

**REV.
D**

AS85049™/117

RATIONALE

REVISION IS REQUIRED TO IMPROVE DRAWINGS, MOVE NOTES TO DESIGN PARAGRAPH TO FOLLOW C1 AS STANDARD FORMAT, REMOVE IMAGES, TO CORRECT SUBSTITUTION INFORMATION, TO CORRECT REQUIREMENTS 1 AND 5, TO CORRECT AS85049 DETAIL SHEET IN THE SUBSTITUTION INFORMATION, AND CLARIFY FINISH AND APPLICATION RESTRICTIONS.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS85049.

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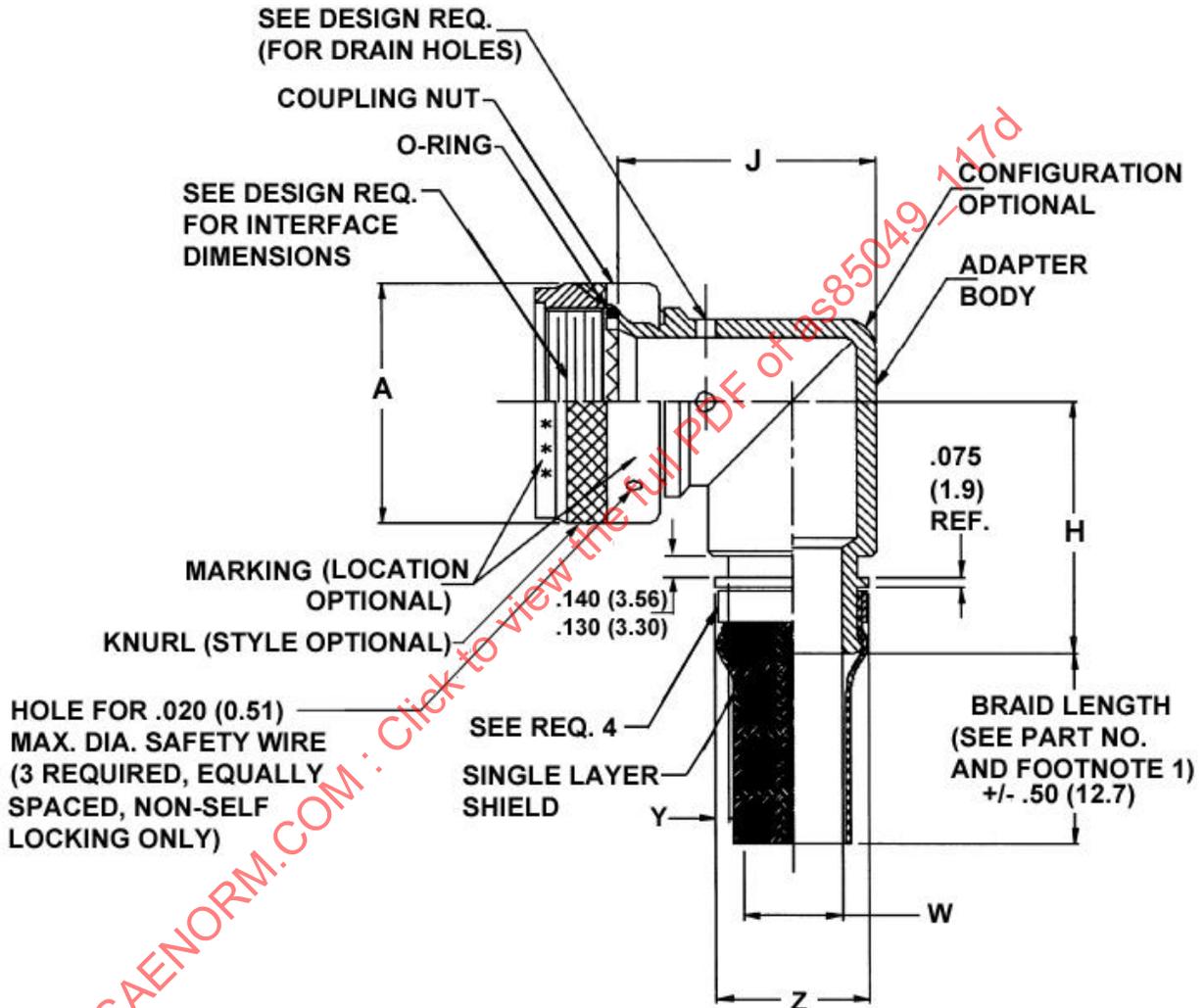
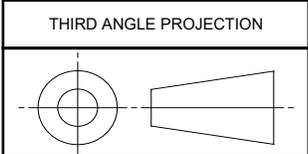


FIGURE 1 - ACCESSORY CONFIGURATION AND DIMENSIONS

For more information on this standard, visit
<https://www.sae.org/standards/content/AS85049/117D>



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS85049



AEROSPACE STANDARD

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

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ISSUED 2002-05 REVISED 2016-11 REAFFIRMED 2021-07

TABLE 1 - ACCESSORY SHELL SIZE AND DIMENSION

ACCESSORY SHELL SIZE CODE	SERIES III SHELL SIZE (REF.)	SERIES IV SHELL SIZE (REF.)	ALLOWABLE CABLE ENTRY SIZE TABLE 2	A MAX. DIAMETER	H MAX.	J MAX.
09	A	-	01	.858 (21.79)	1.730 (43.94)	0.875 (22.23)
11	B	B	01-03	.984 (24.99)	1.850 (46.99)	1.000 (25.40)
13	C	C	01-05	1.157 (29.39)	1.870 (47.50)	1.125 (28.58)
15	D	D	03-07	1.279 (32.49)	1.940 (49.28)	1.312 (33.32)
17	E	E	05-09	1.406 (35.71)	2.030 (51.56)	1.500 (38.10)
19	F	F	06-10	1.516 (38.51)	2.200 (55.88)	1.750 (44.45)
21	G	G	08-12	1.642 (41.71)	2.200 (55.88)	1.750 (44.45)
23	H	H	09-13	1.768 (44.91)	2.310 (58.67)	2.000 (50.80)
25	J	J	10-14	1.889 (47.98)	2.310 (58.67)	2.000 (50.80)

TABLE 2 - CABLE ENTRY DIMENSIONS

ENTRY SIZE	W ±.020 (0.51)	Y +.008 (0.20) -.000	Z MAX.
01	.250 (6.35)	.044 (1.12)	.560 (14.22)
02	.312 (7.92)	.044 (1.12)	.630 (16.00)
03	.375 (9.53)	.044 (1.12)	.690 (17.53)
04	.438 (11.13)	.044 (1.12)	.750 (19.05)
05	.500 (12.70)	.044 (1.12)	.820 (20.83)
06	.562 (14.27)	.044 (1.12)	.890 (22.61)
07	.625 (15.88)	.044 (1.12)	.950 (24.13)
08	.688 (17.48)	.044 (1.12)	1.020 (25.91)
09	.750 (19.05)	.069 (1.75)	1.070 (27.18)
10	.812 (20.62)	.069 (1.75)	1.130 (28.70)
11	.875 (22.23)	.069 (1.75)	1.190 (30.23)
12	.938 (23.83)	.069 (1.75)	1.260 (32.00)
13	1.000 (25.40)	.069 (1.75)	1.320 (33.53)
14	1.125 (28.58)	.069 (1.75)	1.470 (37.34)

REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS85049.

1. DESIGN AND CONSTRUCTION:

ACCESSORIES SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLES 1 AND 2. DIMENSIONS ARE IN INCHES AND APPLY AFTER PLATING. METRIC EQUIVALENTS ARE IN PARENTHESES, ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4 MM (SEE TABLE 1). ACCESSORY CONFIGURATION IS OPTIONAL WITHIN THE DIMENSION ENVELOPE SPECIFIED IN FIGURE 1.

INTERFACE DIMENSIONS: SHALL CONFORM TO AS85049, FIGURE 3 OR 3A.

COUPLING NUT: SHALL BE CAPTIVATED TO THE ADAPTER BODY AND SHALL BE FREE TO ROTATE, FOR SELF LOCKING OR NON-SELF LOCKING.

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

- ADAPTER LENGTH IS MEASURED FROM THE BOTTOM OF THE ACCESSORY TEETH TO THE END OF THE ADAPTER BODY. THE ADAPTER SURFACE UNDER THE BRAID SHALL BE RIBBED, KNURLED, OR HAVE A SURFACE ROUGHNESS OF 125 Ra MINIMUM IN ACCORDANCE WITH ANSI B46.1.
- PIG TAIL TERMINATED BRAID MATERIAL SHALL BE IN ACCORDANCE WITH TABLE 3. BRAID LENGTH IS DEFINED BY FOOTNOTE 1 AS SHOWN IN THE PART NUMBER.
- 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.
- CONNECTOR ACCESSORIES SPECIFIED HEREIN MAY BE USED WITH SHRINK BOOTS IN ACCORDANCE WITH AS85049/140.

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	<small>(R) CONNECTOR ACCESSORIES, ELECTRICAL BACKSHELL, 90 DEGREE, SELF LOCKING AND NON-SELF LOCKING, PRE-ATTACHED SHIELD TERMINATION (RFI/EMI), BOOT ACCOMODATION, CATEGORY 3B FOR MIL-DTL-38999 SERIES III AND IV CONNECTORS</small>		

6. TERMINATION OF THE ACCESSORY SHIELD WITH HARNESS SHIELD MAY BE PERFORMED WITH AN AS85049/93 SHIELD SUPPORT RING OR SIMILAR SPLIT RING ACCESSORY TYPES.
7. MATERIAL AND FINISH: IN ACCORDANCE WITH AS85049 AND TABLE 3 BELOW.

TABLE 3 - MATERIAL AND FINISH

FIGURE 1	FINISH DESCRIPTION	BASE MATERIAL	FINISH CODE
ADAPTER BODY AND COUPLING NUT	ELECTROLESS NICKEL	ALUMINUM ALLOY	N 1/
	CADMIUM OLIVE DRAB OVER ELECTROLESS NICKEL		W 3/
	NICKEL FLUOROCARBON POLYMER		X
	ZINC NICKEL		Z 3/
BAND 4/	TIN	COPPER	N/A
BAND 4/	PASSIVATED	STAINLESS STEEL	N/A
SHIELD 2/	NICKEL	COPPER	K 5/
SHIELD 2/	TIN	COPPER	T 5/

1/ N FINISH NOT RECOMMENDED FOR USE IN APPLICATIONS THAT MAY BE SUSCEPTIBLE TO SALT WATER CORROSION.

2/ BRAID SIMILAR TO A-A-59569. WIRE GAGE, NUMBER OF ENDS AND CARRIERS MAY VARY TO OBTAIN 90% COVERAGE.

3/ W AND Z FINISHES NOT RECOMMENDED FOR USE IN APPLICATIONS THAT MAY BE SUSCEPTIBLE TO OUT GASSING (ALSO SEE SPECIFICATION NOTES).

4/ CHOICE OF BAND IS MANUFACTURER'S OPTION.

5/ BRAID WIRE SHALL CONFORM TO ASTM B33 FOR FINISH "T" AND ASTM B355 CLASS 4 FOR FINISH "K".

8. QUALIFICATION: IN ACCORDANCE WITH AS85049 CATEGORY 3B AND AS SPECIFIED BELOW.

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

- a. BRAID COVERAGE: THE BRAID COVERAGE SHALL BE 90% 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 INCH PER MINUTE TO A MINIMUM FORCE OF 100 POUNDS FOR BRAID .50 INCH AND UNDER AND 150 POUNDS FOR BRAID OVER .50 INCH. THE BRAID SHALL NOT PULL OUT. BAND SLIPPAGE SHALL NOT EXCEED .025 INCH 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 HOURS 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 \pm 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 INCH \pm 0.50 INCH 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 M Ω .

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