



NOTE

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ± 0.13 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 6-way and 7-way free-hanging NECTOR S Line connector for mini HVL cable used in the lighting industry. These connectors are available in low-voltage and high-voltage for AC supply (only negative current supplied to plug at all times). The 7-way connector is also available for AC/DC supply applications.

Each connector consists of a distributor body, which features 5 IDC terminals and 7 outlets, and a distributor cover. The 7-way connector distributor body features a switch outlet and includes a switch terminal. This connector includes a coding ring, which is used to indicate the switch outlet. In this use, a switch plug can be installed into the switch outlet, which controls the flow of the positive current to the other outlets.

The distributor body is marked with negative (-) and positive (+) polarity indicators. The distributor cover is used to protect the assembly. The distributor cover is a hinged so that it closes around the distributor body. The distributor cover features a wire strain relief and locking lances that secure the distributor body to the cover and lock the cover sides together.

The connectors are available in different colors to prevent mis-mating. The connector can fit into a 7.5-mm opening. The connector has a rating of IP 20 when disconnected and IP 40 when connected.

When corresponding with 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.

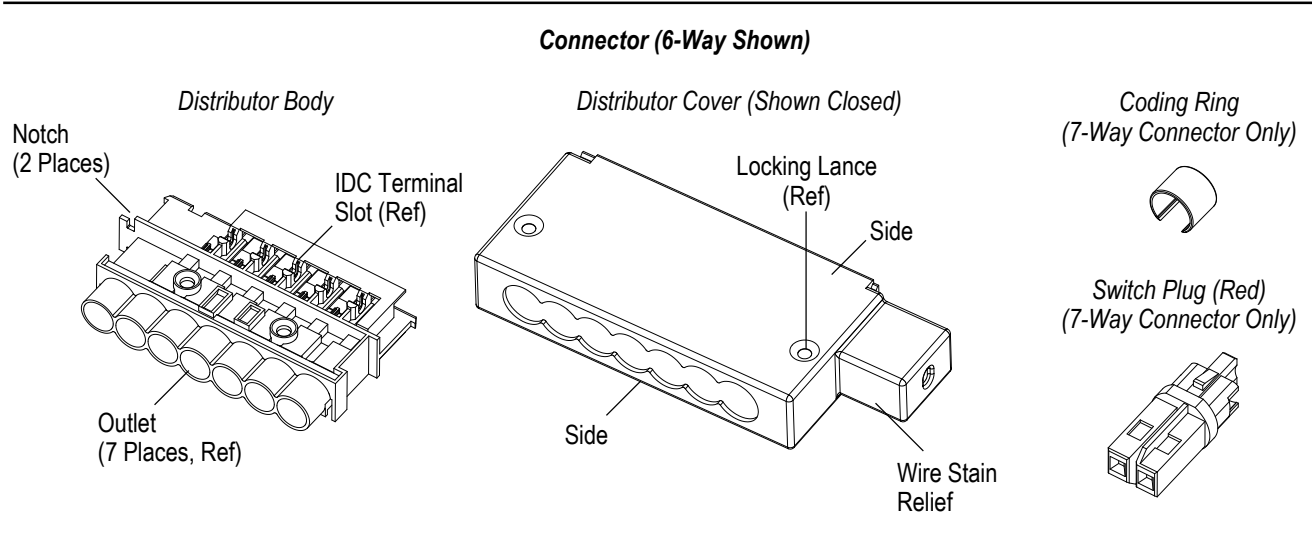


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Revisions to this application specification include:

- Updated specification to corporate requirements
- Changed “blue wire” to “brown wire” and “brown wire” to “blue wire”
- Changed strip length for high-voltage application in Figure 2
- Changed terminology for “phase line” to “negative wire” and “neutral line” to “positive wire”

2.2. Customer Assistance

Reference Product Base Part Number 1740317 and Product Code K746 are representative of 6-way and 7-way free-hanging NECTOR S Line connector for mini HVL cable. 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 Representative, by visiting our website at www.te.com, or by calling PRODUCT INFORMATION or the TOOLING ASSISTANCE CENTER at the numbers at the bottom of this page.

2.3. Drawings

Customer Drawings for product part numbers are available from our website at www.te.com. 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

Customer manuals (412-series) provide machine setup and operating procedures. Instructional material available that pertains to this product are:

[412-18722](#) IDC Hand Lever Press for HVL Connectors

2.5. Catalog

[1773457-7](#) NECTOR S Line Catalog

3. REQUIREMENTS

3.1. Safety

Do not stack product shipping containers so high that the containers buckle or deform.

3.2. Storage

A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the product 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.

Product must be used within 2 weeks of opening sealed package.

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

3.3. Cable Selection and Preparation

The connector accepts UL-approved HVL harmonized cable size 18 AWG having 2 conductors. It is recommended to use cable with a cross-section diameter no larger than 5.9.



NOTE

Cable with larger cross-section diameter than recommended will cause a difficult assembly. In this case, the cable should be tested before use in application.

The cable must be prepared to the dimensions given in Figure 2.

It is recommended that the brown wire be used for positive (+) polarity and the blue wire be used for negative (-) polarity.

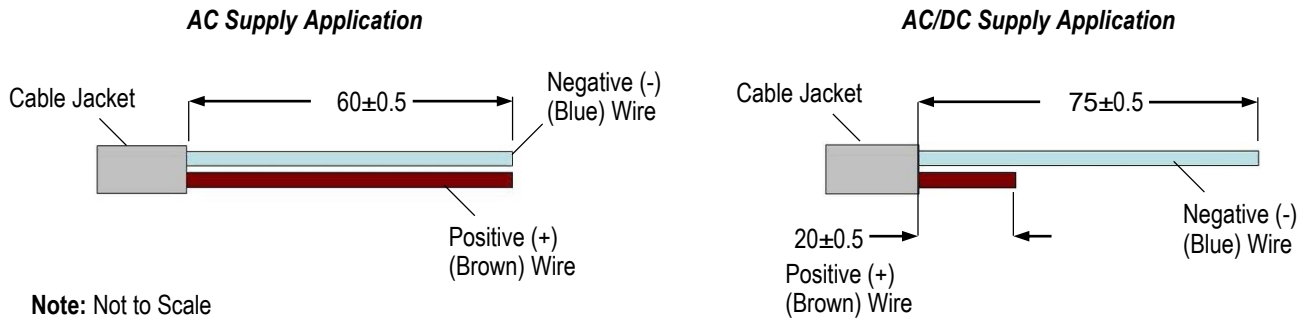


Figure 2

3.4. Assembly

1. Each wire must be placed through the terminals of the distributor body.

For AC supply application, the positive (+) (brown) wire must be routed to the front and the negative (-) (blue) wire must be routed to the back of the distributor body.

For AC/DC applications, the positive and negative wire must be routed to the front of the distributor body, with the positive (+) (brown) wire placed through the first two terminals and the negative (-) (blue) wire routed through the notches and placed through the remaining terminals. See Figure 3.

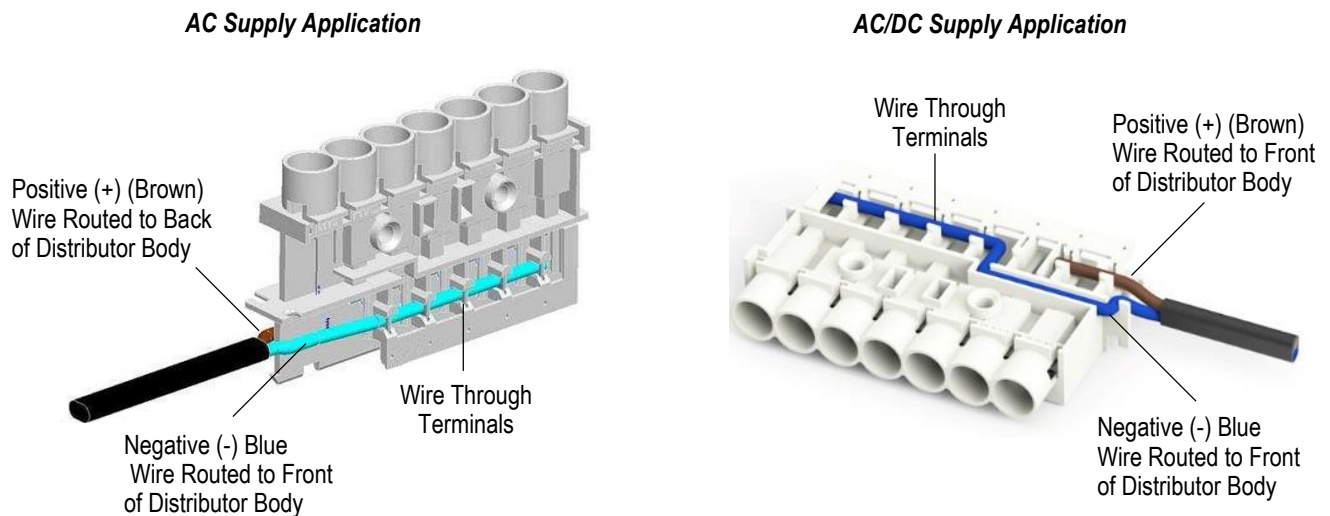


Figure 3

2. The wire must be terminated to the terminals using the tooling given in Section 5. The termination must meet the following requirements:

- The wire must be contained within the confines of the each slot.
- The wire must be bottomed on the distribution body.
- The wire must be straight.
- The wire must not be broken or damaged in any way.
- There must be no damage to the cable.
- The terminals must not be bent.

3. For switch applications, the coding ring must be installed onto the switch outlet. See Figure 4.

For Switch Applications

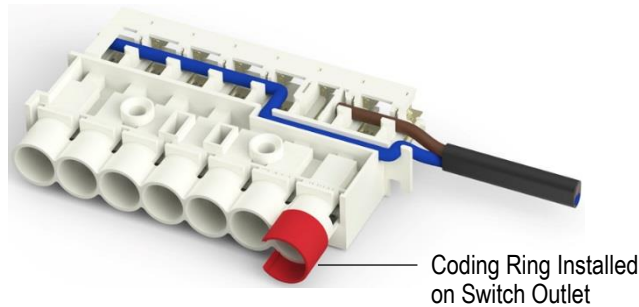


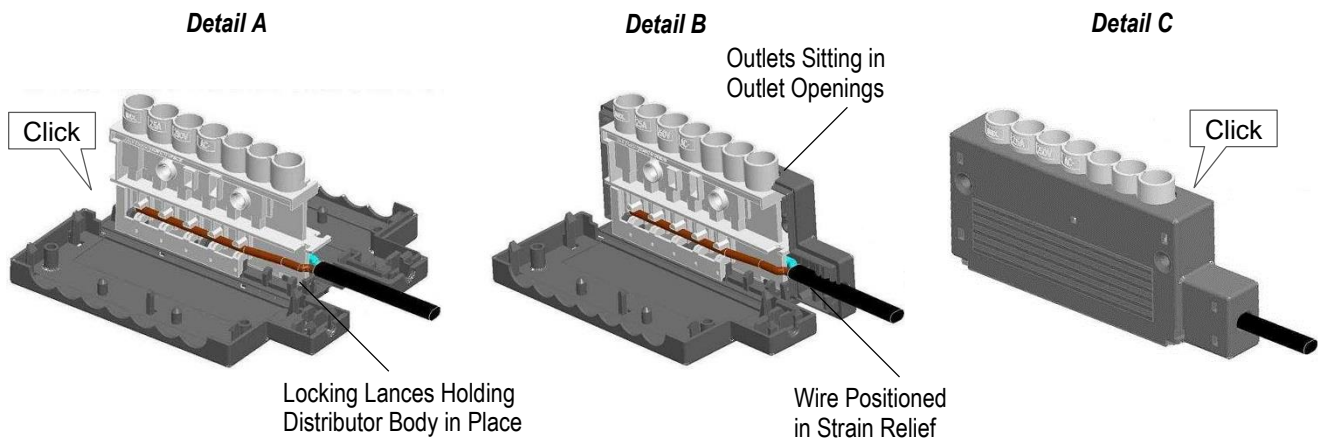
Figure 4

4. The distributor body must be positioned in the center of the distributor cover so that the locking lances hold it in place. There will be an audible click when the distributor body is fully seated. See Figure 6, Detail A.
5. One side of the distributor cover must be rotated against the distributor body so that the locking lances hold it in place—the outlets must sit in the outlet openings and the wire must be positioned in the wire strain relief. See Figure 6, Detail B.
6. The other side of the distributor cover must be rotated against the distributor body so that the locking lances hold it in place—the outlets must sit in the outlet openings and the wire must be positioned in the wire strain relief. There will be an audible click when the distributor cover is fully closed. See Figure 6, Detail C.



NOTE

The distributor cover cannot be opened after it is closed.



Note: AC Supply Application Shown; Same Applies to AC/DC Application

Figure 5

3.5. Repair

Defective or damaged components must not be used. The connectors must not be disassembled. The components must not be re-used by removing the wire.

4. QUALIFICATION

Agency evaluation was not defined for 6-way and 7-way free-hanging NECTOR S Line connector for mini HVL cable at the time of publication of this specification.

5. TOOLING

Connector termination tooling part numbers and instructional material are given in Figure 6.

No tooling is required to assemble the connectors.

The manual press is used to provide the force necessary to crimp the IDC contacts. The IDC tool is used to hold the connector and wire in place for termination.

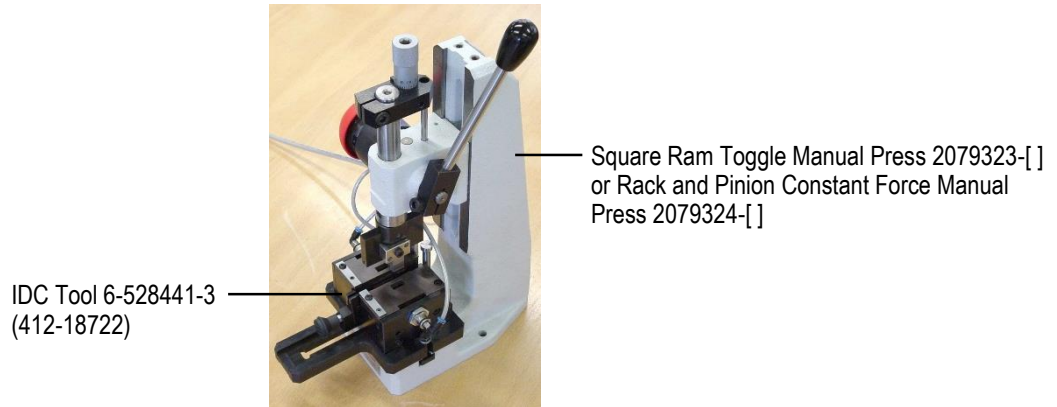


Figure 6