

Tyco Electronics Corporation	<b>Raychem Devices</b>	No: <b>RPIP-684-00</b>
300 Constitution Drive		Rev: F
Menlo Park, CA 94025 U.S.A.		Date: August 7, 2007
		Page 1 of 3

# Installation Procedure for Duraseal Splices and Terminals

#### 1. **Products:**

DuraSeal Splice:		_		DuraSeal Term	inal:
DS-XX-XX	D-406-XXXX	1	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:

function for the second		
Heat Gun	Reflector	Setting
HL1910E	PR-25 or PR-25D and HL1802E-	6 on dial $^{(1)}$
HL2010E	ADAPT	700°F on LCD <sup>(1)</sup>
CV-1981	PR-25D	7 (1)

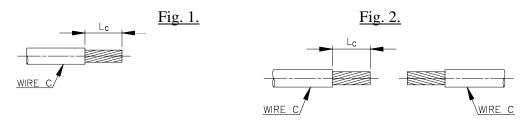
### **3.** Wire Preparation:

- Strip the stranded wire as shown.

	Product							
_		Red		Blue		Yellow		
		Wire	Strip	Wire	Strip	Wire	Strip	
Confi	guration	Range	Length	Range	Length	Range	Length	
			L (±0.5)		L (±0.5)		L (±0.5)	
Ter	rminal	0.5 < Sc < 1.0	$L_{\rm C} = 6$	1.5 < Sc < 2.5	$L_{\rm C} = 6$	3.0 < Sc < 6.0	$L_{\rm C} = 6$	see Fig. 1
Splic	e 1 to 1	0.5 < Sc < 1.0	$L_{C} = 7.5$	1.5 < Sc < 2.5	$L_{\rm C} = 7$	3.0 < Sc < 6.0	$L_{C} = 8$	see Fig. 2
		1.5< øA+øB <3.7		2.0< øA+øB <4.3		3.0< ØA+ØB <6.4		
		and		and		and		
	øA <	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
	øB	$0.5 < S_A + S_B < 1.0$	$L_B = 7$	$1.5 < S_A + S_B < 2.5$	$L_B = 7$	$3.0 < S_A + S_B < 6.0$	$L_B = 8$	
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< ØA+ØB <3.7		2.0< ØA+ØB <4.3		3.0< ØA+ØB <6.4		
		and		and		and		
	øA =	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
	øB	$0.5 < S_A + S_B < 1.0$	$L_{\rm B} = 10$	$1.5 < S_A + S_B < 2.5$	$L_{\rm B} = 10$	$3.0 < S_A + S_B < 6.0$	$L_{\rm B} = 11$	
		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.



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

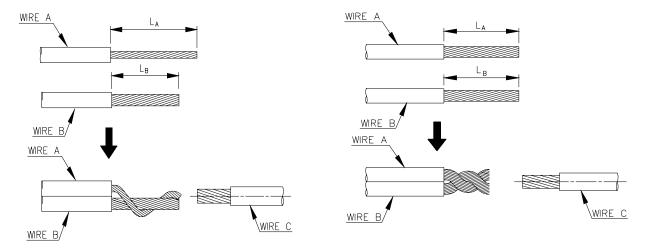
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	Tyco Electronics Corporation 300 Constitution Drive Menlo Park, CA 94025 U.S.A.	Raychem Devices	No: <b>RPIP-684-00</b> Rev: F Date: August 7, 2007 Page 2 of 3
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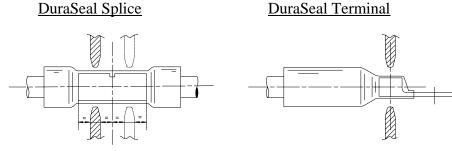


Fig. 4.



## 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.



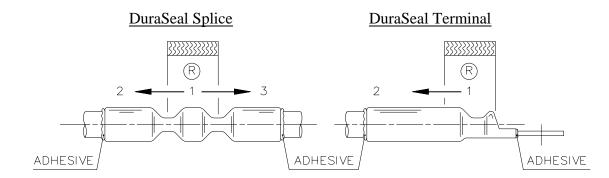
- Insert the stripped wire until it butts inside the DuraSeal crimp.
- Crimp the wire in place.
- Repeat the operation symmetrically for the DuraSeal splice.
- Allow the hot air gun to warm up.
- Position the DuraSeal crimp in the reflector (R).
- Apply heat to shrink the sleeve until the adhesive melt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

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

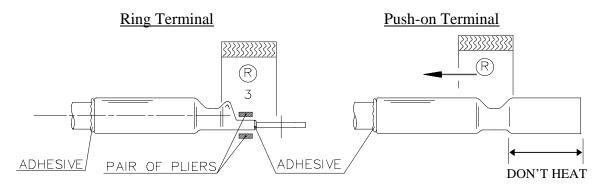
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		Page 3 of 3



*Note:* For DuraSeal terminals, in order to achieve maximum sealing (except for DuraSeal push-on) 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.

<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

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