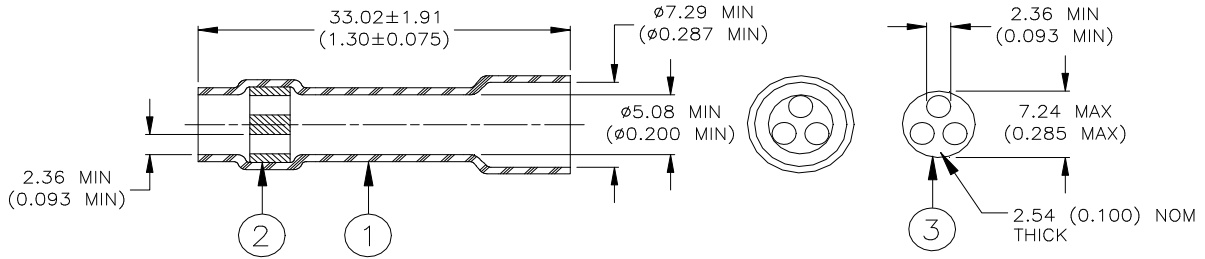
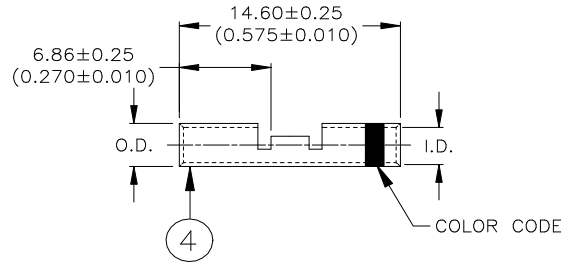


## CUSTOMER DRAWING



**ITEM #1: SEALING SLEEVE**



**ITEM #2: CRIMP SPLICE**

### MATERIALS

1. INSULATION SLEEVE: Heat-shrinkable, transparent blue, radiation cross-linked modified polyvinylidene fluoride.
2. INTEGRAL MULTI-WIRE SEAL: Low outgassing immersion resistant thermoplastic fluoroelastomer. Color: BLUE.
3. SEPARATE MULTI-WIRE SEAL: Low outgassing immersion resistant thermoplastic fluoroelastomer. Color: BLUE.
4. CRIMP SPLICER: Base Metal: Copper Alloy 101 or 102 per ASTM B-75.  
Plating: Tin per MIL-T-10727, Type 1.  
Color Code: See table below.

Part Name	Prod. Rev.	Dimensions: Crimp Splice			Installation Data: Wire Size Range of Crimp Splicer			
		I.D.±0.05 (I.D.±0.002)	O.D.±0.08 (O.D.±0.003)	Color Code	Two Wires		Three Wires	
		Minimum	Maximum	Minimum	Maximum			
D-436-42	F	1.70 (0.067)	2.62 (0.103)	Blue	2 x 24	2 x 20	3 x 24	3 x 22
D-436-43	A	2.54 (0.100)	3.81 (0.150)	Yellow	2 x 22	2 x 16	3 x 22	3 x 18

### APPLICATION

1. These parts are designed to provide an immersion resistant in-line splices of 2 or 3 to 2 or 3 wires falling within the size range listed above, having insulations rated for at least 135°C.
2. Parts are available only as an assembly of one of each Item #1 and Item #2.
3. Crimp splicer may be installed with Raychem AD-1377 crimp tool or equivalent.
4. Inside diameter and outside diameter of splice are to be measured in crimp area, 2.54 to 5.08 (0.100 to 0.200) from ends of part. Slight burr permitted on parted surfaces.
5. Acceptance sampling shall be in accordance with paragraph 4.6.1 of MIL-T-7928.
6. Packing and packaging shall be in accordance with Section 5, Level C, of MIL-T-7928.
7. This document takes precedence over documents referenced herein.

		<b>Raychem Devices</b>	TITLE: <b>IN-LINE SPLICE SEALING SYSTEM, MULTI-WIRE</b>	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS. INCHES DIMENSIONS ARE BETWEEN BRACKETS.			DOCUMENT NO.: <b>D-436-42/-43</b>	
TOLERANCES: 0.00 N/A 0.0 N/A 0 N/A	ANGLES: N/A  ROUGHNESS IN MICRON	TE CONNECTIVITY (TE) RESERVES THE RIGHT TO CHANGE THIS DRAWING AT ANYTIME. USER SHOULD EVALUATE THE SUITABILITY OF THE PRODUCT FOR THEIR APPLICATION.	DATE: <b>June 26, 2015</b>	REVISION: <b>C</b>
DRAWN BY: <b>M. FORONDA</b>	ECO APPROVED: <b>L. RODRIGUEZ</b>	ECO NUMBER: <b>15-009842</b>	SCALE: <b>None</b>	SIZE: <b>A</b> SHEET: <b>1 of 4</b>

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## CUSTOMER DRAWING

### 1.0 TEST ASSEMBLIES

The test assemblies for qualification testing shall be 3 to 3 in-line splices made in wire conforming to MIL-W-81044/12 or MIL-W-16878/4. The assemblies shall be divided equally between the maximum and minimum wire size as shown below:

<i>Assembly</i>	<i>Minimum</i>	<i>Maximum</i>
D-436-42	24	22
D-436-43	22	18

The qualification sample shall consists of 35 assemblies and 8 uninstalled sleeves.

#### 1.1 Acceptance Testing:

Acceptance sampling shall be in accordance with ANSI/ASQC Z1.4, Inspection Level S-4. The Acceptable Quality Level shall be 4.0 for all defects.  
Acceptance tests shall consist of visual and dimensional examination.


### 2.0 QUALIFICATION TESTING:

.1 All sleeves shall be tested for compliance with Sheet 1 in regard to:

<i>Property</i>	<i>Test Method</i>
Material and Appearance	Visual Examination
Dimensions	MIL-I-23053, Paragraph 4.6.3

2.2 Test Group A: Ten assemblies shall pass the post conditioning tests after conditioning in the sequence shown:

<i>Post Conditioning</i>	<i>Requirement</i>	<i>Test Method</i>
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Altitude Immersion	75,000 ft.	MIL-C-26500, Par. 4.7.21
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Dielectric Withstanding	2.5Kv (rms) for 1 min.	MIL-W-81044, Par. 4.7.5.1
<i>Conditioning</i>	<i>Parameters</i>	<i>Test method</i>
Altitude Immersion	75,000 ft.	MIL-C-26500, Par. 4.7.21
Immersion	Condition C	Method 104*
Temperature Cycling	-65°C to 150°C (5 cycles)	Method 102*
Moisture Resistance	Step 7b not required	Method 106*
Fluid Immersion	MIL-H-5606, MIL-L-7808	MIL-T-7928, Par. 4.8.8
Heat Aging	96 hours @200°C	Method 108*

 <b>TE Connectivity</b>		<b>Raychem Devices</b>	TITLE: <b>IN-LINE SPLICE SEALING SYSTEM, MULTI-WIRE</b>		
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## CUSTOMER DRAWING

### 2.3 Test Group B: Ten Assemblies:

<i>Test Sequence</i>	<i>Requirement</i>	<i>Test Method</i>
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Vibration	MIL-STD-202, Method 201	MIL-T-7928, Par. 4.8.6
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Altitude Immersion	75,000 ft. (1 cycle)	MIL-C-26500, Par. 4.7.21
Insulation Resistance	5000 Megaohms	MIL-W-81044, Par. 4.7.5.2
Voltage Drop**	Wire Equivalent + 2.0 millivolts (maximum)	MIL-T-7928, Par. 4.8.1
Tensile Strength	Table II	MIL-T-7928, Par. 4.8.7

\* Test methods are per MIL-STD-202.

\*\* Test current shall be equal to 3X the rated current for the smallest gauge wire used.

### 2.4 Test Group C: Ten Assemblies:

<i>Test Sequence</i>	<i>Requirement</i>	<i>Test Method</i>
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Salt Spray (Corrosion)***		MIL-T-7928, Par. 4.8.4
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Altitude Immersion	75,000 ft. (1 cycle)	MIL-C-26500, Par. 4.7.21
Insulation Resistance	5000 M @500V d-c	MIL-W-81044, Par. 4.7.5.2
Voltage Drop**	Wire Equivalent + 2.0 millivolts (maximum)	MIL-T-7928, Par. 4.8.1
Tensile Strength	Table II	MIL-T-7928, Par. 4.8.7


\*\*\* Lead ends to be sealed prior to exposure.

### 2.5 Test Group D: Five Assemblies:

<i>Test</i>	<i>Requirement</i>	<i>Test Method</i>
Flammability	Self Extinguishing within 15 seconds	MIL-T-7928, Par. 4.8.10

### 2.6 Test Group E: Three Sleeves:

<i>Test</i>	<i>Requirement</i>	<i>Test Method</i>
Corrosive Effect	Non-Corrosive	MIL-I-23053, Par. 4.6.10.2

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## CUSTOMER DRAWING

2.7 Test Group F: Five Sleeves:

<i>Test</i>	<i>Requirement</i>	<i>Test Method</i>
Insulation Shrinkage	Sheet 1	MIL-I-23053, Par. 4.6.3.2.2 (5 minutes @ 300°C)
Longitudinal Change	±10%	MIL-I-23053, Par. 4.6.5.1 (5 minutes @ 300°C)

### TEHRMOFIT ASSEMBLY PROCEDURE:

#### 1.0 SCOPE

This document outlines the procedure to be followed to obtain immersion resistant multiple wire butt splices using Thermofit Multi-Wire In-Line Splice Sealing System D-436-42/-43.

#### 2.0 PROCEDURE

- a) Pass the wires to be attached to one barrel through the separate three wire seal. (Item 3) Pass the wires to be attached to the other barrel through the sealing sleeve from the three hole insert end.
- b) Strip wires 5/16" to 11/32" and crimp into splicer using one of the approved crimping tools (see below). Care must be taken that the wires remain untwisted between the splice and the three wire seals or the sealing sleeve cannot be positioned properly.
- c) Position the separate seal as close as possible to the splicer. Hold this piece in position by squeezing the wires directly behind it, and slide the sealing sleeve over the assembly so that the separate seal is as far inside the sleeve as possible.
- d) Apply heat, using the recommended heat source, first to the "separate" seal end, and then the other. Heat should be applied until insert melts and flows axially along the wires.

#### 3.0 RECOMMENDED TOOLS


##### a. Crimp Tools

<i>Manufacturer</i>	<i>Model Number</i>
Raychem	AD-1377
Buchanan Electric Products	614080
Daniels manufacturing Company	OT-609

##### b. Heat Tools

<i>Heater</i>	<i>Reflector</i>
Thermogun #500A	TG-14
Shop Air Heater #CV-4504	991180
Mini-Gun #CV-5300	991319

Heater should be operated to give an air stream temperature of at least 550°F.

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