

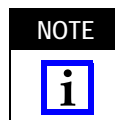
VOLTAGE RATING	CONNECTOR		CONTACT	WIRE			CRIMP TOOLING †		CONTACT EXTRACTION TOOL	
	KIT	TYPE †		SIZE		INSULATION DIAMETER (Max)	DIE SET	HAND TOOL		
				mm <sup>2</sup>	AWG					
10 kV DC	867157-1	Plug	203802-6	0.2-0.6	20-24	2.66 [.105]	—	91544-1	91038-3 (408-7357)	
	867157-2		203802-6			4.06 [.160]				
	867156-1	Receptacle	203816-6	0.2-0.6	20-24	4.06 [.160]	—			
20 kV DC	861610-1	Plug	66399-1	0.3-0.6	22-20	4.7 [.185]	—	91523-1	861751-1 (408-9567)	
	861610-3		66101-2	0.8-1.4	18-16			91505-1		
	861610-4		66399-1	0.3-0.6	22-20	7.67 [.302]		91523-1		
	861610-2		66101-2	0.8-1.4	18-16			91505-1		
	861753-1	Receptacle	66400-1	0.3-0.6	22-20	4.7 [.185]	—	91523-1		
	861753-3		66099-2	0.8-1.4	18-16			91505-1		
	861753-4		66400-1	0.3-0.6	22-20	7.67 [.302]		91523-1		
	861753-2		66099-2	0.8-1.4	18-16			91505-1		
30 kV DC	863103-1	Plug	66741-8	5-6	10	12.7 [.50]	90140-1	69710-1	863558-1 (NA)	
	863103-2		66740-8	2-3	14-12					
	863103-3		66740-8	1.4	16					
	863104-1	Receptacle	66259-1	5-6	10	12.7 [.50]				90140-1
	863104-3		66261-1	1.4	16					90145-2

† Bulkhead receptacle connector kits are also available. ‡ 626 Pneumatic Tool System can also be used. Contact TOOLING ASSISTANCE CENTER at the number at the bottom of this page for details.

Figure 1

1. INTRODUCTION

This instruction sheet provides assembly procedure for LGH commercial single-line connectors. Kit part numbers, which contain the connector, are listed in Figure 1.



Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.

Reasons for reissue of this instruction sheet are provided in Section 6, REVISION SUMMARY.

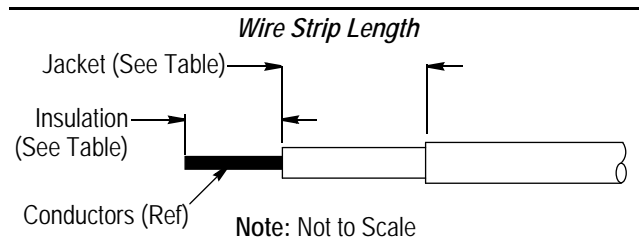
## 2. DESCRIPTION

Components of each connector kit are shown in Figure 1. All of the components (excluding contacts) are made from UL-Recognized self-extinguishing plastic material (94V-0 rated). Voltage rating is given in Figure 1. The connectors are designed for commercial application in industrial environments and have an operating temperature range of 15 to 85°C [59 to 185°F].

## 3. ASSEMBLY PROCEDURE

### 3.1. Inserting Contacts

1. Determine the voltage requirement for the application.
2. Select the connector kit based on the voltage requirement according to wire size and insulation diameter. Refer to Figure 1.
3. Refer to Figure 2, and strip the wire jacket (if required) and insulation to the proper strip length.



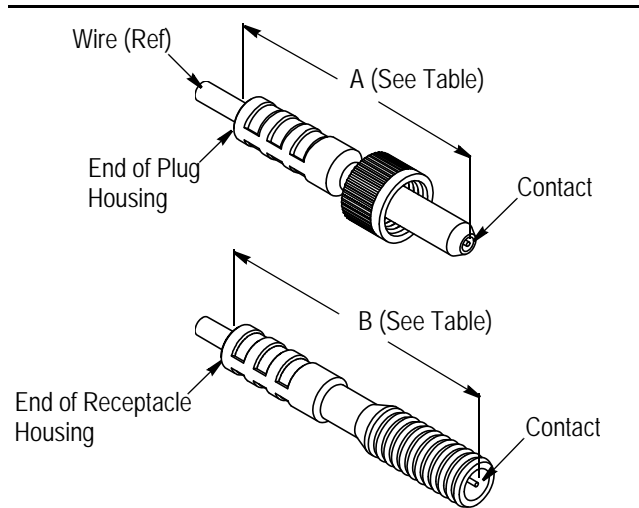
VOLTAGE RATING	CONNECTOR KIT	WIRE STRIP LENGTH	
		JACKET	INSULATION
10 kV DC	867157-1 867157-2	—	15.49-16.00 [.610-.630]
	867156-1	—	4.83-5.08 [.190-.200]
20 kV DC	861610-1 861610-3	22.86-24.13 [.900-.950]	3.56-4.32 [.140-.170]
	861610-2 861610-4	—	22.86-25.4 [.900-1.000]
	861753-1 861753-2 861753-3 861753-4	6.60-7.37 [.260-.290]	3.56-4.32 [.140-.170]
	863103-1 863103-2 863103-3 863104-1 863104-3	—	20.32-22.86 [.800-.900]

Figure 2

4. Tin lead between the contact and wire insulation to provide mechanical strength required for lead insertion.

5. Terminate the contact onto the wire using the tooling listed in Figure 1. Refer to the instruction sheet included with the tooling.

6. Insert leads into the housing until the contacts latch in the cavity. The contacts should be located the proper distance from the end of the housing according to the dimension provided in Figure 3.



VOLTAGE RATING	DIMENSION	
	A (Plug)	B (Receptacle)
10 kV DC	0.00-0.76 [.000-.030]	9.14-9.65 [.360-.380]
20 kV DC	0.76-1.52 [.030-.060]	18.03-18.80 [.710-.740]
30 kV DC	2.03-2.54 [.080-.100]	18.03-18.54 [.710-.730]

Figure 3

### 3.2. Connector Mating

Align the mating face of the connectors, and push them together. The housings contain keys and keyways that will align the contacts for positive mating and sealing.

## 4. CONTACT REMOVAL

Use the applicable extraction tool listed in Figure 1 to remove the contacts (one at a time) from the connector. Refer to the instruction sheet (referenced in Figure 1) provided with the extraction tool.

## 5. REPLACEMENT AND REPAIR

The connectors and contacts are not repairable. Do not use defective or damaged connectors or contacts. Do not re-use the contacts by removing the wire.

## 6. REVISION SUMMARY

Revisions to this instruction sheet include:

- Changed company name and logo
- Modified Figure 3
- Added Section 5