



**NOTE**

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of  $\pm 0.13$  mm [ $\pm .005$  in.] and angles have a tolerance of  $\pm 2^\circ$ . Figures and illustrations are for identification only and are not drawn to scale.

**1. INTRODUCTION**

This specification covers the requirements for application of LIGHT-N-LOK Connectors. These 2-position connectors are available in complete assemblies or may be purchased as individual components and customer assembled. The connectors consist of a plug assembly and receptacle assembly with or without being pre-wired. The assemblies will accept 18 AWG solid copper wire. This “Poke-In Wire Termination” method removes the need for application tooling.

When corresponding with TE Connectivity Personnel, use the terminology provided in this specification to facilitate inquiries for information. Basic terms and features of this product are provided in Figure 1.

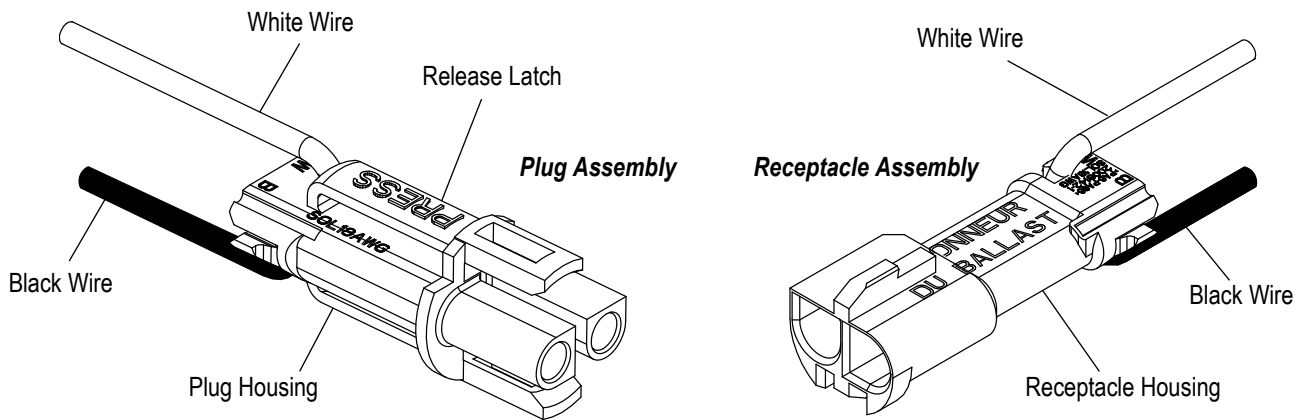


Figure 1

**2. REFERENCE MATERIAL**

**2.1. Revision Summary**

- Updated document to corporate requirements
- Changed Paragraph 2.2

**2.2. Customer Assistance**

Reference Product Base Part Number 2008141 and Product Code 1309 are representative numbers of LIGHT-N-LOK Connectors. Use of these numbers will identify the product line and help you to obtain product and tooling information. Such information can be obtained through a local TE Representative, by visiting our website at [www.te.com](http://www.te.com), or by calling PRODUCT INFORMATION or the TOOLING ASSISTANCE CENTER at the numbers at the bottom of page 1.

**2.3. Drawings**

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, the information contained in the Customer Drawings takes priority.

**2.4. Instructional Material**

Instruction Sheet [408-10153](#) provides assembly and disassembly procedures for the LIGHT-N-LOK Connectors.

### 3. REQUIREMENTS

#### 3.1. Storage

##### A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the connector housing material.

##### B. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

##### C. Chemical Exposure

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites		Tartrates

#### 3.2. Material

The housings are made of polyamide and the contacts are made from tin-plated copper alloy.

#### 3.3. Wire Selection and Preparation

##### A. Type

The wire size for these connectors is 18 AWG solid, soft annealed copper wire, tinned or untinned.

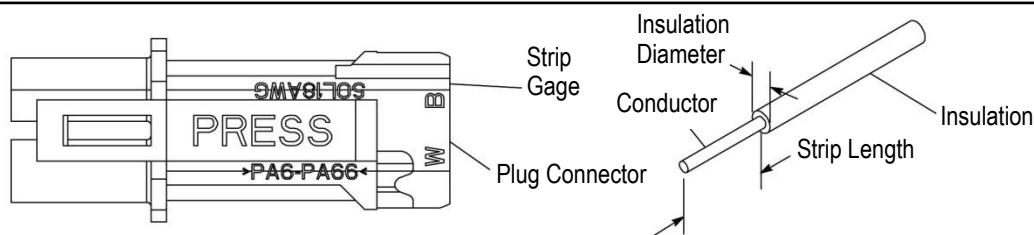
##### B. Preparation

Insulation strip length, as well as the maximum insulation diameter is provided in Figure 2.



**CAUTION**

*Do not nick, scrape, or cut the wire conductor during the stripping operation.*



WIRE SIZE, AWG	STRIP LENGTH	INSULATION DIAMETER (MAX)
18	9.53 ±0.80 [.375 ±.031]	2.18 [.086]

Figure 2

#### 3.4. Assembly Procedure



**CAUTION**

*In the field, these kits must be assembled by a qualified electrician in accordance with national and local electrical codes and the following instructions.*

1. Select the proper assembly for your production requirements.
2. If using customer-assembled connectors, strip two wires with 18 AWG solid copper conductors having a maximum insulation diameter of 2.18 mm [.086 in.] to the dimensions provided in Figure 2.

3. Insert each stripped wire into an insertion hole in the back of the plug or receptacle until bottomed. For field wiring, black and white wires must be inserted into corresponding holes marked “B” or “W”. The “B” (Black) wire insertion hole is also indicated by a black mark on the side of the housing. See Figure 3.

**NOTE**

*Pull back gently on the wires to ensure they have latched fully in the housings.*

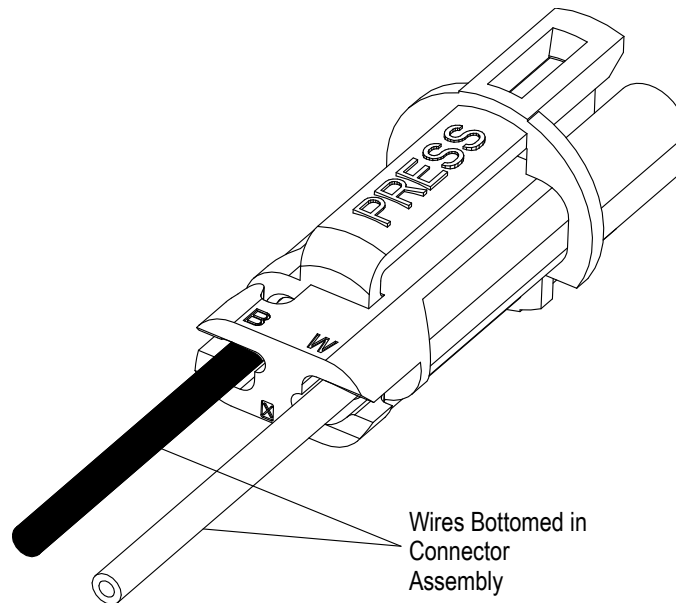


Figure 3

4. Pull the wire down through the slot in the strain relief. See Figure 4.

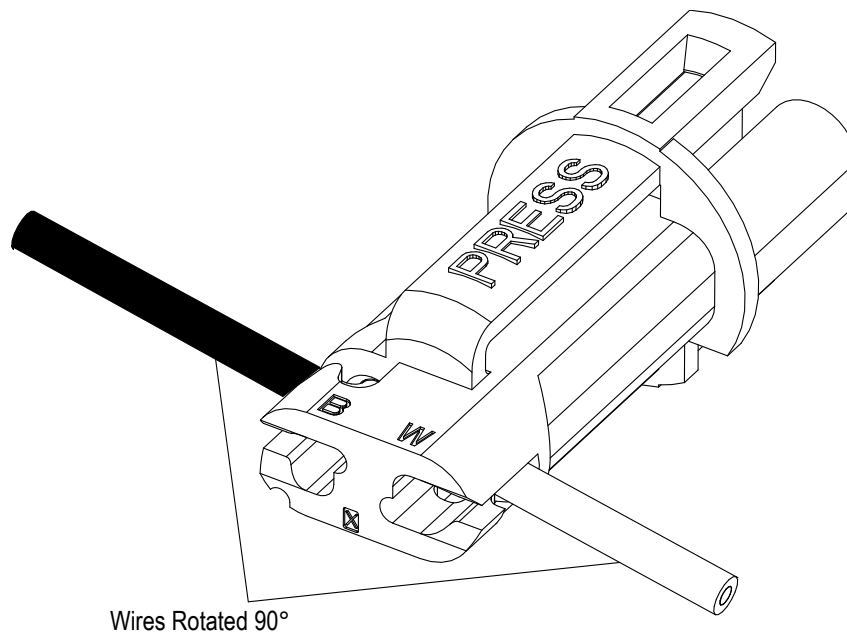
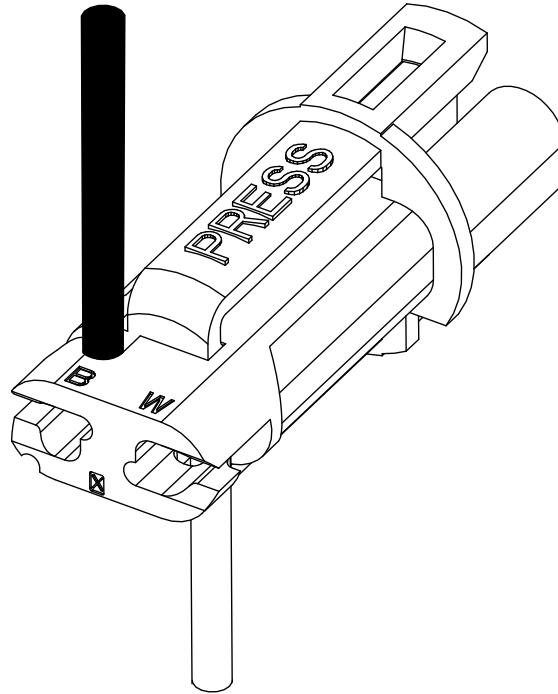


Figure 4

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5. Rotate the wire 90°. See Figure 5.
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Figure 5

6. Dress the wire 180° to complete the process. See Figure 6.
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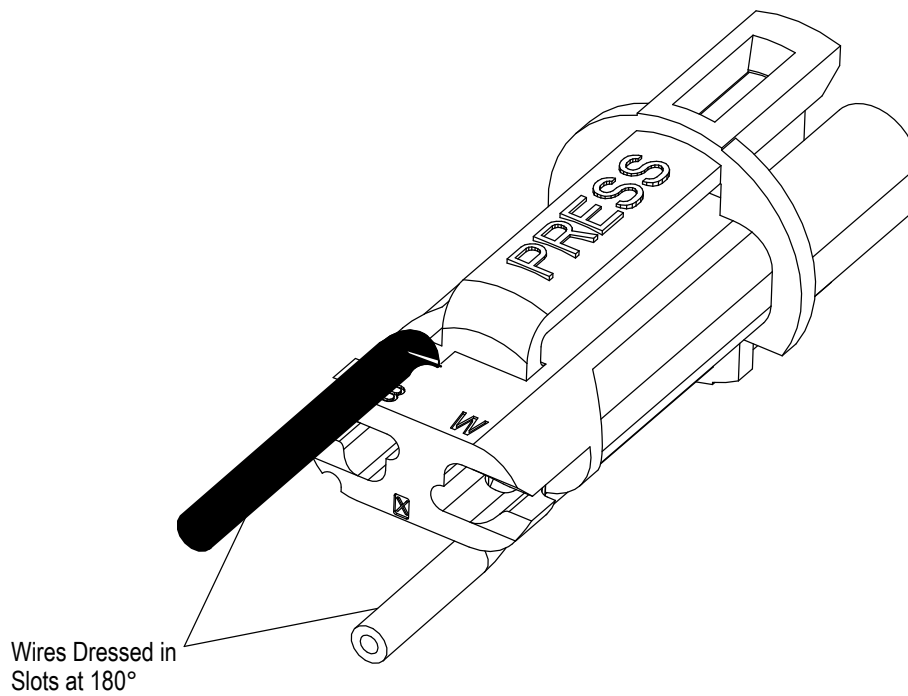


Figure 6

7. Apply optional approved flammability rated tape or clamp to organize the wire. See Figure 7.

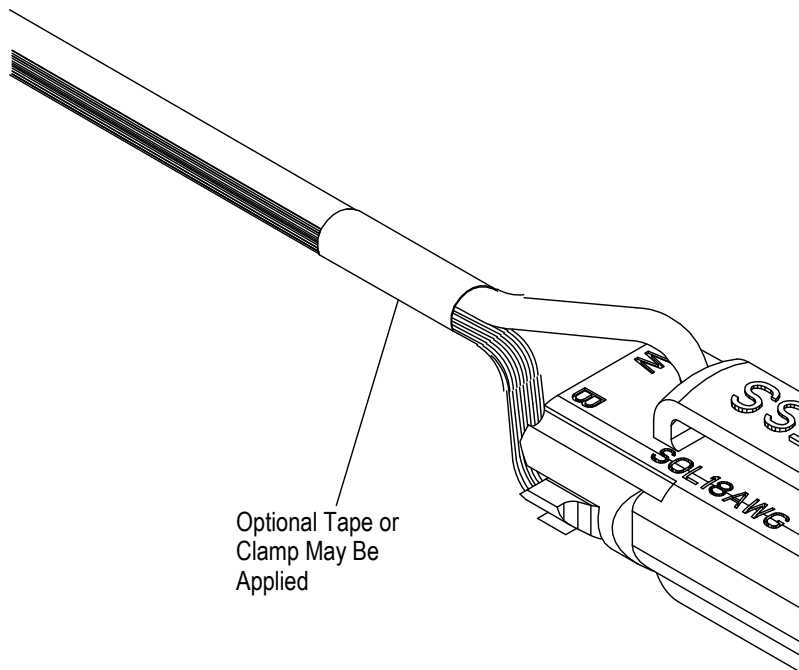


Figure 7

8. If using TE complete assemblies, all the assembly work has been done. They are factory wired and ready for installation.

### 3.5. Connector Mating

Align the polarized mating faces of the housings, and push the housings together. DO NOT force the housings to mate. When fully mated, the housings must appear bottomed with each other and flush at the point of engagement. An audible and tactile click will be heard and felt. See Figure 8.

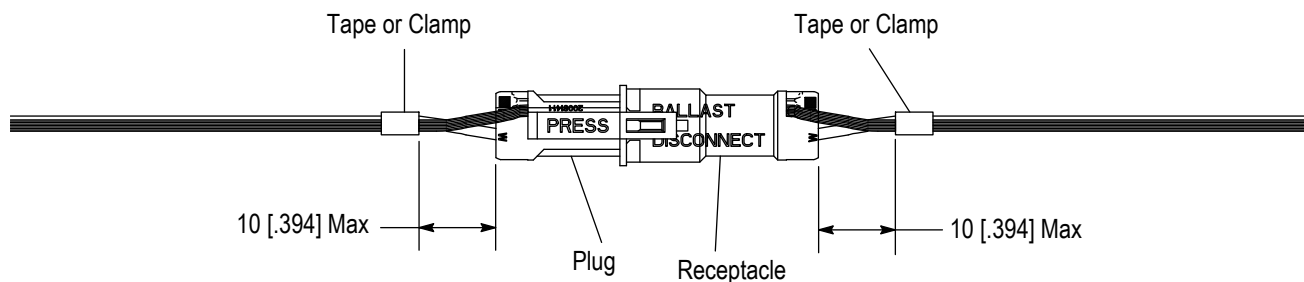


Figure 8

### 3.6. Connector Unmating



**DANGER**

To reduce risk of electrical shock, DISCONNECT the electrical supply before unmating the connectors.

To unmate the connectors, squeeze the release latches on either side of the plug housing and pull back until both connectors separate from each other.

**CAUTION**

*Do NOT pull on the wires when unmating the connectors.*

**3.7. Replacement/Repair****CAUTION**

*The contacts and housings, are not repairable. DO NOT use damaged or defective contacts or housings. DO NOT remove the wire and re-terminate contacts.*

**4. QUALIFICATION**

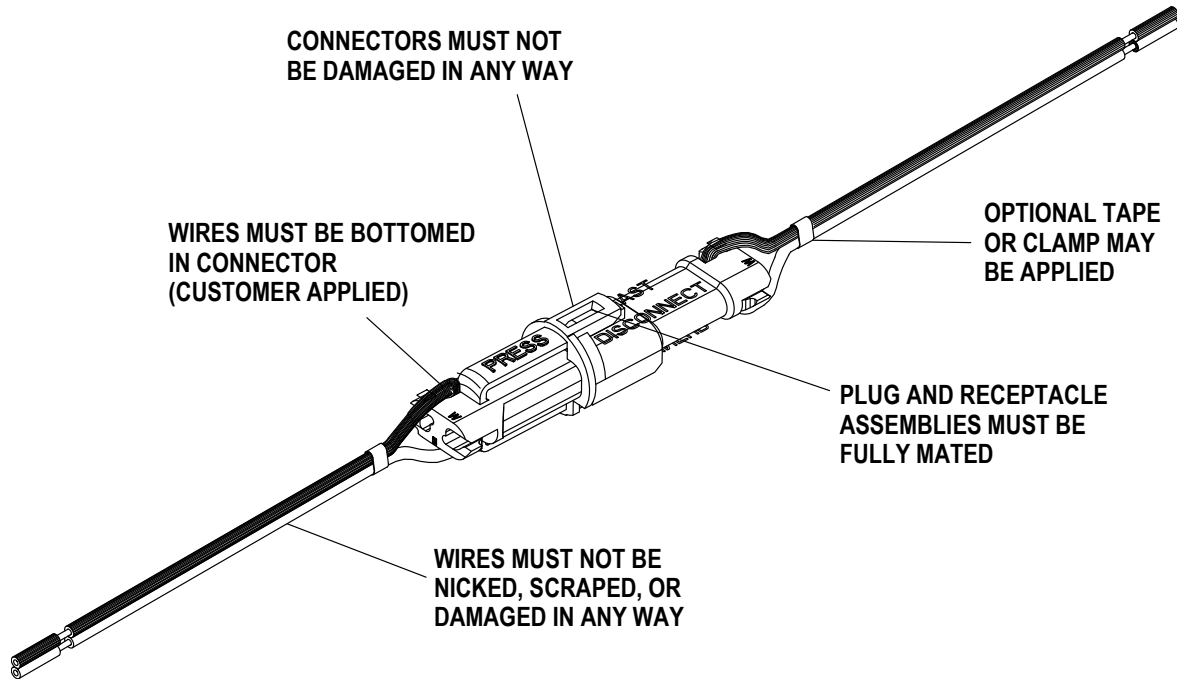
LIGHT-N-LOK Connectors are Listed by Underwriters Laboratories Inc. (UL) in File ZMNA.E308110 and Certified by CSA International for current interruption in File LR 7189, Class 6233-01.

**5. TOOLING**

Only a wire stripper is needed for the installation of LIGHT-N-LOK Connectors if using customer-assembled connectors. No special tooling is required.

## 6. VISUAL AID

The illustration below shows a typical application of LIGHT-N-LOK Connectors. This illustration should be used by production personnel to ensure a correctly applied product. Applications, which DO NOT appear correct, should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.



**FIGURE 9. VISUAL AID**