FEDERAL SUPPLY CLASS
5935

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

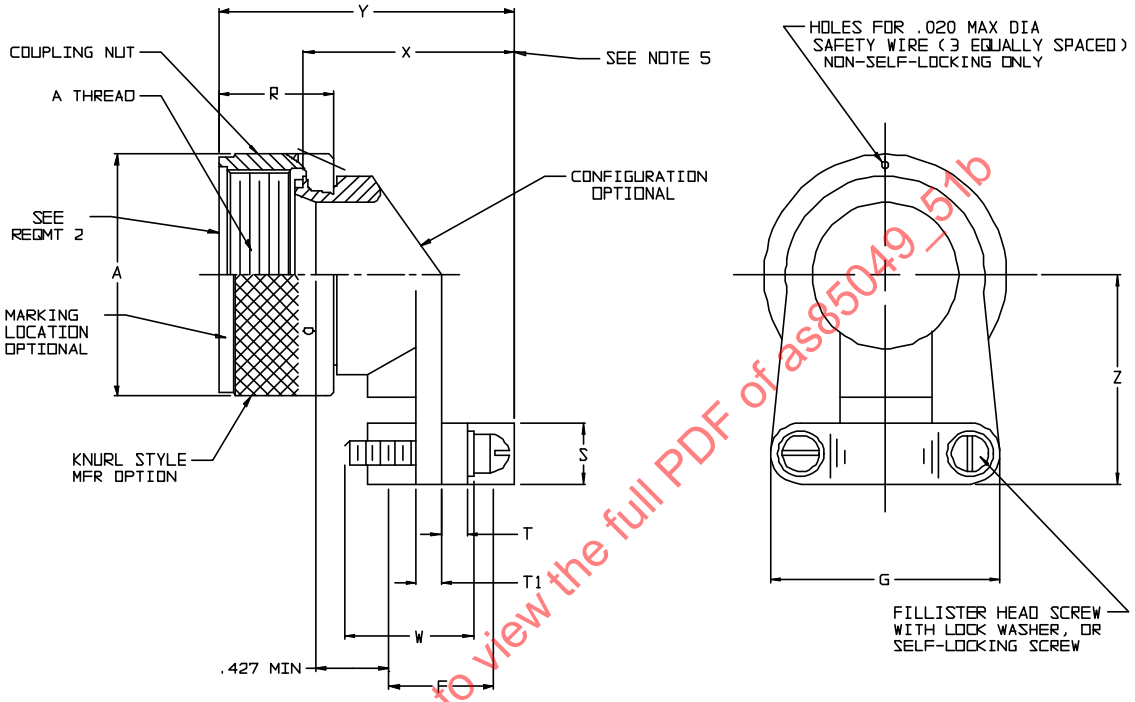
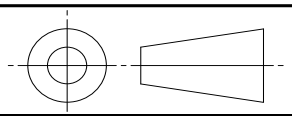


FIGURE 1 - CONFIGURATION AND DIMENSIONS (NON-SELF-LOCKING AND SELF-LOCKING)

THIRD ANGLE PROJECTION



ISSUED 1998-08 REVISED 2009-08

CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL, STRAIN RELIEF, NONENVIRONMENTAL, 90°, SELF-LOCKING AND NON-SELF-LOCKING CATEGORY 4B (FOR MIL-DTL-5015 CRIMP, MIL-DTL-26482 SERIES 2, AS81703 SERIES 3, AND MIL-DTL-83723 SERIES III CONNECTORS)

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)** **Tel: 724-776-4970 (outside USA)**
Fax: 724-776-0790 **Email: CustomerService@sae.org** **SAE WEB ADDRESS: http://www.sae.org**

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

DASH NUMBER	FOR CONNECTOR SHELL SIZE (REF)				NONSELF-LOCKING			
	AS81703 SERIES 3	MIL-DTL-26482 SERIES 2	MIL-DTL-5015 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	MIL-DTL-5015 CRIMP	MIL-DTL-83723 SERIES III	A MAX	L MAX CLOSED	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:

1. DIMENSIONS ARE IN INCHES.
2. METRIC EQUIVALENTS ARE BASED UPON 1.00 INCH = 25.4 MM AND SHALL BE IN ACCORDANCE WITH ASTM E 380, PARAGRAPH 4.5, METHOD A AND ASTM E 29, ROUNDING-OFF METHOD.
3. DIMENSIONS APPLY AFTER PLATING.
4. "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.
5. 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 SAE 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 SAE 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 SAE AS85049	A N 1/ W 2/
1	CORROSION RESISTANT STEEL 300 SERIES IN ACCORDANCE WITH SAE AMS 763	S

1/ NOT FOR NAVY USE. AIR FORCE USE IS FOR SPACEAPPLICATIONS 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 SAE AS85049, PARAGRAPH 4.6.15.

    b. VIBRATION: SEE SAE 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 SAE AS85049, CATEGORY 4B.