

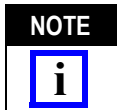
CONNECTOR KIT REFERENCE PART NUMBER					WIRE SIZE RANGE (AWG) (All Connector Positions)
RECEPTACLE	PLUG		PLUG AND RECEPTACLE		
	With Retaining Ring	With Strain Relief	With Retaining Ring	With Strain Relief	
859527-[]	860267-[]	863023-[]	860229-[]	863018-[]	24-14

Figure 1

1. INTRODUCTION

This instruction sheet covers assembly of LGH high-voltage LGH circular connector kits. The connectors are available in 2, 3, 4, 6, and 7 positions. Reference part numbers are given in Figure 1.

The connectors are designed for panel-mount, bulkhead-mount, or free-hanging applications.



All numerical values in this instruction sheet are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Figures are not drawn to scale.

Reasons for reissue of this instruction sheet are provided in Section 5, REVISION SUMMARY.

2. DESCRIPTION

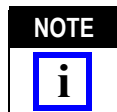
Each connector kit consists of a plug housing, receptacle housing, or both and Type II pin or socket contacts. The plug includes a strain relief or retaining ring (neither shown in Figure 1), and a threaded coupling ring for quick connect/disconnect capability with the receptacle. The receptacle includes a hex nut for mounting. See Figure 1.

The contacts are designed to be crimped onto the wire size range given in Figure 1. The contact cavities of the connector must be sealed with a suitable potting material.

3. ASSEMBLY PROCEDURE

3.1. Wire Preparation

- Strip the wire to the dimension given in Figure 2.
- Crimp the contact to the wire using the appropriate tooling given in Figure 2. Refer to the instruction sheet packaged with the tool.
- Thoroughly clean the surface of the wire and contact with alcohol.

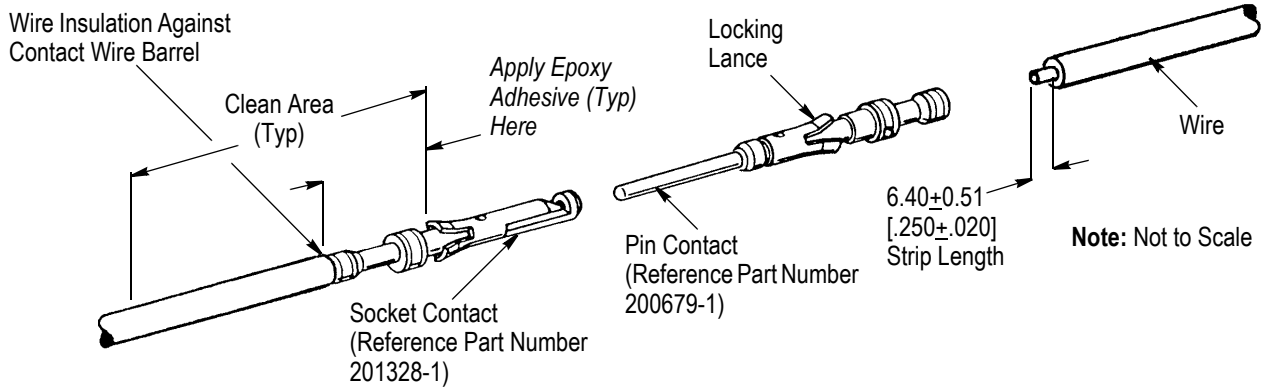


If using silicone-insulated wire with silicone rubber potting material, clean the insulation with alcohol. If using PTFE-insulated wire with silicone rubber, epoxy, or polyurethane potting material; abrade, etch, and prime the insulation according to the recommendations of the potting material manufacturer.

3.2. Installing Contacts and Potting

Refer to Figure 3, and proceed as follows:

- Roughen the inner surface of the potting area of the receptacle, plug, and strain relief (if used) by abrasive blasting. Clean the abraded area thoroughly with alcohol, and allow to dry.
- Insert the contacts into the contact cavities of the plug and receptacle. Pull back lightly on each contact to make sure the locking lances of the contact are fully seated in the contact cavity.



WIRE		CRIMPING TOOL	
SIZE (AWG) RANGE	INSULATION DIAMETER RANGE	PART NUMBER	INSTRUCTION SHEET
24-20	1.35-2.08 [.055-.085]	91538-1	408-8547
	2.03-2.54 [.080-.100]	91523-1	
18-16	—	91539-1	
	2.03-2.54 [.080-.100]	91523-1	
14	—	91539-1	
	2.03-2.54 [.080-.100]	91519-1	

Figure 2



The contacts cannot be extracted after the plug and receptacle is potted; however, it is possible to remove the contacts before potting by using Extraction Tool 861751-1 (see Section 4, CONTACT EXTRACTION).

3. Install the threaded coupling ring onto the plug. Refer to Figure 1.
4. If the strain relief is used, attach it to the plug housing by applying Armstrong A12-T epoxy adhesive to the lip of the strain relief where it contacts the housing. Allow it to cure.
5. Fill the housing and potting shell (if used), with HYSOL EE4215 potting compound if using PTFE-insulated wire and Momentive Performance Materials RTV-511 silicone rubber compound or RTV-21 potting compound if using silicone-insulated wire. DO NOT introduce voids.

If using HYSOL EE4215 potting compound, bond the contact (with wire) with Armstrong A12-T epoxy adhesive to seal the contact cavities. Apply the epoxy adhesive to the area designated in Figure 2, and insert the contacts according to Step 2. Allow the epoxy adhesive to cure thoroughly.



The potting and rubber compounds indicated are recommended; however, materials that are compatible with the wire insulation, housings, wire preparation used, operating voltage, stress levels, and the environmental conditions in which the unit will be operated can be used.

6. If applicable, install the O-rings and retaining rings onto the connectors. Refer to Figure 3.
7. Allow the potting compound to cure FULLY before applying voltage.

3.3. Mounting

1. Cut the panel or bulkhead using the dimensions given in Figure 4.
2. Attach the receptacle to the panel or bulkhead using the hex nut. Tighten the hex nut to a maximum torque of 1.13 N [10 in.-lbs].

4. CONTACT EXTRACTION

Contacts can be extracted from the connector *before* potting using Extraction Tool 861751-1 according to instruction sheet 408-9567 (packaged with the tool).

5. REVISION SUMMARY

- Revisions to this instruction sheet include:
- Updated document to corporate requirements.

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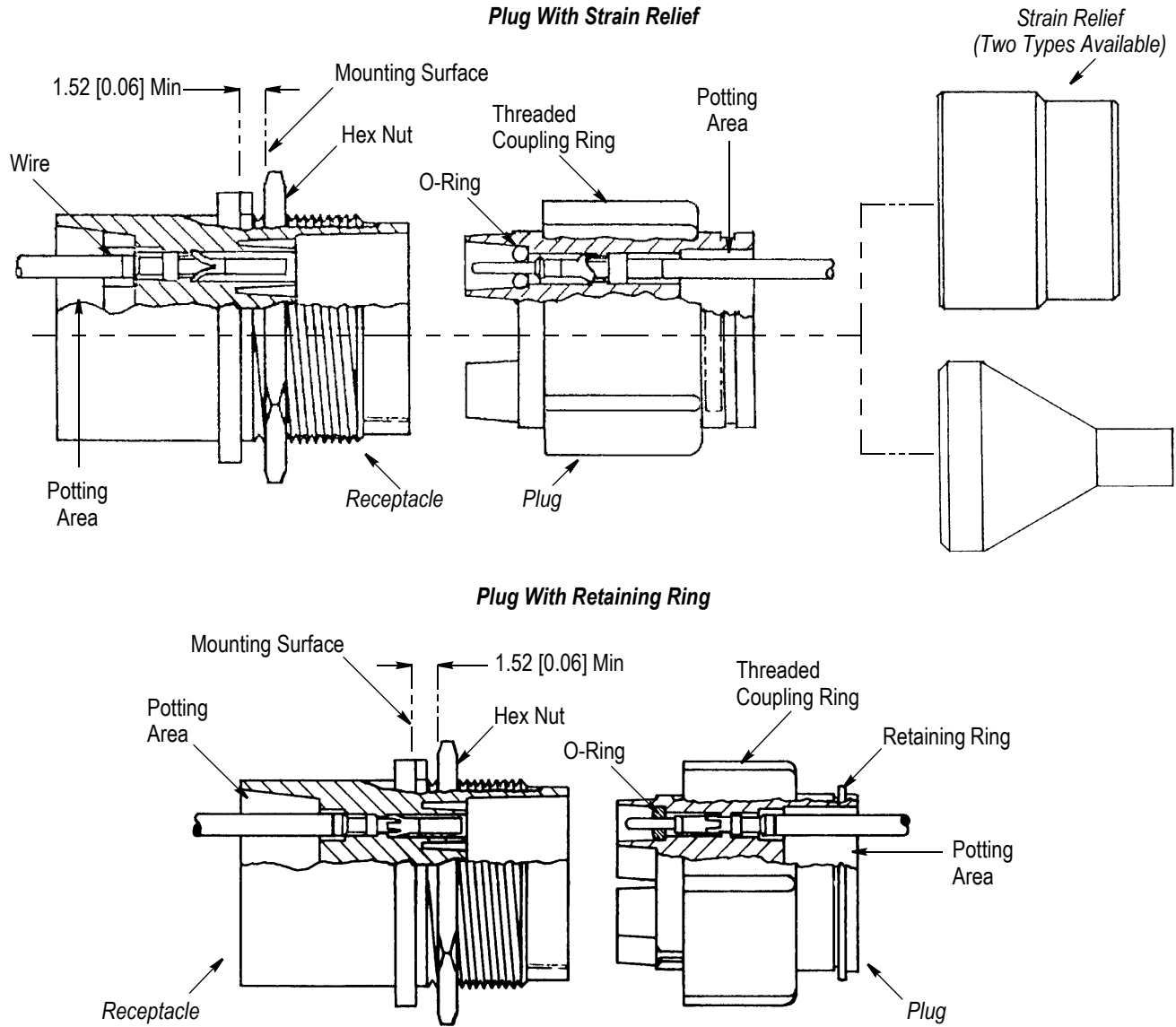
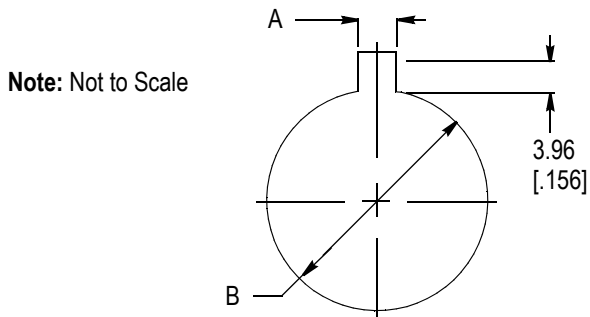


Figure 3

Recommended Cutout for Mounting



CONNECTOR POSITION	DIMENSION	
	A	B
2, 3, 4	3.96 [.156]	25.8-26.19 [1.015-1.031]
6, 7	5.16 [.203]	32.0-32.31 [1.26-1.27]

Figure 4