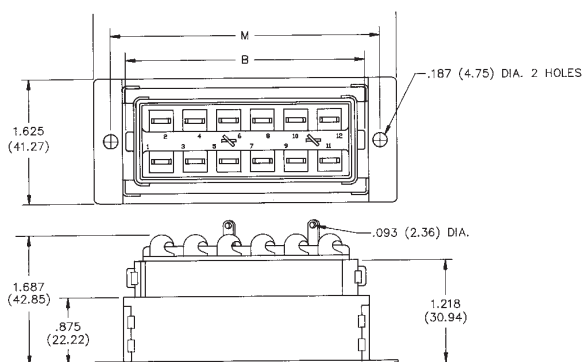
No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	N/A	S-2402-DB
4	P-2404-DB	S-2404-DB
6	P-2406-DB	S-2406-DB
8	P-2408-DB	S-2408-DB
10	P-2410-DB	S-2410-DB
12	P-2412-DB	S-2412-DB



Plug

Socket

Plug or Socket



Dimensions - Plug or Socket

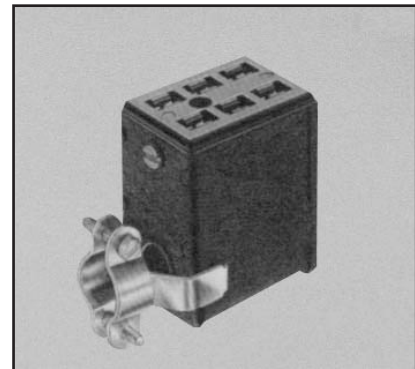
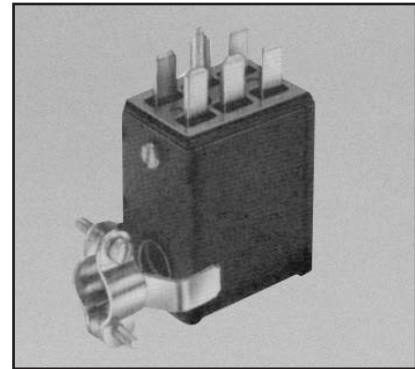
No. of Contacts	B		L		M	
	in	mm	in	mm	in	mm
2	.922	23.42	1.750	44.45	1.313	33.35
4	1.359	34.53	2.188	55.58	1.750	44.45
6	1.797	45.64	2.625	57.53	2.188	55.58
8	2.234	56.74	3.063	77.79	2.625	66.68
10	2.672	67.87	3.500	88.90	3.063	77.80
12	3.109	78.97	3.938	100.03	3.500	88.90

Panel Cutout dimensions are on page 2-61.

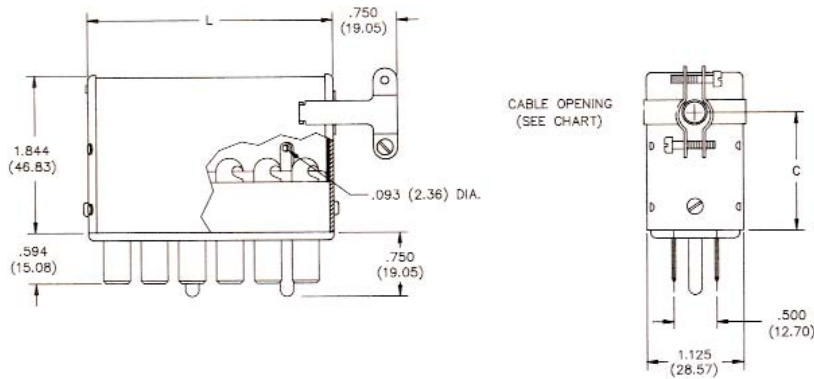
Marketed exclusively through distribution.

**2400 Series with Hood and 90° Clamp**

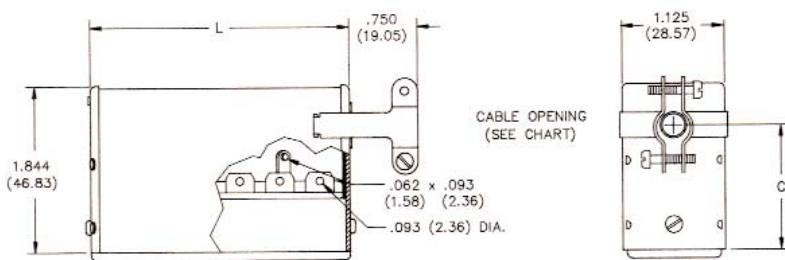
No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	N/A	S-2402-CCE
4	P-2404-CCE	S-2404-CCE
6	P-2406-CCE	S-2406-CCE
8	P-2408-CCE	S-2408-CCE
10	P-2410-CCE	S-2410-CCE
12	P-2412-CCE	S-2412-CCE



**Plug**



**Socket**



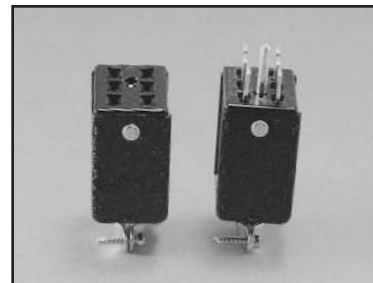
**Dimensions - Plug or Socket**

No. of Contacts	L		C		Cable Opening	
	in	mm	in	mm	in	mm
2	.625	15.88	1.375	34.93	.375	9.53
4	1.062	26.99	1.375	34.93	.438	11.11
6	1.500	38.10	1.375	34.93	.438	11.11
8	1.937	49.21	1.344	34.13	.563	14.29
10	2.375	60.33	1.344	34.13	.563	14.29
12	2.813	71.45	1.312	33.34	.625	15.88

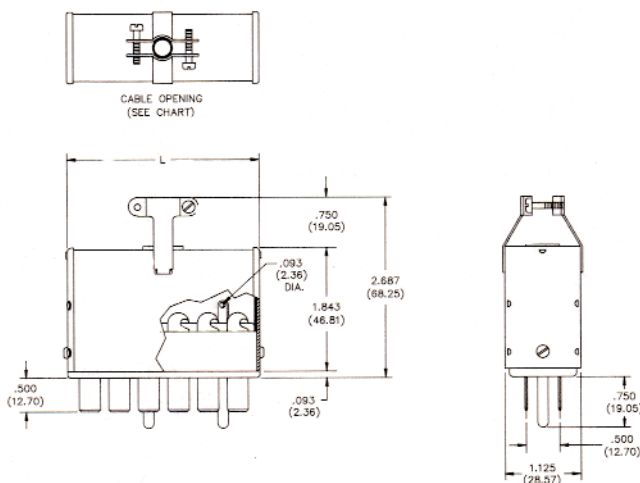
Marketed exclusively through distribution.

**2400 Series with Hood and 180° Clamp**

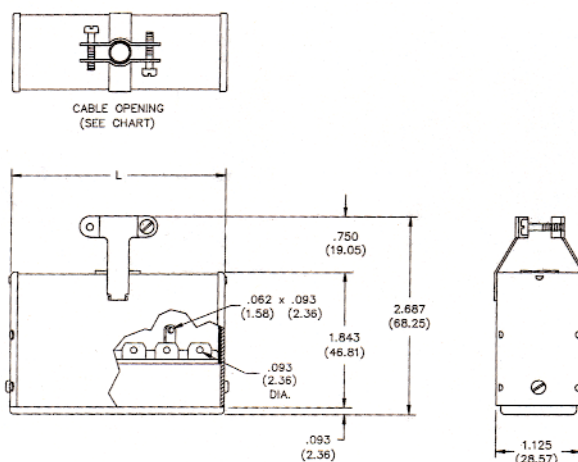
No. of Contacts	Catalog No. Plug	Catalog No. Socket
2	N/A	S-2402-CCT
4	P-2404-CCT	S-2404-CCT
6	P-2406-CCT	S-2406-CCT
8	P-2408-CCT	S-2408-CCT
10	P-2410-CCT	S-2410-CCT
12	P-2412-CCT	S-2412-CCT



**Plug**



**Socket**



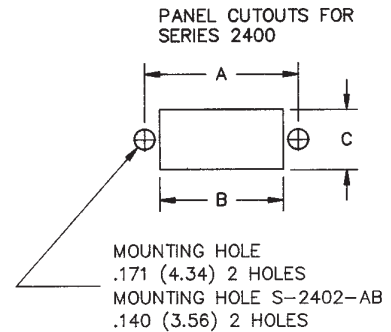
**Dimensions - Plug or Socket**

No. of Contacts	L		Cable Opening	
	in	mm	in	mm
2	.625	15.88	.313	7.94
4	1.062	26.99	.438	11.11
6	1.500	38.10	.438	11.11
8	1.937	49.21	.563	14.29
10	2.375	60.33	.563	14.29
12	2.813	71.45	.625	15.88

Marketed exclusively through distribution.

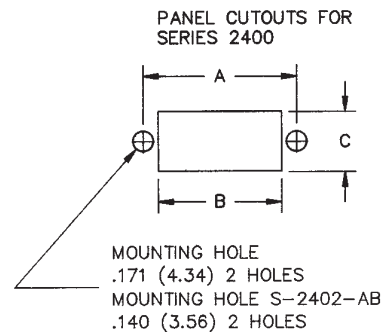
**Panel Cutout Dimensions  
Angle Bracket**

Reference	A		B		C	
	in	mm	in	mm	in	mm
P-2402-AB	--	--	--	--	--	--
S-2402-AB	1.188	30.16	1.008	25.60	1.015	25.78
P-2404-AB						
S-2404-AB	1.625	41.28	1.445	36.70	1.015	25.78
P-2406-AB						
S-2406-AB	2.063	52.40	1.886	47.83	1.015	25.78
P-2408-AB						
S-2408-AB	2.500	63.50	2.320	58.93	1.015	25.78
P-2410-AB						
S-2410-AB	2.938	74.63	2.758	70.05	1.015	25.78
P-2412-AB						
S-2412-AB	3.375	85.73	3.195	81.15	1.015	25.78



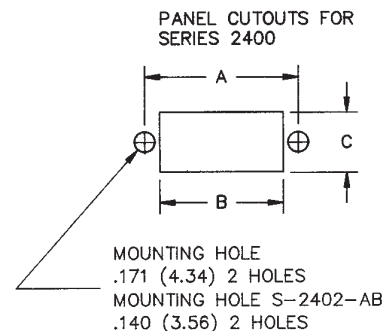
**Panel Cutout Dimensions  
Shallow Bracket**

Reference	A		B		C	
	in	mm	in	mm	in	mm
P-2402-SB						
S-2402-SB	1.062	27.00	.813	20.64	1.156	29.37
P-2404-SB						
S-2404-SB	1.500	38.10	1.250	31.75	1.156	29.37
P-2406-SB						
S-2406-SB	1.938	49.22	1.688	42.86	1.156	29.37
P-2408-SB						
S-2408-SB	2.376	60.34	2.125	53.98	1.156	29.37
P-2410-SB						
S-2410-SB	2.812	71.44	2.563	65.10	1.156	29.37
P-2412-SB						
S-2412-SB	3.250	82.56	3.000	76.20	1.156	29.37



**Panel Cutout Dimensions  
Deep Bracket**

Reference	A		B		C	
	in	mm	in	mm	in	mm
P-2402-DB						
S-2402-DB	1.312	33.34	.938	23.81	1.438	36.51
P-2404-DB						
S-2404-DB	1.750	44.46	1.375	34.93	1.438	36.51
P-2406-DB						
S-2406-DB	2.188	55.56	1.813	46.04	1.438	36.51
P-2408-DB						
S-2408-DB	2.624	66.68	2.250	57.15	1.438	36.51
P-2410-DB						
S-2410-DB	3.062	77.80	2.688	68.28	1.438	36.51
P-2412-DB						
S-2412-DB	3.500	88.90	3.125	79.38	1.438	36.51



Marketed exclusively through distribution.

## FEATURES

- **Contact positions 3, 4, 5, 6, 7, and 8.**
- **Pre-assembled with standard shielded cable lengths; consult factory for other lengths.**
- **Molded-in strain relief.**
- **Cable and overmold available in standard colors: black or beige.**
- **Contacts available with gold over nickel.**
- **Shielding system designed to meet FCC requirements for EMI/RFI suppression.**
- **UL Recognized - file E170218 (UL1977).**
- **CSA Certified - file LR31996-6.**

## MATERIALS

**Insulation Material:** Plug Insulator: UL 94V-0 rated nylon  
 Plug Overmold: PVC (black or beige)  
 Cable Jacket: PVC (black or beige)

**Contact Material:** Plug: Phosphor bronze

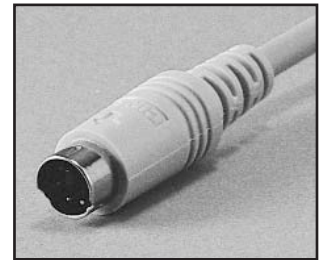
**Contact Plating:**  
**Option 1:** Gold Flash over nickel underplate overall  
**Option 2:** Option 1 plus additional gold in mating area for total thickness of 30µin.

**Shield Material:** Steel

**Shield Plating:** Nickel

**Standard Cable** Shielded cable with 0.197 inch OD jacket over 28 AWG stranded wire

**Composition:** conductors. Contact factory for custom cable requirements.



## ENVIRONMENTAL

**Shock:** MIL-STD-202, Method 213, Condition C

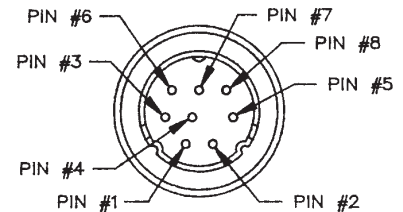
**Operating Temperature:** -40°C to +70°C

**Heat Resistance:** 196 hrs. at 100°C

**Salt Spray:** MIL-STD-202, Method 101D, Condition D

**Vibration:** MIL-STD-202, Method 204, Condition B

**Humidity:** MIL-STD-202, Method 103, 48 hrs. at 90-95% RH at 40°C



## ELECTRICAL

**Voltage Rating:** 500 VAC RMS, 707 VDC

**Current Rating:** 1 Amp at 100 VAC  
2 Amps at 12 VDC

**Contact Resistance:** Contact to contact: 30 milliohms maximum  
Shield to shield: 50 milliohms maximum

**Insulation Resistance:** 500 megohms minimum at 500 VDC  
100 megohms minimum after humidity

PIN NO	COLOR
1	BLACK
2	GREEN
3	RED
4	BROWN
5	BLUE
6	WHITE
7	YELLOW
8	GRAY

## MECHANICAL

**Durability:** Withstands 500 mating/unmating cycles

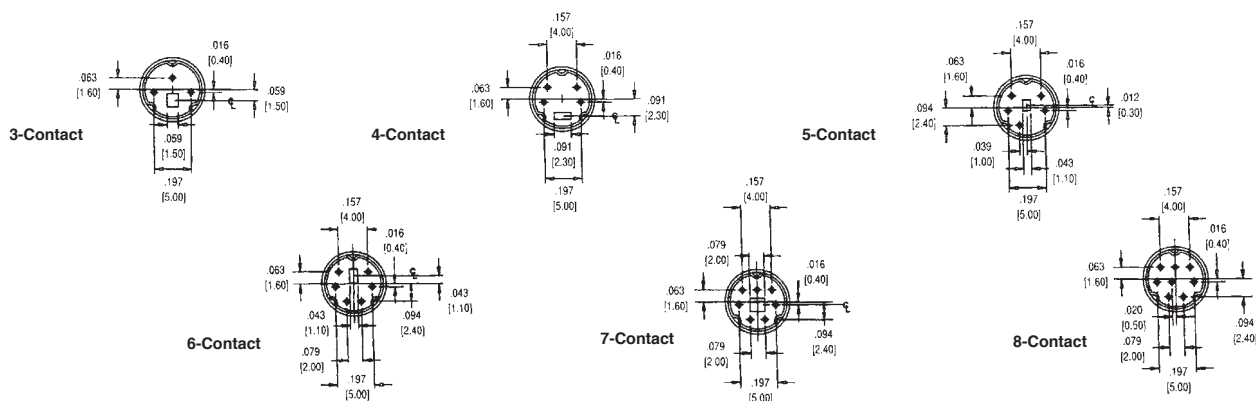
**Mating Force:** 10 lb. (4.5 kg) maximum

**Unmating Force:** 1 lb. (0.9 kg) minimum

**Contact Retention:** 3 lb. minimum

Marketed exclusively through distribution.

## Dimensions



### Ordering Information: (NOTE: One meter = 39.62 inches.)

For cable assemblies with plug on one end. Plug features contacts with Option 1 plating (gold flash over nickel).

No. of Contacts	Cable Length Meter	Black Color Cable & Overmold Catalog No.	Beige Color Cable & Overmold Catalog No.
3	1	MDC-3P05	MDC-3P08
4	1	MDC-4P05	MDC-4P08
4	2	MDC-4P13	MDC-4P53
4	3	MDC-4P15	MDC-4P55
5	1	MDC-5P05	MDC-5P08
6	1	MDC-6P05	MDC-6P08
6	2	MDC-6P13	MDC-6P53
6	3	MDC-6P15	MDC-6P55
7	1	MDC-7P05	MDC-7P08
7	2	MDC-7P13	MDC-7P53
7	3	MDC-7P15	MDC-7P55
8	1	MDC-8P05	MDC-8P08
8	2	MDC-8P13	MDC-8P53
8	3	MDC-8P15	MDC-8P55

The above cable assemblies are highly recommended for general commercial applications. Contact factory for other lengths or colors.

For cable assemblies with plug on one end. Plug features contacts with Option 2 plating (Option 1 with additional gold in mating area). NOTE: Total gold thickness in mating area is 30 microinches.

No. of Contacts	Cable Length Meter	Black Color Cable & Overmold Catalog No.	Beige Color Cable & Overmold Catalog No.
3	1	MDC-3P06	MDC-3P09
4	1	MDC-4P06	MDC-4P09
5	1	MDC-5P06	MDC-5P09
6	1	MDC-6P06	MDC-6P09
7	1	MDC-7P06	MDC-7P09
8	1	MDC-8P06	MDC-8P09

The above cable assemblies are recommended where greater contact durability is required.

### Additional Capabilities

- Additional lengths or colors of the above cable assemblies can be produced. Consult factory for custom orders.
- Custom-plated contacts can be provided. Consult factory for information.

Marketed exclusively through distribution.

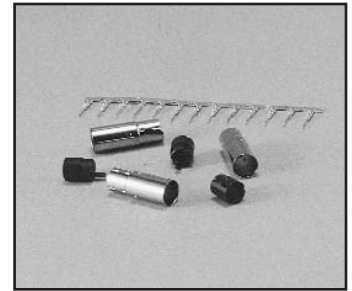
# Circular Mini DIN Plugs

## Plug Components for Cable Termination



FEATURES

- Individual components available for cable assembly with overmolding.
- Plug insulator available with contact positions 3, 4, 5, 6, 7, and 8.
- Seamless shield case is crimped to cable shield; designed to meet FCC requirements for EMI/RFI suppression.
- One-piece shield case - no extra ferrules or shields required with Cinch Shield Crimp Tools.
- Contacts are crimp style and supplied on reels.
- Contacts available with gold over nickel in several options.
- Tools available to facilitate reliable, efficient termination.
- Terminates 24 to 30 AWG wire.
- UL Recognized - file E170218 (UL1977).



MATERIALS

**Insulation Material:** Plug Insulator: 94 V-0 rated nylon

**Contact Material:** Plug: Phosphor bronze

**Contact Plating:**

- Option 1:** Gold flash over nickel underplate overall
- Option 2:** Option 1 plus additional gold in mating area for total thickness of 30µin.
- Option 3:** Option 1 plus additional gold in mating area for total thickness of 50µin.

**Shield Case Material:** Steel

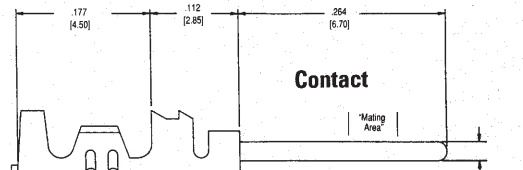
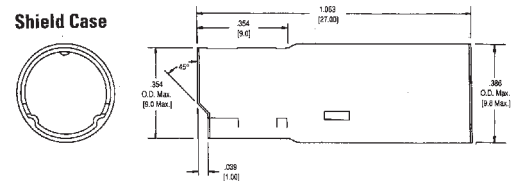
**Shield Case Plating:** Nickel

Cross-Section of Assembly

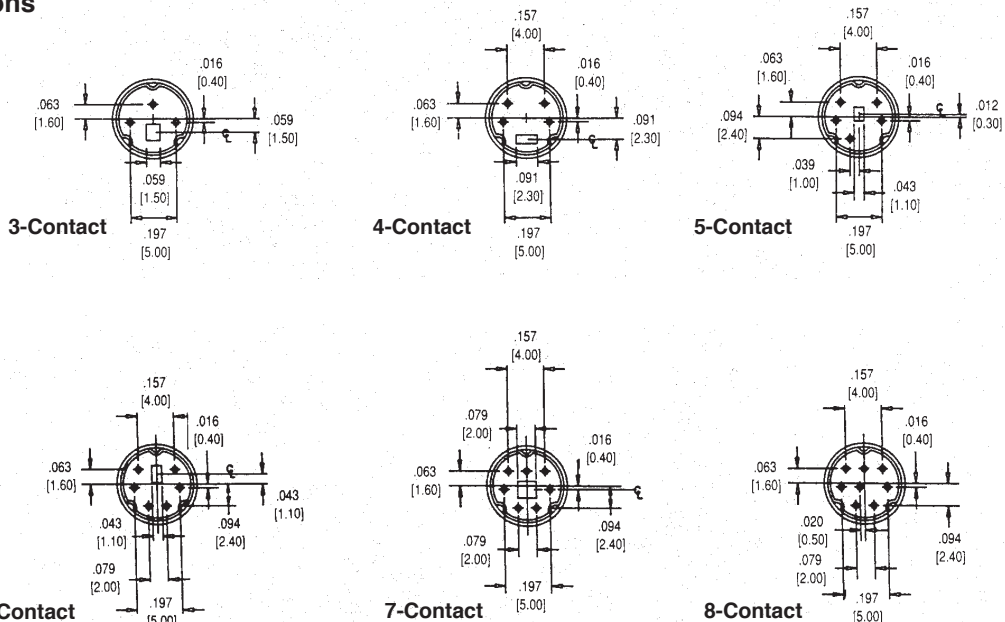
Crimped Contact



Shield Case



### Dimensions



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### Ordering Information

For each Plug Assembly, the following components are needed: one plug insulator, one shield, and adequate contacts.

Component Type	Description	Quantity	Catalog No.
Insulator	3 Position Insulator	1	MDX-3PI
	4 Position Insulator	1	MDX-4PI
	5 Position Insulator	1	MDX-5PI
	6 Position Insulator	1	MDX-6PI
	7 Position Insulator	1	MDX-7PI
	8 Position Insulator	1	MDX-8PI
Shield Case	Metal Shield Case	1	MDX-PZ
Contact	Option 1 Plating	300 on Reel	MDX-P-3A
	Option 1 Plating	15,000 on Reel	MDX-P-15A
	Option 2 Plating	300 on Reel	MDX-P-3B
	Option 2 Plating	15,000 on Reel	MDX-P-15B
	Option 3 Plating	15,000 on Reel	MDX-P-15D

### Tool Ordering Information

The following tools are recommended for Mini Din Cable Plug Assembly. One tool of each type is required.

Tool Type	Description	Catalog No.
Contact Crimp	Stripper-Crimper Machine Complete, Includes Dies	MDT-P25
	Contact Crimp Hand Tool Crimps using 300 Contact Reels	MDT-P35
	Contact Insertion	MDT-P41
Contact Insertion	Combination Contact Insertion and Insulator Insertion Tool	MDT-P41
	Contact Insertion Hand Tool	MDT-P28
	Fixture used with MDT-P28	MDT-P29
	Insulator Insertion Bench Mounted Tool	MDT-P34
	Insulator Insertion Hand Tool	MDT-P30
	Pneumatic Crimp Tool	MDT-P81

### Overview of Assembly Steps

- Prepare multi-conductor cable.
- Crimp contacts onto individual conductors using tool MDT-P25 or tool MDT-P35.
- Insert contact with conductor into insulator using tool MDT-P41 or have insertion tool MDT-P28 with insulator locating vice MDT-P29.
- Insert insulator into the shield case using tool MDT-P34 or MDT-P30.
- Crimp the shield case onto the cable shield using tool MDT-P81.
- Overmold plastic to complete the assembly.

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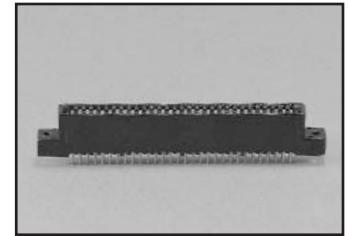
**CARDCON™**  
**Edge Connector**  
**Commercial**

.100" (2.54mm) Density  
 Dip Solder



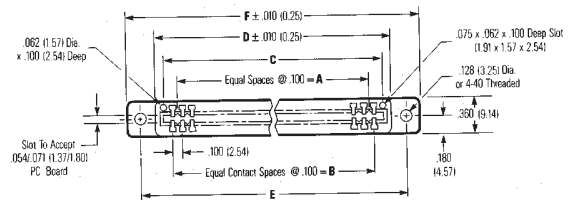
FEATURES

- *AT and XT versions available.*
- *Dip solder tails on .200" (5.08mm) row centers double readout.*
- *Bifurcated semi-bellows contacts for added contact reliability.*
- *Ideal for applications involving vibration or board irregularities.*
- *Contact positions: 12, 15, 18, 20, 22, 25, 28, 30, 31, 36, 37, 40, 43, 44, 49, 50, 52, 60, 70, AT, and XT.*
- *Accepts .062" (1.59mm) thick PC boards.*
- *Available less mounting ears, or with .128" (3.25mm) mounting holes or 4-40 threaded holes.*
- *Meets applicable performance criteria of MIL-C-21097.*
- *Tube packaging available.*
- *UL Recognized - file E170218 (UL1977) E130965 (UL1863).*



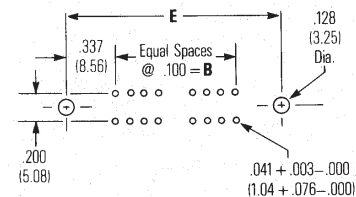
MATERIALS

**Insulation Material:** UL 94V-0 rated glass-filled polyester, black  
**Contact Material:** Spring brass  
**Standard Contact Plating:** 10 in. selective gold over nickel, 50 in. nickel in contact area, tin on tails  
**XT, AT Plating:** 30 in. selective gold over 50 in. nickel in contact area, tin on tails



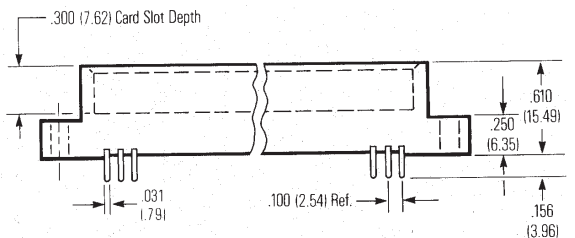
ENVIRONMENTAL

**Shock:** Per MIL-STD-202E, Method 213, Condition C  
**Operating Temperature:** -65°C to +105°C  
**Vibration:** Per MIL-STD-202E, Method 204, Condition B  
**Humidity:** Per MIL-STD-202, Method 103, Condition B  
**Accessories:**  
**Polarizing Key:** Two types (order separately):  
 a) for between-contact polarization and  
 b) for in-contact polarization.  
 See page 2-74 for more information.  
**Card Guide Posts:** (order separately)  
 Attach to mounting ears and guide PC board into connector. See page 2-74 for more information.



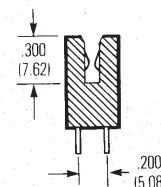
ELECTRICAL

**Withstanding Voltage:** 650 VAC RMS (@ sea level)  
**Current Rating:** 3 Amps  
**Contact Resistance:** 10 Milliohms maximum  
**Insulation Resistance:** 5000 Megohms minimum



MECHANICAL

**Individual Contact Insertion and Separation Force:**  
 12oz. maximum with .070" (1.78mm) blade;  
 1 oz. minimum with .054" (1.37mm) blade



Marketed exclusively through distribution.

**Dimensions**

No. of Pos./Cont.	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
12/24	1.000	25.40	1.100	27.94	1.300	33.02	1.460	37.08	1.775	45.09	2.035	51.69
15/30	1.300	33.02	1.400	35.56	1.600	40.64	1.760	44.70	2.075	52.71	2.335	59.31
18/36	1.600	40.64	1.700	43.18	1.900	48.26	2.060	52.32	2.375	60.33	2.635	66.93
18/36+												
31/62IBM	5.000	127.00	5.100	129.54	5.300	134.62	5.460	138.68	5.775	146.69	6.035	153.29
20/40	1.800	45.72	1.900	48.26	2.100	53.34	2.260	57.40	2.575	65.41	2.835	72.01
22/24	2.000	50.80	2.100	53.34	2.300	58.42	2.460	62.48	2.775	70.49	3.035	77.09
25/50	2.300	58.42	2.400	60.96	2.600	66.04	2.760	70.10	3.075	78.11	3.335	84.71
28/56	2.600	66.04	2.700	68.58	2.900	73.66	3.060	77.72	3.375	85.73	3.635	92.33
30/60	2.800	71.12	2.900	73.66	3.100	78.74	3.260	82.80	3.575	90.81	3.835	97.41
31/62	2.900	73.66	3.000	76.20	3.200	81.28	3.360	85.34	3.675	93.35	3.935	99.95
31/62IBM	2.900	73.66	3.000	76.20	3.200	81.28	3.360	85.34	3.675	93.35	3.935	99.95
36/72	3.400	86.36	3.500	88.90	3.700	93.98	3.860	98.04	4.175	106.05	4.435	112.63
37/74	3.500	88.90	3.600	91.44	3.800	96.52	3.960	100.58	4.275	108.59	4.535	115.19
40/80	3.800	96.52	3.900	99.06	4.100	104.14	4.260	108.20	4.575	116.21	4.835	122.81
43/86	4.100	104.14	4.200	106.68	4.400	111.76	4.560	115.82	4.875	123.83	5.135	130.43
44/88	4.200	106.68	4.300	109.22	4.500	114.30	4.660	118.36	4.975	126.37	5.235	132.97
49/98	4.700	119.38	4.800	121.92	5.000	127.00	5.160	131.06	5.475	139.07	5.735	145.67
50/100	4.800	121.92	4.900	124.46	5.100	129.54	5.260	133.60	5.575	141.61	5.835	148.21
52/104	5.000	127.00	5.100	129.54	5.300	134.62	5.460	138.68	5.775	146.69	6.035	153.29
60/120	5.800	147.32	5.900	149.86	6.100	154.94	6.260	159.00	6.575	167.01	6.835	173.61
70/140	6.800	172.72	6.900	175.26	7.100	180.34	7.260	184.40	7.575	192.41	7.835	199.01

**Ordering Information**

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128" (3.25mm)	4-40
		Mounting Holes Catalog No.	Threaded Holes Catalog No.
12/24	50-12SN-12	50-12SN-11	50-12SN-13
15/30	50-15SN-12	50-15SN-11	50-15SN-13
18/36	50-18SN-12	50-18SN-11	50-18SN-13
18/36+			
31/62 IBM	50-52SN-AT	-	-
20/40	50-20SN-12	50-20SN-11	50-20SN-13
22/44	50-22SN-12	50-22SN-11	50-22SN-13
25/50	50-25SN-12	50-25SN-11	50-25SN-13
28/56	50-28SN-12	50-28SN-11	50-28SN-13
30/60	50-30SN-12	50-30SN-11	50-30SN-13
31/62	50-31SN-12	50-31SN-11	50-31SN-13
31/62 IBM	50-31SN-XT	-	-
36/72	50-36SN-12	50-36SN-11	50-36SN-13
37/74	50-37SN-12	50-37SN-11	50-37SN-13
40/80	50-40SN-12	50-40SN-11	50-40SN-13
43/86	50-43SN-12	50-43SN-11	50-43SN-13
44/88	50-44SN-12	50-44SN-11	50-44SN-13
49/98	50-49SN-12	50-49SN-11	50-49SN-13
50/100	50-50SN-12	50-50SN-11	50-50SN-13
52/104	50-52SN-12	50-52SN-11	50-52SN-13
60/120	50-60SN-12	50-60SN-11	50-60SN-13
70/140	50-70SN-12	50-70SN-11	50-70SN-13

Marketed exclusively through distribution.

**CARDCON™**  
**Edge Connector**  
**Commercial**

.156" (3.96mm) Density  
 Dip Solder/Solder Eyelet



FEATURES

- *Dip solder tails single readout and double readout on .140" (3.56mm) row centers or .200" (5.08mm) row centers.*
- *Solder eyelet, single readout and double readout on .200" (5.08mm) row centers.*
- *Available with unique tails for PC board retention; holds the connector firmly on the board during wave soldering operations.*
- *Bifurcated semi-bellows contacts for added contact reliability.*
- *Ideal for applications involving vibration or board irregularities.*
- *Contact positions: 6, 10, 12, 15, 18, 22, 24, and 25.*
- *Accepts single- or double-sided .062" (1.59mm) thick PC boards.*
- *Available less mounting ears or with .128" (3.25mm) mounting hole.*
- *Meets applicable performance criteria of MIL-C-21097.*
- *UL Recognized - file E170218 (UL1977) E130965 (UL1863).*

MATERIALS

**Insulation Material:** UL 94V-0 rated glass-filled polyester, black  
**Contact Material:** Spring brass  
**Contact Plating:** 10 " selective gold over 30 " nickel in contact area, tin on tails

ENVIRONMENTAL

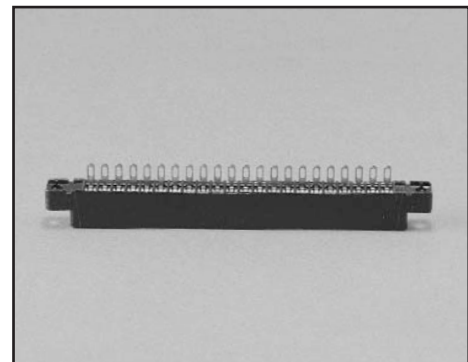
**Shock:** Per MIL-STD-202E, Method 213, Condition C  
**Operating Temperature:** -65°C to +105°C  
**Vibration:** Per MIL-STD-202E, Method 204, Condition B  
**Humidity:** Per MIL-STD-202, Method 103, Condition B  
**Accessories:**  
**Polarizing Key:** Two types (order separately):  
 a) for between-contact polarization and  
 b) for in-contact polarization  
 See page 2-72 for more information.  
**Card Guide Posts:** (order separately):  
 Attach to mounting ears and guide PC board into connector  
 See page 2-72 for more information.

ELECTRICAL

**Withstanding Voltage:** 1800 VAC RMS (@ sea level)  
**Current Rating:** 5 Amps  
**Contact Resistance:** 6 Milliohms maximum  
**Insulation Resistance:** 5000 Megohms minimum

MECHANICAL

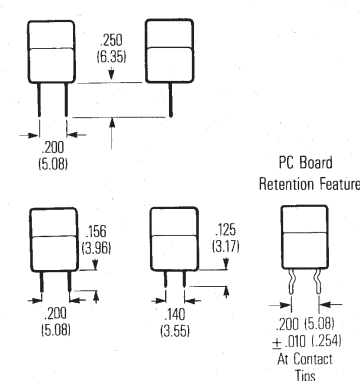
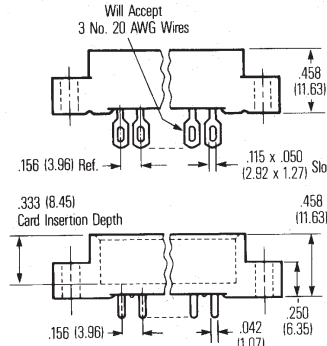
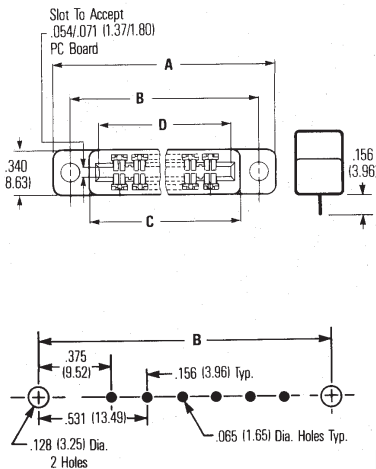
**Individual Contact Insertion and Separation Force:**  
 16 oz. maximum with .070" (1.78mm) blade;  
 1 oz. minimum with .054" (1.37mm) blade



Marketed exclusively through distribution.

# CARDCON™ Edge Connector Commercial

.156" (3.96mm) Density  
Dip Solder/Solder Eyelet



## Dimensions

No. of Pos./Cont.	A		B		C		D	
	In	mm	in	mm	in	mm	in	mm
6/12	1.785	45.34	1.531	38.89	1.239	31.47	1.100	27.94
10/20	2.410	61.21	2.156	54.76	1.874	47.34	1.724	43.79
12/24	2.723	69.16	2.469	62.71	2.177	55.30	2.036	51.71
15/30	3.191	81.05	2.937	74.60	2.645	67.18	2.504	63.60
18/36	3.660	92.96	3.406	86.51	3.114	79.10	2.972	75.49
22/44	4.285	108.84	4.031	102.39	3.739	94.94	3.596	91.34
24/48	4.598	116.79	4.344	110.34	4.052	102.92	3.911	99.34
25/50	4.754	120.75	4.500	114.30	4.208	106.88	4.067	103.30

## Ordering Information

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128 Mounting Hole Catalog No.
<b>Solder eyelet, single readout</b>		
6/6	50-6SN-8	50-6SN-7
10/10	50-10SN-8	50-10SN-7
12/12	50-12SN-8	50-12SN-7
15/15	50-15SN-8	50-15SN-7
18/18	50-18SN-8	50-18SN-7
22/22	50-22SN-8	50-22SN-7
24/24	50-24SN-8	50-24SN-7
25/25	50-25SN-8	50-25SN-7

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128 Mounting Hole Catalog No.
<b>Dip solder tails, single readout, .156" (3.96mm) long</b>		
6/6	50-6SN-6	50-6SN-5
10/10	50-10SN-6	50-10SN-5
12/12	50-12SN-6	50-12SN-5
15/15	50-15SN-6	50-15SN-5
18/18	50-18SN-6	50-18SN-5
22/22	50-22SN-6	50-22SN-5
24/24	50-24SN-6	20-24SN-5
25/25	50-25SN-6	50-25SN-5

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128 Mounting Hole Catalog No.
<b>Dip solder tails with unique board retention feature .200" (5.08mm) row spacing, .156" (3.96mm) long</b>		
6/12	50-12SN-4	50-12SN-2
10/20	50-20SN-4	50-20SN-2
12/24	50-24SN-4	50-24SN-2
15/30	50-30SN-4	50-30SN-2
18/36	50-36SN-4	50-36SN-2
22/24	50-44SN-4	50-44SN-2
24/48	50-48SN-4	50-48SN-2
25/50	50-50SN-4	50-50SN-2

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128 Mounting Hole Catalog No.
<b>Solder eyelet, double readout, .200" (5.08mm) row spacing</b>		
6/12	50-12SN-10	50-12SN-9
10/20	50-20SN-10	50-20SN-9
12/24	50-24SN-10	50-24SN-9
15/30	50-30SN-10	50-30SN-9
18/36	50-36SN-10	50-36SN-9
22/24	50-44SN-10	50-44SN-9
24/28	50-48SN-10	50-48SN-9
25/50	50-50SN-10	50-50SN-9

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128 Mounting Hole Catalog No.
<b>Dip solder tails, double readout, .200" (5.08mm) row spacing, .156" (3.96mm) long</b>		
6/12	50-12SN-3	50-12SN-1
10/20	50-20SN-3	50-20SN-1
12/24	50-24SN-3	50-24SN-1
15/30	50-30SN-3	50-30SN-1
18/36	50-36SN-3	50-36SN-1
22/44	50-44SN-3	50-44SN-1
24/48	50-48SN-3	50-48SN-1
25/50	50-50SN-3	50-50SN-1

No. of Pos./Cont.	Less Mounting Ears Catalog No.	.128 Mounting Hole Catalog No.
<b>Dip solder tails with unique board retention feature .200" (5.08mm) row spacing, .156" (3.96mm) long</b>		
6/12	50-12SN-3R	50-12SN-1R
10/20	50-20SN-3R	50-20SN-1R
12/24	50-24SN-3R	50-24SN-1R
15/30	50-30SN-3R	50-30SN-1R
18/36	50-36SN-3R	50-36SN-1R
22/44	50-44SN-3R	50-44SN-1R
24/48	50-48SN-3R	50-48SN-1R
25/50	50-50SN-3R	50-50SN-1R

Marketed exclusively through distribution.



# Edge Connector High Reliability

.156" (3.96mm) Density Dip  
Solder/Solder Eyelet

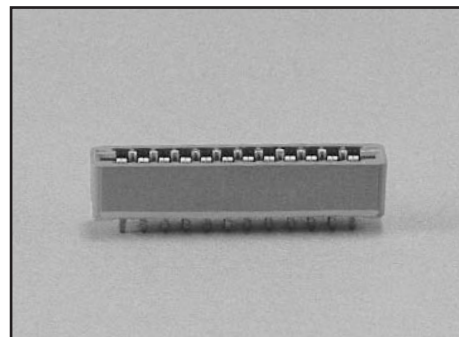


## FEATURES

- *Dip solder tails, single readout, .156" (3.96mm) long or .234" (5.94mm) long.*
- *Dip solder tails, double readout, .156" (3.96mm) or .234" (5.94mm) long on .200" (5.08mm) row spacing, or .125" (3.18mm) long on .140" (3.56mm) row spacing.*
- *Solder eyelet, single readout and double readout on .200" (5.08mm) row spacing.*
- *Patented bifurcated bellows contacts for added contact reliability.*
- *Ideal for applications involving vibration or board irregularities.*
- *Contact positions: 6, 10, 12, 15, 18, 22, and 25.*
- *Available with or without mounting ears.*
- *Accepts single- or double-sided .062" (1.59mm) thick PC boards.*
- *UL Recognized - file E170218 (UL1977) E130965 (UL1863).*

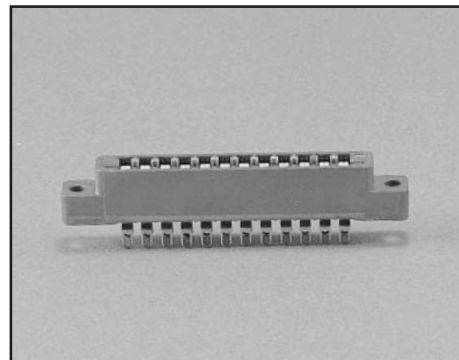
## MATERIALS

**Insulation Material:** Diallyl phthalate, green  
**Contact Material:** Phosphor bronze  
**Contact Plating:** 30 " selective gold over 50 " copper in the contact areas, 5 " gold on tails



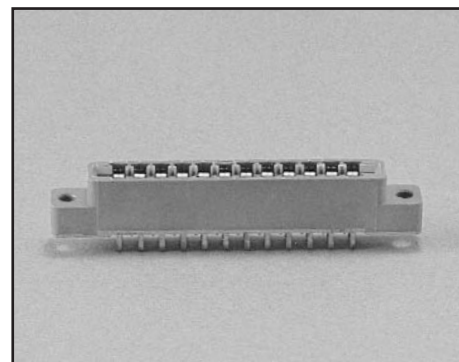
## ENVIRONMENTAL

**Shock:** Per MIL-STD-202E, Method 202  
**Operating Temperature:** Dip solder: -65°C to +105°C  
 Solder eyelet: -65°C to +125°C  
**Vibration:** Per MIL-STD-202E, Method 204, Condition B  
**Humidity:** Per MIL-STD-202E, Method 103, Condition B  
**Accessories:**  
**Polarizing Key:** Two types (order separately):  
 a) for between-contact polarization and  
 b) for in-contact polarization  
 See page 2-74 for more information.  
**Card Guide Posts:** (order separately):  
 Attach to mounting ears and guide PC board into connector  
 See page 2-74 for more information.



## ELECTRICAL

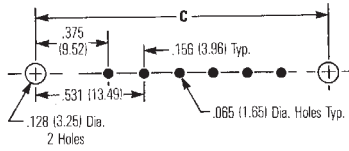
**Withstanding Voltage:** 1800 VAC RMS (@ sea level)  
**Current Rating:** 5 Amps  
**Contact Resistance:** Dip solder: 6 Milliohms  
 Solder eyelet: 10 Milliohms  
**Insulation Resistance:** 5000 Megohms minimum



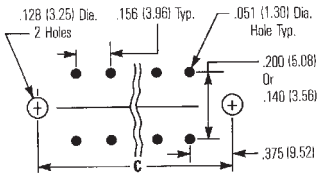
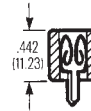
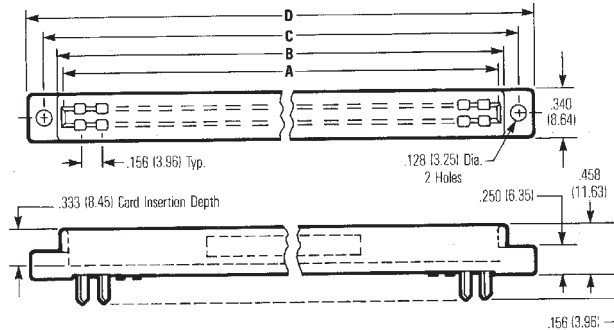
## MECHANICAL

**Individual Contact Insertion and Separation Force:**  
 16 oz. maximum with .070" (1.78mm) blade;  
 1 oz. minimum with .054" (1.37mm) blade

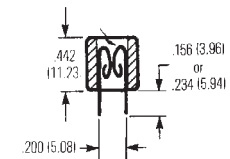
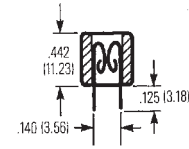
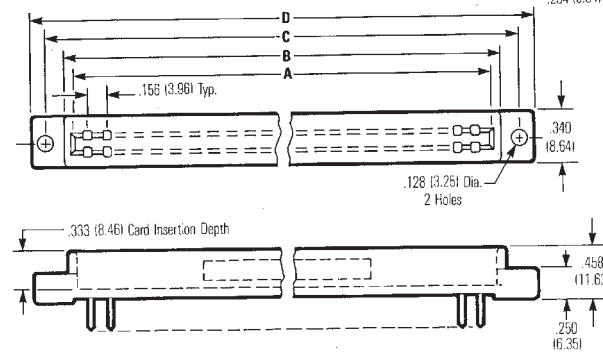
Marketed exclusively through distribution.



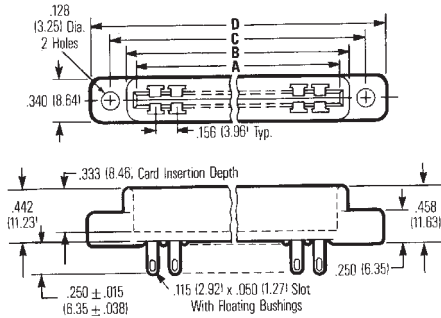
**Single Readout**



**Double Readout**



**With Plain Mounting Holes**



Single Readout

Double Readout

**Dimensions**

No. of Pos./Cont.	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
6	1.100	27.94	1.239	31.47	1.531	38.80	1.785	45.34
10	1.724	43.79	1.864	47.35	2.156	54.76	2.410	61.21
12	2.036	51.71	2.177	55.30	2.469	62.71	2.723	69.16
15	2.504	63.60	2.645	67.18	2.937	74.60	3.191	81.05
18	2.972	75.49	3.114	79.10	3.406	86.51	3.660	92.96
20	3.286	83.46	3.427	87.05	3.719	94.46	3.973	100.91
22	3.596	91.34	3.739	94.97	4.031	102.39	4.285	108.84
25	4.067	103.30	4.208	106.88	4.500	114.30	4.754	120.75

Marketed exclusively through distribution.

Ordering Information

Single Readout

No. of Pos./Cont.	<b>.128" (3.25mm) Mounting Hole</b>		
	<b>Dip Solder Tails</b>	<b>Dip Solder Tails</b>	<b>Solder Eyelet</b>
	<b>.156" (3.96mm) Long</b>	<b>.234" (5.94mm) Long</b>	
	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>
6/6	50-6H-10	50-6S-10	50-6H-20
10/10	50-10H-10	50-10S-10	50-10H-20
12/12	50-12R-10	50-12S-10	50-12H-20
15/15	50-15H-10	50-15S-10	50-15H-20
18/18	50-18H-10	50-18S-10	50-18H-20
20/20	50-20C-10	50-20S-10	50-20A-20
22/22	50-22H-10	50-22S-10	50-22H-20
25/25	50-25H-10	50-25S-10	50-25H-20

Double Readout

No. of Pos./Cont.	<b>.128" (3.25mm)</b>	<b>Mounting Hole</b>		<b>Less Mounting Ears</b>	
	<b>Solder Eyelet</b>	<b>Dip Solder Tails</b>	<b>Dip Solder Tails</b>	<b>Dip Solder Tails</b>	<b>Dip Solder Tails</b>
		<b>.234" (5.94mm) Long</b>	<b>.156" (3.96mm) Long</b>	<b>.125" (3.18mm) Long</b>	<b>.125" (3.18mm) Long</b>
		<b>.200" (5.08mm) Between</b>	<b>.200" (5.08mm) Between</b>	<b>.140" (3.56mm) Between</b>	<b>.140" (3.56mm) Between</b>
		<b>Row Spacing</b>	<b>Row Spacing</b>	<b>Row Spacing</b>	<b>Row Spacing</b>
	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>
6/12	50-12H-30	50-12S-20	50-12H-10	50-12H-30-2	50-12H-30-1
10/20	50-20H-30	50-20S-20	50-20H-10	50-20H-30-2	50-20H-30-1
12/24	50-24H-30	50-24S-20	50-24H-10	50-24H-30-2	50-24H-30-1
15/30	50-30H-30	50-30S-20	50-30H-10	50-30H-30-2	50-30H-30-1
18/36	50-36H-30	50-36S-20	50-36H-10	50-36H-30-2	50-36H-30-1
20/40	50-40A-30	50-40S-20	50-40B-10		
22/44	50-44H-30	50-44S-20	50-44H-10	50-44H-30-2	50-44H-30-1
25/50	50-50H-30	50-50S-20	50-50H-10	50-50H-30-2	50-50H-30-1





# Edge Connector High Reliability

.156" (3.96mm) Density  
Card Extender

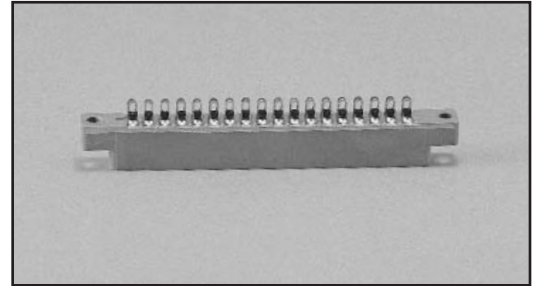


## FEATURES

- **Solder terminations, double readout.**
- **Bifurcated bellows type contacts.**
- **Contact positions: 6, 10, 12, 15, 18, 22, and 25.**
- **Accepts .062" (1.59mm) thick double-sided PC boards.**

## MATERIALS

**Insulation Material:** Diallyl phthalate, green  
**Contact Material:** Beryllium copper  
**Contact Plating:** 30 in. select gold over 50 in. nickel in the contact areas, 10 in. gold tails



## ENVIRONMENTAL

**Shock:** Per MIL-STD-202E, Method 213, Condition C  
**Operating Temperature:** -65°C to +125°C  
**Vibration:** Per MIL-STD-202E, Method 204, Condition B  
**Humidity:** Per MIL-STD-202E, Method 103, Condition B

## ELECTRICAL

**Withstanding Voltage:** 830 VAC RMS (@ sea level)  
**Current Rating:** 5 Amps  
**Contact Resistance:** 5 Milliohms maximum  
**Insulation Resistance:** 5000 Megohms minimum

## MECHANICAL

**Individual Contact Insertion and Separation Force:**  
16 oz. maximum with .070" (1.78mm) blade;  
1 oz. minimum with .054" (1.37mm) blade

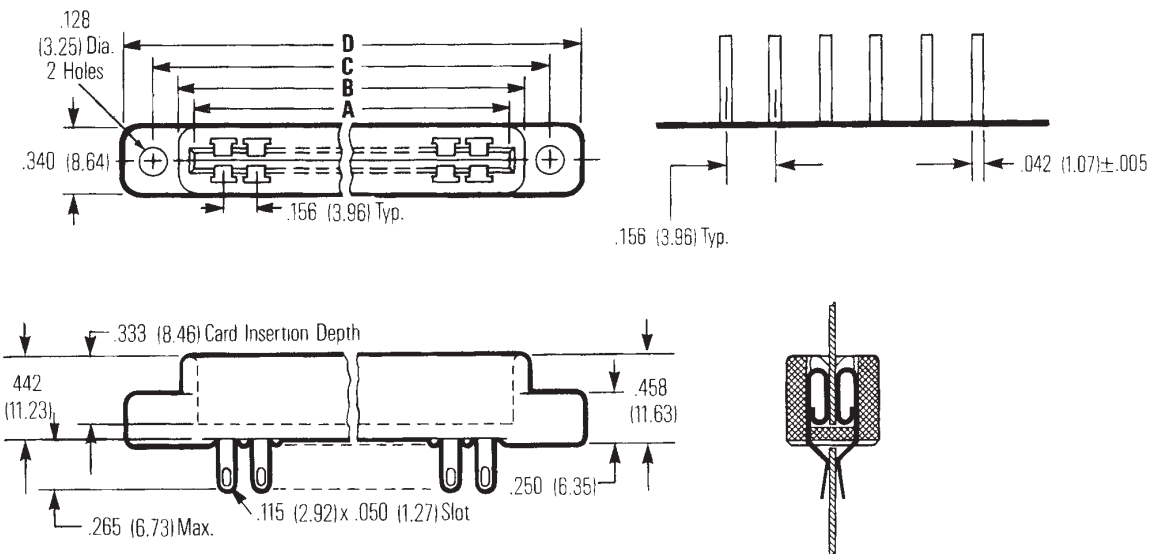
Marketed exclusively through distribution.

# Edge Connector High Reliability

.156" (3.96mm) Density  
Card Extender



## Dimensions



## Dimensions

No. of Pos./Cont.	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
6/12	1.100	27.94	1.239	31.47	1.531	38.88	1.785	45.33
10/20	1.724	43.79	1.864	47.34	2.156	54.76	2.410	61.21
12/24	2.036	51.71	2.177	55.29	2.469	62.71	2.723	69.16
15/30	2.504	63.60	2.645	67.18	2.937	74.59	3.191	81.05
18/36	2.972	75.48	3.114	79.09	3.406	86.51	3.660	92.96
22/44	3.596	91.33	3.739	94.97	4.031	102.38	4.285	108.83
25/50	4.067	103.30	4.208	106.88	4.500	114.30	4.754	120.75

## Ordering Information

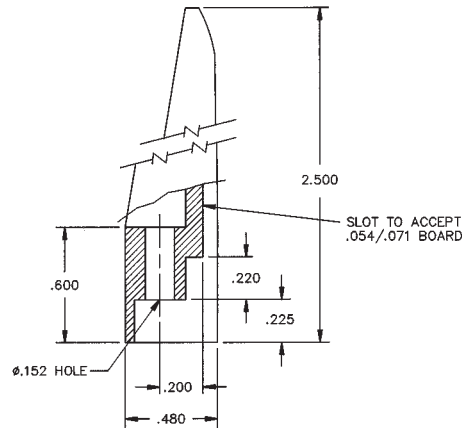
No. of Pos./Cont.	Catalog No.
6/12	50-12S-30
10/20	50-20S-30
12/24	50-24S-30
15/30	50-30S-30
18/36	50-36S-30
22/44	50-44S-30
25/50	50-50S-30

Marketed exclusively through distribution.

**Card Guides**

Card guide for .100" (2.54mm) and .156" (3.96mm) density edge connectors. Accepts .062" (1.59mm) thick PC boards. Card guides attach to mounting ears and guide printed circuit board into connector. Order separately.

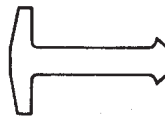
**Material:** Polypropylene  
Part No. 50-GP-1 (Green)  
Part No. 50-GP-1B (Black)



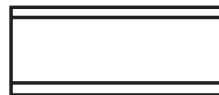
**Polarizing Keys**



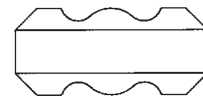
Style A



Style B



Style C



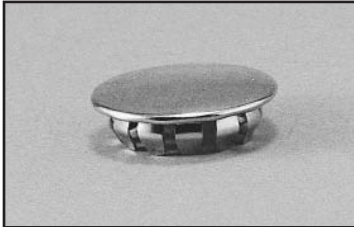
Style D

Description	Connector Family	Material	Style	Catalog No.
Between-contact type	.156"	Cellulose acetate	B	50-PK
In-contact type	.156"	Thermoset plastic	B	50-PK1
Between-contact type	.156"	Glass epoxy	A	50-PK2
Between-contact type	.156"	Glass epoxy	D	50-PK2M
Between-contact type	.100"	Glass-filled nylon	C	50-PK3
In-contact type	.156"	Thermoplastic	B	50-PK4

Marketed exclusively through distribution.

**Plug Buttons**

Nickel-plated steel. Spring tension prongs.  
41V provides ventilation wherever required.



**Dimensions**

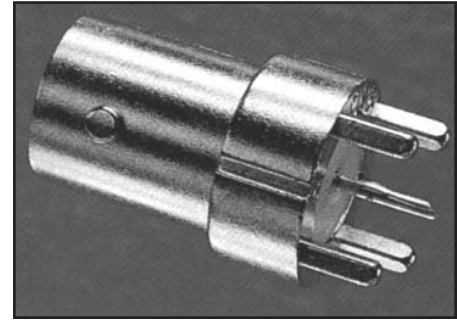
For Hole Diameter		Cup Diameter		Catalog No.
in	mm	in	mm	
.250	6.35	.406	10.32	41A
.375	9.53	.500	12.70	41B
.500	12.70	.656	16.67	41C
.625	15.88	.797	20.24	41D
.750	19.05	.938	23.81	41E
.875	22.23	1.062	26.99	41F
1.000	25.40	1.156	29.37	41G
1.250	31.75	1.438	36.51	41H
1.000	25.40	1.156	29.37	41V

# Press-Fit BNC Coaxial Connector Board Mount Receptacle for 75 Ω Applications



## FEATURES

- **Solderless, Press-Fit Installation.**
- **Strong, One-Piece Cast Body.**
- **Standard BNC Interface.**
- **75Ω Impedance.**
- **Meets Lucent Technologies (AT&T) Requirements.**



**Compliant version,  
Pt. No. 299 99 00 134  
is also available.  
For more information please  
contact us at 1-800-323-9612**

## MATERIALS

**Body:** One-piece diecast zinc per QQ-Z-363  
**Plating:** Nickel, 150μin. min. per QQ-N-290 over copper, 200μin. min. per MIL-C-14550  
**Center Contact:** Beryllium copper  
**Plating:** Gold, 30μin. minimum over nickel, 50μin. minimum  
**Insulator:** Teflon TFE per ASTM D1710

## ELECTRICAL

**Impedance:** 75Ω  
**Frequency Range:** 0 to 4 GHz  
**RF Leakage:** > -55 dB  
**Insertion Loss:** .2dB maximum @ 2 GHz  
**VSWR:** 1.024  
**Working Voltage:** ≤ 500 VAC RMS @ sea level  
**Insulation Resistance:** ≥ 5000 MOhms @ 500 VDC

## MECHANICAL

**Connector Insertion Force:** ≤500 lb.\*  
**Connector Removal Force:** ≥100 lb.\*  
**Center Contact Insertion Force:** ≤ 2.0 lb.\*  
**Center Contact Removal Force:** ≥ 2.0 oz.\*  
 \*Requirements are for two connector insertions into the same PC board mounting holes. PC board thickness can range from .093" to .300" thick. PC board hole requirements are as follows:  
 Ground Legs: .059" Nom.  
 Center Contact: .040" Nom.

Unique patented press-fit connector design allows for multiple insertions into a backplane without loss of mechanical retention or electrical performance.

The design requirements for nominal PC board mounting holes and thickness are as follows:

Insertion Forces:

.093 Board Thickness: 200 lb. max.  
 .250 Board Thickness: 500 lb. max.

Withdraw Forces:

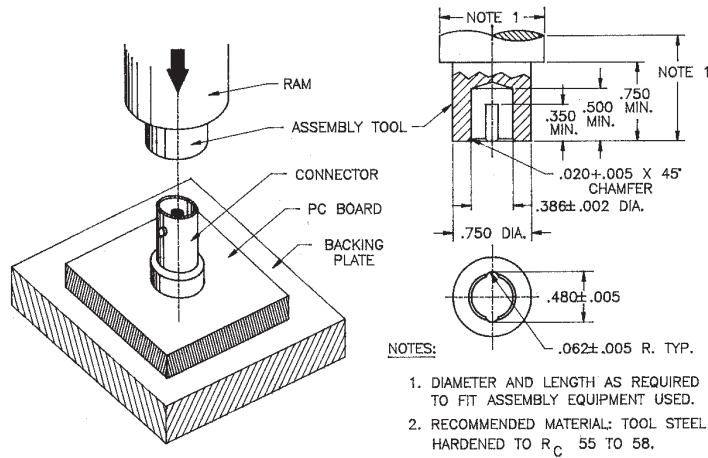
.093 Board Thickness: 100 lb. max.  
 .250 Board Thickness: 200 lb. max.

The Cinch Press-Fit BNC surpasses these requirements with a unique, non-symmetrical ground leg design. This design allows the connector to be inserted, removed, rotated 180°, and reinserted into the same location on the board without loss of mechanical or electrical performance.

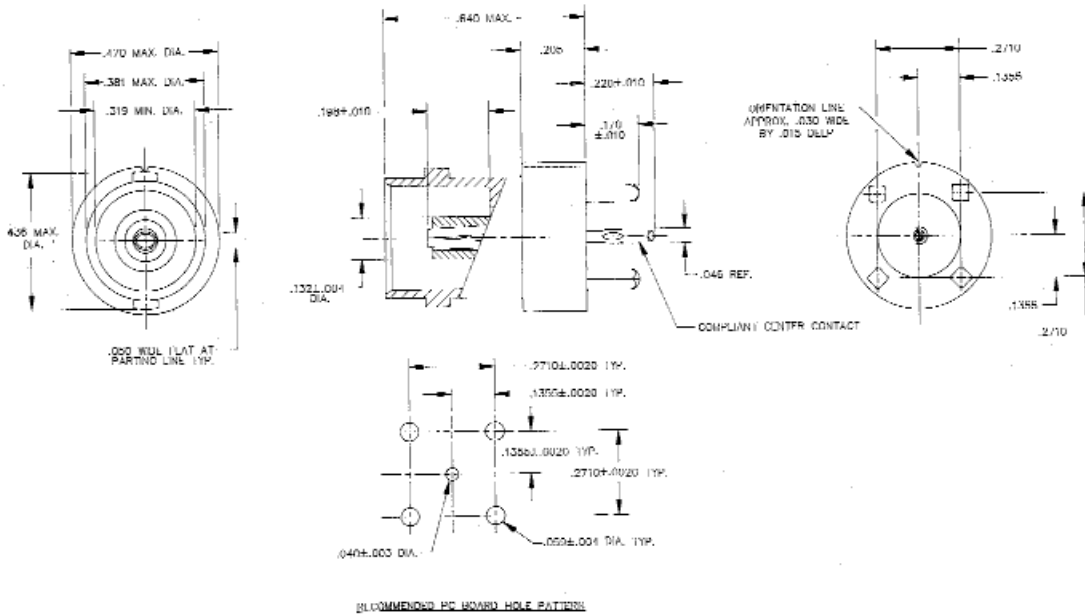
# Press-Fit BNC Coaxial Connector Board Mount Receptacle for 75 Ω Applications



## Production Insertion Tool Design



## Press-Fit BNC Connector Dimensions



### Ordering Information

Catalog Number: BNC-1-PF  
 Standard Package: Anti-Static Tube, 48 Connectors Per Tube

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