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AS81824™/4

FEDERAL SUPPLY CLASS
5940

RATIONALE

REWRITTEN MILITARY SPECIFICATION COPIED VERSION WITH REDRAWN GRAPHICS AND TABLES.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS81824.

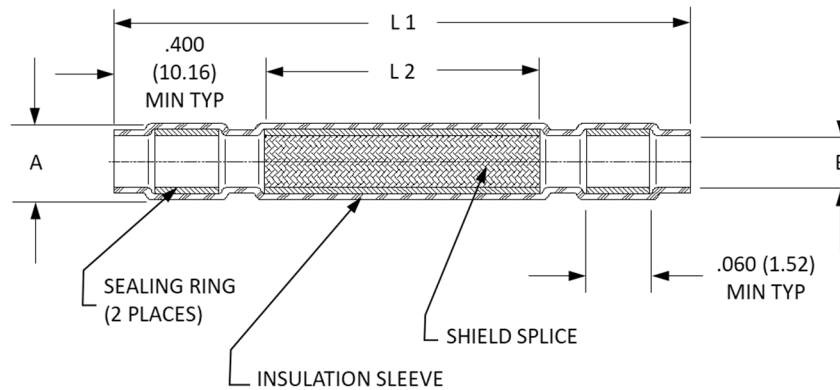


FIGURE 1 - SPLICE CONFIGURATION

TABLE 1 - DIMENSIONS

PART NUMBER	SLEEVE DIMENSIONS				USABLE CABLE DIAMETERS	
	A DIA MAX	B DIA MIN	L1 MAX	L2 MAX MIN	SHIELD 3/ MAX MIN	JACKET MAX MIN
M81824/4-1	.275 (6.99)	.118 (3.00) 1/ .055 (1.40) 2/	3.15 (80.01)	2.07 (52.57) 1.87 (47.49)	.108 (2.74) .060 (1.52)	.118 (3.00) .055 (1.40)
M81824/4-2	.350 (8.89)	.157 (4.00) 1/ .075 (1.91) 2/	3.15 (80.01)	2.07 (52.57) 1.87 (47.49)	.147 (3.73) .080 (2.03)	.157 (4.00) .075 (1.91)
M81824/4-3	.450 (11.43)	.197 (5.00) 1/ .080 (2.03) 2/	3.15 (80.01)	2.07 (52.57) 1.87 (47.49)	.187 (4.75) .098 (2.49)	.197 (5.00) .080 (2.03)
M81824/4-4	.350 (8.89)	.157 (4.00) 1/ .075 (1.91) 2/	4.15 (105.41)	3.05 (77.47) 2.85 (72.39)	.147 (3.73) .080 (2.03)	.157 (4.00) .075 (1.91)
M81824/4-5	.450 (11.43)	.197 (5.00) 1/ .080 (2.03) 2/	4.15 (105.41)	3.05 (77.47) 2.85 (72.39)	.187 (4.75) .098 (2.49)	.197 (5.00) .080 (2.03)
M81824/4-6	.475 (12.07)	.236 (6.00) 1/ .118 (3.00) 2/	4.15 (105.41)	3.05 (77.47) 2.85 (72.39)	.226 (5.74) .137 (3.48)	.236 (5.99) .118 (3.00)
M81824/4-7	.500 (12.70)	.354 (9.00) 1/ .177 (4.50) 2/	4.15 (105.41)	3.05 (77.47) 2.85 (72.39)	.346 (8.79) .190 (4.83)	.356 (9.04) .177 (4.50)

1/ AS SUPPLIED, MINIMUM.

2/ MAXIMUM UNRESTRICTED RECOVERY. SEALING RINGS WILL RECOVER TO AT LEAST THIS VALUE.

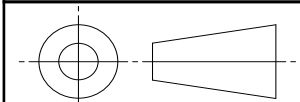
3/ CABLE SHIELD MAY BE FOLDED BACK OVER CABLE JACKET TO MEET MINIMUM SPECIFIED DIAMETER.

DIMENSIONS ARE IN INCHES. METRIC EQUIVALENTS ARE GIVEN FOR REFERENCE ONLY AND ARE BASED UPON 1 INCH = 25.4 MM.

For more information on this standard, visit

<https://www.sae.org/standards/content/AS81824/4A/>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C2

PROCUREMENT SPECIFICATION: AS81824



AEROSPACE STANDARD

(R) SPLICES, ELECTRIC, PERMANENT, CRIMP STYLE, COPPER, INSULATED, ENVIRONMENT RESISTANT, SPLICE, SHIELD, SOLDER TYPE, INSULATED, 150 °C

AS81824™/4
SHEET 1 OF 3

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Documents

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REQUIREMENTS:

1. MATERIAL:

SLEEVE MATERIAL: TRANSPARENT BLUE POLYVINYLIDENE FLUORIDE.

SEALING MATERIAL: SEE PROCUREMENT DOCUMENT.

SHIELD SPLICE: COPPER WIRE BRAID, COATED WITH SOLDER AND FLUX, TYPE SN63PB37 RA PER IPC J-STD-004 REQUIRED.

2. CONTINUOUS OPERATING TEMPERATURE: -55 TO 150 °C

3. NO ETCHING OR SOLVENT TREATMENT OF THE ASSOCIATED CABLE JACKET SHALL BE REQUIRED.

4. THE SPLICE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5. ASSEMBLY INSTRUCTIONS SHALL BE FURNISHED BY THE VENDOR WITH EACH SPLICE ACQUIRED UNDER THIS SPECIFICATION.

6. WHEN ASSEMBLING, SHIELD PORTION OF THE SPLICE SHALL OVERLAP WITH THE ENTIRE PORTION OF THE EXPOSED CABLE SHIELD ON BOTH SIDES OF THE SPLICE TO PRESERVE THE SHIELD CONTINUITY.

7. THESE SPLICES SHALL BE USED WITH M81824/1 CRIMP SPLICES AS PART OF A SPLICE KIT-M81824/5 THAT ARE INTENDED TO MAKE ENVIRONMENTAL RESISTANT IN-LINE SPLICES IN THE SHIELDS OF SHIELDED CABLES MEETING THE DIMENSIONAL REQUIREMENTS OF TABLE 1 AND OF THE FOLLOWING NEMA WC27500 CABLE CONSTRUCTIONS:

SHIELD MATERIAL: M27500 TYPES T, S, M, N, AND P.

JACKET TYPES:

1. M27500 TYPES 05, 06, 08, 09, 10, 11, 12, 14, 15, 16, 17, 18, 22, 23.
2. M7078/8, /9, /10, /11, /12, /13, /14, /26, /28, /30, /32, /34, /35.
3. MIL-DTL-17 TYPES VII, VIIA, VIIB, IX, X, XI.

8. USER SHALL VALIDATE THE PERFORMANCE OF THE ASSEMBLY (E.G., SHIELDING EFFECTIVENESS OF SPLICED CABLE).

QUALIFICATIONS:

TABLE 2 - NEMA WC27500 TEST CABLE FOR QUALIFICATION

M81824/4	MINIMUM	MAXIMUM
-1	M2750022SB1T23	M2750016SB1T23
-2 AND -4	M2750020SB1T23	M2750022SB2T23
-3 AND -5	M2750024SB2T23	M2750018SB2T23
-6	M2750022SB4T23	M2750018SB4T23
-7	M2750016SB3T23	M2750012SB5T23

1. QUALIFICATION OF PART NUMBERS 2 AND 3 SHALL QUALIFY PART NUMBERS 4 AND 5, RESPECTIVELY.

2. QUALIFICATION TESTS: SPLICES AND ASSEMBLIES SHALL BE SUBJECTED TO THE TESTS AND EXAMINATIONS OF GROUPS I, II, III, V, VI, AND VII.

3. TEST ASSEMBLIES: FOR TEST GROUP V, VI, AND VII, THE ASSEMBLIES SHALL BE MADE BY JOINING THE MINIMUM SIZE CABLE TO THE MAXIMUM SIZE CABLE LISTED IN TABLE 2.

4. TEST ASSEMBLIES SHALL BE MADE BY REMOVING A 1-INCH LENGTH OF THE CABLE JACKET FROM 12-INCH LONG SEGMENTS OF THE TEST CABLES, AND THEN TRIMMING THE CABLE SHIELD TO .450 TO .500 INCH. THE SEGMENTS SHALL BE FIXTURED SO THAT THE DISTANCE BETWEEN THE CABLE JACKETS IS $2.20 \pm .05$ (DASH NUMBERS 1, 2, 3) OR $3.20 \pm .050$ (DASH NUMBERS 4, 5, 6, 7).

5. ALL TESTS SHALL BE PERFORMED ON FULLY ASSEMBLED CABLE, UNLESS OTHERWISE SPECIFIED.

6. IR AND DWV SHALL BE PERFORMED ON FULLY ASSEMBLED CABLE BETWEEN THE SHIELD AND THE GROUND, UNLESS OTHERWISE SPECIFIED.

	AEROSPACE STANDARD	AS81824™/4 SHEET 2 OF 3	REV. A
	(R) SPLICES, ELECTRIC, PERMANENT, CRIMP STYLE, COPPER, INSULATED, ENVIRONMENT RESISTANT, SPLICE, SHIELD, SOLDER TYPE, INSULATED, 150 °C		



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