# Installation Procedure for Duraseal Splices and Terminals

RPIP-684-00 Revision G 6-Jun-13

### **Devices Installation Procedure**

### 1. Products:

DuraSeal Splice: DuraSeal Terminal:

DS-XX-XX	D-406-XXXX	DB-X-XX	DP-X-XX	B-106-XX
DS-MIXT-XX		DF-X-XX	DR-X-XX	DS-MIXT-XX

## 2. Application Equipment:

- Crimping tool: AD-1522
- Hot air gun:

Heat Gun	Reflector	Setting
HL1910E	PR-25 or PR-25D and HL1802E-	6 on dial <sup>(1)</sup>
HL2010E	ADAPT	700°F on LCD (1)
CV-1981	PR-25D	7 (1)

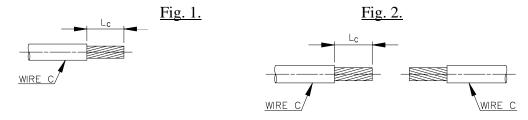
## 3. Wire Preparation:

- Strip the stranded wire as shown.

	1	Product							
		Red		Blue		Yellow			
Configuration		Wire Strip		Wire	Strip	Wire	Strip		
		Range	Length	Range	Length	Range	Length		
			L (±0.5)		L (±0.5)		L (±0.5)		
Terminal		0.5 < Sc < 1.0	$L_C = 6$	1.5 < Sc < 2.5	$L_C = 6$	3.0 < Sc < 6.0	$L_C = 6$	see Fig. 1	
Splice 1 to 1		0.5 < Sc < 1.0	$L_{\rm C} = 7.5$	1.5 < Sc < 2.5	$L_C = 7$	3.0 < Sc < 6.0	$L_C = 8$	see Fig. 2	
		$1.5 < \phi A + \phi B < 3.7$		2.0< ØA+ØB <4.3		$3.0 < \phi A + \phi B < 6.4$			
		and		and		and			
	$\phi A < \phi B$	1.5< øC <3.7	$L_{A} = 10$	2.0< øC <4.3	$L_{A} = 10$	3.0< øC <6.4	$L_{A} = 11$	see Fig. 3	
		$0.5 < S_A + S_B < 1.0$	$L_{\rm B} = 7$	$1.5 < S_A + S_B < 2.5$	$L_B = 7$	$3.0 < S_A + S_B < 6.0$	$L_B = 8$		
Splice		and		and		and			
2 to 1		$0.5 < S_C < 1.0$		$1.5 < S_C < 2.5$		$3.0 < S_C < 6.0$			
		$1.5 < \phi A + \phi B < 3.7$		$2.0 < \phi A + \phi B < 4.3$		$3.0 < \phi A + \phi B < 6.4$			
		and		and		and			
	$\phi A = \phi B$	1.5< øC <3.7	$L_{A} = 10$	2.0< øC <4.3	$L_{A} = 10$	3.0< øC <6.4	$L_{A} = 11$	see Fig. 4	
		$0.5 < S_A + S_B < 1.0$	$L_{\rm B} = 10$	$1.5 < S_A + S_B < 2.5$	$L_{\rm B} = 10$	$3.0 < S_A + S_B < 6.0$	$L_{\rm B} = 11$		
		and		and		and			
		$0.5 < S_C < 1.0$		$1.5 < S_C < 2.5$		$3.0 < S_C < 6.0$			

 $\phi$ A = diameter (mm) of the insulation of wire A.

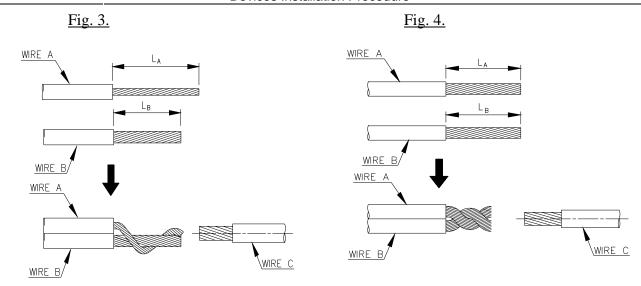
Sc = cross section area (mm<sup>2</sup>) of wire C.



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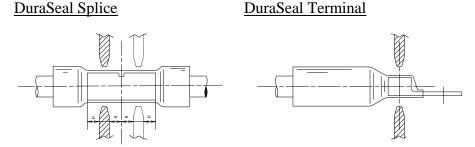


#### **WARNING**

- IR tools are not recommended for use with black wire or cable insulations, and must not be used for Tyco Electronics/Raychem 99T uncross-linked wires.
- Hot Air guns shall be set to a temperature as low as 300 deg C (570 deg F) to avoid thermal damage on uncross-linked wires, such as Tyco Electronics/Raychem 99T.
- Tyco Electronics recommends controlling temperature of application equipment such as hot air guns regularly.

#### 4. Installation Procedure:

- Select the correct DuraSeal crimp.
- Match its color with the color of the cavity of the crimp tool.
- Get the jaws in touch with the tubing.



- Insert the stripped wire until it butts inside the DuraSeal crimp.
- Crimp the wire in place.
- Repeat the operation symmetrically for the DuraSeal splice.
- Allow the hot air gun to warm up.
- Position the DuraSeal crimp in the reflector (R).
- Apply heat to shrink the sleeve until the adhesive melt and flow around the extremities of sleeve.

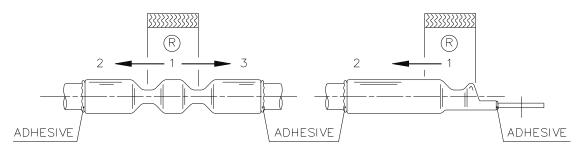
Unless otherwise specified dimensions are in millimeters. [Inches dimensions are in between brackets]

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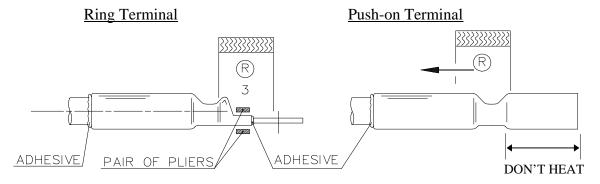
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### DuraSeal Splice DuraSeal Terminal



*Note:* For DuraSeal terminals, in order to achieve maximum sealing (except for DuraSeal pushon) heat the terminal at 3 and press the flat part with a pair of pliers until the assembly cools.



*Note:* Do not heat the terminal for the push-on terminal.

Do not bend the splice or the terminal assemblies until then have completely cooled.

## 5. Inspection of Assembly:

#### Check:

- Wire insulation is positioned inside the DuraSeal sleeve.
- Adhesive has flowed to form a fillet around the ends of the sleeve.
- Sleeve is completely shrunk on to the wire insulation.
- Sleeve is not cut, split or discolored.
- Wire insulation has no signs of mechanical damage or overheating.

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<sup>&</sup>lt;sup>1</sup> These values are for reference only and may change based on other variables (i.e. reflector type, sleeve's relative distance to the reflector, etc.) DISCLAIMER