FEDERAL SUPPLY CLASS
5935

RATIONALE

REVISED TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT / INDUSTRY AND INCORPORATED THE AS85049/103A-A1 AMENDMENT. ALIGN SPECIFICATION WITH SAE GUIDELINES AND REVIEWED SPECIFICATION FOR KNOWN TECHNICAL ISSUES.

NOTICE

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

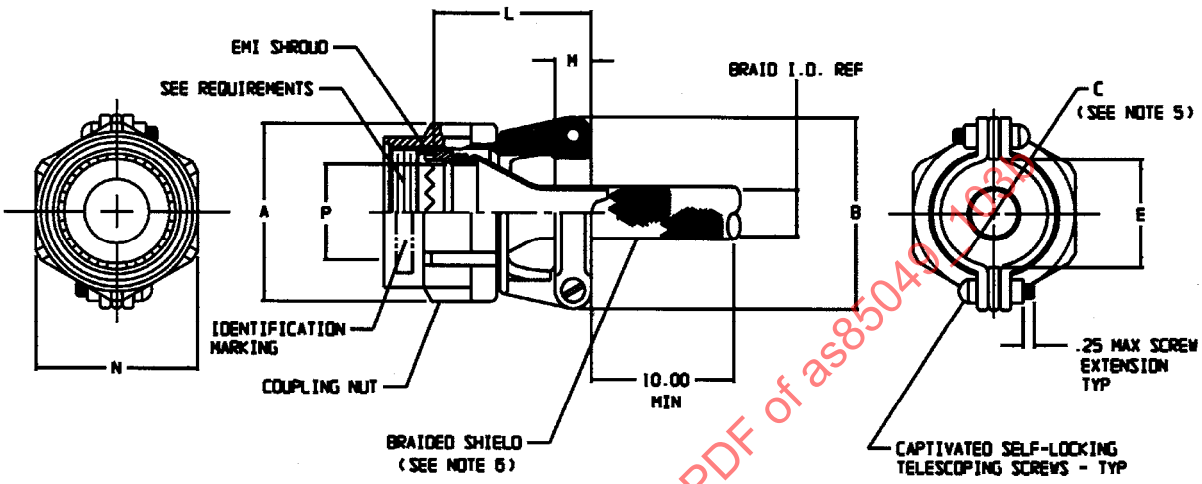
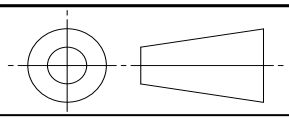


FIGURE 1 - CONFIGURATION AND DIMENSIONS

THIRD ANGLE PROJECTION



ISSUED 2002-08 REVISED 2011-01

CUSTODIAN: AE-8/AE-8C1

PROCUREMENT INFORMATION: AS85049

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

(R) CONNECTORS, ACCESSORIES, COMPOSITE, RFI/EMI, ELECTRICAL, STRAIN RELIEF, STRAIGHT, SELF-LOCKING, CATEGORY 3C
(FOR MIL-DTL-38999 SERIES III AND IV CONNECTORS)

TABLE 1 - SHELL SIZES AND DIMENSIONS

SHELL SIZE	A MAX DIA	B MAX	C ±.031 DIA SEE NOTE 5	E MIN	L	M ±.03	N HEX	P MIN	BRAID ID REF	SCREW SIZE
09	.858 (21.79)	.98 (24.89)	.265 (6.73)	.229 (5.82)	.780/.939 (19.81/23.85)	.375 (9.53)	.750/.736 (19.05/18.69)	.264 (6.71)	.375 (9.53)	4-40
11	.984 (24.99)	1.05 (26.67)	.310 (7.87)	.274 (6.96)	.860/1.059 (21.84/26.90)	.375 (9.53)	.875/.860 (22.23/21.84)	.390 (9.91)	.375 (9.53)	4-40
13	1.157 (29.39)	1.20 (30.48)	.390 (9.91)	.354 (8.99)	.950/1.199 (24.10/30.45)	.406 (10.31)	1.000/.980 (25.40/24.89)	.504 (12.80)	.500 (1.27)	6-32
15	1.280 (32.51)	1.30 (33.02)	.506 (12.85)	.470 (11.94)	.950/1.199 (24.13/30.45)	.406 (10.31)	1.125/1.100 (28.58/27.94)	.630 (16.00)	.500 (1.27)	6-32
17	1.406 (35.71)	1.44 (36.58)	.591 (15.01)	.555 (14.10)	1.080/1.329 (27.43/33.75)	.406 (10.31)	1.250/1.224 (31.75/31.09)	.756 (19.20)	.781 (19.84)	6-32
19	1.516 (38.51)	1.56 (39.62)	.661 (16.79)	.625 (15.88)	1.140/1.509 (28.9/38.33)	.406 (10.31)	1.375/1.348 (34.93/34.24)	.843 (21.41)	.781 (19.84)	6-32
21	1.642 (41.51)	1.69 (42.92)	.744 (18.90)	.708 (17.98)	1.200/1.609 (30.5/40.87)	.406 (10.31)	1.500/1.469 (38.10/37.31)	.969 (24.61)	1.000 (25.40)	6-32
23	1.768 (44.91)	1.77 (44.96)	.826 (20.98)	.790 (20.07)	1.330/1.759 (33.8/44.68)	.406 (10.31)	1.625/1.581 (41.28/40.16)	1.091 (27.71)	1.000 (25.40)	6-32
25	1.890 (48.01)	1.89 (48.01)	.896 (22.76)	.860 (21.84)	1.450/1.859 (36.8/47.22)	.406 (10.31)	1.750/1.690 (44.45/42.93)	1.217 (30.91)	1.250 (31.75)	6-32

NOTES:

1. DIMENSIONS ARE IN INCHES.
2. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4 MM.
3. MILLIMETERS ARE IN PARENTHESES.
4. UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: .XX = ± .03 AND .XXX = ± .015 ANGULAR TOLERANCES X = ± 2.
5. CABLE ENTRY IS MEASURED WITH SADDLE BARS CLOSED AND BOTTOMED ON CLAMP EARS.
6. FOR SHIELD SPLICE/TERMINATION USE M85049/93 SPLIT SUPPORT RING.
7. DIMENSIONS APPLY AFTER PLATING.
8. DETENTED SELF-LOCKING HAS A POSITIVE AUDIBLE, DETENTED COUPLING. OPTION “N” IS A FREE SPINNING SELF-LOCKING COUPLING.

REQUIREMENTS:

1. CONNECTOR ACCESSORY DESIGN AND CONSTRUCTION:

   DIMENSIONS AND CONFIGURATIONS: SEE FIGURE 1 AND TABLE 1.

2. INTERFACE DIMENSIONS: IN ACCORDANCE WITH SAE AS85049, FIGURE 3.
3. ACCESSORIES: CONSIST OF A COUPLING NUT, 45 DEGREE CLAMP STRAIN RELIEF, BRAIDED SHIELD AND SADDLE BARS. THE COUPLING NUT SHALL BE CAPTIVATED TO THE CLAMP AND FREE TO ROTATE.

4. CLAMP SHALL HAVE NO PROTRUSIONS OR SHARP EDGES WHICH MAY PINCH CABLE.

5. MATERIAL AND FINISH: IN ACCORDANCE WITH SAE AS85049.

   CLAMP BODY, COUPLING AND SADDLE CLAMPS: COMPOSITE (NON-CONDUCTIVE NO FINISH)

   SELF-LOCKING TELESCOPING SCREWS AND WASHERS: 300 SERIES CORROSION-RESISTANT STEEL/ PASSIVATED SILVER PLATE OPTIONAL

   BRAID: 34 GAUGE WIRE, COPPER, NICKEL PLATED, 50 MICRO-INCHES MINIMUM THICKNESS

   BRAID CONSTRUCTION: SIMILAR TO AA59569 34 AWG CARRIERS AND ENDS MAY VARY TO OBTAIN 90% MINIMUM COVERAGE

   INTERFACE AND SHROUD: BRASS, NICKEL PLATED

   BRAID RETENTION DEVICE: ALUMINUM/IRIDITE PER MIL-DTL-5541 OR 300 SERIES CORROSION RESISTANT STEEL/PASSIVATED OR COPPER/TIN PLATED

PART OR IDENTIFYING NUMBER (PIN):

EXAMPLE: M85049/ 103 - 11 N

BASIC PART NUMBER

SPECIFICATION SHEET

SHELL SIZE CODE

"N" = NON-DENTENT SELF-LOCKING
(OMIT FOR DETENTED SELF-LOCKING, SEE NOTE 8)

QUALIFICATION: SEE SAE AS85049 CATEGORY 3C AND AS STATED HEREIN.

1. TEMPERATURE CYCLING: IN ACCORDANCE WITH SAE AS85049, FINISH M.

2. FLUID IMMERSION: ACCESSORIES SHALL BE TESTED IN ACCORDANCE WITH SAE AS85049. AFTER IMMERSION THE ACCESSORIES SHALL MEET THE COUPLING THREAD STRENGTH REQUIREMENTS OF SAE AS85049.

3. ELECTRICAL CONDUCTIVITY: FOLLOWING QUALIFICATION TEST SEQUENCE FOR CATEGORY 3C AND ABOVE ADDITIONAL TESTS, BACKSHELL SHALL BE TESTED IN ACCORDANCE WITH SAE AS85049 SHELL CONDUCTIVITY REQUIREMENTS, EXCEPT ELECTRICAL RESISTANCE SHALL NOT EXCEED 0.0025 OHM.

4. BRAID RETENTION: BACKSHELL SHALL BE TESTED FOR BRAID RETENTION TO VALUES SPECIFIED IN TABLE 2. WHEN TESTED THE BRAID SHALL NOT PULL OUT NOR SHALL SLIPPAGE EXCEED .025 INCHES. BREAKAGE OF BRAID SHALL NOT BE CONSIDERED A FAILURE.

TABLE 2 – BRAID RETENTION

SHELL SIZE	TENSILE LOAD IN LB, MIN
09, 11, 13, 15	50
17, 19, 21, 23, 25	100