

TRIM TRIO Connectors

Type MS-M, MSD-M

SPECIFICATIONS

Contact Rating Per MIL-W-5088	Machined — 13 amperes Formed, Two Piece — 13 amperes Formed, One Piece — 5 amperes
Operating Voltage	750 VAC, 60 Hz
Operating Temperature	MS-M and MSD-M — -55°C to +125°C
Contact Voltage Drop (Max.)	Machined — 23 millivolts Formed, Two Piece/One Piece — 25 millivolts
Insulation Resistance (Min.)	5,000 MΩ min. at 500 VDC
Test Potential One Minute Duration	2,000 VAC, 60Hz
Contact Retention in Block (Min.)	Machined — 20 lbs Formed — 15 lbs after 10 insertions and withdrawals
Connector Mating Forces (Max.)	Per MIL-C-28748
Crimp Joint	Machined Contacts Per MIL-STD-202, method 106
Characteristics	Formed 240 hours at 40° C, 90% - 95% RH
Corrosion	Salt spray per MIL-STD-202, method 101
Moisture Resistance	Machined contacts per MIL-STD-202, method 106 Formed 240 hours at 40° C, 90% - 95% RH
Vibration Resistance	Per MIL-STD-202, method 204
Shock	Per MIL-STD-202, method 207
Durability	500 Cycles Mating and Unmating
Flammability Rating	UL 94 V-O

SUBMINIATURE COAXIAL

Contacts Isolation	30 Hz, 140 db
VSWR for RG174/U 50Ω Cable	510 MHz, 1.12 2,300 MHz, 1.30
Operating Temperature In Mated Condition	-55°C to +125°C
Contact Retention In Connector Body	15 lbs. min. (Retention after 5 cycles of insertion and extraction)
Contact Voltage Drop	30 millivolts max. (When measured on mated contacts from the wire or braid .25" beyond the hying, 1 amp current)
Contact Withdrawal Forces	Inner Socket using pin (.023" dia.) — .5 oz. min. Outer Socket using pin (.073" dia.) — .5 oz. min.
Dielectric Withstanding Voltage	Applied for 1 minute between inner and outer contacts — 750 VAC RMS (multi-piece) — 450 VAC RMS (monocrimp)
Insulation Resistance Of Inner Bushings	Per MIL-STD-202B, method 302, condition B 1,000 MΩ min.
Durability	250 cycles mating and unmating of assembled pins and sockets; meets voltage drop requirements
Crimp Requirements	Meets MIL-T-7928 for tensile and electrical tests on inner conductor 8 to 12 lb min. on the braid depending upon type of coax wire used
Salt Spray	(48 hours) Contacts show no evidence of corrosion and pass withdrawal requirements
Shock	One shock of 50g intensity in each of three mutually perpendicular directions; contact shows no evidence of damage
UL Recognized	File no. E31151

MATERIALS

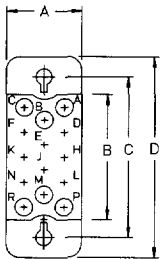
MS-M Blocks	Glass-filled phenolic per MIL-M-14F, type MFH
MSD-M Blocks	Diallyl phthalate per MIL-M-19833
Guide Pins and Sockets	Brass-ASTM B1.6 nickel plated with accessories in stainless steel #303
Keyed Jacks and Rotating Jacks	Stainless steel #303

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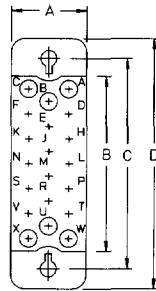


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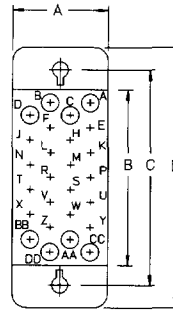
14 - 75 Place Blocks Plug and Receptacle Dimensions



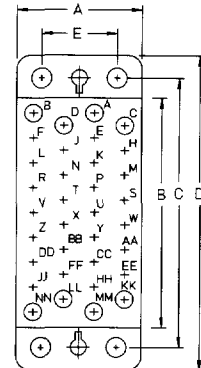
14 Positions



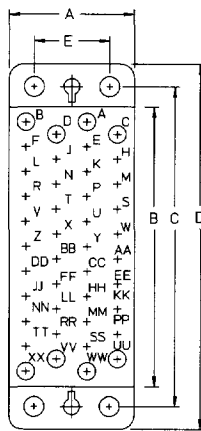
20 Positions



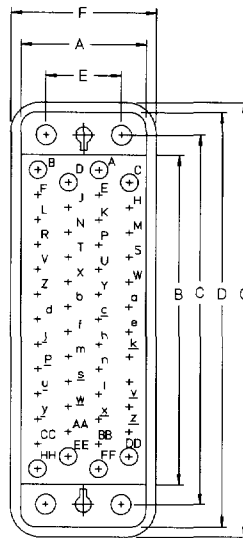
26 Positions



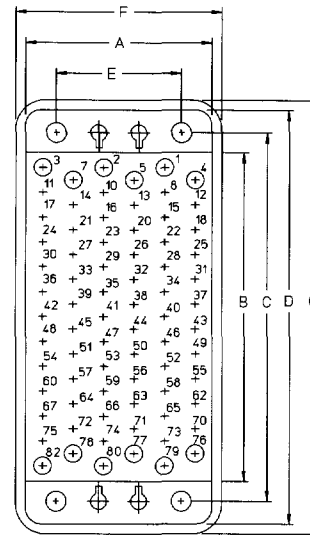
34 Positions



42 Positions



50 Positions



75 Positions

(Wire Face of Receptacles Shown)

Number of Positions	Dimensions													
	A		B		C		D		E		F		G	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
14	0.46	(11,7)	0.79	(20,1)	0.937	(23,80)	1.25	(31,8)	—	—	—	—	—	—
20	0.46	(11,7)	1.10	(27,9)	1.250	(31,75)	1.56	(39,6)	—	—	—	—	—	—
26	0.59	(15,0)	1.07	(27,2)	1.312	(33,32)	1.62	(41,1)	—	—	—	—	—	—
34	0.75	(19,1)	1.41	(35,8)	1.686	(42,82)	1.99	(50,5)	0.468	(11,89)	—	—	—	—
42	0.75	(19,1)	1.69	(42,9)	1.990	(50,55)	2.31	(58,7)	0.468	(11,89)	—	—	—	—
50	0.75	(19,1)	2.00	(50,8)	2.281	(57,94)	2.59	(65,8)	0.468	(11,89)	0.87	(22,1)	2.72	(69,1)
75	1.11	(28,2)	2.00	(50,8)	2.281	(57,94)	2.59	(65,8)	0.764	(19,41)	1.23	(31,2)	2.72	(69,1)

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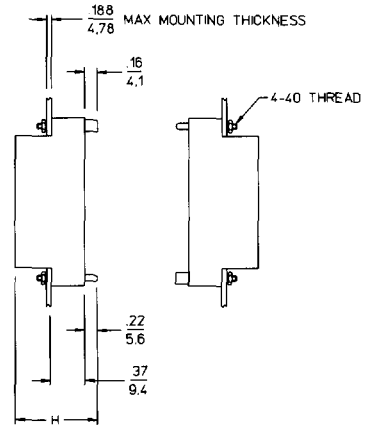
14 - 75 Place Blocks Plug and Receptacle Dimensions

Block Size

Blocks of both materials have the same dimensions. See the preceding page and chart for plan dimensions.

Note: Mounting hardware torque requirement — 2-4 in-lb.

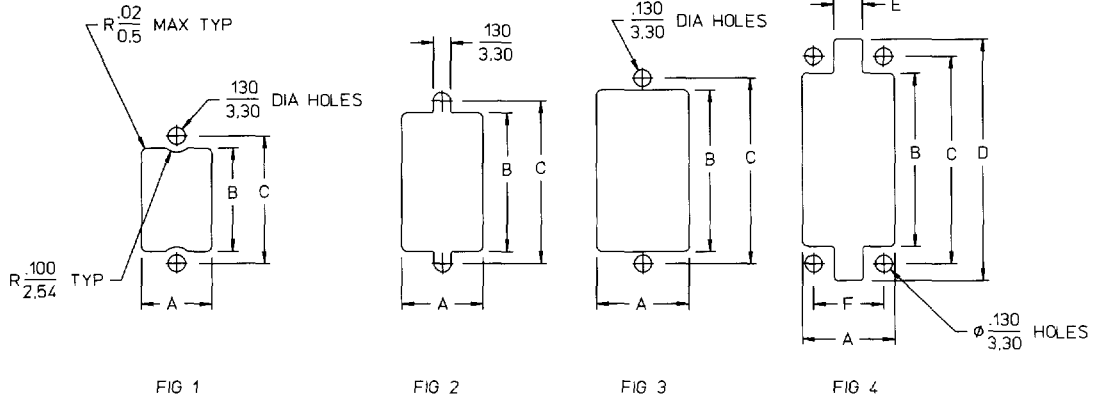
Block Family	Max. "H"			
	With Jackscrews		With Guide Pin & Socket	
	in	mm	in	mm
MS-M	1.13	(28,97)	1.10	(28,20)
MSD-M	1.13	(28,97)	1.10	(28,20)



Panel Cutouts

Both block materials have the same cut-out dimensions for blocks with the same number of contact positions. Alternate methods of mounting are indicated in the table.

SUGGESTED MOUNTING CUTOUTS FOR PLUG OR RECEPTACLE



Number of Positions	Figure Number	Dimensions											
		A		B		C		D		E		F	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
14	1 or 2	0.49	(12,4)	0.82	(20,8)	0.937	(23,80)	—	—	—	—	—	—
20	1 or 2	0.49	(12,4)	1.13	(28,7)	1.250	(31,75)	—	—	—	—	—	—
26	2 or 3	0.62	(15,7)	1.11	(28,2)	1.312	(33,32)	—	—	—	—	—	—
34	4	0.78	(19,8)	1.44	(36,6)	1.686	(42,82)	1.94	(49,3)	0.250	(6,35)	0.468	(11,89)
42	4	0.78	(19,8)	1.72	(43,7)	1.990	(50,55)	2.24	(56,9)	0.250	(6,35)	0.468	(11,89)
50	4	0.78	(19,8)	2.03	(51,6)	2.281	(57,94)	2.53	(64,3)	0.250	(6,35)	0.468	(11,89)
75	4	1.14	(29,0)	2.03	(51,6)	2.281	(57,94)	2.53	(64,3)	0.560	(14,22)	0.764	(19,41)

TRIM TRIO Connectors



Type MS-M, MSD-M How To Order

This catalog has been produced to provide the necessary information to order standard HYFEN connector assemblies.

There are five criteria to be considered in developing the part number for a basic connector assembly.

- The body material.
- The number of contacts positions.
- Plug or receptacle block
- The design variation number for the desired accessories (for example, strain-relief clamps, hoods, guide pins and sockets, or jack screws).
- If optional pin protection skirts are required, the discrimination suffix must be indicated. If skirts are not required, no designator is to be included in the part numbering.

A Selector Chart for obtaining the required connector assembly has been included. This chart will identify the variation number and the page number in the catalog containing detailed dimensional information.

If the optional pin protection skirt is selected, the appropriate discrimination suffix number must be selected, see "Pin Protection Skirts and Block Assemblies" section.

After selecting plug and receptacle assemblies, it is advisable to verify the intermateability of variations by checking the "Intermateability Checklist" on page 10. Note: TRIM TRIO contacts must be ordered separately.

How to order

		*MS	14	P	M	1	83
Body Material Prefix	MS = Phenolic MSD = Diallyl Phthalate						
Number of Contact Positions	14, 20, 26, 34, 42, 50, 75						
Plug Receptacle	P R						
Bundy Molding Code	Blocks for TRIM TRIO contacts						
Design Variation							
Pin Protection or Discrimination Keying Slot (When Required)							