

RATIONALE

REVISION IS REQUIRED TO IMPROVE DRAWING QUALITY AND TO UPDATE THE AVAILABLE CABLES AND RELATED DETAILS.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

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AS39029™/28

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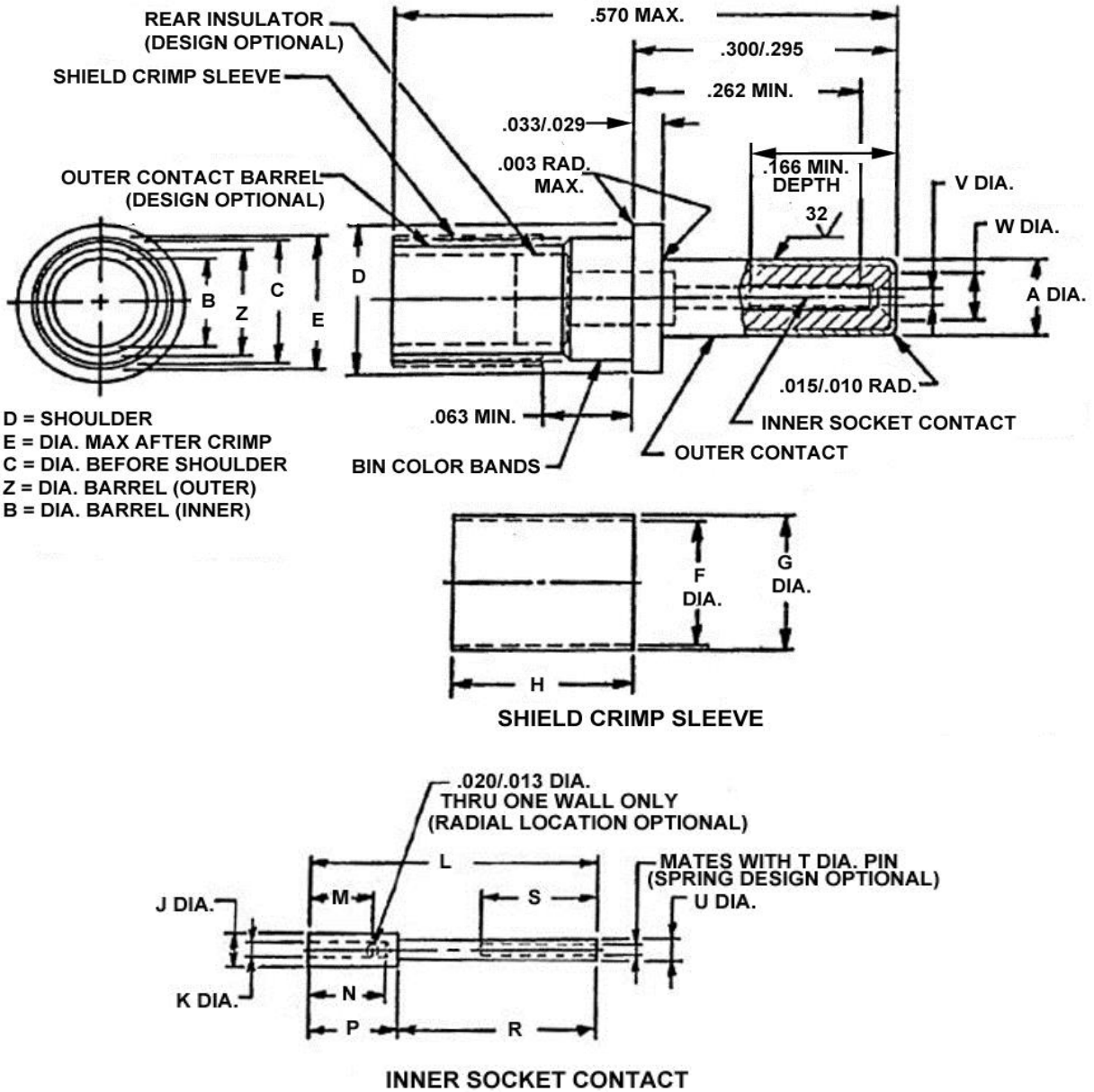
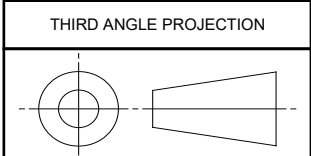


FIGURE 1 - PIN CONTACTS

For more information on this standard, visit
<https://www.sae.org/standards/content/AS39029/28B>



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

(R) CONTACTS, ELECTRICAL CONNECTOR, PIN, CRIMP REMOVABLE, SHIELDED, SIZE 12 (FOR MIL-DTL-38999 SERIES I, II, III AND IV CONNECTORS)

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ISSUED 2000-07 REVISED 2016-04 REAFFIRMED 2020-12

TABLE 1 - FIGURE 1 METRIC EQUIVALENTS

INCHES	MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS
.003	0.076	.020	0.51	.166	4.22	.570	14.48
.010	0.254	.029	0.737	.262	6.65		
.013	0.33	.033	0.838	.295	7.49		
.015	0.381	.063	1.60	.300	7.62		

TABLE 2A - DIMENSIONS

BIN CODE	A DIA.	B DIA. MIN.	C DIA.	D DIA.	E DIA. MAX.	F DIA. MIN.	G DIA. MAX.	H DIA.	J DIA. MAX.	K DIA. MIN.	L REF.
211	.095 (2.41) .093 (2.36)	.090 (2.29)	.151 (3.84) .148 (3.76)	.182 (4.62) .179 (4.55)	.156 (3.96)	.127 (3.23)	.169 (4.29)	.125 (3.18) .115 (2.92)	.052 (1.32)	.0225 (.57)	.363 (9.22)
409		.108 (2.74)				.0355 (.90)					
410											
411											
412		.090 (2.29)				.0225 (.57)					
413		.117 (2.97)				.0270 (.686)					
414		.090 (2.29)				.0225 (.57)					
415		.108 (2.74)				.0355 (.90)					

TABLE 2B - DIMENSIONS (CONTINUED)

BIN CODE	M	N MIN.	P	R	S MIN.	T	U	V DIA.	W DIA.	Z DIA. MAX.									
211										.110 (2.79)									
409										.127 (3.23)									
410																			
411										.103 (2.62) .096 (2.44)	.112 (2.84)	.146 (3.71) .140 (3.56)	.222 (5.64) .219 (5.56)	.156 (3.96)	.0205 (.52) .0195 (.50)	.035 (.89) .033 (.84)	.027 (.69) .025 (.64)	.058 (1.47) .055 (1.40)	.110 (2.79)
412																			
413																			.136 (3.45)
414																			.110 (2.79)
415																			.127 (3.23)

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TABLE 3 - DESIGN CHARACTERISTICS

BIN CODE	COLOR BANDS			CABLE ACCOMMODATED	CONTACT CAVITY SIZE	TYPE	CLASS
	1 ST	2 ND	3 RD				
211	RED	BROWN	BROWN	M17/119-RG174 ^{3/} M17/113-RG316 M17/94-RG179	12	D	B
409	YELLOW	BLACK	WHITE	M17/95-RG180			
410 ^{1/}	YELLOW	BROWN	BLACK	^{2/}			
411 ^{1/}	YELLOW	BROWN	BROWN	^{2/}			
412 ^{1/}	YELLOW	BROWN	RED	^{2/}			
413 ^{1/}	YELLOW	BROWN	ORANGE	^{2/}			
414	YELLOW	BROWN	YELLOW	M17/152-00001			
415	YELLOW	BROWN	GREEN	MIL-DTL-24643/28			

^{1/} CONTACT NOT RECOMMENDED FOR USE.

^{2/} NO KNOWN STANDARD CABLE EXIST TO REPLACE THE PREVIOUSLY RECOMMENDED COMMERCIAL CABLES OR THE CABLES ARE NO LONGER MANUFACTURED. STANDARD TOOLS MAY NOT APPLY. FOLLOW CONTACT SUPPLIER'S INSTRUCTIONS.

^{3/} CABLE IS NOT RECOMMENDED FOR NEW DESIGN.

TABLE 4 - TOOLS

BIN CODE	INNER CONTACT		OUTER CONTACT		INSTALLING TOOL ^{1/}	REMOVAL TOOL ^{1/}
	BASIC CRIMPING TOOL	POSITIONER	BASIC CRIMPING TOOL	POSITIONER		
211, 409, 410, 411, 412, 413, 414, 415	M22520/2-01	M22520/2-34	M22520/31-01	M22520/31-02	M81969/8-09 OR M81969/14-04	M81969/8-10 OR M81969/14-04

^{1/} METAL TOOL FOR MIL-STD-1760 APPLICATION IS TO BE DEVELOPED.

TABLE 5 - CONTACT ENGAGEMENT AND SEPARATION FORCES

TEST PIN DIAMETER (INCH)	MINIMUM SEPARATION FORCE (OUNCES)		MAXIMUM ENGAGEMENT FORCE (OUNCES)		MAXIMUM AVERAGE ENGAGEMENT FORCE (OUNCES)
	INITIAL	AFTER CONDITIONING	INITIAL	AFTER CONDITIONING	
.0205 (.52) +.0002 (0.01) -.0000 (0.00)	N/A	N/A	12	14	N/A
.0195 (.50) +.0000 (0.00) -.0002 (0.01)	0.5	0.4	N/A	N/A	N/A

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