

REV.  
B

SAE AS85049/39

RATIONALE

REVISED TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT AND INDUSTRY, REMOVE GOVERNMENT JARGON, INCORPORATE AMENDMENTS, AND UP-DATE SPECIFICATION REFERENCES.

THE REQUIREMENTS FOR ACQUIRING THE ACCESSORIES DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF SAE AS85049.

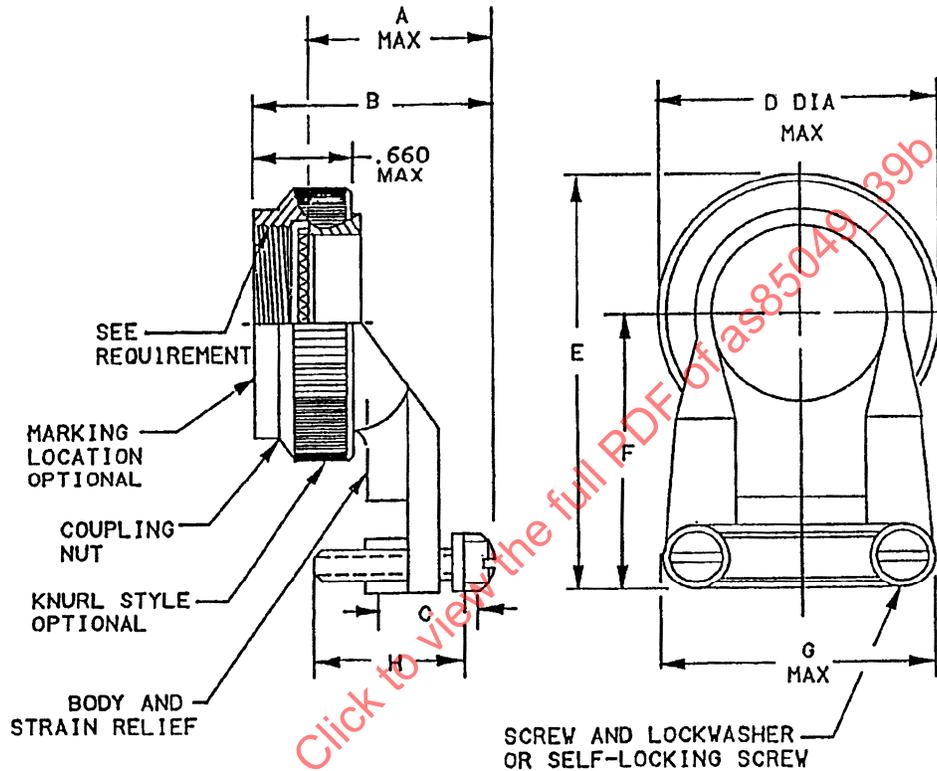
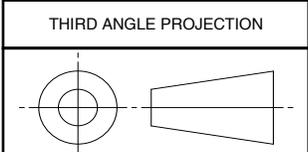


FIGURE 1 - DIMENSIONS AND CONFIGURATION (SELF-LOCKING ONLY)

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CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS85049

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

CONNECTOR ACCESSORIES, ELECTRICAL,  
STRAIN RELIEF, 90°, SELF-LOCKING AND  
NON-SELF-LOCKING, CATEGORY 4C  
(FOR MIL-DTL-38999 SERIES III AND IV CONNECTORS)

**SAE AS85049/39**  
SHEET 1 OF 5

**REV. B**

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ISSUED 2000-05 REVISED 2009-08

TABLE 1A - DIMENSIONS (SELF-LOCKING ONLY)

CONNECTOR SHELL SIZE	SHELL SIZE CODE (REF)	A MAX (SEE NOTE 6)	B MAX OVERALL LENGTH	C WIRE BUNDLE ACCOMMODATION RANGE (SEE NOTE 5)		D MAX DIA	E MAX	F MAX SIZE	G MAX	H SCREW LENGTH	SCREW SIZE
				MIN	MAX						
9	A	1.01 (25.7)	1.31 (33.3)	.098 (2.49)	.234 (5.94)	.858 (21.79)	1.38 (35.1)	1.00 (25.4)	.85 (21.6)	.500 (12.70)	6-32
11	B	1.01 (25.7)	1.31 (33.3)	.153 (3.89)	.234 (5.94)	.984 (24.99)	1.53 (38.9)	1.10 (27.9)	.90 (22.9)	.500 (12.70)	6-32
13	C	1.21 (30.7)	1.51 (38.4)	.190 (4.83)	.328 (8.33)	1.157 (29.39)	1.60 (40.6)	1.10 (27.9)	1.10 (27.9)	.625 (15.88)	6-32
15	D	1.26 (32.0)	1.55 (39.4)	.260 (6.60)	.457 (11.61)	1.279 (32.49)	1.80 (45.7)	1.25 (31.8)	1.15 (29.2)	.750 (19.05)	6-32
17	E	1.41 (35.8)	1.71 (43.4)	.283 (7.19)	.614 (15.60)	1.406 (35.71)	1.93 (49.0)	1.30 (33.0)	1.30 (33.0)	.750 (19.05)	6-32
19	F	1.51 (38.4)	1.81 (46.0)	.325 (8.26)	.634 (16.10)	1.516 (38.51)	2.05 (52.1)	1.35 (34.3)	1.50 (38.1)	.750 (19.05)	8-32
21	G	1.66 (42.2)	1.95 (49.5)	.343 (8.71)	.698 (17.73)	1.642 (41.71)	2.35 (59.7)	1.60 (40.6)	1.60 (40.6)	.875 (22.23)	8-32
23	H	1.76 (44.7)	2.10 (53.3)	.381 (9.68)	.823 (20.90)	1.768 (44.91)	2.58 (65.5)	1.75 (44.5)	1.70 (43.2)	1.000 (25.40)	8-32
25	J	1.91 (48.5)	2.21 (56.1)	.418 (10.62)	.853 (21.67)	1.889 (47.98)	2.73 (69.3)	1.85 (47.0)	1.80 (45.7)	1.125 (28.58)	8-32

NOTES:

- DIMENSIONS ARE IN INCHES.
- DIMENSIONS APPLY AFTER PLATING.
- METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY.
- MILLIMETERS ARE IN PARENTHESES.
- WIRE BUNDLE ACCOMMODATION RANGE DIMENSION IS DEFINED AS THE ENVELOPE AREA OF THE WIRE BUNDLE. THIS DIMENSION IS NOT MEANT TO DEFINE THE CLAMP HARDWARE LIMITS.
- THE "A" DIMENSION IS MEASURED FROM THE BOTTOM OF THE ACCESSORY TEETH TO THE REAR OF THE SADDLE CLAMP.

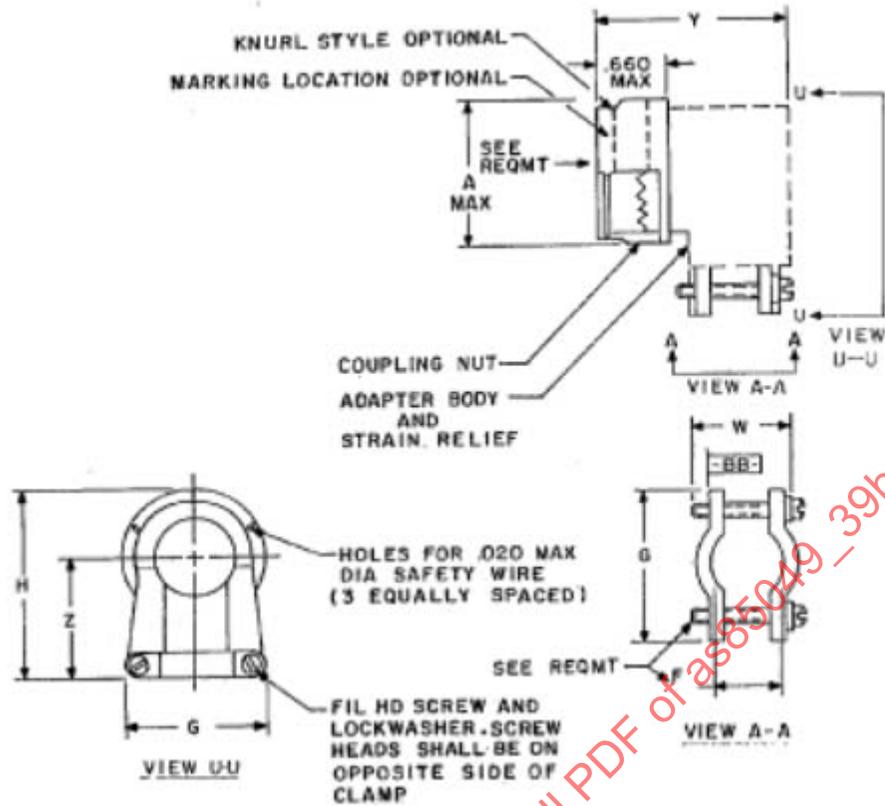


FIGURE 2 - DIMENSIONS AND CONFIGURATIONS (NON-SELF-LOCKING ONLY)

TABLE 1B - DIMENSIONS (NON-SELF-LOCKING ONLY)

CONNECTOR SHELL SIZE	SHELL SIZE CODE (REF)	A MAX	F WIRE BUNDLE ACCOMMODATION RANGE (SEE NOTE 5)		G MAX DIA	SCREW SIZE	Y MAX	Z MAX	W +.000 -.062 SCREW LENGTH	H MAX
			MIN	MAX						
9	A	.75 (19.1)	.098 (2.49)	.234 (5.94)	.85 (21.6)	6-32	1.20	1.00	.500 (12.70)	1.38 (35.1)
11	B	.85 (21.6)	.153 (3.89)	.234 (5.94)	.90 (22.9)	6-32	1.20	1.10	.500 (12.70)	1.53 (38.9)
13	C	1.00	.190 (4.83)	.328 (8.33)	1.10	6-32	1.40	1.10	.625 (15.88)	1.60 (40.6)
15	D	1.10	.260 (6.60)	.457 (11.61)	1.15	6-32	1.45	1.25	.750 (19.05)	1.80 (45.7)
17	E	1.25	.283 (7.19)	.614 (15.60)	1.30	6-32	1.60	1.30	.750 (19.05)	1.93 (49.0)
19	F	1.40	.325 (8.26)	.634 (16.10)	1.50	8-32	1.70	1.35	.750 (19.05)	2.05 (52.1)
21	G	1.50	.343 (8.71)	.698 (17.73)	1.60	8-32	1.85	1.60	.875 (22.23)	2.35 (59.7)
23	H	1.65	.381 (9.68)	.823 (20.90)	1.70	8-32	1.95	1.75	1.000 (25.40)	2.58 (65.5)
25	J	1.75	.418 (10.62)	.853 (21.67)	1.80	8-32	2.10	1.85	1.125 (28.58)	2.73 (69.3)

NOTES:

1. DIMENSIONS ARE IN INCHES.
2. DIMENSIONS APPLY AFTER PLATING.
3. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY.
4. MILLIMETERS ARE IN PARENTHESES.
5. WIRE BUNDLE ACCOMMODATION RANGE DIMENSION IS DEFINED AS THE ENVELOPE AREA OF THE WIRE BUNDLE. THIS DIMENSION IS NOT MEANT TO DEFINE THE CLAMP HARDWARE LIMITS.

REQUIREMENTS:

1. DESIGN AND CONSTRUCTION  
 DIMENSIONS AND CONFIGURATION: SEE FIGURES 1 AND 2.
2. INTERFACE DIMENSIONS: IN ACCORDANCE WITH SAE AS85049, FIGURE 3.
3. ACCESSORY: CONSISTS OF A COUPLING NUT AND FOLLOWER. THE COUPLING NUT SHALL BE CAPTIVATED TO AND SHALL BE ROTATEABLE. FIGURE 2 DIMENSION Y AND F MAX ARE APPLICABLE WHEN THE END OF THE SCREW IS FLUSH WITH BB OR A MAXIMUM OF TWO SCREW THREADS PROTRUDE.
4. DETENTED SELF-LOCKING PROVIDES A POSITIVE AUDIBLE DETENTED COUPLING.
5. CLAMPS SHALL HAVE NO PROTRUSIONS OR SHARP EDGES WHICH MAY PINCH CABLE.
6. MATERIAL AND FINISH: SEE TABLE 2. ACCESSORIES SHALL BE AS SHOWN IN TABLE 2.

TABLE 2 - MATERIAL AND FINISH

FIGURE	MATERIAL	FINISH
1 & 2	ALUMINUM ALLOY IN ACCORDANCE WITH SAE AS85049	A N <sup>1/</sup> W <sup>2/</sup>
1 & 2	CORROSION RESISTANT STEEL 300 SERIES IN ACCORDANCE WITH SAE AS85049	S

<sup>1/</sup> NOT FOR NAVY USE. AIR FORCE USE IS FOR SPACE APPLICATIONS ONLY. W IS THE PREFERRED FINISH.  
<sup>2/</sup> W IS NOT FOR USE IN SPACE APPLICATION. ALSO SEE SPECIFICATION NOTE

7. CLAMP SCREW AND LOCKWASHERS: CORROSION-RESISTANT STEEL, PASSIVATE.
8. SELF-LOCKING DEVICES DESIGN AND CONSTRUCTION: COUPLINGS WITH SELF-LOCKING DEVICES SHALL MEET ALL THE REQUIREMENTS SPECIFIED HEREIN FOR ITS SPECIFIC CATEGORY AND THE FOLLOWING ADDITIONAL TESTS:
  - a. LIFE CYCLE: SEE SAE AS85049, PARAGRAPH 4.6.15.
  - b. VIBRATION: SEE SAE AS85049, PARAGRAPH 3.5.4.1.
9. QUALIFICATION: SEE SAE AS85049, CATEGORY 4C.
10. ACCESSORIES ARE NOT RECOMMENDED FOR CONNECTORS USING CO-AX, DATA BUS, NO. 8, 6, 4 OR 0 CONDUCTORS. WHEN USED WITH MAXIMUM DENSITY ARRANGEMENTS, CLAMP MAY OPEN OUTER WIRE SEALS.