

SolderShield Shielded and Coaxial Cable Splices

Product Facts

- Flux-coated, solderimpregnated copper shield braid encased in a transparent heat-shrinkable insulation sleeve provides a controlled soldering process, encapsulation, inspectability, strain relief, and insulation
- One-piece design provides easy installation and lower installed cost
- Circumferential (360°) shielding results in EMI protection and shield continuity equal to or better than the original cable
- Conductor splices are made using MiniSeal crimp products, which are recognized by MIL-S-81824 and MIL-W-5088



Applications

Used for splicing a wide range of cables, including coaxial and multiconductor cables.

SolderShield devices can be used to repair or splice shielded or coaxial cables. These products consist of a MiniSeal crimp splice plus a flux-coated, solderimpregnated copper shield encased in a heat-shrinkable sealing sleeve, for splicing the shields. SolderShield kits terminate single- or multiple-conductor cables, eliminate EMI problems at the splice, and provide strain relief for the cable.

Product Selection Process

For splicing multiconductor cables refer to Table A.

For splicing coaxial cables refer to Table B.

Installation

For proper installation of these devices, the correct heating tool and reflector attachment must be used. Any one of the following TE heating tools is recommended:

- HL1910E/HL2010E
- IR-1759 MiniRay
- CV-1981

Refer to TE installation procedure RCPS-150-02 (D-150 series) and RPIP-699-00 (B-202 series) for detailed instructions and recommended reflector attachment.

You will find ordering information for most of these tools in Section 10.

Specifications/Approvals

	Series		Military	TE	
_	D 150		US: M81824 (conducto		
_	D-150		UK: RAF AP 1130	R1-1404	
<u> </u>	Available in: Americas Europe Asia Pacific	÷			
66 ■ C R	Catalog 1654025 Revised 5-12	Dimensions are shown for reference purposes only. Specifications subject	Dimensions are in millimeters unless otherwise specified.	Canada: +1 (905) 475-6222 Mexico/C. Am.: +52 (0) 55-1106-0800 Latin/S. Am.: +54 (0) 11-4733-2200	UK: +44 (0) 800-267666 France: +33 (0) 1-3420-8686 Netherlands: +31 (0) 73-6246-999
W	vww.te.com	to change.	USA: +1 (800) 522-6752	Germany: +49 (0) 6251-133-1999	China: +86 (0) 400-820-6015



SolderShield Shielded and Coaxial Cable Splices (Continued)

Table A. MulticonductorCable Splices

Each SolderShield part consists of a SolderShield splice and one or more conductor splices. Refer to information below for description and numbers of conductor splices.



SolderShield Product Dimensions

Pa	rt No.	Dimensions			Conductor Splice	Color	Quantity	
Tin Plated	Nickel Plated	L1 Max.	L2 Nom.	L3 Min.	ID Min.	CMA [mm ²] Min.–Max.	Code	Per Kit
D-150-0168	D-150-0228	80.50 [3.17]	50.00 [1.97]	10.20 [.400]	3.00 [.118]	304–1510 [0.15–0.75]	Red	1
D-150-0169	D-150-0229	80.50 [3.17]	50.00 [1.97]	10.20 [.400]	4.00 [.157]	779–2680 [0.39–1.34]	Blue	1
D-150-0170	D-150-0230	80.50 [3.17]	50.00 [1.97]	10.20 [.400]	5.00 [.197]	1900–6755 [0.95–3.37]	Yellow	1
D-150-0174	D-150-0231	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	4.00 [.157]	304–1510 [0.15–0.75]	Red	2
D-150-0175	D-150-0232	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	5.00 [.197]	779–2680 [0.39–1.34]	Blue	2
D-150-0176	D-150-0233	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	6.00 [.236]	1900–6755 [0.95–3.37]	Yellow	2
D-150-0177	D-150-0234	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	9.00 [.356]	304–1510 [0.15–0.75]	Yellow	2
D-150-0178	D-150-0235	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	4.00 [.157]	304–1510 [0.15–0.75]	Red	4
D-150-0179	D-150-0236	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	5.00 [.197]	779–2680 [0.39–1.34]	Red	4
D-150-0180	D-150-0237	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	6.00 [.236]	1900–6755 [0.95–3.37]	Blue	4
D-150-0181	D-150-0238	10.60 [4.17]	75.00 [2.95]	10.20 [.400]	9.00 [.353]	1900–6755 [0.95–3.37]	Yellow	4

Note: The SolderShield splice kits listed in this table are for 1:1 cable splices. The kits can be used on cables with tin-, silver-, and nickel-plated copper conductors. All the kits have environmental-sealing capability. The cable temperature rating must be 125°C minimum.

To find the splice kit part number for your application:

1. Determine the number of conductors in the cable to be spliced.

2. Determine the gauge of each conductor or the maximum jacket OD.

3. Determine the conductor plating.

4. Select the appropriate part number from the table above.

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SolderShield Shielded and Coaxial Cable Splices (Continued)

Table B. Coaxial Cable **Splices**

Each SolderShield part consists of a SolderShield splice and one or more conductor splices. Refer to information below for description and numbers of conductor splices.



DO Ochie Ne	Cable Description	Conductor Splice Qty/Kit	Part	Solo	SolderShield Dimensions		
RG Cable No.			No.	L1 Max	L2 Min	ID Min	
8A, 9B, 11	5012A3311		D-150-0214	80.50 [3.170]	50.00 [1.970]	12.00 [.472]	
13, 26, 31	5012E1339						
115, 144, 149	7518A1311	1					
165, 213, 214	—	I	D-130-0214				
216, 235, 391	—						
393, 397	—						
178, 196,	5028A1317						
179, 187, 188,	7528A1317	4	D-150-0094	80.50 [3.170]	50.00 [1.970]	3.00 [.118]	
316, 404, M17/138-00001,	5030A1317	I					
M17/136-00001	7530A1317						
180, 195	5024A1311		D-150-0095	80.50 [3.170]	50.00 [1.970]	4.00 [.157]	
M17/137-00001	7526A1311	1					
M17/139-00001	9527A1318						
—	9530E1014						
124, 140, 141	5020A1311						
159, 302, 303	5022A1311		D-150-0096	80.50 [3.170]	50.00 [1.970]	5.00 [.236]	
_	7522A1311	1					
—	7523D1331						
_	7524A1311						
29, 30, 55B	5019D3318		B-202-81*	56.00 [2.200]	23.00 [.900]	7.00 [.275]	
58, 223	5021D1331	1					
	5022A1311						
59, 62, 71	7523D1331					7.00	
	7524A1311	1	B-202-82*	56.00 [2 200]	23.00	7.00 [275]	
	9524A1311			[2.200]	[.000]	[,0]	

*These kits use solder to terminate the center conductors. All other kits use crimp. All kits are for one-to-one coaxial cable splices, and all kits have environmental sealing capability. Each kit contains products to splice conductors, build up dielectric, splice the shield, and provide insulation.

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Product Characteristics

Materials						
Insulation sleeve	Radiation-crosslinked polyvinylidene fluoride					
Meltable inserts	Fluorocarbon-based thermoplastic	Fluorocarbon-based thermoplastic				
MiniSeal crimp splice	Base metal: Copper alloy C10200 per ASTM B75 Plating: Tin per MIL-T-10727 or nickel per QQ-N-290					
SolderShield shield splice	Base metal: Tin-plated copper wire braid per ASTM B3 Solder and flux coating: Type Sn63 Pb37. Flux: ROM1 per ANSI - J - STD - 004 (RA flux)					
Parameter	Test Method	Requirement				
Electromechanical Performance						
Dielectric strength (shield connection)	_	No breakdown or arcing at 1000 Vac (RMS)				
Dielectric strength (conductor connection)	_	2.5 kV				
Voltage drop	MIL-S-81824	Less than 2.0-millivolt increase				
Insulation resistance (shield connection)	_	1000 megohms minimum at 500 Vdc				
Insulation resistance (conductor connection	i) —	5000 megohms				
Tensile strength for MiniSeal	MIL-S-81824	Exceed yield strength (pounds) of wire.				
Tensile strength for SolderShield	MIL-S-81824	75% of strength (pounds) of unspliced cable				
Temperature rating		-55°C to 150°C [-67°F to 302°F]				
Environmental Resistance						
Salt spray	MIL-STD-202 M101	Meet voltage drop requirement.				
Heat aging	750 hours at 150°C [302°F]	Meet all electromechanical requirements.				
Temperature cycling	MIL-STD-202 M107C	Meet all electromechanical requirements.				
Altitude immersion	Immersion at 22,860m [75,000 ft]	Meet insulation-resistance requirement.				
Corrosion resistance	_	No evidence of corrosion after testing in accordance with MIL-STD-202. Method 101. Test Condition A				

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