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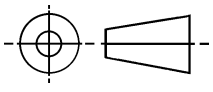

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AEROSPACE STANDARD

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

AS39029/28
SHEET 1 OF 7

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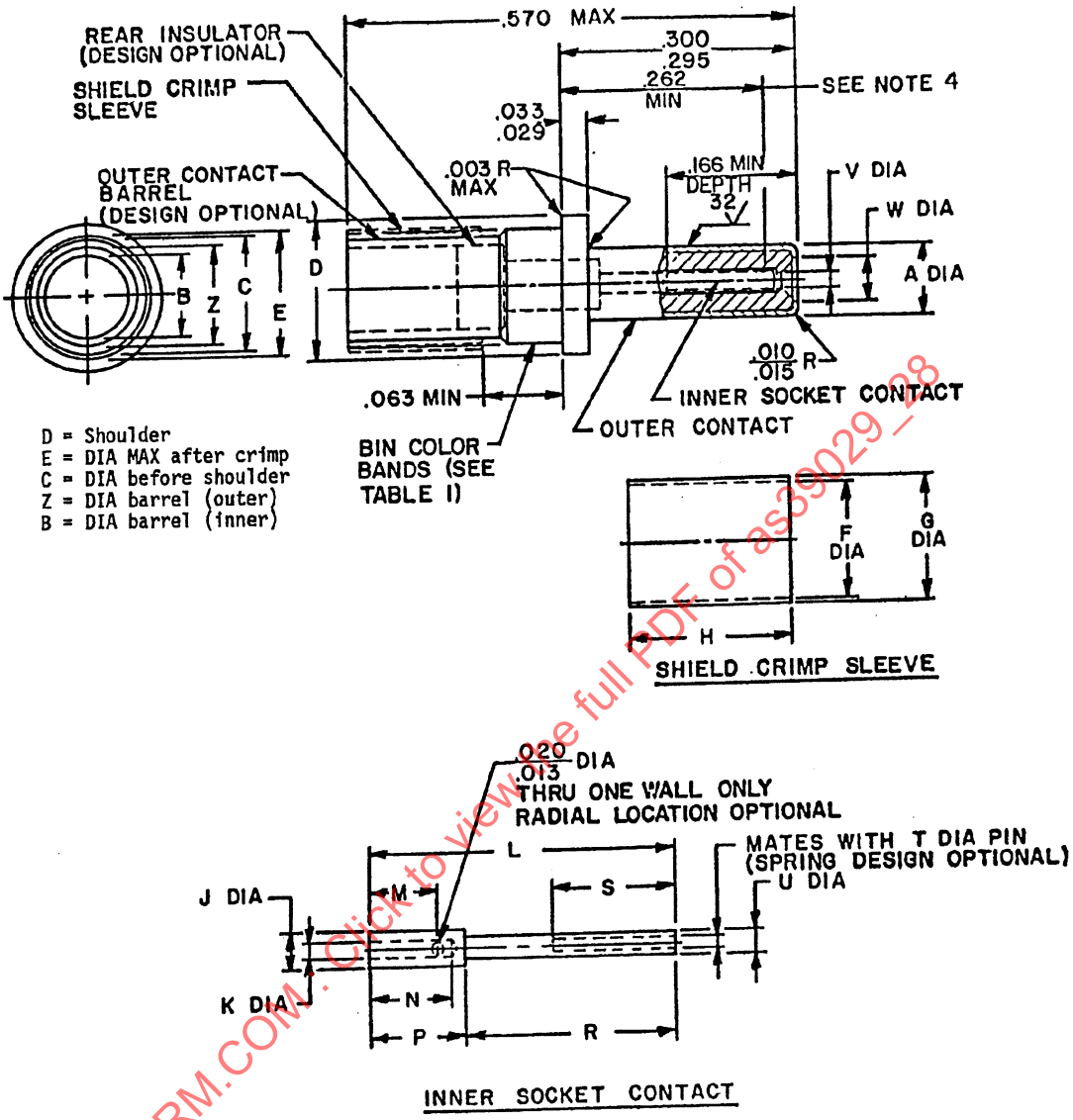

FIGURE 1. PIN CONTACTS.

BIN code	A Dia.	B Dia. Min.	C Dia.	D Dia.	E Dia. Max.	F Dia. Min.	G Dia. Max.	H	J Dia. Max.	K Dia. Min.	L REF
211	.095 .093	.090	.151 .148	.182 .179	.156	.127	.169	.125 .115	.052	.0225	.363
409		.108				.144				.0225	
410		.108				.144				.0355	
411		.090				.127				.0355	
412		.090				.127	.169			.0225	
413		.117				.156	.174			.0270	
414		.090				.138	.174			.0225	
415	.095 .093	.108	.151 .148	.182 .179	.156	.156	.174	.125 .115	.052	.0355	.363

BIN code	M	N Min.	P	R	S Min.	T	U	V Dia.	W Dia.	Z Dia. Max.
211	.103 .096	.112	.146 .140	.222 .219	.156	.0205 .0195	.035 .033	.027 .025	.058 .055	.110
409										.127
410										.127
411										.110
412										.110
413										.136
414										.110
415	.103 .096	.112	.146 .140	.222 .219	.156	.0205 .0195	.035 .033	.027 .025	.058 .055	.127

INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.003	.08	.025	.64	.058	1.47	.110	2.79	.144	3.66	.179	4.55
.010	.25	.027	.69	.063	1.60	.112	2.84	.146	3.71	.182	4.62
.013	.33	.029	.74	.090	2.29	.115	2.92	.148	3.76	.219	5.56
.015	.38	.033	.84	.093	2.36	.117	2.97	.151	3.84	.222	5.64
.0195	.495	.035	.89	.095	2.41	.125	3.18	.156	3.96	.262	6.65
.020	.51	.0355	.902	.096	2.44	.127	3.23	.166	4.22	.295	7.49
.0205	.521	.052	1.32	.103	2.62	.136	3.45	.169	4.29	.300	7.62
.0225	.572	.055	1.40	.108	2.74	.140	3.56	.174	4.42	.363	9.22
										.570	14.48

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Dimensions shown apply after plating.
4. Point at which a square ended pin of the same basic diameter as the mating contact first engages the inner contact spring. Provision for clearance hole shall be provided.
5. Crimp deformation: The maximum diameter over the crimped portion of the shield crimp sleeve shall not exceed E diameter.

FIGURE 1. PIN CONTACTS - CONTINUED.

REQUIREMENTS:

Contacts shall comply with the reliability assurance provisions of MIL-STD-790 as specified in MIL-C-38999.

Dimensions, design characteristics, and configuration: See figure 1 and table I.

Mating contacts: MIL-C-39029/27 and MIL-C-39029/75.

Tools: See table II.

TABLE I. DESIGN CHARACTERISTICS.

BIN code	Color bands			Cable accommodated	Contact cavity size	Type	Class
	1st	2nd	3rd				
211	Red	Brown	Brown	1/2/ M17/119-RG174 M17/113-RG316 M17/094-RG179 Times AA3248 Teledyne 11299 Thermax 75-738-BCCWXE Tensolite 30888/L707YX-1 Haveg 8100207	12	D	B
409	Yellow	Black	White	1/ M17/095-RG180 Raychem 9527D1514-2L Raychem 9528A1318 Microdot 293-3922			
410	Yellow	Brown	Black	1/ Microdot 250-4070			
411	Yellow	Brown	Brown	1/ Raychem 48-502 & 5022E5111			
412	Yellow	Brown	Red	1/ Raychem 48-950 & 9530D5117			
413	Yellow	Brown	Orange	1/ Raychem 7624D1311 Raychem 9527A1318			
414	Yellow	Brown	Yellow	1/ Gore GWN1159A & M17/152-00001			
415	Yellow	Brown	Green	1S50MU-16, -20, -40, -70 (MIL-C-24643/28)	↓	↓	↓

1/ Or equivalent.
2/ High tensile strength copper alloy wire.

TABLE II. 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 III. CABLE TO CONTACT INFORMATION.

BIN code	Cable accommodated	Inner contact tool selector setting no.
211	M17/119-RG174	4
	M17/113-RG316	5
	M17/094-RG179	3
	1/ 2/ Times AA3248	4
	Teledyne 11299	4
	Thermax 75-738-BCCWXE	4
	Tensolite 30888/L707YX-1	4
	Haveg 8100207	4
409	M17/095-RG180	3
	1/ Raychem 9527D1514-2L	5
	Raychem 9528A1318	4
	Microdot 293-3922	3
410	1/ Microdot 250-4070	4
411	1/ Raychem 48-502 & 5022E5111	4
412	1/ Raychem 48-950 & 9530D5117	3
413	1/ Raychem 7624D1311	5
	Raychem 9527A1318	5
414	1/ Gore GWN1159A & M17/152-00001	4
415	1S50MU-16, -20, -40, -70 (MIL-C-24643/28)	4

1/ Or equivalent.
2/ High tensile strength copper alloy wire.

Contact resistance: See table IV.
Test current:
Inner contact - 1 ampere.
Outer contact - 12 amperes.

Low signal level contact resistance (inner contact only): See table V.

Contact engagement and separation forces (inner socket contact only): The engagement depth shall be as encountered in normal service. The test pins shall be in accordance with MS3197 except the diameters shall be as specified in the following, and surface roughness shall not exceed 3 microinches. Provision for clearance hole shall be provided.

Test pin diameter (inch)	Minimum separation force (ounces)		Maximum engagement force (ounces)		Maximum average engagement force
	Initial	After conditioning	Initial	After conditioning	
.0205 +.0002 -.0000	NA	NA	12	14	NA
.0195 +.0000 -.0002	0.5	0.4	NA	NA	NA

Dielectric withstanding voltage (applied between inner and outer contact):
Test voltage:
At sea level - 1000 Vac rms.
At 50,000 feet - 250 Vac rms.

Tensile strength (inner and outer contact crimp joint): See table V.