

RATIONALE

TIN WHISKER RESISTANT TERMINALS ARE REQUIRED FOR SENSITIVE LOW SIGNAL AND SPACE APPLICATIONS.

NOTICE

THE REQUIREMENTS FOR PROCURING THE CONTACTS DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF: SAE AS7928

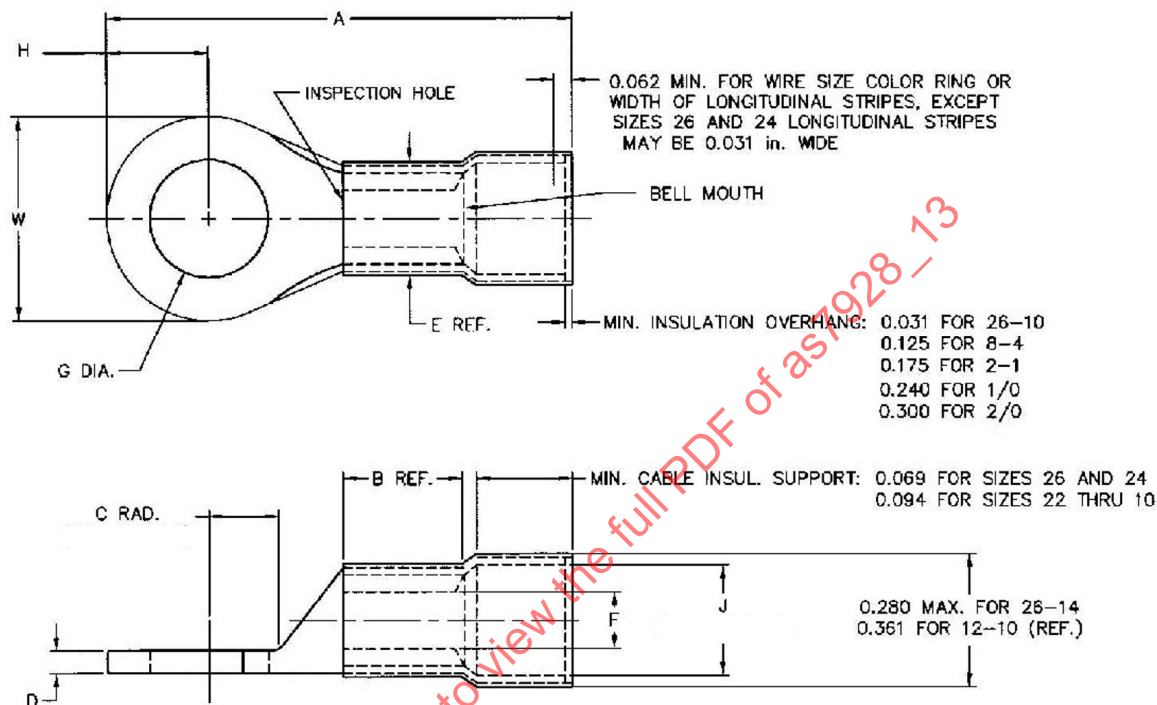
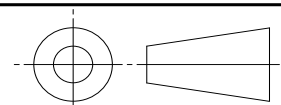


FIGURE 1 - AS7928/4 TERMINAL

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS7928/13>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C2

PROCUREMENT SPECIFICATION: AS7928

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

TERMINALS, LUG AND SPLICES, CONDUCTOR, CRIMP STYLE, COPPER TERMINAL, LUG, INSULATED, TIN WHISKER RESISTANT, RING TONGUE, BELL-MOUTHED, TYPE II, CLASS 1 (FOR 150°C TOTAL CONDUCTOR TEMPERATURE)

SAE AS7928/13
SHEET 1 OF 5

TABLE 1 - DASH NUMBERS AND CHARACTERISTICS

DASH NO.	TERMINAL SIZE	STUD SIZE	A MAX	B REF	C MIN RAD	D		E DIA REF	F DIA	G DIA		J MIN DIA	W		COLOR OF CIRCULAR RING OR LONGITUDINAL STRIPES
						MAX	MIN			MAX	MIN		MAX	MIN	
143	26 - 24	2 (0.086)	0.740	0.126	0.133	0.028	0.022	0.215 0.190	0.033 0.027	0.098	0.090	0.084	0.210	0.133	Yellow
144		4 (0.112)	0.755		0.171					0.122	0.114		0.260	0.193	
145		6 (0.138)	0.855		0.202					0.152	0.142		0.330	0.245	
146		8 (0.164)			0.178					0.168					
147		10 (0.190)			0.203					0.193					
159	22 - 18	2 (0.086)	0.755	0.156	0.115	0.035	0.027	0.215 0.190	0.073 0.052	0.098	0.090	0.120	0.230	0.193	Red
148		4 (0.112)			0.125					0.122	0.114		0.210		
101		6 (0.138)			0.202					0.152	0.142		0.260	0.245	
102		6 (0.138)	0.865		0.234					0.178	0.168		0.320	0.305	
149		8 (0.164)	0.910							0.203	0.193				
103		10 (0.190)	1.090							0.275	0.260				
150		1/4 (0.250)			0.296					0.338	0.323				
104		5/16 (0.312)			0.328					0.400	0.385		0.540	0.520	
105		3/8 (0.375)	1.320		0.453					0.525	0.510		0.720	0.705	
151		1/2 (0.500)	1.320												
152	16 - 14	4 (0.112)	0.774	0.156	0.125	0.035	0.029	0.240 0.210	0.095 0.081	0.122	0.114	0.153	0.260	0.240	Blue
106		6 (0.138)			0.152					0.147	0.317		0.302		
107		6 (0.138)			0.202					0.178	0.168		0.473	0.430	
153		8 (0.164)	0.234		0.203					0.193					
108		10 (0.190)	0.265		0.275					0.260					
154		1/4 (0.250)	1.085		0.296					0.338	0.323		0.540	0.520	
109		5/16 (0.312)	1.225		0.328					0.400	0.385		0.720	0.705	
110		3/8 (0.375)	1.225		0.328					0.400	0.385		0.720	0.705	
155		1/2 (0.500)	1.320		0.453					0.525	0.510		0.720	0.705	
111	12 - 10	6 (0.138)	1.120	0.234	0.202	0.043	0.037	0.300 0.275	0.139 0.129	0.152	0.142	0.210	0.380	0.365	Yellow
156		8 (0.164)			0.178					0.168	0.536		0.516		
112		10 (0.190)			0.234					0.203	0.193		0.598	0.573	
157		1/4 (0.250)	1.322		0.265					0.275	0.260		0.720	0.705	
113		5/16 (0.312)	1.414		0.296					0.338	0.323				
114		3/8 (0.375)			0.328					0.400	0.385				
158		1/2 (0.500)			0.453					0.525	0.510				
115	8	10 (0.190)	1.402	0.315	0.234	0.084	0.038	0.350 0.300	0.186 0.176	0.203	0.193	0.257	0.429	0.386	Red
116		1/4 (0.250)	1.446		0.265					0.275	0.260		0.478	0.435	
117		5/16 (0.312)	1.544		0.296					0.338	0.323		0.590	0.547	
118		3/8 (0.375)			0.328					0.400	0.385				
119	6	10 (0.190)	1.599	0.375	0.238	0.084	0.043	0.419 0.360	0.232 0.222	0.203	0.193	0.300	0.503	0.460	Blue
120		1/4 (0.250)			0.265					0.275	0.260		0.623	0.580	
121		5/16 (0.312)	1.762		0.305					0.338	0.323				
122		3/8 (0.375)			0.328					0.400	0.385				

TABLE 1 - DASH NUMBERS AND CHARACTERISTICS (CONTINUED)

DASH NO.	TERMINAL SIZE STUD SIZE	STUD SIZE	A MAX	B REF	C MIN RAD	D		E DIA REF	F DIA	G DIA		J MIN DIA	W		COLOR OF CIRCULAR RING OR LONGITUDINAL STRIPES
						MAX	MIN			MAX	MIN		MAX	MIN	
123	4	1/4 (0.250)	1.812	0.437	0.276	0.096	0.047	0.500 0.425	0.290 0.280	0.275	0.260	0.370	0.570	0.480	YELLOW
124		5/16 (0.312)	1.879		0.308					0.338	0.323		0.648	0.605	
125		3/8 (0.375)			0.328					0.400	0.385				
126	2	1/4 (0.250)	2.069	0.505		0.109	0.054	0.560 0.510	0.365 0.355	0.275	0.260	0.453	0.711	0.665	Red
127		5/16 (0.375)			0.343					0.400	0.385		0.804	0.740	
128		3/8 (0.500)	2.269		0.453					0.525	0.510				
129	1	1/4 (0.250)	2.150	0.565	0.383	0.125	0.070	0.620 0.560	0.398 0.388	0.275	0.260	0.500	0.793	0.740	White
130		3/8 (0.375)								0.400	0.385		0.987		
131		1/2 (0.500)	2.370		0.453					0.525	0.510				
132	0	1/4 (0.250)	2.401	0.630		0.125	0.070	0.685 0.625	0.458 0.438	0.275	0.260	0.550	0.853	0.810	Blue
133		3/8 (0.375)			0.418					0.400	0.385		0.903	0.860	
134		1/2 (0.500)	2.525		0.453					0.525	0.510				
135	00	5/16 (0.312)	2.750	0.700		0.129	0.075	0.755 0.685	0.520 0.500	0.338	0.323	0.610	0.956	0.913	Yellow
136		3/8 (0.375)								0.400	0.385				
137		1/2 (0.500)								0.525	0.510				

REQUIREMENTS

1. DESIGN AND CONFIGURATION (SEE FIGURE 1 AND TABLE 1):

DIMENSIONS ARE IN INCHES. MAX AND MIN DIMENSIONS DUE TO OVALIZATION MUST BE WITHIN 3% OF SPECIFICATION REQUIREMENTS. CONTOUR INDICATED BY PHANTOM LINES MAY VARY FROM THAT SHOWN TO SUIT INDIVIDUAL MANUFACTURER'S DESIGN.

THE "C" MIN DIMENSION IS MIN WASHER CLEARANCE RADIUS.

INSULATION SUPPORT AND TERMINAL BARREL MAY BE MULTIPLE PIECE CONSTRUCTION.

2. MATERIAL:

INSULATION SLEEVE SHALL BE IN ACCORDANCE WITH AS7928. SLEEVE COLOR SHALL BE CLEAR (UNCOLORED).

FINISH (WHISKER RESISTANT): TIN PLATED. ASTM B 545, ALLOYED WITH 3% BY WEIGHT, MINIMUM LEAD. PLATING THICKNESS SHALL BE 0.0001 IN MINIMUM (SEE AS7928 FOR MORE DETAILS).

3. IDENTIFICATION OF PRODUCT MARKING:

MANUFACTURER IDENTIFICATION AND PART NUMBER MARKING SHALL BE AS SPECIFIED IN AS7928.

COLOR RINGS OR LONGITUDINAL STRIPES SHALL BE LOCATED AS SHOWN IN FIGURE 1. COLOR OF CIRCULAR RING OR LONGITUDINAL STRIPES SHALL BE AS SPECIFIED IN TABLE 1 AND SHALL BE IN ACCORDANCE WITH EIA STANDARD RS359.

COLOR RINGS MUST COVER A MINIMUM OF 315° OF THE CIRCUMFERENCE.

LONGITUDINAL STRIPES SHALL BE 2 OR MORE AND EQUALLY SPACED ON THE INSULATION PORTION OF THE TERMINAL. THE STRIPES MUST EXTEND TO WITHIN 1/16 INCHES OF THE ENDS OF THE INSULATION AND MUST NOT OBLITERATE THE BASIC SLEEVE COLOR.

4. CRIMPING TOOLS:

CRIMPING TOOLS SHALL BE AS SPECIFIED IN TABLE 2.

TABLE 2 - TERMINAL CRIMPING TOOLS

TERMINAL SIZE (SEE TABLE 1)	CRIMP TOOL	CRIMP DIE
26-10	M22520/5-01	M22520/5-100
26-14	M22520/10-01	M22520/10-101
8 – 00	AS5259/1 (MS25441)	AS5259/1 (MS23002)

5. PART NUMBER:

M7928 /13 -103

| | |

| | | DASH NUMBER FOR TERMINAL FOR SIZE 22-18 WIRE WITH A (.190) STUD HOLE

| | | _____ DETAIL SPECIFICATION NUMBER FOR TERMINALS (150°C TEMPERATURE)

| | | BASIC SPECIFICATION NUMBER

6. QUALIFICATION AND QUALITY CONFORMANCE:

FOR QUALIFICATION, TERMINALS SHALL BE TESTED WITH ONE WIRE AS SPECIFIED IN AS81044/6, /7, /8, /9, /10, /12, /13, OR AS22759/16, /17, /18, /19.

THE FINISH REQUIREMENT SPECIFIED HEREIN SHALL BE INCLUDED AS PART OF THE GROUP 1 QUALIFICATION REQUIREMENTS. THREE ADDITIONAL SPECIMENS SHALL BE INSPECTED FOR FINISH COMPOSITION USING ANALYTICAL METHODS SUCH AS X-RAY FLUORESCENCE, SCANNING ELECTRON MICROSCOPE WITH ENERGY DISPERSION SPECTRO-PHOTOMETRY TECHNIQUE OR OTHER ATOMIC ABSORPTION METHODS. FINISH CONTAINING LESS THAN 3% BY WEIGHT LEAD SHALL BE CAUSE FOR FAILURE TO QUALIFY.

QUALITY CONFORMANCE VALIDATION OF CORROSION PROTECTION REQUIREMENTS SHALL BE MADE FOR EACH LOT AS SPECIFIED IN THE SPECIFIED FINISH SPECIFICATIONS.

QUALITY ASSURANCE: FOR QUALITY CONFORMANCE TESTING, THE TERMINAL FINISH SHALL BE TESTED AS PART OF GROUP A INSPECTION. FIVE (5) SPECIMENS PER PLATING LOT SHALL BE INSPECTED FOR FINISH COMPOSITION USING ANALYTICAL METHODS SUCH AS X-RAY FLUORESCENCE, SCANNING ELECTRON MICROSCOPE WITH ENERGY DISPERSION SPECTRO-PHOTOMETRY TECHNIQUE OR OTHER ATOMIC ABSORPTION METHODS. FINISH CONTAINING LESS THAN 3% BY WEIGHT LEAD SHALL BE CAUSE FOR REJECTION OF THE ENTIRE LOT. FOR EACH LOT DELIVERED, A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED FROM THE SUPPLIER, WHICH STATES CONFORMANCE TO THE FINISH REQUIREMENT HEREIN.