

FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

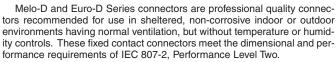
Size 20 Contacts, Fixed **Professional Quality** Connectors

IEC Publication 807-2 Performance Level Two

U.L. Recognized File #E49351

CSA Recognized File #LR54219

Telecommunication U.L. File #14098



Melo-D and Euro-D Series connectors utilize precision machined contacts which are fixed within the connector body. The female contact is an open entry design contact, precision machined of high tensile phosphor bronze.

Six standard connector variants are offered in arrangements of 9, 15, 25, 29, 37 and 50 contacts. Each Melo-D connector variant is available with contact terminations for solder cup, wrap post, and straight and 90° printed board mount terminations featuring a choice of three printed board footprints. Each Euro-D connector variant is available with contact terminations for solder cup, wrap post and straight and 90° printed board mount terminations per standard European metric footprints. Melo-D and Euro-D



Series connectors are mateable and compatible with all D-Subminiature connectors conforming to IEC 807-2 and MIL-DTL-24308.

A wide assortment of printed board mounting hardware, cable support hoods and locking systems is available from stock.

Melo-D and Euro-D Series connectors conform to EIA RS 232 and RS 449, and CCITT X.24 interface connector requirements.



MELO-D/EURO-D SERIES TECHNICAL CHARACTERISTICS

Euro-D

Polarization:

Contact Terminations:

MATERIALS AND FINISHES:

Insulator: Nylon resin, UL 94V-0, black color.

Male contacts – precision machined brass. Female contacts – precision machined Contacts:

high tensile phosphor bronze.

Contact Plating: Professional performance Gold flash over

nickel plate. Other finishes available upon

Steel with tin plate; zinc plate with dichro-Shells:

mate seal. Other materials and finishes

available upon request.

Mounting Spacers

Jackscrew Systems:

and Brackets: Nylon plastic, or brass with tin plate; zinc

plate with dichromate seal.

Push-On Fasteners: Phosphor bronze or beryllium copper with

Steel with zinc plate and dichromate seal,

or clear zinc plate. **Vibration Lock Systems:** Slide lock and lock tabs, steel with nickel

plate.

Hoods: Thermoplastic UL 94V-0. Composite,

brass or steel with zinc plate and dichro-

mate seal.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating: 7.5 amperes nominal.

Initial Contact

0.008 ohms maximum. Resistance:

Insulator Resistance: 5 G ohms. **Proof Voltage:** 1000 V r.m.s.

Clearance and Creepage

Distance [minimum]: 0.039 inch [1.0mm]. Working Voltage: 300 V r.m.s.

CLIMATIC CHARACTERISTICS:

Temperature Range: -55°C to +125°C.

Damp Heat, Steady State:

10 days.

MECHANICAL CHARACTERISTICS:

Fixed Contacts: Size 20 contact, male contact - 0.040 inch

[1.02mm] diameter. Female contact -

rugged open entry design.

Contact Retention In Insulator: 6 lbs. [27N]

Resistance To Solder 500°F [260°C] for 10 seconds duration per Iron Heat:

IEC 512-6.

Solder cup contacts - 0.042 inch [1.06mm] Melo-D Contact Terminations: minimum hole diameter for 20 AWG

[0.5mm²] wire maximum.

Straight Printed Board Mount - 0.028 inch

[0.71mm] diameter.

90° Printed Board Mount - 0.028 inch [0.71mm] diameter for all printed board

Wrap Post - 0.025 inch [0.64mm] square. Solder cup contacts - 0.042 inch [1.06mm]

minimum hole diameter for 20 AWG [0.5mm²] wire maximum.

Straight Printed Board Mount - 0.024 inch

[0.60mm] diameter.

90° Printed Board Mount - 0.024 inch [0.60mm] diameter for European Metric

Male shells may be dimpled for EMI/ESD Shells:

ground paths. Trapezoidally shaped shells and polarized

iackscrews.

Mounting To Angle Brackets: Jackscrews and riveted fasteners with a 0.120 inch [3.05mm] clearance hole, and threaded riveted fasteners with 4-40

threads and nylon lock inserts.

Mounting To Printed Board: Rapid installation push-on fasteners and

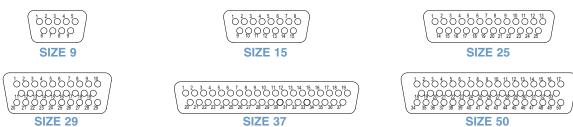
threaded posts.

Jackscrews and vibration locking systems. Locking Systems: **Mechanical Operations:** 500 operations minimum per IEC 512-5.

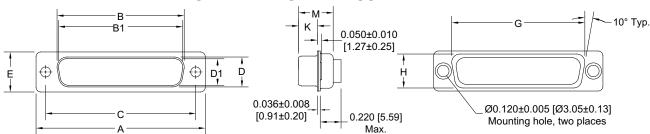


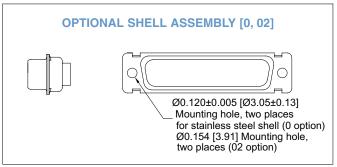
FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

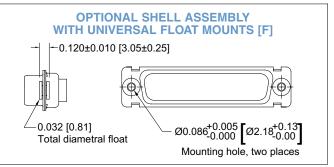
CONTACT VARIANTS FACE VIEW OF MALE OR REAR VIEW OF FEMALE



STANDARD SHELL ASSEMBLY





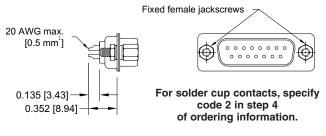


CONNECTOR	A ±0.015	B ±0.005	B1 ±0.005	C ±0.005	D ±0.005	D1 ±0.005	E ±0.015	G ±0.010	H ±0.010	K ±0.005	M ±0.010
VARIANT SIZES	[0.38]	[0.13]	[0.13]	[0.13]	[0.13]	[0.13]	[0.38]	[0.25]	[0.25]	[0.13]	[0.25]
9 M	1.213 [30.81]		<u>0.666</u> [16.92]	<u>0.984</u> [24.99]		<u>0.329</u> [8.36]	<u>0.494</u> [12.55]	<u>0.759</u> [19.28]	<u>0.422</u> [10.72]	<u>0.233</u> [5.92]	<u>0.422</u> [10.72]
9 F	1.213 [30.81]	<u>0.643</u> [16.33]		<u>0.984</u> [24.99]	<u>0.311</u> [7.90]		<u>0.494</u> [12.55]	<u>0.759</u> [19.28]	<u>0.422</u> [10.72]	<u>0.243</u> [6.17]	<u>0.429</u> [10.90]
15 M	1.541 [39.14]		<u>0.994</u> [25.25]	1.312 [33.32]		<u>0.329</u> [8.36]	<u>0.494</u> [12.55]	1.083 [27.51]	<u>0.422</u> [10.72]	<u>0.233</u> [5.92]	<u>0.422</u> [10.72]
15 F	1.541 [39.14]	<u>0.971</u> [24.66]		1.312 [33.32]	<u>0.311</u> [7.90]		<u>0.494</u> [12.55]	1.083 [27.51]	<u>0.422</u> [10.72]	<u>0.243</u> [6.17]	<u>0.429</u> [10.90]
25 M	<u>2.088</u> [53.04]		1.534 [38.96]	1.852 [47.04]		<u>0.329</u> [8.36]	<u>0.494</u> [12.55]	1.625 [41.28]	<u>0.422</u> [10.72]	<u>0.230</u> [5.84]	<u>0.426</u> [10.82]
25 F	<u>2.088</u> [53.04]	1.511 [38.38]		1.852 [47.04]	<u>0.311</u> [7.90]		<u>0.494</u> [12.55]	1.625 [41.28]	<u>0.422</u> [10.72]	<u>0.243</u> [6.17]	<u>0.429</u> [10.90]
29 M	1.770 [44.96]		1.274 [32.36]	1.534 [38.96]		<u>0.450</u> [11.43]	<u>0.605</u> [15.37]	1.322 [33.58]	<u>0.539</u> [13.69]	<u>0.217</u> [5.51]	<u>0.426</u> [10.82]
29 F	1.770 [44.96]	1.251 [31.78]		1.534 [38.96]	<u>0.431</u> [10.95]		<u>0.605</u> [15.37]	1.322 [33.58]	<u>0.539</u> [13.69]	<u>0.237</u> [6.02]	<u>0.429</u> [10.90]
37 M	2.729 [69.32]		<u>2.182</u> [55.42]	2.500 [63.50]		<u>0.329</u> [8.36]	<u>0.494</u> [12.55]	<u>2.272</u> [57.71]	<u>0.422</u> [10.72]	<u>0.230</u> [5.84]	<u>0.426</u> [10.82]
37 F	2.729 [69.32]	<u>2.159</u> [54.84]		<u>2.500</u> [63.50]	<u>0.311</u> [7.90]		<u>0.494</u> [12.55]	<u>2.272</u> [57.71]	<u>0.422</u> [10.72]	<u>0.243</u> [6.17]	<u>0.429</u> [10.90]
50 M	2.635 [66.93]		2.079 [52.81]	<u>2.406</u> [61.11]		<u>0.441</u> [11.20]	<u>0.605</u> [15.37]	<u>2.178</u> [55.32]	<u>0.534</u> [13.56]	<u>0.230</u> [5.84]	<u>0.426</u> [10.82]
50 F	2.635 [66.93]	2.064 [52.43]		<u>2.406</u> [61.11]	<u>0.423</u> [10.74]		<u>0.605</u> [15.37]	<u>2.178</u> [55.32]	<u>0.534</u> [13.56]	<u>0.243</u> [6.17]	<u>0.429</u> [10.90]

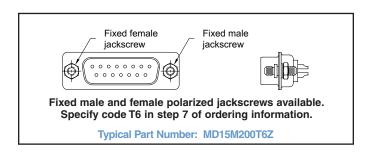


FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

SOLDER CUP CONNECTOR



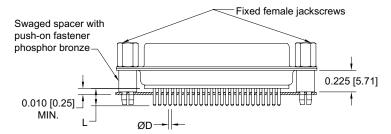




STRAIGHT PRINTED BOARD MOUNT CONNECTOR

CODE NUMBER	L	ØD
3	<u>0.150</u> [3.81]	<u>0.028</u> [0.71]
32	<u>0.375</u> [9.53]	<u>0.028</u> [0.71]
36	<u>0.236</u> [5.99]	<u>0.024</u> [0.61]

For straight printed board mount contacts, specify code number in step 4 of ordering information.

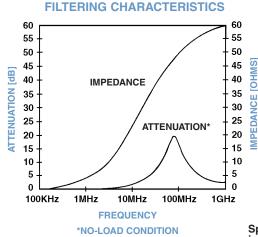


Typical Part Number: MD25F3S60T0

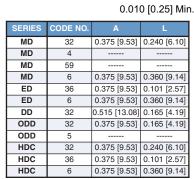
FERRITE INDUCTOR BAR FOR EMI/RFI NOISE SUPPRESSION

STRAIGHT PRINTED BOARD MOUNT CONNECTOR

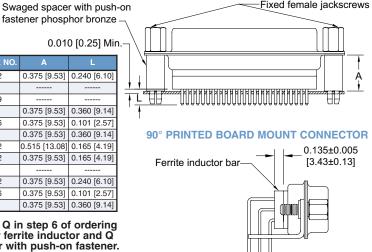
Fixed female jackscrews



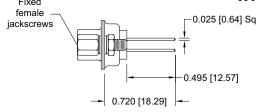
MATERIAL: NICKEL ZINC CERAMIC.



Specify code F or Q in step 6 of ordering information. F for ferrite inductor and Q for ferrite inductor with push-on fastener.



WRAP POST CONNECTOR



For wrap post contacts, specify code 6 in step 4 of ordering information.

Typical Part Number: MD15F600T20

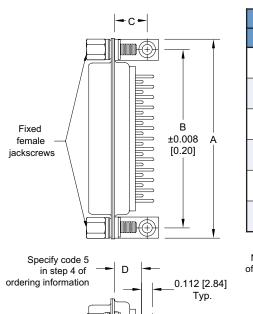




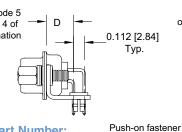
FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

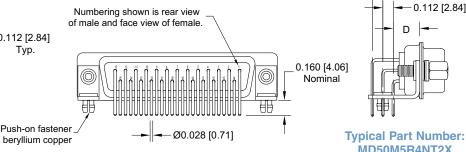
90° PRINTED BOARD MOUNT CONNECTOR

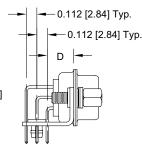
CODE 5, 0.283 [7.19] CONTACT EXTENSION



MD**5R4*** 0.283 [7.19] CONTACT EXTENSION								
PART NUMBER	Α	В	С	D				
MD9*5R4***	1.204	<u>0.984</u>	<u>0.339</u>	<u>0.283</u>				
	[30.58]	[24.99]	[8.61]	[7.19]				
MD15*5R4***	<u>1.532</u>	<u>1.312</u>	<u>0.339</u>	<u>0.283</u>				
	[38.91]	[33.32]	[8.61]	[7.19]				
MD25*5R4***	<u>2.072</u>	<u>1.852</u>	<u>0.339</u>	<u>0.283</u>				
	[52.63]	[47.04]	[8.61]	[7.19]				
MD29*5R4***	1.754	<u>1.534</u>	<u>0.395</u>	<u>0.283</u>				
	[44.55]	[38.96]	[10.03]	[7.19]				
MD37*5R4***	<u>2.720</u>	<u>2.500</u>	<u>0.339</u>	<u>0.283</u>				
	[69.09]	[63.50]	[8.61]	[7.19]				
MD50*5R4***	<u>2.626</u>	<u>2.406</u>	<u>0.395</u>	<u>0.283</u>				
	[66.70]	[61.11]	[10.03]	[7.19]				





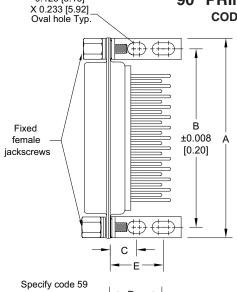


MD50M5R4NT2X

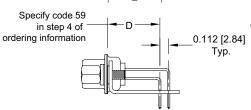
Typical Part Number: MD25M5R4NT2X

0.125 [3.18]

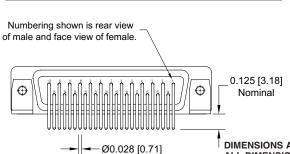
90° PRINTED BOARD MOUNT CONNECTOR **CODE 59, 0.545 [13.84] CONTACT EXTENSION**



MD**59B*** 0.545 [13.84] CONTACT EXTENSION								
PART NUMBER	Α	В	С	D	Е			
MD9*59B***	1.204	<u>0.984</u>	<u>0.275</u>	<u>0.545</u>	<u>0.601</u>			
	[30.58]	[24.99]	[6.99]	[13.84]	[15.27]			
MD15*59B***	<u>1.532</u>	1.312	<u>0.275</u>	<u>0.545</u>	<u>0.601</u>			
	[38.91]	[33.32]	[6.99]	[13.84]	[15.27]			
MD25*59B***	<u>2.072</u>	<u>1.852</u>	<u>0.275</u>	<u>0.545</u>	<u>0.601</u>			
	[52.63]	[47.04]	[6.99]	[13.84]	[15.27]			
MD29*59B***	1.754	1.534	<u>0.275</u>	<u>0.545</u>	<u>0.657</u>			
	[44.55]	[38.96]	[6.99]	[13.84]	[16.69]			
MD37*59B***	<u>2.720</u>	2.500	<u>0.275</u>	<u>0.545</u>	<u>0.601</u>			
	[69.09]	[63.50]	[6.99]	[13.84]	[15.27]			
MD50*59B***	<u>2.626</u>	<u>2.406</u>	<u>0.275</u>	<u>0.545</u>	<u>0.657</u>			
	[66.70]	[61.11]	[6.99]	[13.84]	[16.69]			



Typical Part Number: MD25M59B0T2X



MD29M59B0T2X 0.112 [2.84] Typ. 0.112 [2.84] Typ.

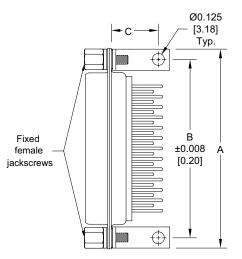
Typical Part Number:



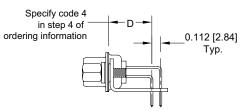
FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

90° PRINTED BOARD MOUNT CONNECTOR

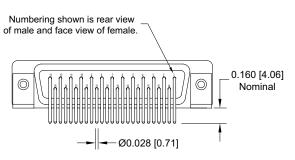
CODE 4, 0.450 [11.43] CONTACT EXTENSION

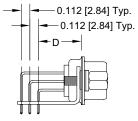


MD**4B*** 0.450 [11.43] CONTACT EXTENSION								
PART NUMBER	А	В	С	D				
MD9*4B***	1.204	<u>0.984</u>	<u>0.506</u>	<u>0.450</u>				
	[30.58]	[24.99]	[12.85]	[11.43]				
MD15*4B***	<u>1.532</u>	<u>1.312</u>	<u>0.506</u>	<u>0.450</u>				
	[38.91]	[33.32]	[12.85]	[11.43]				
MD25*4B***	<u>2.072</u>	<u>1.852</u>	<u>0.506</u>	<u>0.450</u>				
	[52.63]	[47.04]	[12.85]	[11.43]				
MD29*4B***	<u>1.754</u>	1.534	<u>0.562</u>	<u>0.450</u>				
	[44.55]	[38.96]	[14.27]	[11.43]				
MD37*4B***	<u>2.720</u>	2.500	<u>0.506</u>	<u>0.450</u>				
	[69.09]	[63.50]	[12.85]	[11.43]				
MD50*4B***	<u>2.626</u>	<u>2.406</u>	<u>0.562</u>	<u>0.450</u>				
	[66.70]	[61.11]	[14.27]	[11.43]				



Typical Part Number: MD25M4B0T20

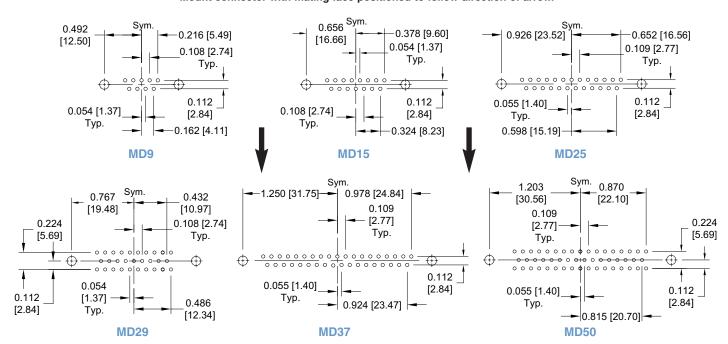




Typical Part Number: MD50M4B0T20

90° AND STRAIGHT PRINTED BOARD CONTACT HOLE PATTERN

Mount connector with mating face positioned to follow direction of arrow.



Specify code 42 or 52 in step 4 of

ordering information

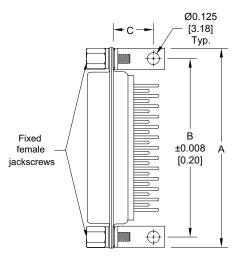
PROFESSIONAL QUALITY, **FIXED CONTACT** SUBMINIATURE-D CONNECTORS



FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

90° PRINTED BOARD MOUNT CONNECTOR

CODE 42 AND 52, 0.370 [9.40] CONTACT EXTENSION



D

Typical Part Number:

ED25M42B0T2X

ED***B*** 0.370 [9.40] CONTACT EXTENSION									
PART NUMBER	Α	В	C	D					
ED9**B***	1.204	<u>0.984</u>	<u>0.420</u>	<u>0.370</u>					
	[30.58]	[24.99]	[10.67]	[9.40]					
ED15**B***	<u>1.532</u>	<u>1.312</u>	<u>0.420</u>	<u>0.370</u>					
	[38.91]	[33.32]	[10.67]	[9.40]					
ED25**B***	<u>2.072</u>	<u>1.852</u>	<u>0.420</u>	<u>0.370</u>					
	[52.63]	[47.04]	[10.67]	[9.40]					
ED29**B***	<u>1.754</u>	1.534	<u>0.470</u>	<u>0.370</u>					
	[44.55]	[38.96]	[11.94]	[9.40]					
ED37**B***	<u>2.720</u>	<u>2.500</u>	<u>0.420</u>	<u>0.370</u>					
	[69.09]	[63.50]	[10.67]	[9.40]					
ED50**B***	<u>2.626</u>	<u>2.406</u>	<u>0.470</u>	<u>0.370</u>					
	[66.70]	[61.11]	[11.94]	[9.40]					



0.100 [2.54] Typ. for code 42 contacts 0.112 [2.84] Typ. for code 52 contacts

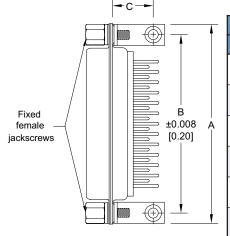
Numbering shown is rear view of male and face view of female. Max. -Ø0.028 [0.71]

0.100 [2.54] Typ. for code 42 0.100 [2.54] Typ. contacts for code 42 contacts 0.112 [2.84] Typ. 0.112 [2.84] Typ. for code 52 for code 52 contacts contacts 0.197 [5.01]

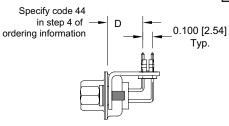
Typical Part Number: ED50M52B0T2X

90° PRINTED BOARD MOUNT CONNECTOR

CODE 44, 0.370 [9.40] CONTACT EXTENSION

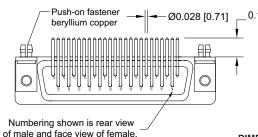


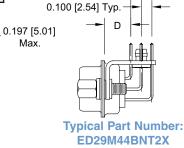
ED**44B*** 0.370 [9.40] CONTACT EXTENSION								
PART NUMBER	Α	В	С	D				
ED9*44B***	1.204	<u>0.984</u>	<u>0.420</u>	<u>0.370</u>				
	[30.58]	[24.99]	[10.67]	[9.40]				
ED15*44B***	<u>1.532</u>	<u>1.312</u>	<u>0.420</u>	<u>0.370</u>				
	[38.91]	[33.32]	[10.67]	[9.40]				
ED25*44B***	<u>2.072</u>	<u>1.852</u>	<u>0.420</u>	<u>0.370</u>				
	[52.63]	[47.04]	[10.67]	[9.40]				
ED29*44B***	<u>1.754</u>	<u>1.534</u>	<u>0.470</u>	<u>0.370</u>				
	[44.55]	[38.96]	[11.94]	[9.40]				
ED37*44B***	<u>2.720</u>	<u>2.500</u>	<u>0.420</u>	<u>0.370</u>				
	[69.09]	[63.50]	[10.67]	[9.40]				
ED50*44B***	<u>2.626</u>	<u>2.406</u>	<u>0.470</u>	<u>0.370</u>				
	[66.70]	[61.11]	[11.94]	[9.40]				



Typical Part Number:

ED25M44BNT2X





0.100 [2.54] Typ.

DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.

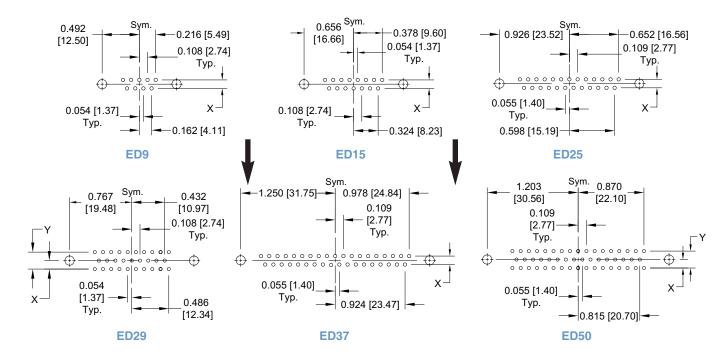


FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

90° AND STRAIGHT PRINTED BOARD CONTACT HOLE PATTERN

Hole identification shown for male connector, use mirror image for female connector.

For code 42 and 52 contacts, mount connector with mating face positioned to follow direction of arrow. For code 44 contacts, mount connector with mating face positioned to oppose direction of arrow.



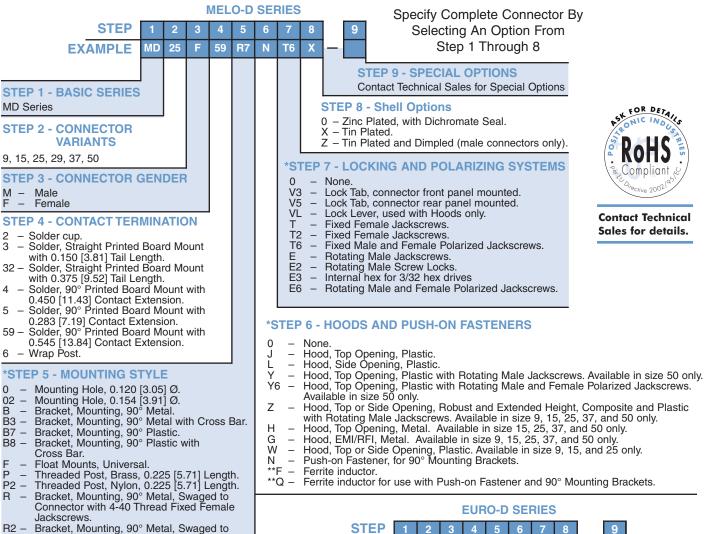
Suggest 0.040 [1.02] Ø hole for contact termination positions. Suggest 0.123 \pm 0.003 [3.12 \pm 0.08] Ø hole for mounting connector with push-on fasteners.

CODE NUMBER	х	Y
36	<u>0.112</u> [2.84]	<u>0.224</u> [5.69]
42	<u>0.100</u> [2.54]	<u>0.200</u> [5.08]
44	<u>0.100</u> [2.54]	<u>0.200</u> [5.08]
52	<u>0.112</u> [2.84]	<u>0.224</u> [5.69]



FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

ORDERING INFORMATION - CODE NUMBERING SYSTEM



				EUF	RO-D	SE	RIES	5	
STEP	1	2	3	4	5	6	7	8	9
EXAMPLE	ED	25	F	42	R7	N	T2	0	
STEP 1 - BASIC SER ED Series	IES								STEP 9 - SPECIAL OPTIONS Contact Technical Sales
STEP 2 - CONNECTOR VARIANTS 9, 15, 25, 29, 37, 50									EP 8 - Shell Options - Zinc Plated, with Dichromate Seal.
STEP 3 - CONNECTOR GENDER M - Male F - Female									- Tin Plated. - Tin Plated and Dimpled (male connectors only).
STEP 4 - CONTACT TERMINATION 2 - Solder cup. 36 - Solder, Straight Printed Board Mount							*ST	EP 7	7 - LOCKING AND POLARIZING SYSTEMS Refer to MD Series Step 7
with 0.236 [5.99] Tail Length. 42 - Solder, 90° Printed Board Mount with 0.370 [9.40] Contact Extension. 44 - Solder, Inverted 90° Printed Board Mount with 0.370 [9.40] Contact						*5	STEF	P 6 -	HOODS AND PUSH-ON FASTENERS Refer to MD Series Step 6
Extension.						*Fc	or add	dition	al information on accessories

^{*}For additional information on accessories listed in steps 5, 6 and 7, see Accessory Catalog.

Connector with 4-40 Thread Fixed Female

Bracket, Mounting, 90° Metal, Swaged to Connector with 0.120 [3.05] Ø Mounting Bracket, Mounting, 90° Metal, Swaged to

Bracket, Mounting, 90° Metal, Swaged to

Bracket, Mounting, 90° Metal, Swaged to Connector with 0.120 [3.05] Ø Mounting

Hole with Cross Bar.
Bracket, Mounting, 90° Metal, Swaged to
Connector with 4-40 Threads with Cross Bar.

Bracket, Mounting, 90° Metal, Swaged to Connector with 4-40 Locknut with Cross Bar. Swaged Spacer, 4-40 Threads, 0.225 [5.71]

Swaged Spacer, 4-40 Threads, 0.125 [3.18]

Swaged Locknut, 4-40 Threads.
Swaged Spacer with Push-on Fastener,
4-40 Threads, 0.225 [5.71] Length.
Swaged Spacer with Push-on Fastener for
use with Ferrite Inductor, 4-40 Threads,
0.375 [9.53] Length.

Jackscrews with Cross Bar.

Connector with 4-40 Threads.

Connector with 4-40 Locknut.

S

S2 -

Length.

Length.

Solder, 90° Printed Board Mount with

0.370 [9.40] Contact Extension.

Refer to MD Series Step 5

Catalog.

listed in steps 5, 6 and 7, see Accessory

^{**}Ferrite inductor is available on contact types 32, 4, 59 and 6 only.

^{*}STEP 5 - MOUNTING STYLE

^{**}Ferrite inductor is available on contact types 36 only.