



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 nonmetallic sheathed cable interconnection devices. Used in mating pairs, these devices provide an interconnection of two nonmetallic sheathed cables in an insulating enclosure. The enclosure is complete without openings and is intended to permit use without an outlet box or other types of enclosures. Individual strain relief clamps are provided for each cable.

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

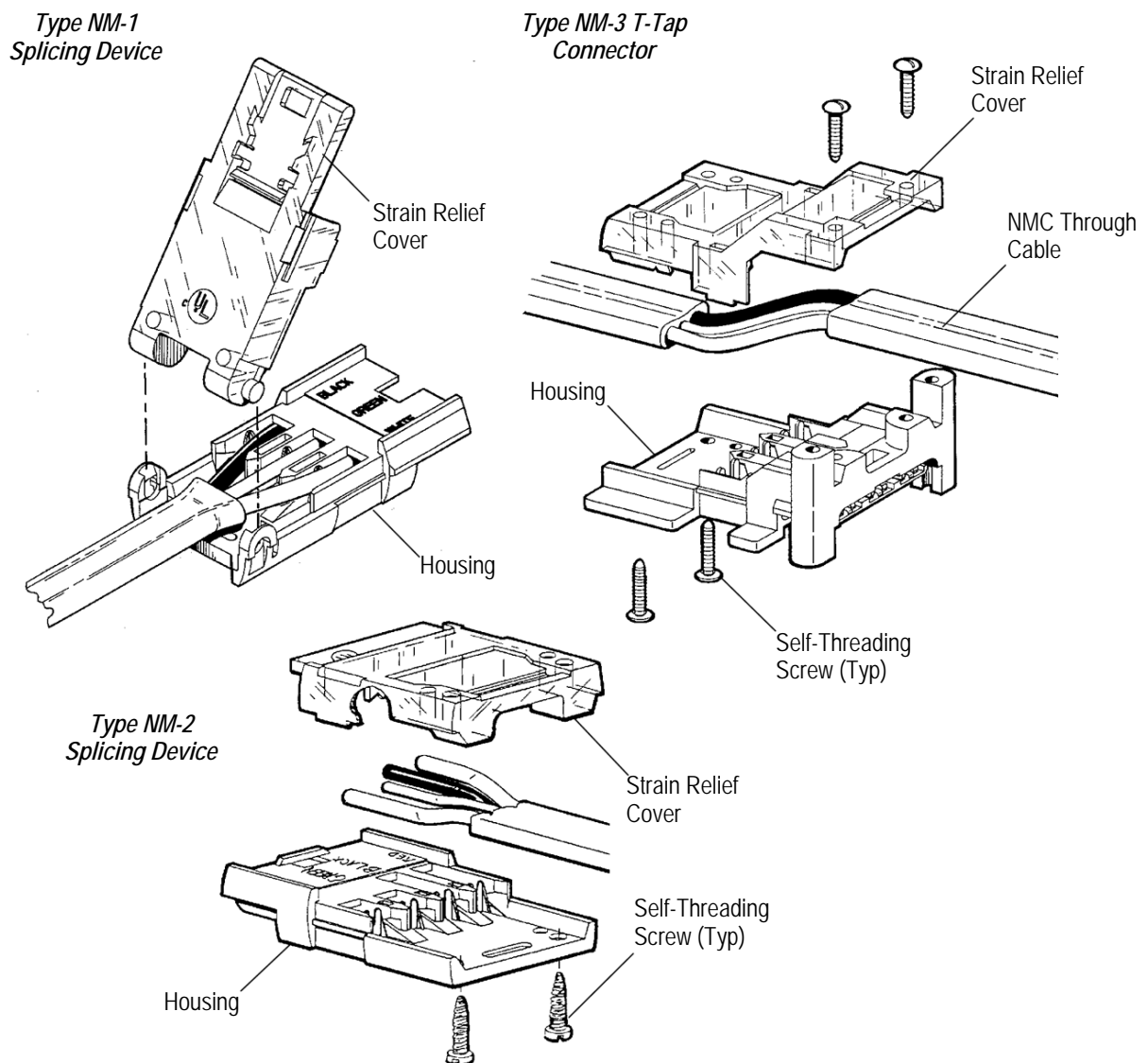


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Revision to this application specification include:

- Changed company name and logo

2.2. Customer Assistance

Reference Product Base Part Number 1116377 and Product Code 6110 are representative of nonmetallic sheathed cable interconnection devices. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local Representative or, after purchase, by calling PRODUCT INFORMATION at the number 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 Sheets (408-series) provide product assembly instructions or tooling setup and operation procedures and Customer Manuals (409-series) provide machine setup and operating procedures. Documents that pertain to this product are:

- 408-4504 Nonmetallic (Type NM-1) Sheathed Cable Splicing Device 1116377
- 408-6548 Nonmetallic (Type NM-3) Sheathed Cable T-Tap Connector 208294
- 408-6571 Nonmetallic (Type NM-2) Sheathed Cable Splicing Device 208169

3. REQUIREMENTS

3.1. Electrical

These devices are intended for use with 15 A, wire size 2 mm² [14 AWG] and 20 A, wire size 3 mm² [12 AWG] having solid copper conductors, 300 Vac maximum branch circuits, and 105°C [221°F] maximum operating temperature.

3.2. Cable Preparation

Cable must be prepared as shown in Figure 2.

3.3. Installation

A. Factory

Type NM-1 and NM-2 devices must be factory installed on the free end of a nonmetallic sheathed cable. The Type NM-3 device is must be factory installed anywhere along a nonmetallic sheathed cable. The cable must be prepared (cut, stripped, and formed) to allow the device to be assembled in only one position (to maintain the integrity of the polarity arrangement). The conductors and stripped cable jacket are completely within the enclosure and strain-relief cover. When used to connect expandable or dual-unit mobile homes, the connector ends are to be located where they are protected from moisture and physical damage during transport to the mobile home lot.

B. Building Site and Dwelling Site

The separate modules of a building or dwelling assembled on location are to be connected electrically by the simple plug-in connection (including a mechanical latch) of mating pairs thereby providing circuit continuity. The connected pairs may or may not be fastened in place. The connected pairs may or may not be concealed by the installation.

Cable Preparation

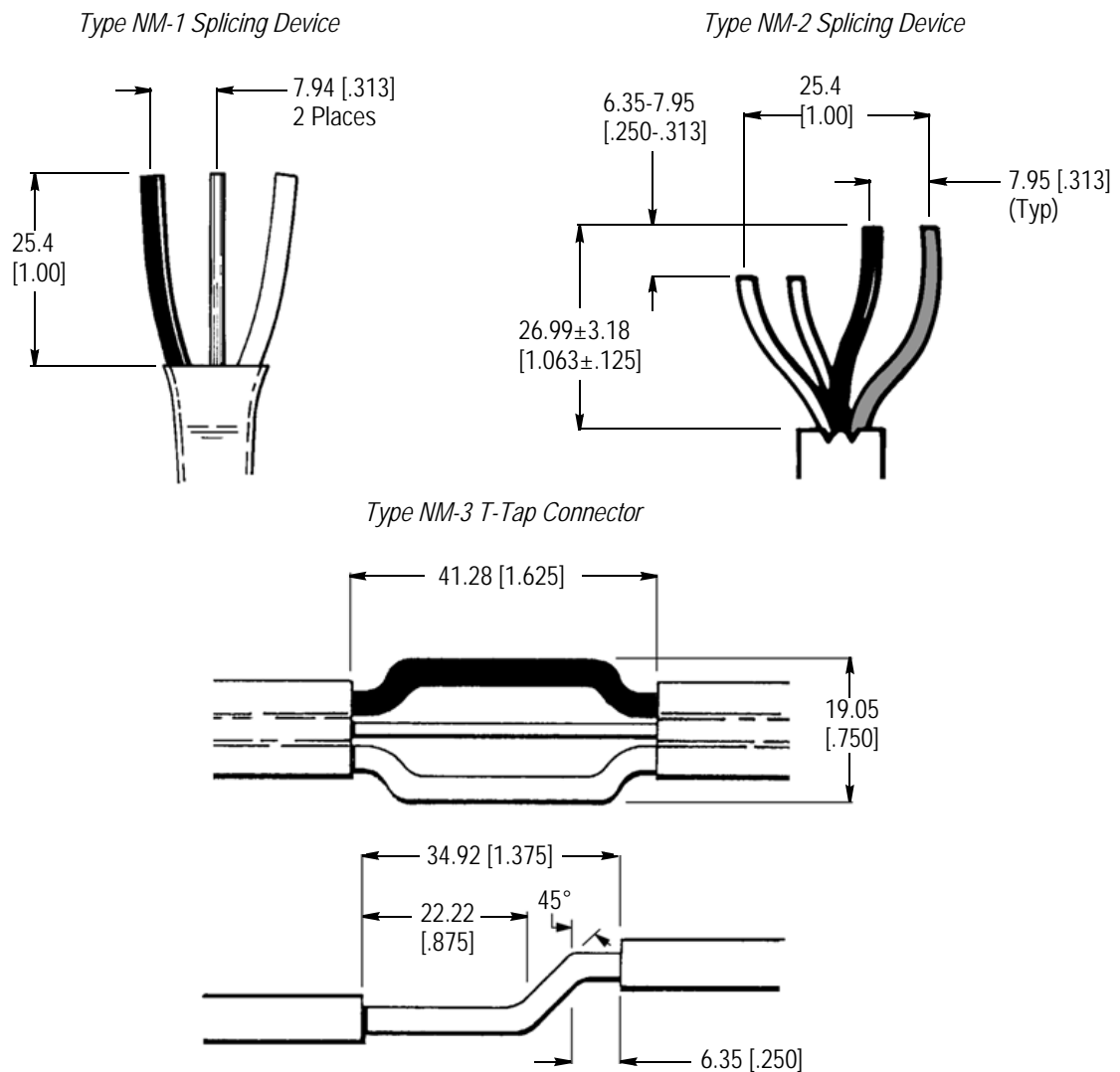


Figure 2

3.4. Assembly

The instruction sheet packaged with each device contains specific assembly procedures.

A. Spacing

Spacing between uninsulated live parts or uninsulated conductors of opposite polarity and between uninsulated live metal parts or uninsulated conductors and dead-metal parts should not be less than 4.76 [.188] over the surface and 3.18 [.125] through the air.

B. Device Marking

The clear thermoplastic strain-relief cover is marked "AMP." The back of the housing is marked "TYPE NM-1, NM-2, or NM-3, 300V, 20A, NM 14 & 12 SOLID COPPER ONLY, DO NOT RE-TERMINATE." The reverse side of the housing, adjacent to the conductor contacts, is marked "BLACK, GREEN, WHITE" on the NM-1 and NM-3 devices and "RED, BLACK, GREEN, WHITE" on the NM-2 device.

C. Components

Refer to Figure 3.

*Component Assembly
Type NM-1 Splicing Device (Typ)*

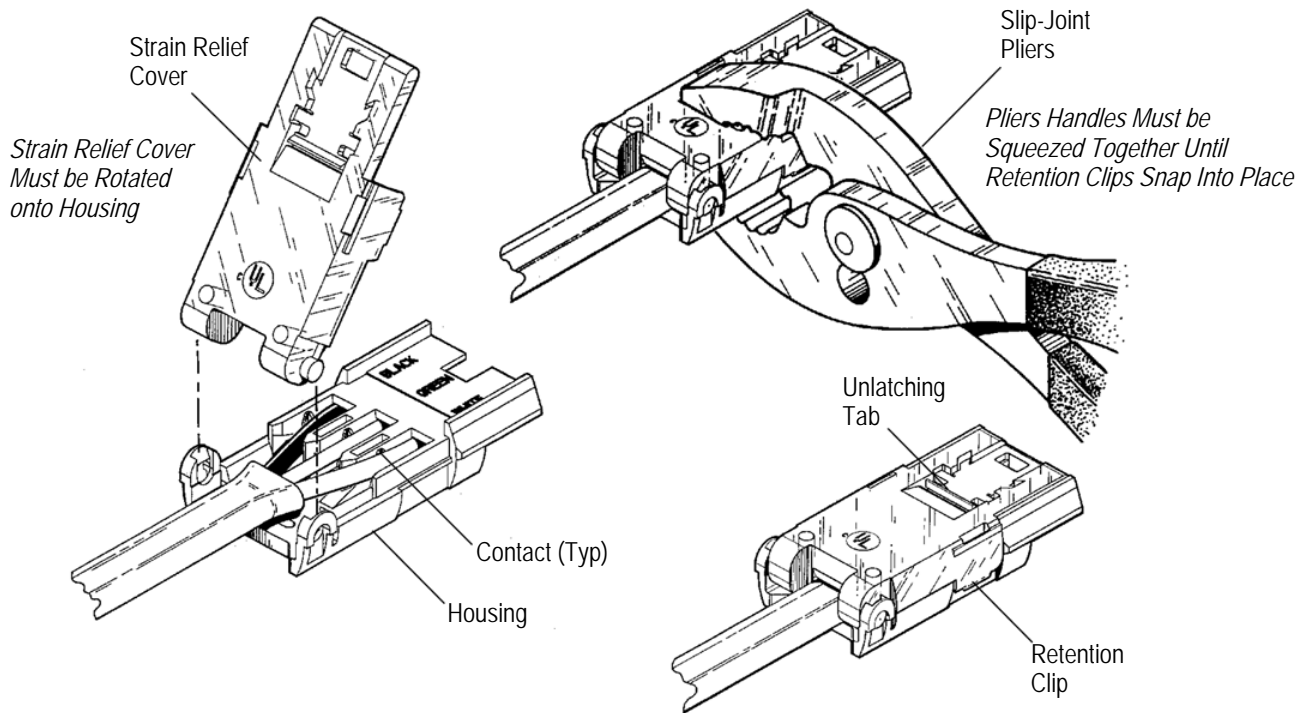


Figure 3

1) Housing

The housing is recognized component plastic material, polycarbonate-gray and polycarbonate-soft white approximately 53.98 [2.125] long, 28.5 [1.125] wide, 12.7 [.50] high, and 1.91 [.075] thick. The housing features slots for contacts and locking mechanism.

2) Contacts

The contacts are made of tin-plated copper alloy, 0.51 [.020] thick stamped, formed, and plated stock. The rear of the contact is provided with a U-shaped insulation-displacement termination for the conductor. The midsection is provided with a 1.59 [.062] wide, 3.97 [.156.] long extension for locking the contact into the housing.

3) Strain-Relief Cover

The strain-relief cover is recognized component plastic material, polycarbonate-clear approximately 39.68 [1.562] long (53.98 [2.125] for Type NM-3 device), 28.58 [1.125] wide, 9.52 [.375] high (22.22 [.875] for Type NM-3 device), and 3.05 [.120] thick. A 1.59 [.062] high boss at the rear of the cover serves as a strain-relief clamp for the NM cable.

4) Screws

The screws are No. 6 self-threading, plated-steel approximately 8.73 [.344] long, combination slot/cross-tip head. The screws secure the strain-relief cover to the housing. The Type NM-1 splicing device does not require screws.

3.5. Mating and Unmating for Type NM-1 Splicing Device

When mating the splices, they must be oriented so that the mating faces are aligned as shown in Figure 4. The splices must be slide into each other until the locking latches engage the locking tabs.

When unmating the splices, the unlatching tabs must be pressed simultaneously (allowing the locking latches to ride over the locking tabs). A rocking motion must be applied to pull the splices apart.

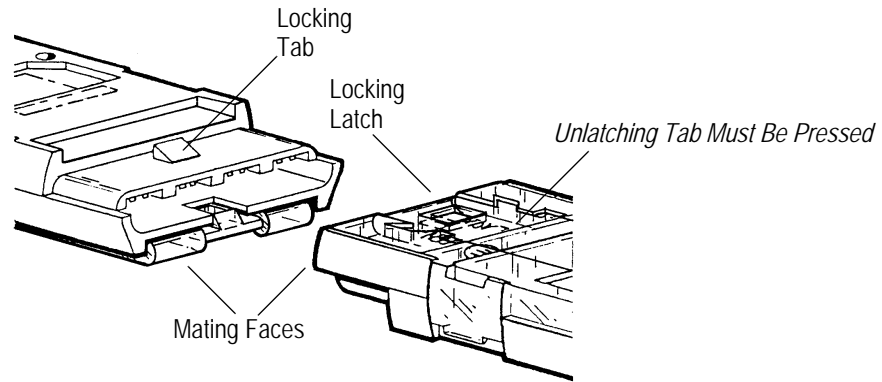


Figure 4

4. QUALIFICATIONS

The nonmetallic sheathed cable interconnection devices are Underwriters Laboratories Inc. (UL) Listed to U.S. and Canadian safety standards under UL File E57250 for use in manufactured buildings in accordance with 1999 National Electrical Code (NEC) Article 545-13 (Component Interconnections); mobile homes, manufactured homes, and mobile home parks NEC Article 550-10(k) (Wiring Methods and Materials and Component Interconnections); and recreational vehicles and recreational vehicle parks NEC Article 551-47(o) (Wiring Methods and Component Interconnections). The equivalent NEC Articles can be found in the Canadian Electrical Code, Part 1, Section 70, for use in factory built relocatable structures and non-relocatable structures.

The Type NM-1 splicing device is also used with the Type NM-3 T-Tap device (UL Listed in File E57250). This combination (NM-1 and NM-3) is suitable for surface mounting without an outlet box in exposed cable wiring and in existing buildings/dwellings where the cable is installed in accordance with and as permitted by Article 336-21 (Nonmetallic Sheathed Cable and Devices of Insulating Material-1999 National Electrical Code) and the Canadian Electrical Code, Part 1, Section 12-522.

5. TOOLING

Adjustable slip-joint pliers must be used to terminate the conductors with the contacts and to latch the strain-relief cover onto the housing.

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.

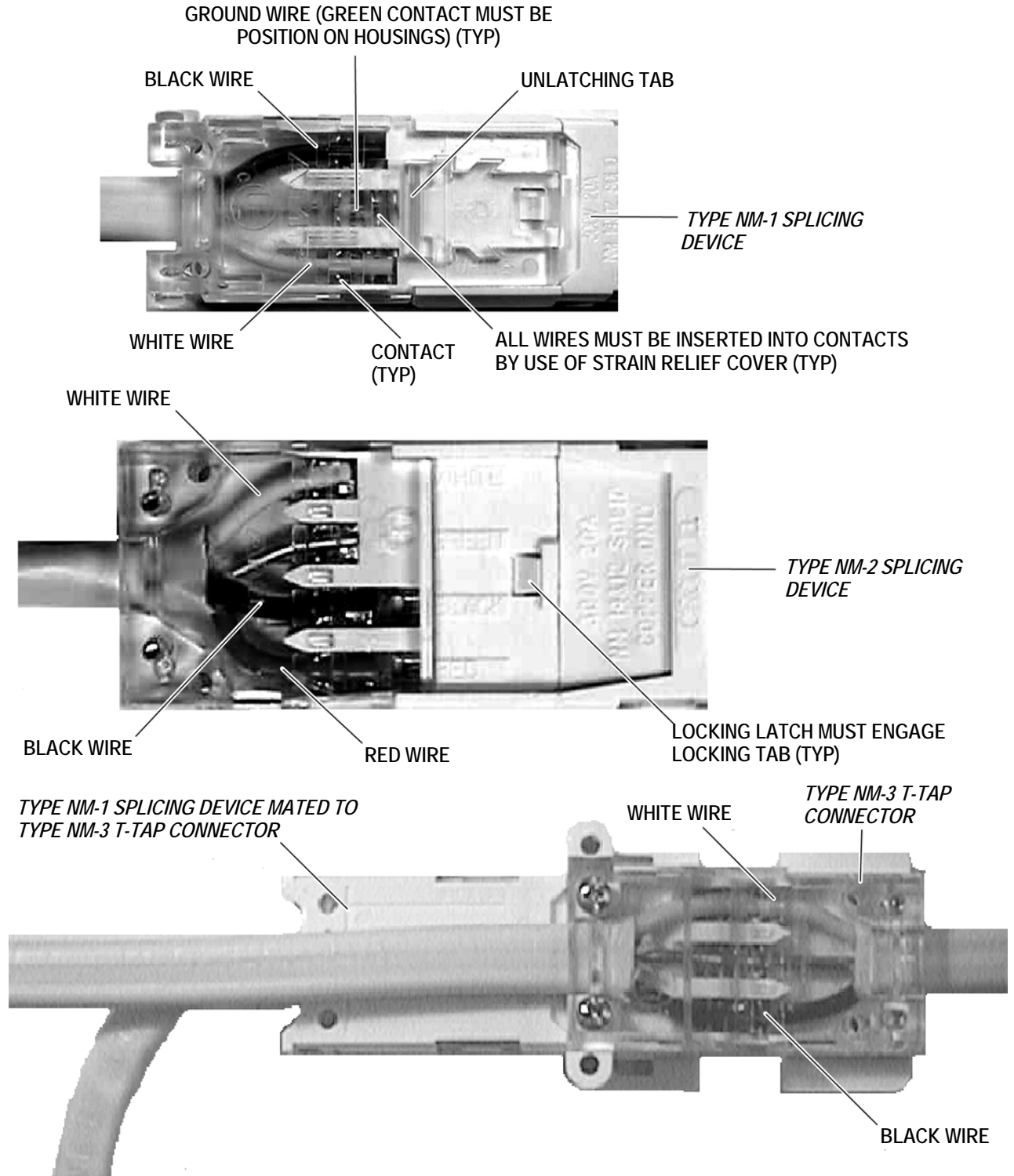


FIGURE 5. VISUAL AID