



Instructions

For the Assembly of the 68, 80, 100 Position MDR 103XX-12R1-00 and 103XX-12S1-00 Metal Junction Shells for Pleated Foil Cable and 101XX-6000 Series MDR Plug.

General:

The 103XX-12R1-00 MDR Junction Shells provide grounding, EMI/RFI shielding, thumb screw retention, and strain relief.

Kit Contents:

- 4 each M2.5 flat head thread cutting screws
- 2 each Metal shell halves
- 2 each Thumb screws
- 2 each Elastomer gaskets
- 2 each Metal strain reliefs



Figure 1

NOTE: Kit 103XX-12S1 does not include the elastomer gasket material. Contact 3M for details.

Tools Needed:

- 3430-7000 Hand Tool (Scribe)
- Straight edge (Metal ruler)
- Philips screwdriver (No. 1 point head)
- 4000-2000 Cable Splitter
- 3640 or 3335 Assembly Press

NOTE: Because of the torque/pressure involved with using the thread cutting screws, make sure the recommended No. 1 pt. Philips screwdriver is used.

Cable Preparation

The cable, shield, and jacket should be trimmed to the recommended dimensions shown in Figure 2.

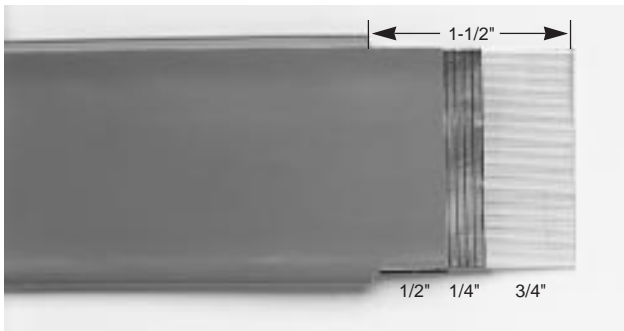


Figure 2

- 3/4" cable should be exposed.
- 1/4" pleated foil should be exposed.
- 1/2" cable jacket should be trimmed along the side.

After terminating the connector to the cable, the assembly is ready to be installed in the junction shell.

Assembly

1. Place the top half of the junction shell next to the bottom half, with the inside of each half facing up. See Figure 3.



Figure 3

- The **top** half of the shell has four holes on the side with the 3M logo.
- The **bottom** half of the shell has no holes on the side with the 3M logo. See Figure 4.

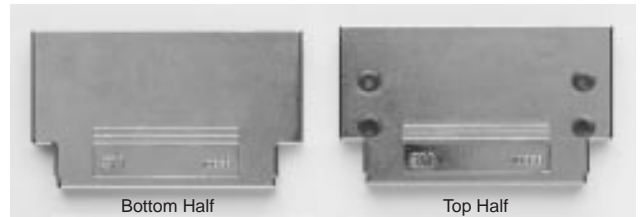


Figure 4

2. Insert the Elastomer Gasket in both halves as shown in Figure 5. (Gasket material in vertical position.)
3. Insert the metal strain reliefs, with flat side facing up as shown in Figure 5.



Figure 5

The strain relief for the top half of the junction shell was designed to be held in place using the following steps:

Place a flat block of metal, for extra height, on the base of the 3640 or 3335 Assembly Press. See Figure 7a.

- Adjust the press so the shaft will come down on the plated “dimple” on the junction shell at each end of the strain relief. This will press the strain relief into position. See Figure 6b.
- Do the opposite end next.



Figure 6a

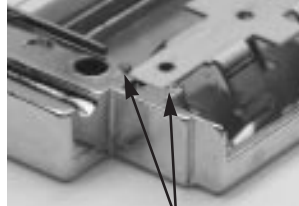


Figure 6b
Dimple

- Make sure the strain relief is in place by picking the shell up and turning it over.
- If the strain relief does not stay in place, repeat the above steps.



Figure 7a



Figure 7b

4. Place the connector/cable assembly in the bottom half of the shell, making sure the “connector locating tabs” in the Junction Shell mate to the slots in the connector body. See Figure 8.

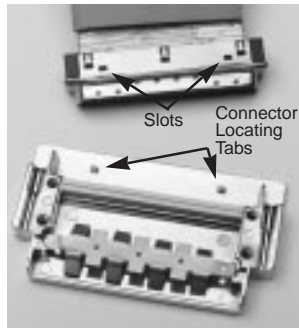


Figure 8

IMPORTANT:

The Pleated Copper Foil should be resting on top of the Elastomer Gasket.

**For technical, sales, or ordering information, contact 3M at:
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5. Place the top half of the shell over the bottom half, making sure the connector latching tabs are secure in the connector body. See Figure 9.



Figure 9

6. Using the recommended screw driver, insert the flat head screw into the front of the junction shell and turn but do not tighten. See Figure 10.



Figure 10

7. Slide the two thumb screws into position, one on each side of the shell. See Figure 11.

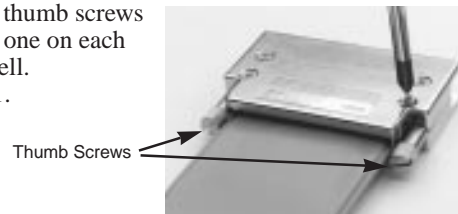


Figure 11

8. Insert the two remaining screws then tighten all four screws. See Figure 12.



Figure 12

Caution: Because of the amount of torque involved, it is recommended that this assembly be done on a flat surface. DO NOT hold the junction shell in your hand while using a screwdriver.

Figure 13 shows a complete Metal Junction Shell.



Figure 13

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