FEDERAL SUPPLY CLASS
5935

RATIONALE

REVISE TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT AND INDUSTRY. REMOVE GOVERNMENT JARGON AS A RESULT OF THE WORD-FOR-WORD CONVERSION. UPDATE SPECIFICATION REFERENCES.

THE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF: SAE AS85049.

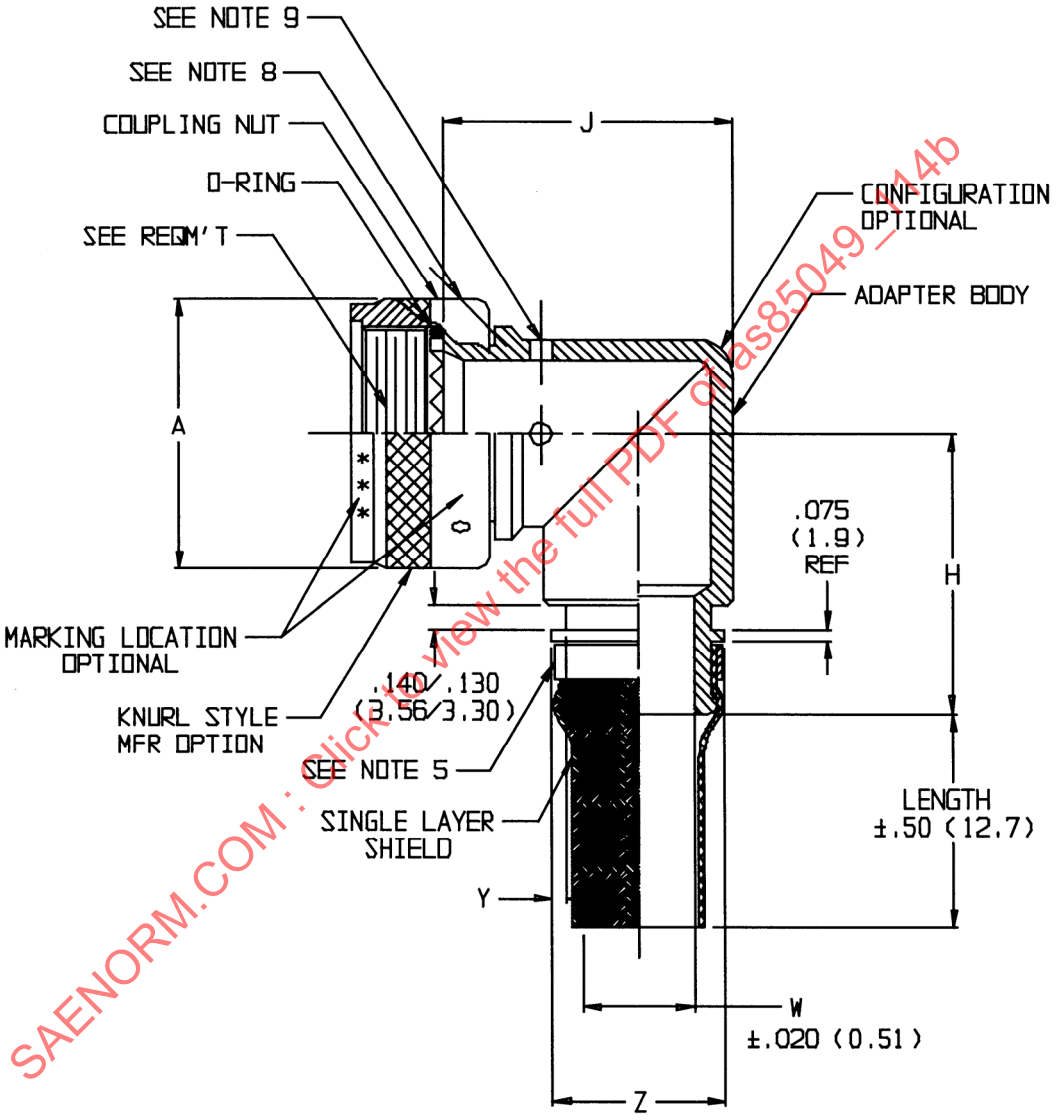

FIGURE 1 - CONFIGURATION AND DIMENSIONS

THIRD ANGLE PROJECTION

ISSUED 2002-05 REVISED 2007-06

CUSTODIAN: SAE AE-8/AE-8C1

SAE Aerospace
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AEROSPACE STANDARD

(R) CONNECTOR ACCESSORIES, ELECTRICAL BACKSHELL, 90 DEGREE, SELF-LOCKING AND NON-SELF LOCKING, PRE-ATTACHED SHIELD TERMINATION (RFI/EMI), BOOT ACCOMMODATION, CATEGORY 3B (FOR MIL-DTL-38999 SERIES I AND II CONNECTORS)

AS85049/114
SHEET 1 OF 5

REV. B

INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.044	1.12	.562	14.27	.829	21.06	1.157	29.39
.130	3.30	.583	14.81	.858	21.79	1.279	32.49
.140	3.56	.625	15.88	.895	22.73	1.350	34.29
.250	6.35	.684	17.37	.938	23.83	1.406	35.71
.312	7.92	.707	17.96	.957	24.30	1.516	38.51
.395	10.03	.730	18.54	.984	24.99	1.642	41.71
.438	11.13	.750	19.05	1.000	25.40	1.768	44.91
.457	11.61	.770	19.56	1.083	27.51	1.889	47.98
.500	12.70	.812	20.62	1.145	29.08	1.919	48.74

NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH CONTAINS CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

1. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1.000 in (25.40 mm).

2. DIMENSIONS ARE IN INCHES, AND APPLY AFTER PLATING. ACCESSORY CONFIGURATION IS OPTIONAL WITHIN THE DIMENSION ENVELOPE SPECIFIED IN FIGURE 1.

3. ADAPTER LENGTH IS MEASURED FROM THE BOTTOM OF THE ACCESSORY TEETH TO THE END OF THE ELBOW. THE ADAPTER SURFACE UNDER THE BRAID SHALL BE RIBBED, KNURLED, OR HAVE A SURFACE ROUGHNESS OF 125 R MINIMUM IN ACCORDANCE WITH ANSI B46.1.

4. PIG TAIL TERMINATED BRAID MATERIAL SHALL BE IN ACCORDANCE WITH TABLE 3. BRAID LENGTH IS DEFINED BY NOTE 1 AS SHOWN IN THE PART OR IDENTIFYING NUMBER (PIN).

5. TERMINATION BAND CONFIGURATION IS NOT CONTROLLED. BAND WITH BUCKLE MAY EXCEED THE “Z” DIMENSION (SEE TABLE 2) PROVIDED THE BAND DOES NOT INTERFERE WITH BOOT ATTACHMENT. BAND MATERIAL SHALL BE AS SPECIFIED IN TABLE 3.

6. CONNECTOR ACCESSORIES SPECIFIED HEREIN MAY BE USED WITH SHRINK BOOTS IN ACCORDANCE WITH SAE AS5258.

7. TERMINATION OF THE ACCESSORY SHIELD WITH HARNESS SHIELD MAY BE PERFORMED WITH AN AS85049/93 SHIELD SUPPORT RING OR SIMILAR SPLIT RING ACCESSORY TYPES.

8. THREE (3) HOLES EQUALLY SPACED SHALL BE PROVIDED AND ACCOMMODATE .020 MAXIMUM SAFETY WIRE FOR THE NON-SELF-LOCKING COUPLING CONFIGURATION.

9. DRAIN HOLES WILL BE PROVIDED WITH A .125 (3.2 mm) DIAMETER, 4 PLACES EQUALLY SPACED (OPTIONAL, SEE PART NUMBER DEVELOPMENT). O-RING NOT REQUIRED WHEN DRAIN HOLE OPTION IS SPECIFIED.

10. THE CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISIOIN OF THE DOCUMENT.

TABLE 1 - SHELL SIZE AND DIMENSION

ACCESSORY SHELL SIZE CODE	SERIES I SHELL SIZE (REF)	SERIES II SHELL SIZE (REF)	ALLOWABLE CABLE ENTRY SIZE TABLE 2	A MAX DIAMETER	H MAX	J MAX
08	9	8	01	.858	1.730	1.070
10	11	10	01-03	.984	1.850	1.190
12	13	12	01-05	1.157	1.870	1.320
14	15	14	03-07	1.279	1.940	1.440
16	17	16	05-09	1.406	2.030	1.570
18	19	18	06-10	1.516	2.200	1.750
20	21	20	08-12	1.642	2.200	1.750
22	23	22	09-13	1.768	2.310	2.000
24	25	24	10-14	1.889	2.310	2.000

TABLE 2 - CABLE ENTRY DIMENSIONS

ENTRY SIZE	W ±.020	Y +.008 -.000	Z MAX
01	.250	.044	.560
02	.312	.044	.630
03	.375	.044	.690
04	.438	.044	.750
05	.500	.044	.820
06	.562	.044	.890
07	.625	.044	.950
08	.688	.044	1.020
09	.750	.069	1.070
10	.812	.069	1.130
11	.875	.069	1.190
12	.938	.069	1.260
13	1.000	.069	1.320
14	1.125	.069	1.470

TABLE 3 - MATERIAL AND FINISH

FIGURE 1	FINISH DESCRIPTION	BASE MATERIAL	FINISH CODE
ADAPTER & COUPLING NUT	ELECTROLESS NICKEL	ALUMINUM ALLOY	N 1/
	CADMIUM OLIVE DRAB OVER ELECTROLESS NICKEL		W 3/
BAND 4/	TIN	COPPER	
BAND 4/	PASSIVATED	STAINLESS STEEL	
SHIELD 2/	NICKEL	COPPER	K 5/
SHIELD 2/	TIN	COPPER	T 5/

1/ NOT FOR NAVY USE. AIR FORCE USE IS FOR SPACE APPLICATIONS ONLY. W IS THE PREFERRED FINISH.
2/ BRAID SIMILAR TO A-A-59569. WIRE GAGE, NUMBER OF ENDS AND CARRIERS MAY VARY TO OBTAIN 90% COVERAGE.
3/ NOT FOR USE IN SPACE APPLICATIONS.
4/ CHOICE OF BAND IS OPTIONAL.
5/ BRAID WIRE SHALL CONFORM TO ASTM B 33 FOR FINISH 'T' AND ASTM B 355 CLASS 4 FOR FINISH 'K'.

REQUIREMENTS:

1. CONNECTOR ACCESSORY DESIGN & CONSTRUCTION: CONSIST OF A COUPLING NUT, ADAPTER BODY, BRAIDED SHIELD, AND TERMINATION BAND. THE COUPLING NUT SHALL BE CAPTIVATED TO THE ADAPTER, AND ROTATABLE.

2. QUALIFICATION: AS85049 CATEGORY 3B AND HEREIN.

3. DIMENSION AND CONFIGURATION: SEE FIGURE 1, TABLE 1, AND TABLE 2.

4. INTERFACE DIMENSIONS: SEE AS85049 FIGURE 2.

5. COUPLING NUT: CAPTIVATED TO ADAPTER BODY, FREE TO ROTATE, AND SELF LOCKING OR NON-SELF LOCKING

6. ADDITIONAL QUALIFICATION TESTS: THE FOLLOWING TESTS SHALL BE PERFORMED ON AN UNTESTED SMALL, MEDIUM, AND LARGE ACCESSORY:

   a. BRAID COVERAGE: THE BRAID COVERAGE SHALL BE 90 PERCENT MINIMUM. TEST DATA RECEIVED FROM THE BRAID MANUFACTURER MAY BE USED FOR QUALIFICATION DATA.

   b. BRAID RETENTION: WITH ACCESSORY CLAMPED, PULL THE BRAID AT A RATE OF 1 in PER MINUTE TO A MINIMUM FORCE OF 100 lb FOR BRAID .50 in AND UNDER AND 150 lb FOR BRAID OVER .50 in. THE BRAID SHALL NOT PULL OUT. BAND SLIPPAGE SHALL NOT EXCEED .025 in WHEN MEASURED FROM A FIX POINT ON THE ADAPTER. BRAID BREAKAGE DUE TO TENSILE LOAD WILL NOT BE VIEWED AS A FAILURE.

   c. THERMAL AGING: THERMALLY EXPOSE THE ACCESSORY TO 150 DEGREES CENTIGRADE FOR 168 h FOLLOWED BY ELECTRICAL RESISTANCE AT ROOM TEMPERATURE. MEASURE THE ELECTRICAL RESISTANCE OF THE ACCESSORY AT ROOM TEMPERATURE. THE APPLIED CURRENT SHALL BE 0.100 AMPS ± 0.010 AMPS AT A MAXIMUM OF 1.50 DC VOLTS. THE MEASUREMENT SHALL BE TAKEN FROM A POINT ON THE BRAID, WITHIN 1.0 in ± 0.50 in BEYOND THE END OF THE ADAPTER AND A POINT ON THE ADAPTER AT THE OPPOSITE SIDE OF THE BAND. THE ELECTRICAL RESISTANCE SHALL NOT EXCEED 1 mΩ.