

[INCH-POUND]

MIL-C-85049/49C

6 September 1990

SUPERSEDING

MIL-C-85049/49B

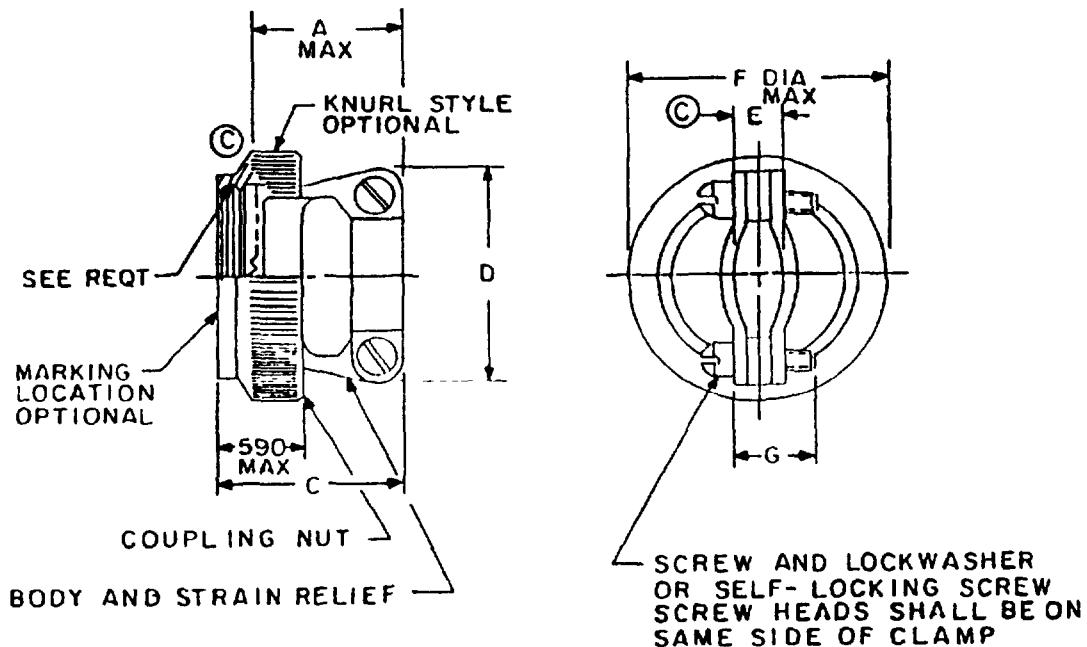
26 January 1987

MILITARY SPECIFICATION SHEET

CONNECTOR ACCESSORIES, ELECTRICAL, STRAIN RELIEF, STRAIGHT,
SELF-LOCKING AND NONSELF-LOCKING, CATEGORY 4B
(FOR MIL-C-38999 SERIES I AND II CONNECTORS)

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall
consist of this specification sheet and the issue of the following
specification listed in that issue of the Department of Defense
Index of Specifications and Standards (DODISS) specified in the
solicitation: MIL-C-85049.



(C) Denotes changes

FIGURE 1. Dimensions and configuration (self-locking only).

AMSC N/A

DISTRIBUTION STATEMENT A

1 of 6

Approved for public release; distribution is unlimited.

FSC 5935

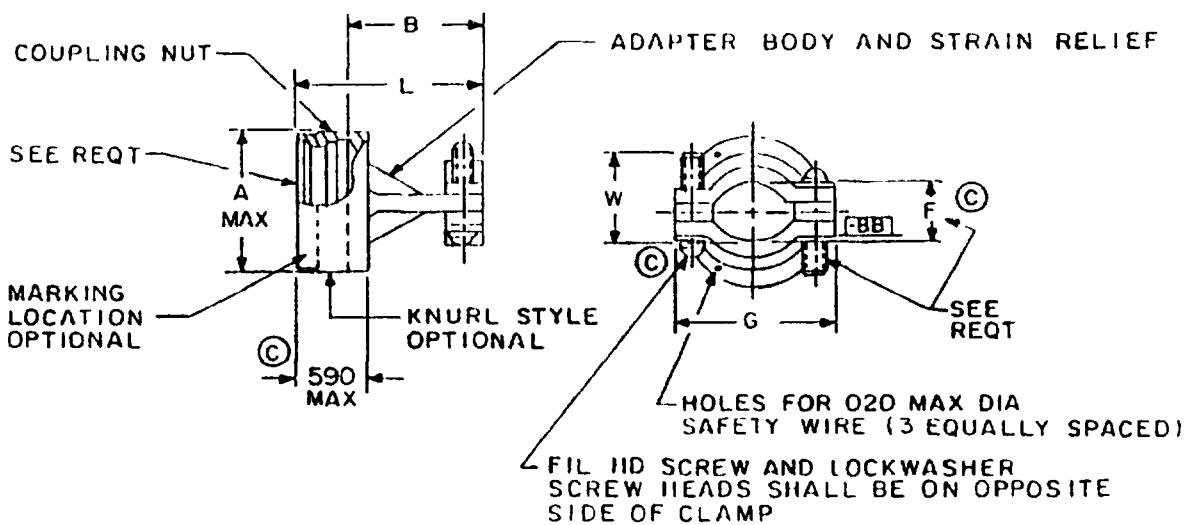
Shell sizes and dimensions

Dash number	Connector shell size		A max	C max	D max	E Wire bundle accommodation range (See note 6)		F max dia	G *.032 screw length	Screw size
	Series II		Series I			Min	Max			
8	8	9	.91 (23.1)	1.10 (27.9)	.85 (21.6)	.098 (2.49)	.234 (5.94)	.859 (21.82)	.500 (12.70)	6-32
10	10	11	.91 (23.1)	1.10 (27.9)	.90 (22.9)	.153 (3.89)	.234 (5.94)	.984 (24.99)	.500 (12.70)	6-32
12	12	13	1.01 (25.7)	1.20 (30.5)	1.10 (22.9)	.190 (4.83)	.328 (8.33)	1.156 (29.36)	.625 (15.88)	6-32
14	14	15	1.06 (26.9)	1.25 (31.8)	1.15 (29.2)	.260 (6.60)	.457 (11.61)	1.281 (32.54)	.750 (19.05)	6-32
16	16	17	1.16 (29.5)	1.35 (34.3)	1.30 (33.0)	.283 (7.19)	.614 (15.60)	1.406 (35.71)	.750 (19.05)	6-32
18	18	19	1.41 (35.9)	1.60 (40.6)	1.50 (38.1)	.325 (8.26)	.634 (16.10)	1.516 (38.51)	.750 (19.05)	8-32
20	20	21	1.51 (38.4)	1.70 (43.2)	1.60 (40.6)	.343 (8.71)	.698 (17.73)	1.641 (41.68)	.875 (22.23)	8-32
22	22	23	1.66 (42.2)	1.85 (47.0)	1.70 (43.2)	.381 (9.68)	.823 (20.90)	1.766 (44.86)	1.000 (25.40)	8-32
24	24	25	1.76 (44.7)	1.95 (49.5)	1.80 (45.7)	.418 (10.62)	.853 (21.66)	1.891 (48.03)	1.125 (28.58)	8-32

NOTES:

1. Dimensions are in inches.
2. Dimensions apply after plating.
3. Metric equivalents are to nearest .01 mm for information only.
4. Millimeters are in parentheses.
5. Metric equivalent are based on 25.4 mm = 1 inch.
6. 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.

FIGURE 1. Dimensions and configurations (self-locking only) - Continued.

FIGURE 2 Dimensions and configurations (nonself-locking only).

Shell sizes and dimensions

Dash number	Connector shell size		A maximum diameter of coupling ring (See note 7)	B maximum (See note 7)	C Wire bundle accommodation range (See note 6)		G maximum	L maximum	W * .032 screw length	Screw size
	Series II	Series I			Min	Max				
8	8	9	.75 (19.1)	.91 (23.1)	.093 (2.49)	.234 (5.49)	.85 (21.6)	1.10 (27.9)	.500 (12.70)	6-32
10	10	11	.85 (21.5)	.91 (23.1)	.153 (3.89)	.234 (5.49)	.90 (22.9)	1.10 (27.9)	.500 (12.70)	6-32
12	12	13	1.00 (25.4)	1.01 (25.9)	.190 (4.83)	.328 (8.33)	1.10 (27.9)	1.20 (30.5)	.625 (15.88)	6-32
14	14	15	1.10 (27.9)	1.06 (26.7)	2.60 (6.60)	4.57 (11.61)	1.15 (29.2)	1.25 (31.8)	.750 (19.05)	6-32
16	16	17	1.25 (31.8)	1.16 (29.5)	.283 (7.19)	.614 (15.60)	1.30 (33.0)	1.356 (34.3)	.750 (19.05)	6-32
18	18	19	1.40 (35.6)	1.41 (35.8)	.325 (8.26)	.634 (16.10)	1.50 (38.1)	1.60 (40.6)	.750 (19.05)	8-32
20	20	21	1.50 (38.1)	1.51 (38.4)	.343 (8.71)	.698 (17.73)	1.60 (40.6)	1.701 (43.2)	.875 (22.23)	8-32
22	22	23	1.65 (41.9)	1.66 (42.2)	.381 (9.68)	.823 (20.90)	1.70 (43.2)	1.85 (47.0)	1.000 (25.40)	8-32
24	24	25	1.75 (44.5)	1.76 (44.7)	.418 (10.62)	.853 (21.67)	1.80 (45.7)	1.951 (49.5)	1.125 (28.58)	8-32

NOTES

- Dimensions are in inches.
- Dimensions apply after plating.
- Metric equivalents are to nearest .01 mm for information only.
- Millimeters are in parentheses.
- Metric equivalent are based on 25.4 mm = 1 inch
- 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 "B" dimension is measured from the bottom of the accessory teeth to the end of the clamp

FIGURE 2 Dimensions and configurations (nonsself-locking only) - Continued.

REQUIREMENTS.

Self-locking and nonself-locking styles

Design and construction

Dimensions and configurations See figures 1 and 2.

Interface dimensions: In accordance with MIL-C-38999, series I and II.

Accessory: Consists of a coupling nut and body. The coupling nut shall be captivated to, and free to rotate on the body. This accessory will not accommodate connectors using size 8, 4, or 0 contacts. Figure 2 dimension F₁ is applicable when the end of screw is flush with -BB-. Clamp shall have no protrusions or sharp edges which may pinch cable.

Material and finish: See table I. Accessories shall be as shown in table I.

Clamp screws and lockwashers: 300 series corrosion-resistant steel, passivate.

TABLE I. Material and finish.

Figure	Material	Finish
1	Aluminum alloy in accordance with MIL-C-85049	N and W ^{1/}
1	Corrosion-resistant steel, 300 series in accordance with QQ-S-763	S
2	Aluminum alloy in accordance with MIL-C-85049	A, N, and W ^{1/}

^{1/} A finish inactive for new design. N finish not for Navy use; Air Force use for space applications only. W is the preferred finish.

Self-locking styles only:

Self-locking device within the coupling nut shall be corrosion-resistant material and shall provide a positive detent. Couplings with self-locking devices shall meet all the performance requirements specified herein for its specific category and the following additional tests.

Life cycle: The coupling with the locking device engaged shall be rotated 60 full turns in a clockwise direction and 60 full turns counter clockwise, prior to standard qualification testing. Cycle speed shall not exceed one full turn per second.

Vibration: Backshells shall be subjected to test parameters of applicable connector specifications. The coupling torque shall be within +20, -10 inch-pounds of the initial value.

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Part or Identifying number (PIN). See example below.

M85049/ 49 -2 S 10 W

Military designator _____

Specification sheet _____

Nonsignificant (used in previous part number) _____

Configuration S - for self-locking, use a dash for nonself-locking _____

Dash number (see figures 1 and 2) _____

Finish (see table I) _____

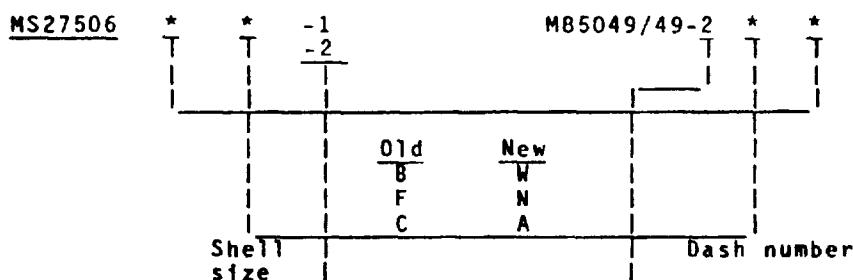
Qualification:

Self-locking and nonself-locking styles. The connector accessories shall meet the qualification requirements in accordance with MIL-C-85049 category 48. The accessory shall be tested in accordance with MIL-C-38999 series I connectors.

Self-locking only: For qualification testing the accessories shall be installed on the specified connector or fixture with a coupling torque of 80 percent of coupling thread strength values given for medium and light duty accessories as specified in table III of MIL-C-85049. The tolerance shall be ± 5 inch-pounds.

QPL evaluating activity: Naval Avionics Center, Code B/444, 6000 East 21st Street, Indianapolis, IN 46219-2189.

Supersession data: M85049/49-1XX is superseded by M85049/49-2XXXX.



CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - AS
Air Force - 85

Review activities:

Army - AR, MI
Navy - EC
Air Force - 11, 15, 19, 99
DLA - ES

Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5935-3746)