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REV.  
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AS85049™/109

FEDERAL SUPPLY CLASS  
5935

## RATIONALE

REVISION IS REQUIRED TO IMPROVE DRAWINGS, MOVE NOTES TO DESIGN PARAGRAPH TO FOLLOW C1 AS STANDARD FORMAT, REMOVE IMAGES, TO CORRECT REQUIREMENTS 1 AND 5, CORRECT PART NUMBER EXAMPLE FOOTNOTE 1, 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. SEE APPLICATION NOTE 1.

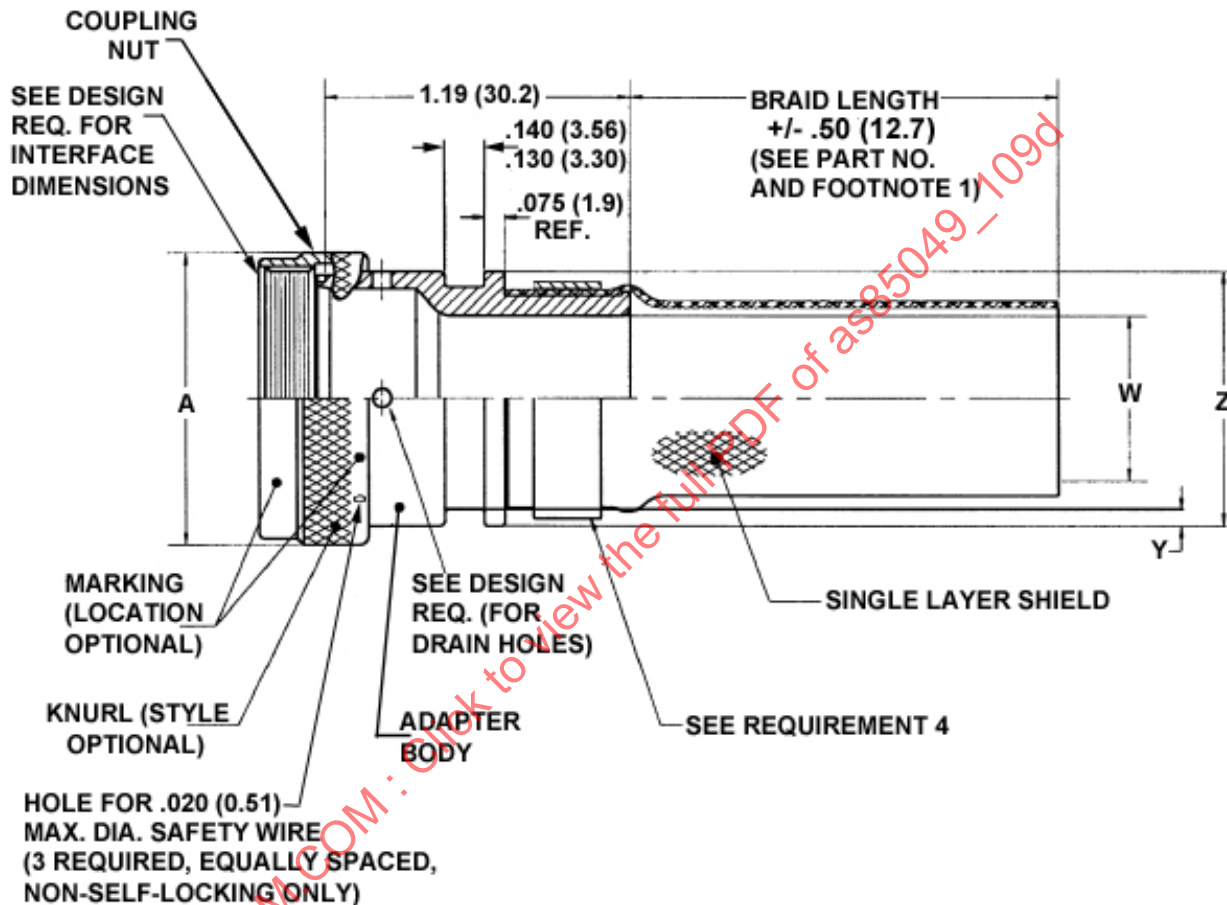
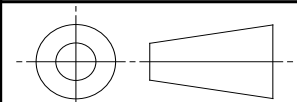


FIGURE 1 - ACCESSORY CONFIGURATION AND DIMENSIONS

For more information on this standard, visit

<https://www.sae.org/standards/content/AS85049/109D>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS85049



## AEROSPACE STANDARD

(R) CONNECTOR ACCESSORIES, ELECTRICAL BACKSHELL, STRAIGHT, NON-SELF LOCKING AND SELF LOCKING, PRE-ATTACHED SHIELD TERMINATION (RFI/EMI), BOOT ACCOMMODATION, CATEGORY 3B (FOR MIL-DTL-83723 SERIES III, AS50151 CRIMP, AS95234, AS81703 SERIES III, AND MIL-DTL-26482 SERIES II CONNECTORS)

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ISSUED 2000-05 REVISED 2016-11 REAFFIRMED 2021-07

**TABLE 1 - ACCESSORY SHELL SIZE AND DIMENSIONS**

ACCESSORY SHELL SIZE CODE	ALLOWABLE CABLE ENTRY SIZE TABLE 2	AS81703 SERIES III SHELL SIZE (REF.)	MIL-DTL-26482 SERIES II & MIL-DTL-83723 SERIES III SHELL SIZE (REF.)	AS50151 CRIMP AS95234 SHELL SIZE (REF.)	A MAX. DIAMETER
03	01	3	-	-	.885 (22.48)
08	01	-	8	8S	.885 (22.48)
10	01-03	-	10	10S & 10SL	1.010 (25.65)
12	01-05	7	12	12S & 12	1.135 (28.83)
14	02-06	12	14	14S & 14	1.260 (32.00)
16	04-08	19	16	16S & 16	1.385 (35.18)
18	05-09	27	18	18	1.510 (38.35)
20	07-11	37	20	20	1.635 (41.53)
22	09-13	-	22	22	1.760 (44.70)
24	11-14	-	24	24	1.885 (47.88)
28	14-16	-	-	28	2.135 (54.23)
32	16-17	-	-	32	2.395 (60.83)
36	17-19	-	-	36	2.635 (66.93)
40	19-21	-	-	40	2.885 (73.28)
44	21-23	-	-	44	3.135 (79.63)
48	23-25	-	-	48	3.385 (85.98)
61	12-14	61	-	-	1.885 (47.88)

**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)
15	1.250 (31.75)	.069 (1.75)	1.600 (40.64)
16	1.375 (34.93)	.069 (1.75)	1.710 (43.43)
17	1.500 (38.10)	.086 (2.18)	1.840 (46.74)
18	1.625 (41.28)	.086 (2.18)	2.000 (50.80)
19	1.750 (44.45)	.086 (2.18)	2.120 (53.85)
20	1.875 (47.63)	.086 (2.18)	2.270 (57.66)
21	2.000 (50.80)	.086 (2.18)	2.440 (61.98)
22	2.125 (53.98)	.086 (2.18)	2.600 (66.04)
23	2.250 (57.15)	.086 (2.18)	2.750 (69.85)
24	2.375 (60.33)	.086 (2.18)	2.900 (73.66)
25	2.500 (63.50)	.086 (2.18)	3.060 (77.72)



**AEROSPACE STANDARD**

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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 4 OR 4A.

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).

2. 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.
3. 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.
4. 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.
5. CONNECTOR ACCESSORIES SPECIFIED HEREIN MAY BE USED WITH SHRINK BOOTS IN ACCORDANCE WITH AS85049/140 OR /141.
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.

**TABLE 3 - MATERIAL AND FINISH**

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

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".

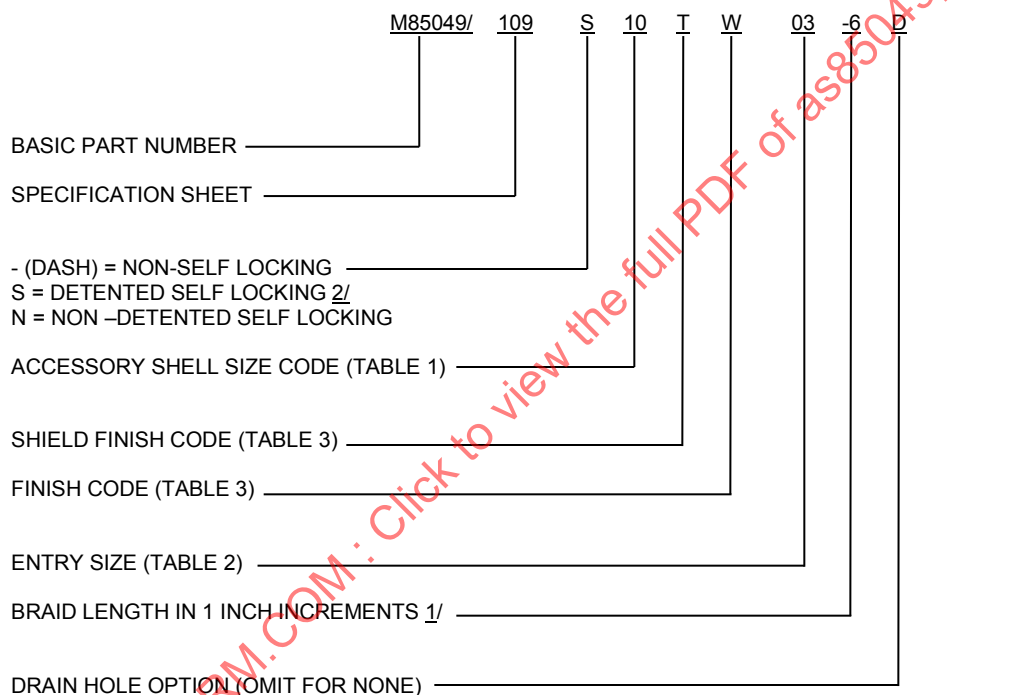
	<b>AEROSPACE STANDARD</b>	<b>AS85049™/109</b> SHEET 3 OF 5	<b>REV.</b> <b>D</b>
	(R) CONNECTOR ACCESSORIES, ELECTRICAL BACKSHELL, STRAIGHT, NON-SELF LOCKING AND SELF LOCKING, PRE-ATTACHED SHIELD TERMINATION (RF/EMI), BOOT ACCOMMODATION, CATEGORY 3B (FOR MIL-DTL-83723 SERIES III, AS50151 CRIMP, AS95234, AS81703 SERIES III, AND MIL-DTL-26482 SERIES II CONNECTORS)		

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:

- BRAID COVERAGE: THE BRAID COVERAGE SHALL BE 90% MINIMUM. TEST DATA RECEIVED FROM THE BRAID MANUFACTURER MAY BE USED FOR QUALIFICATION DATA.
- 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.
- 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 $\Omega$ .

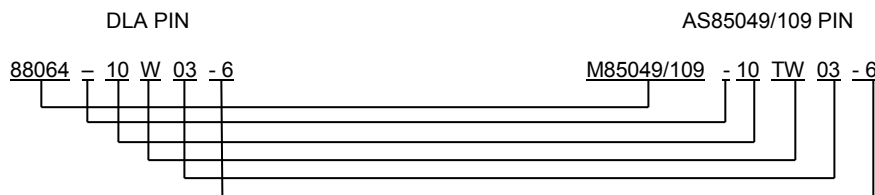
7. PART NUMBER: SEE EXAMPLE BELOW:



<sup>1/</sup> BRAID LENGTH SHALL BE A MINIMUM OF 6 INCHES THEN INCREASE IN 1 INCH INCREMENTS (7 = 7 INCHES, 8 = 8 INCHES, ETC.) UP TO A MAXIMUM OF 18 INCHES.

<sup>2/</sup> "DETENTED SELF LOCKING" COUPLING NUTS PROVIDE A POSITIVE AUDIBLE DETENT.

10. SUBSTITUTION INFORMATION:



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