

REV.
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SAE AS85049/51

FEDERAL SUPPLY CLASS
5935

RATIONALE

REVISION IS REQUIRED TO CORRECT THE ERROR IN THE DOCUMENT TITLE BLOCK FOR AS50151.

REVISION IS REQUIRED TO CORRECT THE ERROR IN THE DIMENSIONAL TITLE FOR THE L MAX-CLOSED DIMENSION, THE CORRECT TITLE IS R MAX.

NOTICE

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

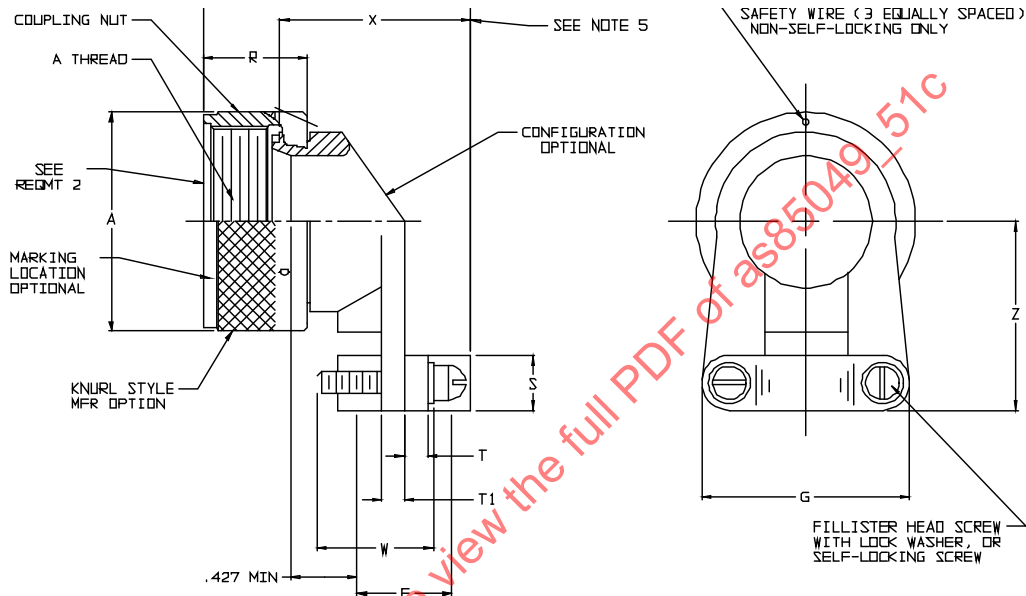
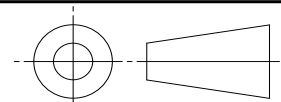


FIGURE 1 - CONFIGURATION AND DIMENSIONS (NON-SELF-LOCKING AND SELF-LOCKING)

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<http://www.sae.org/technical/standards/AS85049/51C>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
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AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL, STRAIN RELIEF,
NONENVIRONMENTAL, 90°, SELF-LOCKING AND NON-SELF-LOCKING
CATEGORY 4B (FOR AS50151 CRIMP, MIL-DTL-26482 SERIES 2,
AS81703 SERIES 3, AND MIL-DTL-83723 SERIES III CONNECTORS)

SAE AS85049/51
SHEET 1 OF 6

REV.
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TABLE 1A - DIMENSIONS (NON-SELF-LOCKING ONLY)

DASH NUMBER	FOR CONNECTOR SHELL SIZE (REF)				NONSELF-LOCKING			
	AS81703 SERIES 3	MIL-DTL- 26482 SERIES 2	AS50151 CRIMP	MIL-DTL- 83723 SERIES III	A MAX	R MAX	X MAX (SEE NOTE 5)	Y MAX
-3	3				.669 (16.99)	.540 (13.72)	.78 (19.81)	1.101 (27.97)
-8		8	8S	8	.617 (15.67)	↑	.78 (19.81)	1.101 (27.97)
-10		10	10S, 10SL	10	.734 (18.64)		.86 (21.84)	1.183 (30.05)
-12	7	12	12S, 12	12	.858 (21.79)		1.05 (26.67)	1.376 (34.95)
-14	12	14	14S, 14	14	.984 (24.99)		1.11 (28.19)	1.436 (36.47)
-16	19	16	16S, 16	16	1.112 (28.24)		1.26 (32.00)	1.585 (40.26)
-18	27	18	18	18	1.218 (30.94)		1.37 (34.80)	1.697 (43.10)
-20	37	20	20	20	1.345 (34.16)		1.50 (38.10)	1.822 (46.28)
-22		22	22	22	1.468 (37.29)	↓	1.62 (41.15)	1.947 (49.45)
-24		24	24	24	1.593 (40.46)	.540 (13.72)	1.75 (44.45)	2.072 (52.63)
-28			28		1.969 (50.01)	.702 (17.83)	1.89 (48.01)	2.372 (60.25)
-32			32		2.219 (56.36)	↑	1.95 (49.53)	2.435 (61.85)
-36			36		2.469 (62.71)		2.07 (52.58)	2.560 (65.02)
-40			40		2.719 (69.06)		2.20 (55.88)	2.685 (68.20)
-44			44		2.969 (75.41)	↓	2.45 (62.23)	2.935 (74.55)
-48			48		3.219 (81.76)	.702 (17.83)	2.57 (65.28)	3.060 (77.72)
-61	61				1.653 (41.99)	.540 (13.72)	1.75 (44.45)	2.072 (52.63)

TABLE 1B - DIMENSIONS (SELF-LOCKING ONLY)

DASH NUMBER	FOR CONNECTOR SHELL SIZE (REF)				SELF-LOCKING			
	AS81703 SERIES 3	MIL-DTL- 26482 SERIES 2	AS50151 CRIMP	MIL-DTL- 83723 SERIES III	A MAX	R MAX	X MAX (SEE NOTE 5)	Y MAX
-3 1/	3							
-8		8	8S	8	.885 (22.48)	.710 (18.03)	.93 (23.62)	1.257 (31.93)
-10		10	10S, 10SL	10	1.010 (25.65)	↑	1.02 (25.91)	1.339 (34.01)
-12	7	12	12S, 12	12	1.135 (28.83)		1.21 (30.73)	1.532 (38.91)
-14	12	14	14S, 14	14	1.260 (32.00)		1.27 (32.26)	1.592 (40.44)
-16	19	16	16S, 16	16	1.385 (35.18)		1.42 (36.07)	1.741 (44.22)
-18	27	18	18	18	1.510 (38.35)		1.53 (38.86)	1.853 (47.07)
-20	37	20	20	20	1.635 (41.53)		1.65 (41.91)	1.978 (50.24)
-22		22	22	22	1.760 (44.70)	↓	1.78 (45.21)	2.108 (53.54)
-24		24	24	24	1.885 (47.88)	.710 (18.03)	1.90 (48.26)	2.228 (56.59)
-28			28		2.135 (54.23)	.890 (22.61)	2.20 (55.88)	2.528 (64.21)
-32			32		2.395 (60.83)	↑	2.27 (57.66)	2.591 (65.81)
-36			36		2.635 (66.93)		2.39 (60.71)	2.716 (68.99)
-40			40		2.885 (73.28)		2.52 (64.01)	2.841 (72.16)
-44			44		3.135 (79.63)	↓	2.77 (70.36)	3.091 (78.51)
-48			48		3.385 (85.98)	.890 (22.61)	2.89 (73.41)	3.216 (81.69)
-61 1/	61							

1/ NOT AVAILABLE ON SELF-LOCKING CONFIGURATION.

TABLE 1C - DIMENSIONS (NON-SELF LOCKING AND SELF-LOCKING, CONTINUED)

DASH NUMBER	F (SEE NOTE 4) WIRE BUNDLE ACCOMMODATION RANGE		G MAX	S ±.020	T / T1 MAX	Z ±.062	W +.000 -.062 SCREW LENGTH	SCREW SIZE
	MAX	MIN						
-3	.204 (5.18)	.125 (3.18)	.782 (19.86)	.250 (6.35)	.140 (3.56)	.777 (19.74)	.500 (12.70)	6-32
-8	.204 (5.18)	.125 (3.18)	.782 (19.86)	↑	↑	.746 (18.95)	.500 (12.70)	↑
-10	.286 (7.26)	.187 (4.75)	.862 (21.89)			.805 (20.45)	.500 (12.70)	
-12	.416 (10.57)	.291 (7.39)	1.003 (25.48)	↓	↓	.867 (22.02)	.625 (15.88)	↓
-14	.476 (12.09)	.351 (8.92)	1.061 (26.95)			.930 (23.62)	.625 (15.88)	
-16	.626 (15.90)	.501 (12.73)	1.334 (33.88)	.250 (6.35)	.140 (3.56)	.994 (25.25)	.625 (15.88)	6-32
-18	.706 (17.93)	.518 (13.16)	1.466 (37.24)	.375 (9.53)	.171 (4.34)	1.171 (29.74)	.750 (19.05)	8-32
-20	.831 (21.11)	.581 (14.76)	1.572 (39.93)	↑	↑	1.234 (31.34)	.875 (22.23)	↑
-22	.956 (24.28)	.644 (16.36)	1.688 (42.88)	↓	↓	1.296 (32.92)	1.000 (25.40)	↓
-24	1.081 (27.46)	.706 (17.93)	1.790 (45.47)	.375 (9.53)	.171 (4.34)	1.358 (34.49)	1.125 (28.58)	↓
-28	1.187 (30.15)	.750 (19.05)	2.035 (51.69)	.500 (12.70)	.203 (5.16)	1.572 (39.93)	1.250 (31.75)	8-32
-32	1.250 (31.75)	.875 (22.23)	2.386 (60.60)	↑	↑	1.797 (45.64)	1.250 (31.75)	¼-20
-36	1.375 (34.93)	.938 (23.83)	2.496 (63.40)	↓		1.922 (48.82)	1.500 (38.10)	↑
-40	1.500 (38.10)	.938 (23.83)	2.566 (65.18)	.500 (12.70)		2.047 (51.99)	1.500 (38.10)	↑
-44	1.750 (44.45)	1.188 (30.18)	2.860 (72.64)	.625 (15.88)	↓	2.296 (58.32)	1.750 (44.45)	↓
-48	1.875 (47.63)	1.312 (33.32)	3.344 (84.94)	.625 (15.88)	.203 (5.16)	2.421 (61.49)	2.000 (50.80)	¼-20
-61	1.081 (27.46)	.706 (17.93)	1.775 (45.09)	.375 (9.53)	.171 (4.34)	1.388 (35.26)	1.125 (28.58)	8-32

NOTES:

- DIMENSIONS ARE IN INCHES.
- METRIC EQUIVALENTS ARE BASED UPON 1.00 INCH = 25.4 MM AND SHALL BE IN ACCORDANCE WITH ASTM E380, PARAGRAPH 4.5, METHOD A AND ASTM E29, ROUNDING-OFF METHOD.
- DIMENSIONS APPLY AFTER PLATING.
- "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.
- MEASURED FROM THE ROOT OF THE TOOTH TO THE REAR OF THE SADDLE CLAMP.

REQUIREMENTS:

1. CONNECTOR ACCESSORY DESIGN AND CONSTRUCTION:

DIMENSIONS AND CONFIGURATION: SEE FIGURE 1 AND TABLE 1.

2. INTERFACE DIMENSIONS: IN ACCORDANCE WITH AS85049, FIGURE 4 OR 4A.

3. ACCESSORIES CONSIST OF A COUPLING NUT AND STRAIN RELIEF.

4. DETENTED SELF-LOCKING PROVIDES A POSITIVE AUDIBLE DETENTED COUPLING.

5. THE STRAIN RELIEF ACCOMMODATES AS85049/127 BUSHING STRIP.

6. CLAMPS SHALL HAVE NO PROTRUSIONS OR SHARP EDGES WHICH MAY PINCH CABLE.

7. MATERIAL AND FINISH: SEE TABLE 2. ACCESSORIES SHALL BE AS SHOWN IN TABLE 2.

TABLE 2 - MATERIAL AND FINISH

FIGURE	MATERIAL	FINISH
1	ALUMINUM ALLOY IN ACCORDANCE WITH AS85049	A N <u>1</u> / W <u>2</u>
1	CORROSION RESISTANT STEEL 300 SERIES IN ACCORDANCE WITH AMS763	S

1/ NOT FOR NAVY USE. AIR FORCE USE IS FOR SPACE APPLICATIONS ONLY.
W IS THE PREFERRED FINISH.

2/ W IS NOT FOR USE IN SPACE APPLICATION. ALSO SEE SPECIFICATION NOTE.

8. CLAMPS, SCREWS AND LOCK WASHERS: 300 SERIES CORROSION-RESISTANT STEEL, PASSIVATE.

9. SELF-LOCKING DEVICE: CORROSION RESISTANT MATERIAL

10. 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 AS85049, PARAGRAPH 4.6.15.

b. VIBRATION: SEE AS85049, PARAGRAPH 3.5.4.1.

11. 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.

12. QUALIFICATION: SEE AS85049, CATEGORY 4B.