


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 ± 0.13 [$\pm .005$] and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

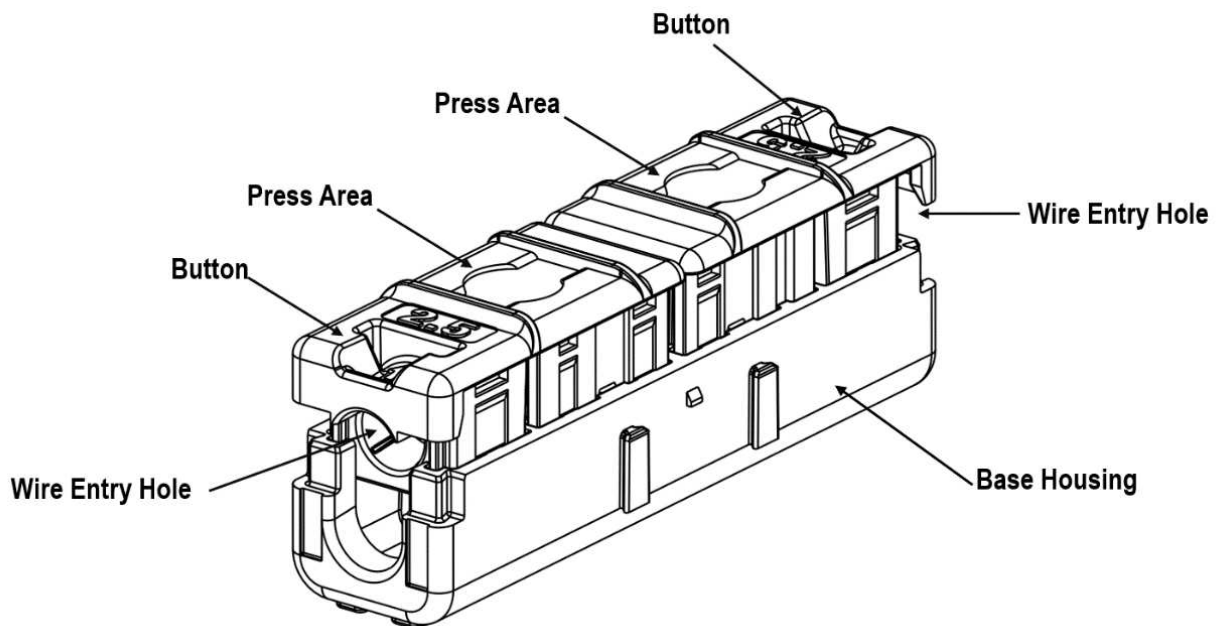
1. INTRODUCTION

This specification covers the requirements for application of Compact Seal Splice connector used for an electrical power connection. This connector is available in sealed for multiple wire gauges. The connector consists of a housing with a wire entry hole at each end, an internal contact, and two buttons. The wire entry holes, and the housing features a stop that ensures proper wire insertion depth. When pressed, the buttons force the wires into the contact for left or right side independent termination.


NOTE

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

Basic terms and features of this product are provided in Figure 1.

2378100-X

Figure 1

Part Number	Wire Size	Button Color	Housing Color	Grade
2378100-1	12-14AWG, 2.5mm ²	Red	Clear	UL94 V-0, UL746C F1, GWT 750°C, IP X7.
2378100-2	14-16AWG, 1.5mm ²	Orange		
2378100-3	16-18AWG, 1.5/0.75mm ²	Blue		

Table 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Initial release of application specification.

2.2. Customer Assistance

Reference Product Base Part Number 2378100 and L758 are representative of Compact Seal Splice connector. Use of these numbers will identify the product line and help you to obtain product and tooling information when visiting www.te.com or calling the number at the bottom of page 1.

2.3. Drawings

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority.

2.4. Manuals

Manual 402-40 can be used as a guide to soldering. This manual provides information on various flux types and characteristics with the commercial designation, flux removal procedures, and a checklist for information on soldering problems.

2.5. Specifications

Product Specification 108-106569 provides product performance and test results.

2.6. Instructional Material

Instruction sheets (408-106569) provide product assembly instructions or tooling setup and operation procedures.

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.

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. Wire Selection and Preparation

The connector accepts copper stranded wire having the sizes and types given in Table 2. Non-concentric wire is not acceptable.



NOTE
For suitability of other wire types, call the number at the bottom of page 1.

The wire 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. The wire must not be stripped.

Reference Figure 2 for quality requirements of the wire end.

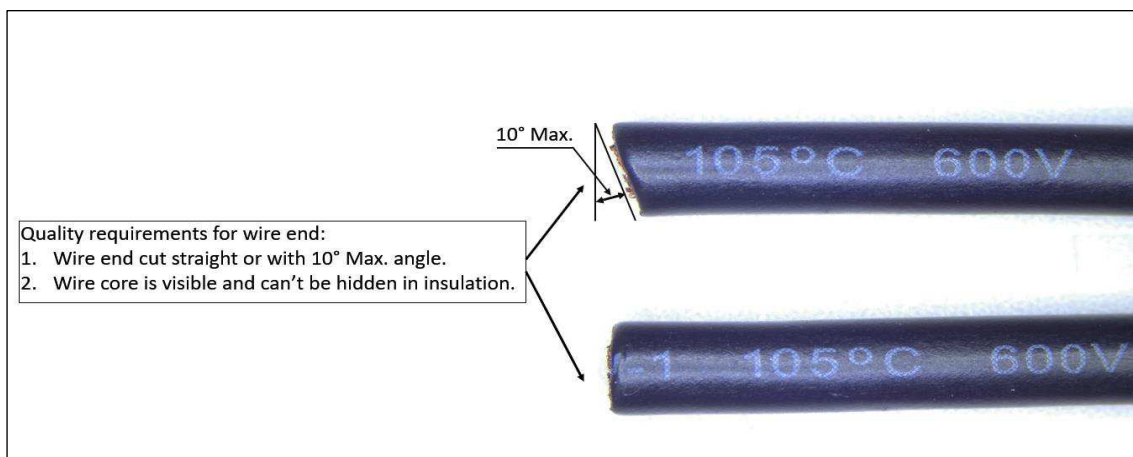


Figure 2

Part number	Certified Wire Standards	Current	Max. insulation diameter
2378100-X	IEC 60245 57(YZW) ¹ or equivalent	2.5mm ² : 20A Max.	4.1mm
		1.5mm ² : 15A Max.	3.4mm
		1.0mm ² : 10A Max.	2.7mm
		0.75mm ² : 6A Max.	2.5mm
	UL1015 or equivalent	12 AWG: 20 A Max.	4.1mm
		14 AWG: 15 A Max.	3.6mm
		16 AWG: 10 A Max.	3.1mm
		18 AWG: 7 A Max.	2.9mm

¹ Remove the Jacket before use, see Figure 3

Table 3

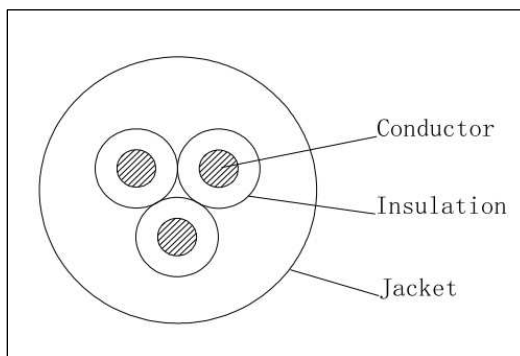


Figure 3

3.4. Wire Insertion

A wire must be inserted into one or both wire entry holes of the connector until its end touches the button stop surface or approx. 1 mm past the end of the associated button. The wires can be visually inspected for proper depth through the transparent housing. See Figure 4.


NOTE

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

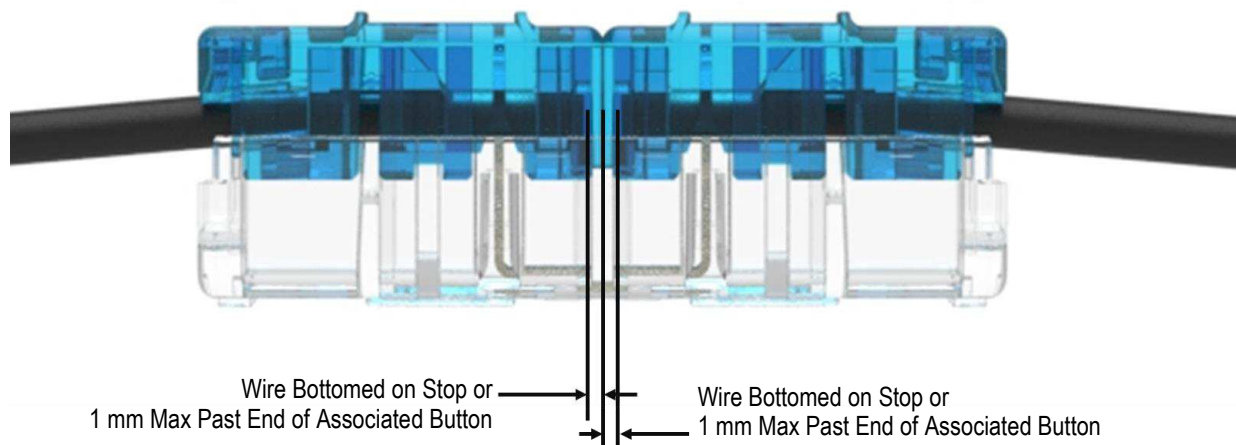


Figure 4

3.5. 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 press area 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]. Until the tool is unlocked.

A. Wire Placement

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

B. Housing and Contact

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

C. Buttons

The top of each button must be flush with the top of the housing. There must be no apparent damage or cracks in the buttons. See Figure 5.

D. Connector Height

The connector must be within the connector height dimension given in Figure 5.

Note: Not to Scale

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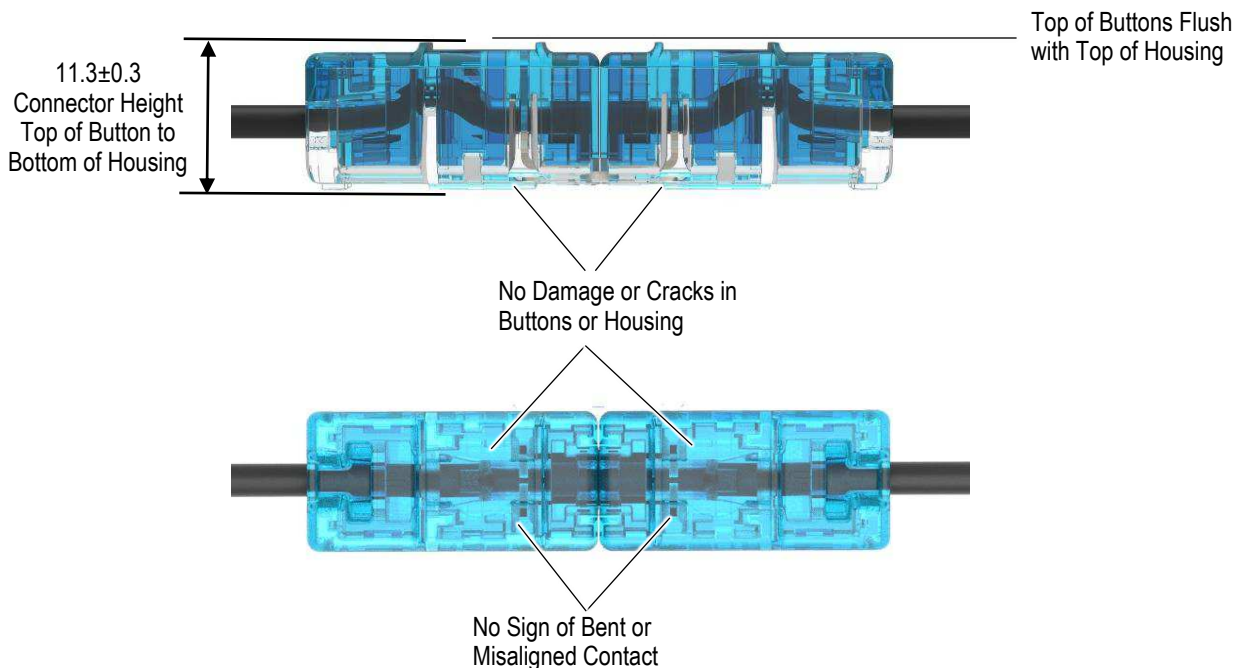


Figure 5

3.6. 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

4.1. Underwriters Laboratories Inc. (UL)

are recognized by Underwriters Laboratories Inc. (UL) in File .

5. TOOLING

Tooling information for product part numbers is available from www.te.com or by calling the Product Information Center at the number at the bottom of page 1.

The special tooling as shown in Figure 5 below.



Figure 6

6. VISUAL AID

The illustration below shows a typical application of this product. 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.

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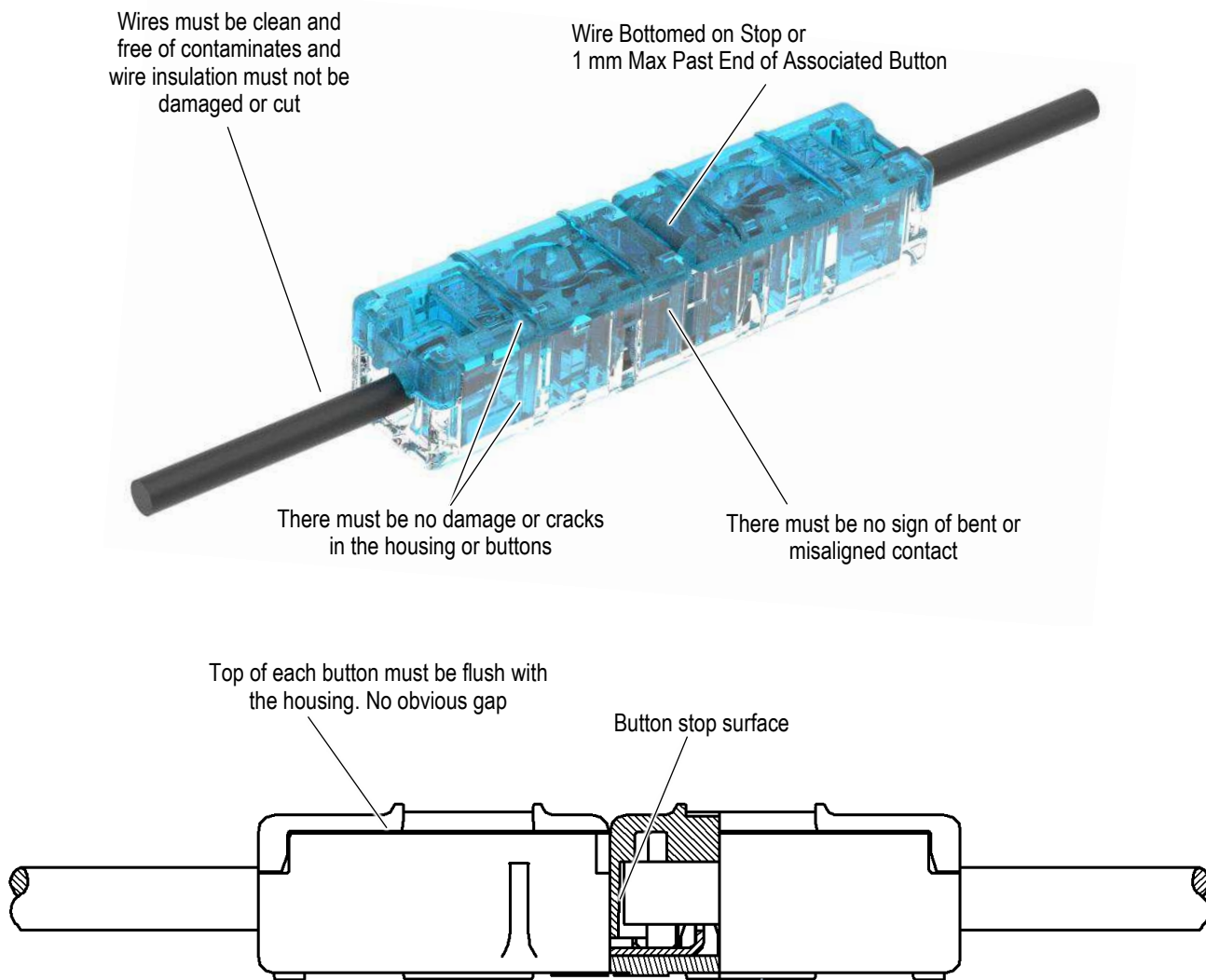


Figure 7