



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

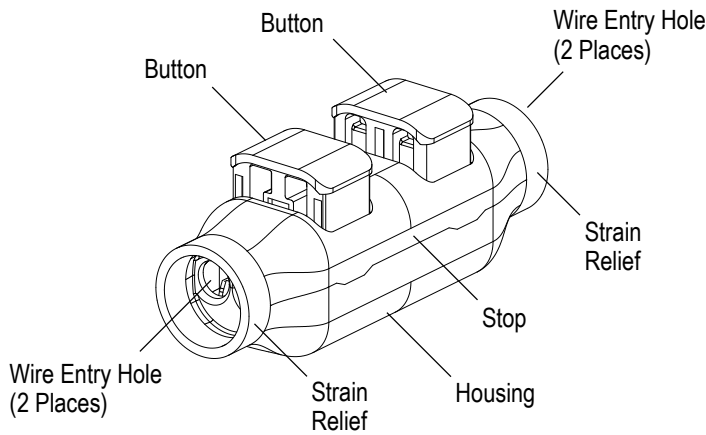
This specification covers the requirements for application of wire-to-wire IDC CoolSplice connector used for 1 or 2 electrical power connections. This connector is available in unsealed and sealed. The connector consists of a color-coded housing with two wire entry holes at each end, two internal contacts, and two color-coded buttons. The housing features a stop that ensures proper wire insertion depth. When pressed, the buttons force the wires into the contacts for left/right side independent termination. The connector provides strain relief for the wire.



NOTE

It is strongly recommended to locate the sealed connector inside an enclosure if used outside or underground.

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.



WIRE SIZE	CONNECTOR		
	TYPE	COLOR	
		Buttons	Housing
22-20 AWG	Unsealed	Green	Transparent Yellow
	Sealed	Blue	
18 AWG or 0.75 mm ²	Unsealed	Green	Clear
	Sealed	Blue	

Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Revisions to this application specification include:

- Updated to corporate requirements

2.2. Customer Assistance

Reference Product Base Part Number 293545 and Product Code L837 are representative of wire-to-wire IDC CoolSplice connector. 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 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. Specifications

Product Specification [108-19419](#) provides product performance and test results.

3. REQUIREMENTS

3.1. 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.

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. Wire Selection and Preparation

The connector accepts copper discrete wire or twin cord cable having the sizes and types given in Figure 2. Non-concentric wire is not acceptable.

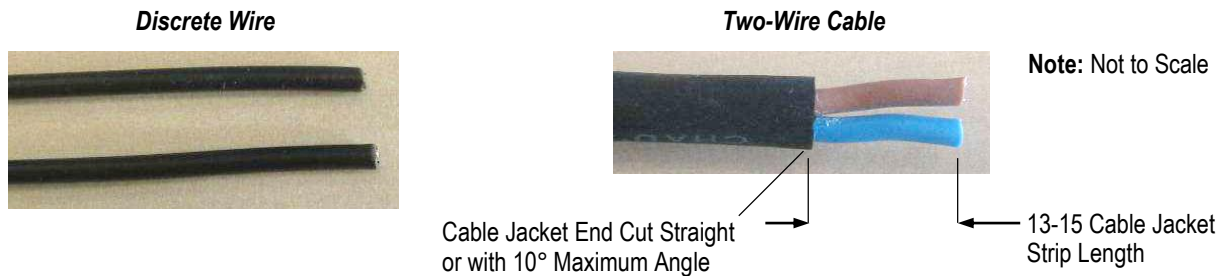


NOTE

For suitability of other wire types, contact *PRODUCT INFORMATION* at the number at the bottom of page 1.

The wires must be clean and free of contaminants such as dust or other substances that can compromise the insulation diameter. The wire insulation must not be damaged or cut. The wire must have no spacing deformation or burrs. Discrete wires must not be stripped.

For two-wire cable, the jacket end must have a clean straight cut or cut with maximum angle of 10°. The strip length of the jacket is given in Figure 2.



WIRE SIZE	WIRE TYPE	WIRE INSULATION		MUST MEET STANDARDS
		TYPE	DIAMETER	
22-20	Solid or Stranded	PVC/Nylon	1.1 (Min)	UL/AWM 1316, 1408, 1452, 1007
18	Solid	PVC/Nylon	1.75-2.85	UL/AWM 1316, 1408, 1452, 1007
	Stranded	PVC/Nylon		UL/AWM 1316, 1408, 1452
0.75 mm ²	Solid	PVC	1.75-2.85	H05V-U 300/500V

Figure 2

3.3. Wire Insertion

A wire must be inserted into one or both wire entry holes at both ends of the connector until it bottoms on the stop or at least 1 mm past the end of the associated button. The wires can be visually inspected for proper depth through the transparent housing. See Figure 3.



NOTE

This connector is not designed to be used as a wire end cap.

Discrete Wire Insertion



Cable Insertion



Figure 3

3.4. Termination

Wires must be held in place during termination to prevent them from moving out of position. The anvil of the tool must be placed on the top center of the button to prevent uneven seating. Each button must be closed (one at a time) using a maximum force of 500 N [112 lb-force].

A. Wire Placement

Each wire must be bottomed on the stop or at least 1 mm past the end of the associated button. There must be no exposed copper wire chips or broken wire strands. Refer to Figure 4.

B. Buttons

The top of each button must be flush with the top of the connector housing. There must be no apparent damage or cracks in the buttons.

C. Housing and Contacts

There must be no apparent damage or cracks in the housing and no sign of bent or misaligned contacts.

D. Connector Height

The connector must be within the connector height dimension given in Figure 4.

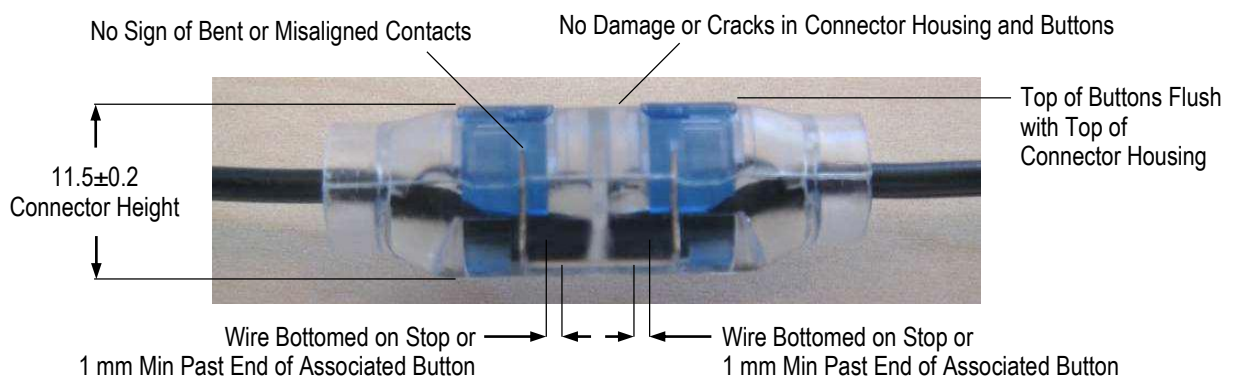


Figure 4

3.5. Replacement and Repair

A damaged or defective connector must not be used. The connector cannot be repaired. The connector must not be re-used by removing or lifting the buttons before or after termination.

4. QUALIFICATION

Agency evaluation for wire-to-wire IDC CoolSplice connector was not defined at the time of publication of this application specification.

5. TOOLING

A standard pliers as shown in Figure 5 can be used for termination of the connector.



Figure 5

6. VISUAL AID

The illustration below shows a typical application of wire-to-wire IDC CoolSplice connector. 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.

THERE MUST BE NO DAMAGE OR CRACKS IN CONNECTOR HOUSING AND BUTTONS

EACH WIRE MUST BE BOTTOMED ON STOP OR SLIGHTLY PAST END OF ASSOCIATED BUTTON

TOP OF EACH BUTTON MUST BE FLUSH WITH TOP OF CONNECTOR HOUSING



WIRES MUST BE CLEAN AND FREE OF CONTAMINATES AND WIRE INSULATION MUST NOT BE DAMAGED OR CUT

THERE MUST BE NO SIGN OF BENT OR MISALIGNED CONTACTS

FIGURE 6. VISUAL AID