FEDERAL SUPPLY CLASS
5940

RATIONALE

AS7928/14B IS BEING STABILIZED BECAUSE THE PROCESSES/PRODUCT IS CONSIDERED MATURE AND THE COMMITTEE DOES NOT ANTICIPATE FUTURE TECHNICAL CHANGES. STABILIZATION DOES NOT IMPLY THE PROCESS OR PRODUCT IS UNACCEPTABLE FOR APPLICATIONS FOR WHICH IT IS DESIGNED. ANY TECHNICAL CHANGES NOTED BY A SUPPLIER OR USER WHICH RESULTS IN A PRODUCT OR REQUIREMENT CHANGE WILL BE ADDRESSED BY A NEW REVISION. NO QUALIFIED SOURCE IS CURRENTLY AVAILABLE AND USAGE IS ESTIMATED TO BE LOW.

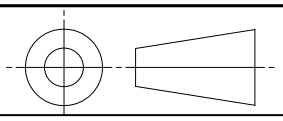
STABILIZED NOTICE

THIS DOCUMENT HAS BEEN DECLARED "STABILIZED" BY SAE AE-8C2 TERMINATING DEVICES AND TOOLING COMMITTEE AND WILL NO LONGER BE SUBJECTED TO PERIODIC REVIEWS FOR CURRENCY. USERS ARE RESPONSIBLE FOR VERIFYING REFERENCES AND CONTINUED SUITABILITY OF TECHNICAL REQUIREMENTS. NEWER TECHNOLOGY MAY EXIST.

ISSUED 2011-11 REVISED 2016-04 STABILIZED 2024-11

For more information on this standard, visit
https://www.sae.org/standards/content/AS7928/14B/

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8C2

PROCUREMENT SPECIFICATION: AS7928

SAE INTERNATIONAL

AEROSPACE STANDARD

TERMINAL, ELECTRIC, PERMANENT, CRIMP STYLE, TIN-COATED COPPER, INSULATED, ENVIRONMENT RESISTANT, CLASS 1 150 °C, HEATLESS SEALING

AS7928™/14

REV. B

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)** **Tel: +1 724-776-4970 (outside USA)**
Fax: 724-776-0790 **Email: CustomerService@sae.org** **SAE WEB ADDRESS: http://www.sae.org**

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS7928.

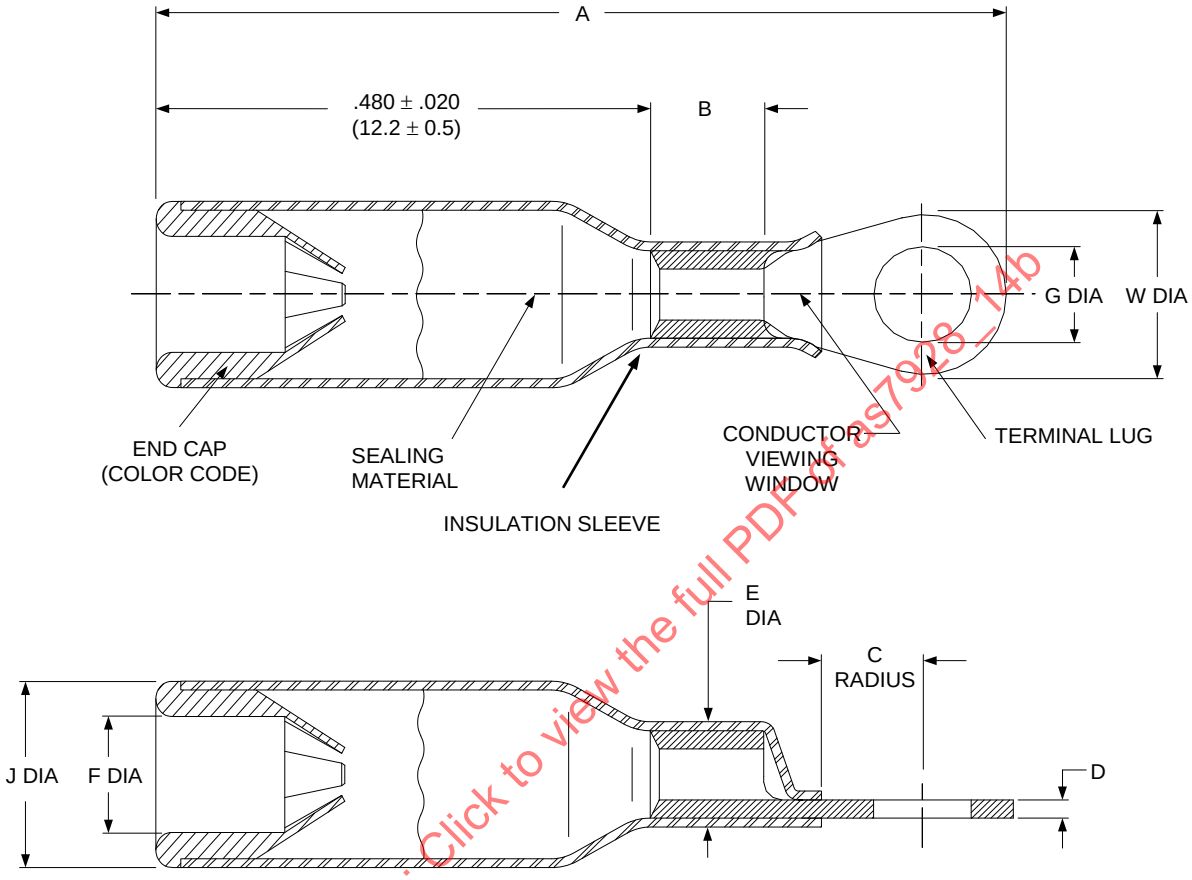


FIGURE 1 - HEATLESS SEALED TERMINAL

TABLE 1 - CONSTRUCTION DETAILS - INCHES

DASH NO.	WIRE SIZE	STUD SIZE	A MAXI-MUM	B REF	C MINI-MUM	D ±.002 ± (0.05)	E ±.010 ± (0.25)	F MAXI-MUM	G DIA		J MAXI-MUM	W DIA		END CAP COLOR CODE
									MAXI-MUM	MINI-MUM		MAXI-MUM	MINI-MUM	
001	26-20	4	1.180 (30.0)	.165 (4.2)	.093 (2.4)	.023 (0.58)	.145 (3.68)	.085 (2.2)	.122 (3.1)	.114 (2.9)	.170 (4.3)	.286 (7.3)	.193 (4.9)	RED
002		6	1.180 (30.0)		.093 (2.4)				.152 (3.9)	.142 (3.6)		.286 (7.3)	.245 (6.2)	
003		8	1.220 (31.0)		.125 (3.2)				.178 (4.5)	.168 (4.3)		.330 (8.4)	.245 (6.2)	
004		10	1.220 (31.0)		.125 (3.2)				.203 (5.2)	.194 (4.9)		.330 (8.4)	.245 (6.2)	
005	18-16	4	1.100 (27.9)	.240 (6.1)	.059 (1.5)	.030 (0.76)	.178 (4.52)	.120 (3.0)	.134 (3.4)	.114 (2.9)	.205 (5.2)	.230 (5.8)	.210 (5.3)	BLUE
006		6	1.250 (31.8)		.112 (2.8)				.152 (3.9)	.142 (3.6)		.270 (6.9)	.245 (6.2)	
007		8	1.270 (32.3)		.140 (3.6)				.178 (4.5)	.168 (4.3)		.325 (8.3)	.305 (7.7)	
008		10	1.460 (37.1)		.234 (5.9)				.217 (5.5)	.193 (4.9)		.473 (12.0)	.450 (11.4)	
009		1/4	1.460 (37.1)		.265 (6.7)				.275 (7.0)	.252 (6.4)		.473 (12.0)	.450 (11.4)	
010		5/16	1.460 (37.1)		.296 (7.5)				.338 (8.6)	.323 (8.2)		.473 (12.0)	.450 (11.4)	
011		3/8	1.580 (40.1)		.328 (8.3)				.429 (10.9)	.385 (9.8)		.540 (13.7)	.520 (13.2)	
012		1/2	1.780 (45.2)		.453 (11.5)				.525 (13.3)	.510 (13.0)		.765 (19.4)	.705 (17.9)	
013	14-12	4	1.100 (27.9)	.240 (6.1)	.059 (1.5)	.031 (0.79)	.210 (5.33)	.155 (3.9)	.134 (3.4)	.114 (2.9)	.240 (6.1)	.270 (6.9)	.210 (5.3)	YELLOW
014		6	1.150 (29.2)		.116 (2.9)				.152 (3.9)	.142 (3.6)		.270 (6.9)	.240 (6.1)	
015		8	1.250 (31.8)		.169 (4.3)				.178 (4.5)	.168 (4.3)		.345 (8.8)	.305 (7.7)	
016		10	1.250 (31.8)		.169 (4.3)				.217 (5.5)	.193 (4.9)		.345 (8.8)	.317 (8.1)	
017		1/4	1.460 (37.1)		.265 (6.7)				.275 (7.0)	.252 (6.4)		.473 (12.0)	.450 (11.4)	
018		5/16	1.460 (37.1)		.296 (7.5)				.338 (8.6)	.323 (8.2)		.473 (12.0)	.450 (11.4)	
019		3/8	1.580 (40.1)		.328 (8.3)				.429 (10.9)	.385 (9.8)		.540 (13.7)	.520 (13.2)	
020		1/2	1.780 (45.2)		.453 (11.5)				.525 (13.3)	.510 (13.0)		.765 (19.4)	.750 (19.1)	

NOTES:

1. CONDUCTOR VIEWING WINDOW MAY VARY FROM THAT SHOWN.
2. CONTOURS MAY VARY FROM THAT SHOWN.
3. UNLESS OTHERWISE INDICATED, DIMENSIONS ARE IN INCHES (MM).
4. METRIC EQUIVALENTS (TO THE NEAREST 0.1 OR 0.01 MM) ARE GIVEN FOR GENERAL INFORMATION AND REFERENCE ONLY. VALUES ARE CALCULATED AND ROUNDED ON 1 INCH = 25.4 MM.
5. DIMENSION “C RAD” REPRESENTS THE MINIMUM WASHER CLEARANCE RADIUS.

MATERIALS:

1. TERMINAL LUG: COPPER PER ASTM B280, ASTM B75, ASTM F68, OR ASTM B187.
2. METAL FINISH: TIN-PLATED.
3. INSULATION SLEEVE: TRANSPARENT POLYVINYLIDENE FLUORIDE PER AMS-DTL-23053/8.
4. SEALING MATERIAL: TRANSPARENT CROSS-LINKED GEL.
5. END CAPS: THERMOPLASTIC, COLOR CODED PER TABLE 1.

REQUIREMENTS:

1. CONSTRUCTION: THE TERMINAL ASSEMBLY SHALL CONSIST OF A ONE PIECE ASSEMBLY, WHICH INCLUDES THE SEALING SLEEVE WITH SELF-CONTAINED SEALING MATERIAL, METAL TERMINAL WITH CRIMP BARREL, AND COLOR-CODED END CAPS.

2. TERMINAL ASSEMBLY (TRANSPARENT - SLEEVE AND SEALING MATERIAL) SHALL PERMIT VISUAL EXAMINATION OF THE WIRE AS IT IS INSTALLED IN THE TERMINAL ASSEMBLY. THE TERMINAL LUG END OF THE CRIMP BARREL (VIEWING WINDOW) SHALL BE CLEAR TO VISUALLY DETERMINE THAT THE WIRE IS FULLY INSERTED IN THE TERMINAL LUG.

3. CONTINUOUS OPERATING TEMPERATURE SHALL BE -55 TO +150 °C.

4. CRIMPING OF THE TERMINAL SHALL NOT RESULT IN ANY SHARP EDGES WHICH MAY DAMAGE ADJACENT WIRES.

5. ASSEMBLY INSTRUCTIONS: INSTALLATION INSTRUCTION SHALL BE PROVIDED IN EACH PACKAGE OF TERMINALS SHIPPED.

6. QUALITY ASSURANCE PROVISIONS

6.1 QUALIFICATION TESTS SHALL BE IN ACCORDANCE WITH AS7928 QUALIFICATION INSPECTION TABLE AND AS FOLLOWS:

a. GROUP III VIBRATION SHALL INCLUDE AN 18 HOUR THIRD AXIS (VERTICAL). ANY LEAKAGE OF THE SEALING MATERIAL DURING VIBRATION IN ANY OF THE THREE AXES OF VIBRATION SHALL BE CONSIDERED AS A FAILURE OF THE TERMINAL ASSEMBLY. SAMPLES SHALL PASS ALL REMAINING TESTS IN GROUP V.

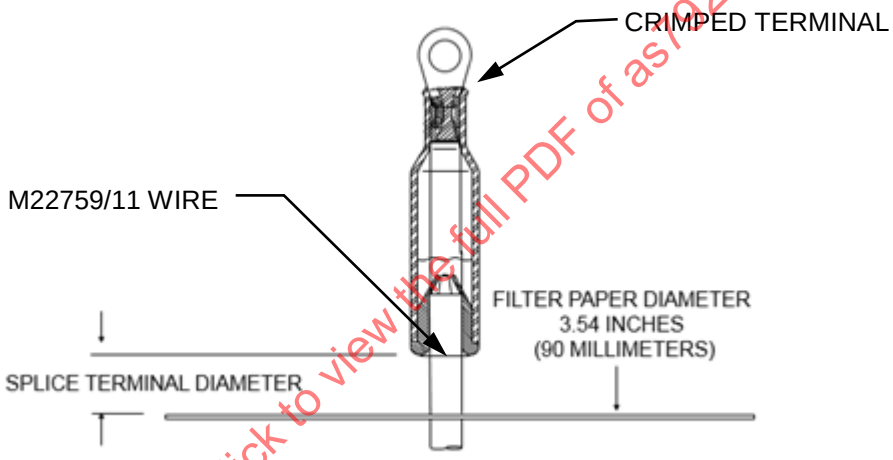


FIGURE 2 - FIXTURE FOR TEMPERATURE CYCLING TEST AND HEAT AGING

b. GROUP VII HEAT AGING: TERMINAL ASSEMBLY SHALL BE TESTED AT THE MAXIMUM RATED TEMPERATURE (SEE REQUIREMENT 3 AND AS7928 HEAT AGING (TYPE II) 150 °C TEMPERATURE). TERMINAL ASSEMBLY SHALL BE MOUNTED VERTICALLY WITH A FILTER PAPER POSITIONED BELOW THE TERMINAL ASSEMBLY (SEE FIGURE 2). ANY LEAKAGE OF THE SEALANT MIGRATED ONTO THE FILTER PAPER AROUND THE WIRE SHALL BE CONSIDERED AS A FAILURE OF THE TERMINAL ASSEMBLY. WIRE SHALL PENETRATE THE FILTER PAPER BY THE OPENING MADE BY A CROSS CUT. LEGS OF THE CROSS SHALL BE APPROXIMATELY EQUAL TO THE OUTER DIAMETER OF THE WIRE SUCH THAT THE PAPER IS IN CONTACT WITH THE WIRE JACKET THROUGHOUT THE TEST. SPECIMENS SHALL BE CONDITIONED FOR A PERIOD OF 720 HOURS.

c. ADD GROUP X AND XI. TEST SEQUENCE AND REQUIREMENTS SHALL BE AS SHOWN ON TABLE 2: