FEDERAL SUPPLY CLASS
5935

RATIONALE

LIMITED SCOPE REVISION IS REQUIRED TO CLARIFY THE SAFETY WIRE HOLE REQUIREMENTS IN FIGURE 1 FOR THE NON-SELF-LOCKING COUPLING NUT CONFIGURATION.

AS85049/145B HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

NOTICE

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

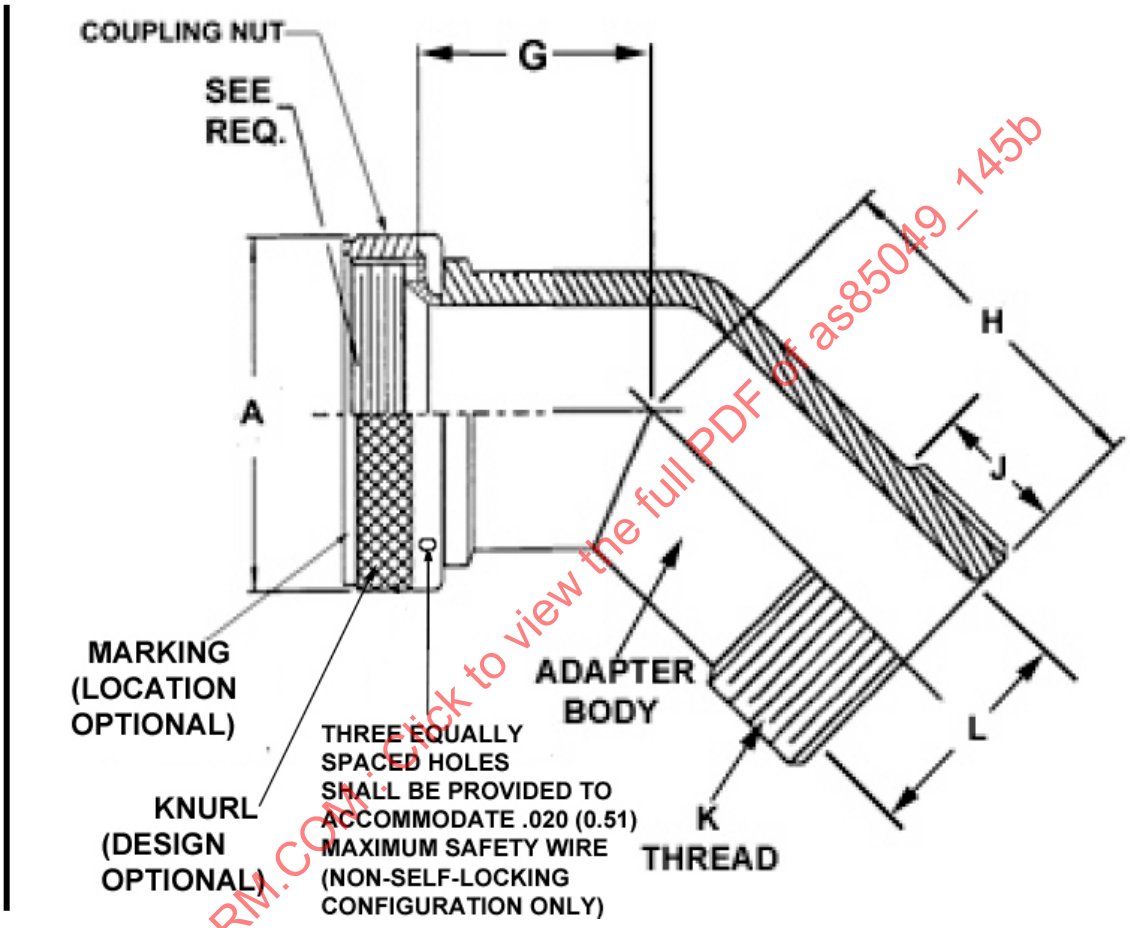
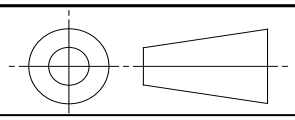


FIGURE 1 - ACCESSORY CONFIGURATION AND DIMENSIONS

ISSUED 2015-01 REVISED 2019-04 REAFFIRMED 2025-02

THIRD ANGLE PROJECTION



For more information on this standard, visit
https://www.sae.org/standards/content/AS85049/145B/

CUSTODIAN: AE-8C1

PROCUREMENT SPECIFICATION: AS85049

SAE INTERNATIONAL

AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL BACKSHELL, 45°, NON-SELF LOCKING AND SELF LOCKING, MS "V" THREAD, CATEGORY 3B (FOR MIL-DTL-83723 SERIES III, AS50151 SERIES II AND III, AS81703 SERIES III, MIL-DTL-26842 SERIES II AND AS95234 CONNECTORS)

AS85049™/145
SHEET 1 OF 4

REV. B

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TABLE 1 - SHELL SIZE AND DIMENSIONS

ACCESSORY SHELL SIZE CODE	MAX ALLOWABLE ENTRY SIZE (SEE TABLE 2)	AS81703 SERIES III SHELL SIZE (REF)	MIL-DTL-26482 SERIES II & MIL-DTL-83723 SERIES III SHELL SIZE (REF)	AS50151 SERIES II & III SHELL SIZE (REF)	AS95234 SHELL SIZE (REF)	A MAX DIAMETER		G MAX	H MAX
						SELF LOCKING	NON-SELF LOCKING		
03	03	3	-	-	-	.885 (22.48)	.669 (16.99)	1.00 (25.40)	1.05 (26.67)
08	03	-	8	8S	-	.885 (22.48)	.617 (15.67)	1.00 (25.40)	1.05 (26.67)
10	04	-	10	10S & 10SL	10SL	1.010 (25.65)	.734 (18.64)	1.02 (25.91)	1.07 (27.18)
12	06	7	12	12S & 12	-	1.135 (28.83)	.858 (21.79)	1.05 (26.67)	1.10 (27.94)
14	08	12	14	14S & 14	14S	1.260 (32.00)	.984 (24.99)	1.06 (26.92)	1.11 (28.19)
16	10	19	16	16S & 16	16S & 16	1.385 (35.18)	1.112 (28.24)	1.09 (27.69)	1.14 (28.96)
18	12	27	18	18	18	1.510 (38.35)	1.218 (30.94)	1.11 (28.19)	1.15 (29.21)
20	12	37	20	20	20	1.635 (41.53)	1.345 (34.16)	1.13 (28.70)	1.18 (29.97)
22	16	-	22	22	22	1.760 (44.70)	1.468 (37.29)	1.16 (29.46)	1.21 (30.73)
24	16	-	24	24	24	1.885 (47.88)	1.593 (40.46)	1.18 (29.97)	1.23 (31.24)
28	24	-	-	28	28	2.135 (54.23)	1.969 (50.01)	1.23 (31.24)	1.40 (35.56)
32	28	-	-	32	32	2.395 (60.83)	2.219 (56.36)	1.28 (32.51)	1.45 (36.83)
36	28	-	-	36	36	2.635 (66.93)	2.469 (62.71)	1.33 (33.78)	1.49 (37.85)
40	32	-	-	40	-	2.885 (73.28)	2.719 (69.06)	1.37 (34.80)	1.60 (40.64)
44	32	-	-	44	-	3.135 (79.63)	2.969 (75.41)	1.42 (36.07)	1.65 (41.91)
48	40	-	-	48	-	3.385 (85.98)	3.219 (81.76)	1.47 (37.34)	1.76 (44.70)
61	16	61	-	-	-	1.885 (47.88)	1.653 (41.99)	1.19 (30.23)	1.24 (31.50)

TABLE 2 - CABLE ENTRY DIMENSIONS

ENTRY SIZE	J (REFERENCE)	K THREAD	L WIRE BUNDLE ACCOMMODATION MAX 1/
03	.44 (11.18)	.500-28 UNEF-2A	.250 (6.4)
04		.625-24 UNEF-2A	.312 (7.9)
06		.750-20 UNEF-2A	.438 (11.1)
08		.875-20 UNEF-2A	.562 (14.3)
10		1.000-20 UNEF-2A	.625 (15.9)
12		1.188-18 UNEF-2A	.750 (19.1)
16		1.438-18 UNEF-2A	.938 (23.8)
20	.50 (12.70)	1.750-18 UNS-2A	1.250 (31.8)
24	.56 (14.22)	2.000-18 UNS-2A	1.375 (34.9)
28	.56 (14.22)	2.250-16 UN-2A	1.625 (41.3)
32	.62 (15.75)	2.500-16 UN-2A	1.875 (47.6)
40	.68 (17.27)	3.000-16 UN-2A	2.375 (60.3)

1/ WIRE BUNDLE ACCOMMODATION DIMENSION IS DEFINED AS THE ENVELOPE AREA OF THE WIRE BUNDLE. THIS DIMENSION IS NOT MEANT TO DEFINE THE HARDWARE LIMITS.

TABLE 3 - MATERIAL AND FINISH

FIGURE 1	MATERIAL	FINISH CODE
ADAPTER BODY AND COUPLING NUT	ALUMINUM ALLOY IN ACCORDANCE WITH AS85049	N 1/, W 2/, X, Y, Z 2/
	CORROSION RESISTANT STEEL IN ACCORDANCE WITH AS85049	B 2/, S, XS, YS, ZS 2/

1/ N FINISH NOT RECOMMENDED FOR USE IN APPLICATIONS THAT MAY BE SUSCEPTIBLE TO SALT WATER CORROSION.
2/ W, B, Z, AND ZS FINISHES NOT RECOMMENDED FOR USE IN APPLICATIONS THAT MAY BE SUSCEPTIBLE TO OUT GASSING (SEE SPECIFICATION NOTES).

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

1. DESIGN: THE CONNECTOR ACCESSORY SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLES 1 AND 2. THE ACCESSORY SHALL CONSIST OF A COUPLING NUT AND ADAPTER BODY. DIMENSIONS ARE IN INCHES AND APPLY AFTER PLATING. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED ON 1 INCH = 25.4 MM. ACCESSORY CONFIGURATION IS OPTIONAL WITHIN THE DIMENSIONAL ENVELOPE SPECIFIED IN FIGURE 1. FOR INTERFACE DIMENSIONS, REFER TO AS85049 FIGURE 4 OR 4A.

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

3. QUALIFICATION: AS85049 CATEGORY 3B.

4. PART NUMBER: SEE EXAMPLE BELOW

EXAMPLE: M85049 /145 S 16 W 08

BASIC PART NUMBER

SPECIFICATION SHEET

COUPLING NUT STYLE CODE
- (DASH) = NON-SELF LOCKING
S = DETENTED SELF LOCKING (WITH POSITIVE AUDIBLE DETENT)
N = NON-DETENTED SELF LOCKING

ACCESSORY SHELL SIZE CODE (SEE TABLE 1)

FINISH CODE (SEE TABLE 3)

ENTRY SIZE (SEE TABLE 2)

APPLICATION NOTES:

1. ACCOMMODATES ACCESSORIES WITH MS “V” THREADS SUCH AS AS85049/1, /2, /41, AND /42.

2. FOR INSTALLATION TORQUE, REFER TO AIR6151.