RFS Technologies
an Amphenol Company

Doc #: 10000037017 Ver A

Installation Instructions for EIA Connectors

Connector Model: **318EIA-HCA300-C03KT** Matching Cable Models: **HCA300-50**

Disclaimer:
These instructions are intended for use by qualified and experienced personnel only. Please review them thoroughly before beginning any work. We disclaim any liability or responsibility for any consequences resulting from improper or unsafe installation practices. Additionally, please adhere to all applicable environmental regulations regarding assembly and waste disposal.

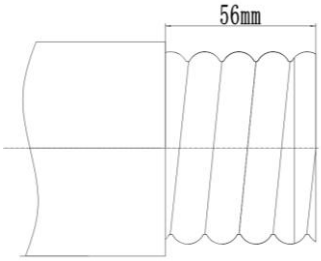
Tools and Materials

Measuring tape, Saw, Tubing cutter, Cable knife, Pointed-nose pliers, Ball hammer, Light metal scissors, Flat file, 3/8" Allen wrench

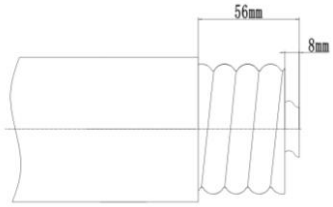
Parts List (gasket grease, 1-1/2 screws and a heat shrink tube are provided but not shown in the picture)

Installation Steps

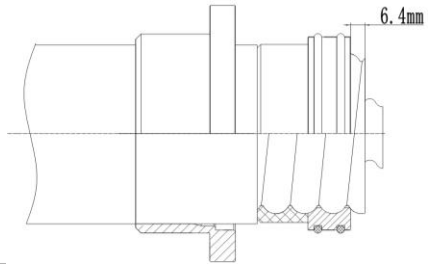
1. Clean cable end and saw it off. Ensure the saw is perpendicular to the cable axis during sawing and no metal particles get inside of the cable. Do not deform the cable.
2. After that, measure 56mm (2.2inch) from the end of the cable and peel off the cable jacket using a cable knife.



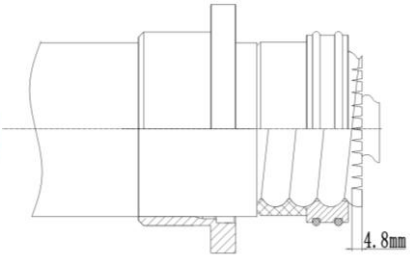
3. Cut off 8mm (0.31inch) of the outer conductor of the cable along the axial direction according to the drawing below. Slide the heat shrink boot onto the cable and out of the way. Install the back nut (part 1) with the flange facing the cable end. Then lubricate gasket (part 2) using supplied grease and screw it onto the out conductor up to the trimmed jacket. Ensure a smooth fit of the gasket in the cable corrugation.

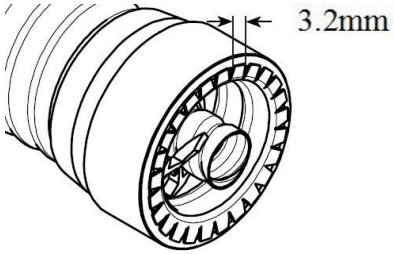


4. Screw the lining (part 3) onto the cable, ensuring the distance between the lining's front edge and the end face of the cable's outer conductor is 6.4mm (0.25inch). Put two lining O-rings (part 4) in place.



5. Cut slits in the protruding outer conductor along the axial direction at 4.8mm(0.19inch) depth, spacing the slits approximately 3.2mm (0.13inch) apart.

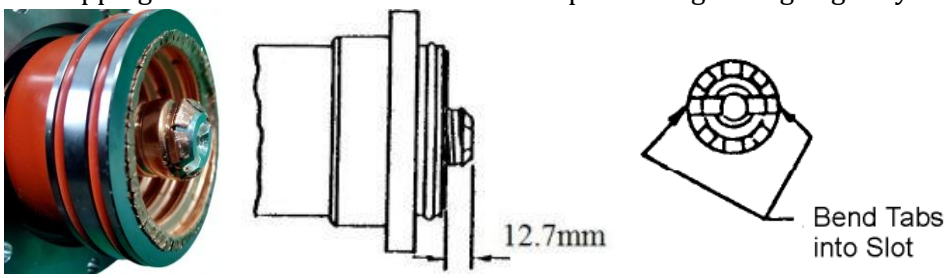




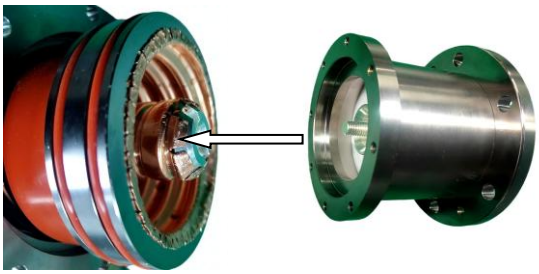
6. Bend the cut outer conductor with pointed-nose pliers and flatten it onto the lining using a ball hammer. Trim any excess outer conductor beyond the lining's diameter with light metal scissors and file the edges flat.

7. Cut out the inner conductor gap of the cable evenly to 6.35mm (0.25inch), making 8 notches as recommended.

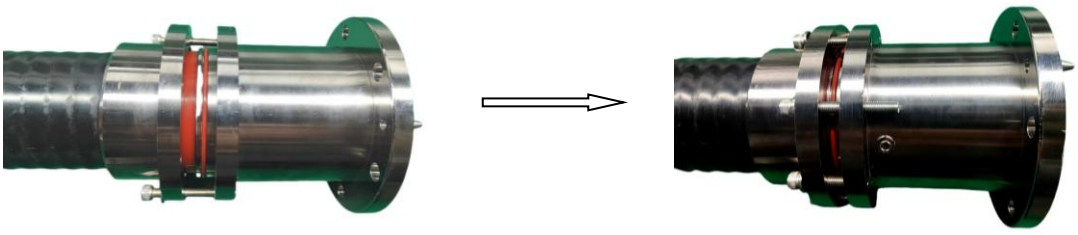
8. Screw the connector's inner anchor (part 5) into the cable's inner conductor, ensuring a 12.7mm (0.5inch) clearance from the top of the inner anchor (part 5) to the flared outer conductor surface, as shown in the figure. Close the cut inner conductor of the cable, ensuring two tabs are bended and stuck in the slot of the connector's inner anchor (part 5) to secure it in place.
Overlapping tabs must be reworked. Remove protruding flaring edges by flat file.



9. Apply a light film of gasket grease to the two O-rings (part 4). Align the inner conductor pin on the connector body (part 6) with the inner anchor (part 5) installed on the cable. Carefully slide the connector body (part 6) over the lining (part 3). Thread the basket contact into the inner anchor (part 5) by turning the connector body (part 6). Tighten with a 3/8" Allen wrench from the other side of the pin.



10. Apply a light film of gasket grease to the outside of the gasket. Slide the back nut (part 1) forward. Use the two 1-1/2inch starter screws to draw the connector halves together, tightening them equally until the 1inch connector screws (part 7) can be engaged.



11. Remove the starter screws and install the 1inch connector screws (part 7), alternating sides to ensure even compression of the gasket and inner contact surfaces.
    Tighten the screws to finish the connector assembling. It is correct that a small gap reminds between the back nut (part 1) and the connector body (part 6).
12. To complete the installation, slide the heat shrink boot into place over the back nut (part 1). Use a heat gun or apply a light flame to the boot until it shrinks smoothly forming a weatherproof seal.
    Drill through the insulation if a gas pass connector is needed.
    Plug in the RF coupling element (part 7) if necessary.
    Remove the plug and use the 1/8 NPT gas inlet on the connector to get dry air and pressurize the cable.

Note: Ensure all parts are properly aligned and tightened to avoid any issues during operation.