

Installation Procedure for In-Line Cold Applied Splice, Series D-436-3X-COLD

1. Introduction

This installation procedure establishes the techniques to be used when installing Tyco Electronics Cold Applied in-line crimp splices, series D-436, onto insulated wires rated for at least 135°C. Conductors may be Tin, Silver, or Nickel-plated copper. Conductor material may be copper or high strength copper alloy (HSCA).

2. Splice Selection

The Cold Applied in-line splice system is used for making immersion resistant splices of 1-to-1 conductors falling within a specific size range (see Table 1). Select the appropriate splice based on conductor size and crimp ferrule plating.

Table 1: Conductor CMA or Wire Range

Tin-plated Cold Splice (*)	AWG
D-436-36-COLD	26-20
D-436-37-COLD	18-16
D-436-38-COLD	14-12

3. Application Equipment

- Crimping tool: Tyco Electronics AD-1381
- Cable stripper (mechanical or thermal)

4. Procedure:

4.1. Cable preparation

- A. Strip conductor jacket: 5.35-6.85 mm [0.210-0.270"] if conductors are to be spliced with D-436-36-COLD.
- B. Strip conductor jacket: 6.35-7.85 mm [0.250"-0.310"] if conductors are to be spliced with D-436-37 COLD or D-436-38-COLD.

▲WARNING *

Heat application is not suitable for these cold applied splices.



Picture 1. Conductor jacket stripped length verification

- C. Inspect to determine that there are no cut or damaged conductor strands. If conductor strands have been cut or damaged, trim the stripped end of the conductor and strip it again to the length specified above.
- D. Verify conductor strands remain in a standard twist layout. If not, twist strands as required.
- E. Conductor jacket stripped length shall be verified by inserting the stripped end onto slot gauges located on the jaws of the crimp tool (Picture 1)

4.2 Conductor splicing.

- A. Insert first conductor into the Cold Applied splice until it hits the wire stop. Check to ensure the conductor is fully inserted by looking through the crimp ferrule inspection window as shown in Picture 2. Note that the gel will be displaced towards the end caps due to wire insertion. Displaced gel will be proportional to the wire gauge being spliced. However, even when the largest wire size is spliced, there will be some vacant space between the end cap and the gel.



Picture 2. Wire insertion on Cold Applied Splice

- B. Locate conductor/splice into the appropriate cavity of the crimp tool die. Ensure the crimp barrel end is located on the die cavity in a position as centered as possible, as shown below (Picture 3).



Picture 3. Splice location on Tyco Electronics AD-1381 crimp tool

- C. Close crimp tool fully (the tool will not release until the crimp has been fully made)
D. Remove Cold Splice from crimping tool
E. Inspect to ensure:
- There is not cracking or damage on splice outer insulation
 - Crimped conductor stripped end is still visible in the inspection window
 - There are not strands left out of the crimp ferrule
- F. Insert the second conductor into the un-crimped end of the Cold Applied splice.
G. Insert un-crimped end of the Cold Applied splice barrel into the crimp tool. Repeat crimping operation (Picture 4).



Picture 4. Splice location on Tyco Electronics AD-1381 crimp tool, opposite end.

5. Final Inspection

- A. Outer Sleeve should not show any cracks or damage due to the crimping process. Visual inspection of the crimped area is required.
- B. Both conductor stripped ends inside the crimp ferrule must be visible through the inspection window.
- C. There should not be any wire strand out of the crimp ferrule.
- D. Gel should not show air bubbles.
- E. Indent should be centered on the crimp barrel (Pictures 5 and 6).
- F. Wire cannot be pulled out of splice



Picture 5. Crimped conductor



Picture 6. Crimped conductor

For assistance or more information, call Tyco Electronics, Raychem Devices: 1-800-522-6752

Product Name	MSDS References
Insulation sleeve	RAY3139
Gel	CSM-6755-11 PARTS A AND B

IMPORTANT

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