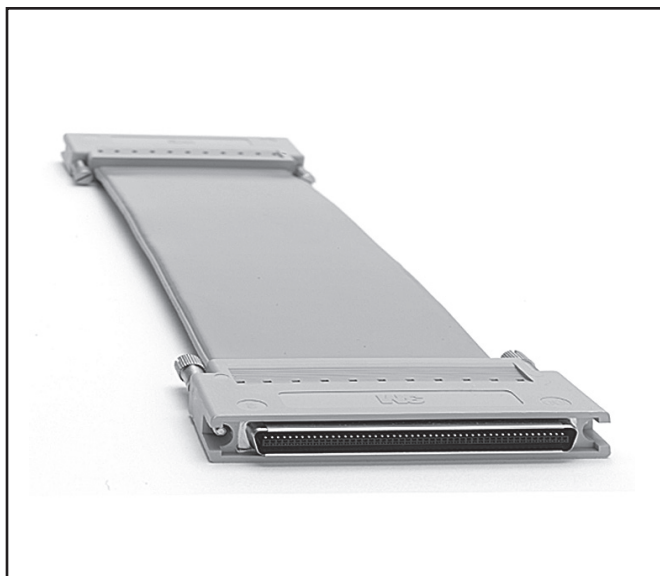


# 3M™ Pleated Foil I/O Cable Assemblies

MDR Series



- Mates with standard 3M MDR Boardmount Headers
- Pleated copper foil provides a 360 degree shield

## Overmolded Assemblies

- Available in 68, 80 and 100 Positions
- Molded-in strain relief
- Can utilize either #4-40 or M2.5 thumbscrews
- Supplied as a complete assembly only

## Metal Shell Assemblies

- Metal shells available in 20, 26, 36, 40, 50, 68, 80 and 100 Positions
- Offer quick release feature on 20 to 68 position for ease of installation
- 68, 80 and 100 positions available with thumbscrews
- RoHS Compliant. See the Regulatory Information Appendix (RIA) in the "RoHS Compliance" section of [www.3Mconnector.com](http://www.3Mconnector.com) for compliance information (RIA E1 and C1 apply)

Date Modified: October 20, 2010

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## Physical

(Connector) Technical Specification: See TS-0423 for .050" Mini D-Ribbon (MDR)

(Cable) Construction: 0.025" Pleated Foil Shielded, 30 AWG (solid), TPE Primary

50 Ohm Technical Specifications: See TS-0285 for 90101 - Gray PVC Jacket  
See TS-0402 for 90201 - Gray TPE Cover  
See TS-0876 for 93101 - Low Skew, Gray PVC Jacket

75 Ohm Technical Specifications: See TS-0451 for 90111 - Gray PVC Jacket  
See TS-0598 for 90211 - Gray TPE Cover

(Shells) Overmolded: 68, 80 and 100 positions, thumbscrews  
Glass Reinforced Polyester (PBT) - Gray

Metal: See TS-0655 - 20, 26, 36 and 40 position, latching  
See TS-0396 - 50 position, latching  
See TS-0355 - 68 position, latching  
See TS-0666 - 68, 80 and 100 position, thumbscrew

(Jackscrews) Material: Stainless Steel

## Electrical

Voltage Rating: 30 V

Impedance: See Pleated Foil Cable (PFC) Specifications

## Environmental

Temperature Rating: 75°C maximum

\*"RoHS Compliant 2005/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M's Regulatory Information Appendix, then 3M's entire liability and Buyer's exclusive remedy will be in accordance with the Warranty stated below.

UL File No.:E86982

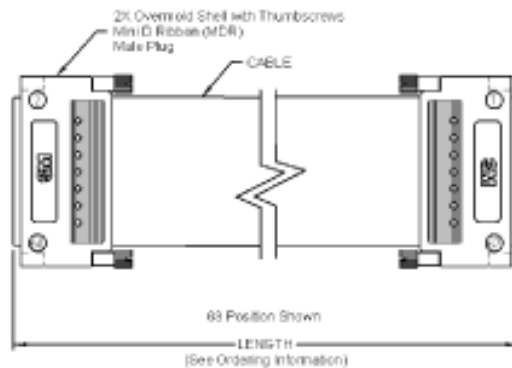
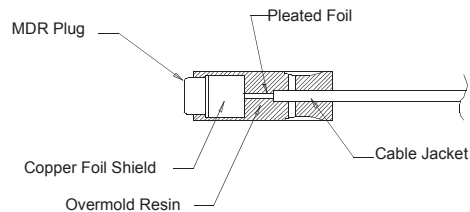
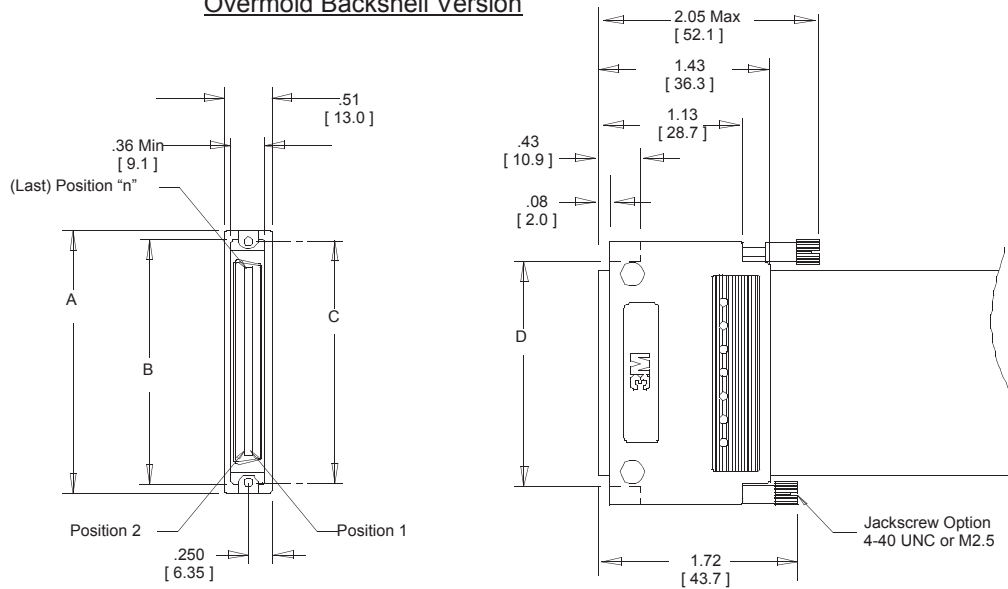
# 3M™ Pleated Foil I/O Cable Assemblies

MDR Series

| Overmolded Shell with Thumbscrews |               |               |               |               |
|-----------------------------------|---------------|---------------|---------------|---------------|
| Contact Quantity                  | Dimension A   | Dimension B   | Dimension C   | Dimension D   |
| 68                                | 2.52 [ 64.0 ] | 2.32 [ 58.9 ] | 2.22 [ 56.4 ] | 2.11 [ 53.6 ] |
| 80                                | 2.81 [ 71.4 ] | 2.61 [ 66.3 ] | 2.58 [ 65.5 ] | 2.41 [ 61.2 ] |
| 100                               | 3.32 [ 84.3 ] | 3.12 [ 79.2 ] | 3.08 [ 78.2 ] | 2.91 [ 73.9 ] |

Assembly Tolerances  
Length and Tolerance  
<36":  $\pm 1"$   
36" to 120":  $\pm 2"$   
120" to 240":  $\pm 4"$   
>240":  $\pm 6"$   
Minimum Length: 8" [203 mm]

## Overmold Backshell Version

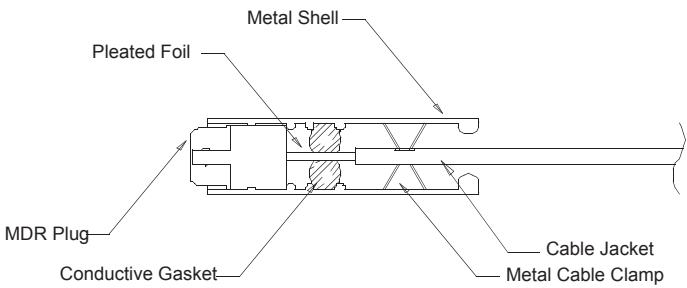


| Inch<br>[mm]                      |          |           |            |
|-----------------------------------|----------|-----------|------------|
| Tolerance Unless Noted            |          |           |            |
|                                   | .0       | .00       | .000       |
| Inch                              | $\pm .1$ | $\pm .01$ | $\pm .005$ |
| [ ] Dimensions for Reference Only |          |           |            |

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# 3M™ Pleated Foil I/O Cable Assemblies

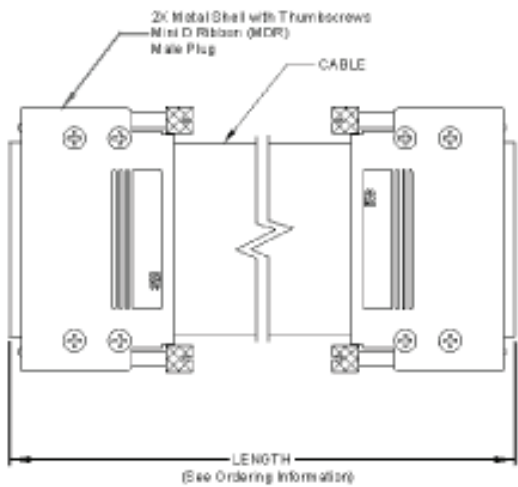
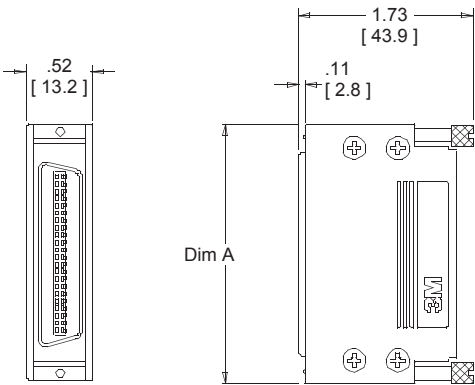
MDR Series



Assembly Tolerances  
Length and Tolerance  
<36" : ±1"  
36" to 120" : ±2"  
120" to 240" : ±4"  
>240" : ±6"  
Minimum Length:  
68-100 Position: 8" [203 mm]

## Metal Backshell with Thumbscrews Version

| Metal Shell with Thumbscrews |               |
|------------------------------|---------------|
| Contact Quantity             | Dimension A   |
| 68                           | 2.52 [ 64.0 ] |
| 80                           | 2.82 [ 71.6 ] |
| 100                          | 3.32 [ 84.3 ] |



Note: There are two connector terminations available for Metal Shell Versions (see ordering information).

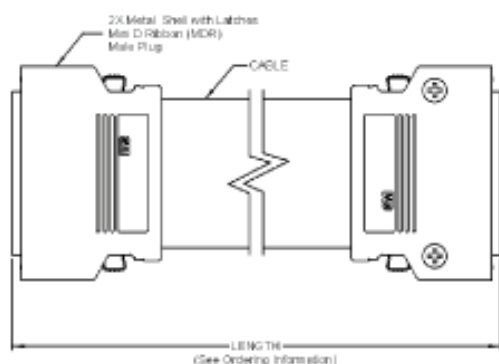
1. MS = Standard Connection for GSGSG, with Signals on wires 2, 4, 6, (etc.) places all the Grounds in the lower (Circle) row of the connector and all the signals in the upper (Triangle) row of the connector.
2. LS = Low Crosstalk Connection for GSGSG, with signals on wires 2, 4, 6, (etc.) places a GSGSG pattern on both the lower (Circle) and upper (Triangle) rows of the connector.
3. Metal junction shells come with either 2 or 4 screws, see individual tech sheet for details.

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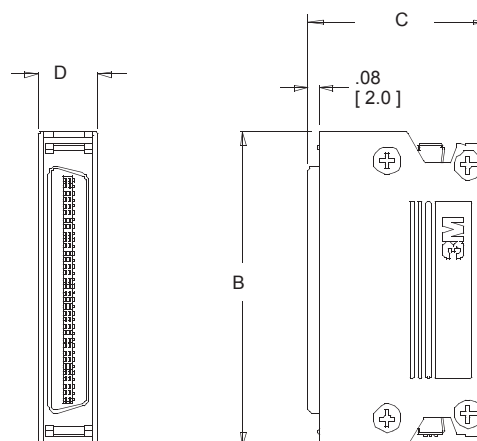
# 3M™ Pleated Foil I/O Cable Assemblies

MDR Series

| Metal Shell with Latches |               |              |              |
|--------------------------|---------------|--------------|--------------|
| Contact Quantity         | Dimension B   | Dimension C  | Dimension D  |
| 20                       | 1.17 [ 29.7 ] | 1.55 [ 39.4] | .42 [ 10.7 ] |
| 26                       | 1.31 [ 33.3]  | 1.50 [ 38.1] |              |
| 36                       | 1.57 [ 39.9]  |              |              |
| 40                       | 1.67 [ 42.4]  |              |              |
| 50                       | 1.93 [ 49.0]  | 1.35 [ 34.3] | .46 [ 11.7 ] |
| 68                       | 2.37 [ 60.2]  |              |              |



## Metal Backshell with Latching Version



| Inch<br>[mm]                      |     |      |       |
|-----------------------------------|-----|------|-------|
| Tolerance Unless Noted            |     |      |       |
|                                   | .0  | .00  | .000  |
| Inch                              | ±.1 | ±.01 | ±.005 |
| [ ] Dimensions for Reference Only |     |      |       |

Assembly Tolerances  
Length and Tolerance  
<36" : ±1"  
36" to 120" : ±2"  
120" to 240" : ±4"  
>240" : ±6"  
Minimum Length:  
20-50 Position: 6" [152 mm]  
68-100 Position: 8" [203 mm]

|   | 50 Ohm, PVC Jacket, 90101/XX | 50 Ohm, TPE Cover, 90201/XX | 50 Ohm, PVC Jacket Low Skew, 93101/XX | 75 Ohm, PVC Jacket, 90111/XX | 75 Ohm, TPE Cover, 90211/XX |
|---|------------------------------|-----------------------------|---------------------------------------|------------------------------|-----------------------------|
| Over Molded or Metal Backshell with Thumbscrews | X                            | X                           | X                                     | X                            | X                           |
| 68 - 100 position                               |                              |                             |                                       |                              |                             |
| Metal Backshell with Latches                    | X                            | X                           |                                       |                              | X                           |
| 20 - 68 position                                |                              |                             |                                       |                              |                             |

## Ordering Information

Body Type

OM=Overmold

LS=Metal Shell, Low Crosstalk Connection

MS=Metal Shell, Standard Connection

Cable Impedance and Jacket Type

50 Ω

90101= Thick Jacket

90201= Thin Cover

93101= Thick Jacket, Low Skew

75 Ω

90111= Thick Jacket

90211= Thin Cover

**XX - XXXXXG - XXX - XX - XXX.X**

Conductor/  
Contact Quantity  
( See Table )

Jackscrew  
4=4-40 Thread  
M=M2.5 Thread  
L=Latch

Shim  
N=No Shim (Overmold Only)  
O=Placeholder (metal shell only)

Length in Inches

Minimum lengths, 6" [152 mm] for 20 - 50 position cables, and 8" [203 mm] for 68 - 100 position cables

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