

INCH-POUND

MIL-C-85049/51C

30 November 1990

SUPERSEDING

MIL-C-0085049/51B(USAF)

28 April 1989

MIL-C-0085049/51A(USAF)

21 November 1986

MIL-C-85049/51

16 January 1980

MS3418E

10 May 1982

MILITARY SPECIFICATION SHEET

CONNECTOR ACCESSORIES, ELECTRICAL, STRAIN RELIEF,
NONENVIRONMENTAL, 90°, SELF-LOCKING AND NON-SELF-LOCKING CATEGORY 4B
(FOR MIL-C-5015 CRIMP, MIL-C-26482 SERIES 2, MIL-C-81703
SERIES 3, AND MIL-C-83723 SERIES III 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.

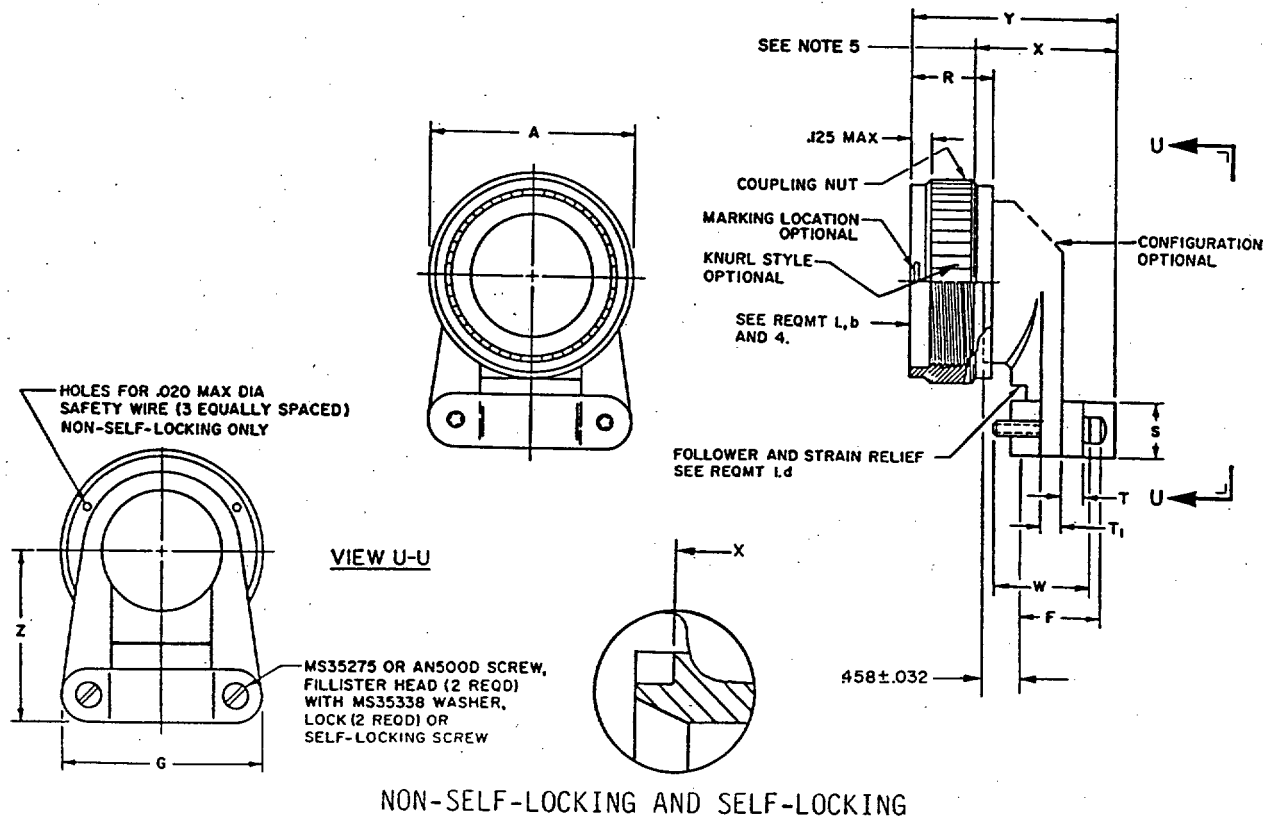


FIGURE 1. Configuration and dimensions.

AMSC N/A

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

FSC 5935

TABLE I. Shell size, dash numbers and dimensions.

Dash No.	For Connector Shell, Size (Ref)				Non-Self-Locking						Self-Locking			
	MIL-C-81703 Series 3	MIL-C-26482 Series 2	MIL-C-5015 Crimp	MIL-C-83723 Series III	A Max Dia	R Max	Fillister Head Screw		X Max	Y Max	A Max Dia	R Max	X Max	Y Max
							AN500D Dash No.	MS35275 Dash No.						
-3	3				.669	.540	6-8	230	.78	1.101				
-8		8	8S	8	.617	↑	6-8	230	.78	1.101	.885	.710	.93	1.257
-10		10	10S&10SL	10	.734	↑	6-8	230	.86	1.183	1.010	↑	1.02	1.339
-12	7	12	12S&12	12	.858	↑	6-10	231	1.05	1.376	1.135	↑	1.21	1.532
-14	12	14	14S&14	14	.984	↑	6-10	231	1.11	1.436	1.260	↑	1.27	1.592
-16	19	16	16S&16	16	1.112	↑	6-10	231	1.26	1.585	1.385	↑	1.42	1.741
-18	27	18	18	18	1.218	↑	8-12	247	1.37	1.697	1.510	↑	1.53	1.853
-20	37	20	20	20	1.345	↑	8-14	248	1.50	1.822	1.635	↑	1.65	1.978
-22		22	22	22	1.468	↓	8-16	249	1.62	1.947	1.760	↓	1.78	2.108
-24		24	24	24	1.593	.540	8-18	N/A	1.75	2.072	1.885	.710	1.90	2.228
-28			28		1.969	.702	8-20	250	1.89	2.372	2.135	.890	2.20	2.528
-32			32		2.219	↑	416-20	284	1.95	2.435	2.395	↑	2.27	2.591
-36			36		2.469	↑	416-24	285	2.07	2.560	2.635	↑	2.39	2.716
-40			40		2.719	↑	416-24	285	2.20	2.685	2.885	↑	2.52	2.841
-44			44		2.969	↓	416-28	286	2.45	2.935	3.135	↓	2.77	3.091
-48			48		3.219	.702	416-32	297	2.57	3.060	3.385	.890	2.89	3.216
-61	61				1.653	.540	8-18	N/A	1.75	2.072				

N/A = Not Available

TABLE I. Shell size, dash numbers and dimensions (continued).

Non-Self-Locking and Self-Locking									
Dash No.	F (see Note 5)		G +.020	S +.020	T T ₁ +.015	Z +.062	MS35338 Washer, Lock Dash Number	W +.032 Screw Length	Screw Size
	Wire Bundle Accommodation Range								
	Max	Min							
-3 <u>1/</u>	.204	.125	.732	.250	.125	.777	136	.500	6-32
-8	.204	.125	.732	↑	↑	.746	↑	.500	↑
-10	.286	.187	.812	↑	↑	.805	↑	.500	↑
-12	.416	.291	.968	↑	↑	.867	↑	.625	↑
-14	.476	.351	1.026	↓	↓	.930	↓	.625	↓
-16	.626	.501	1.299	.250	.125	.994	136	.625	6-32
-18	.706	.518	1.431	.375	.156	1.171	137	.750	8-32
-20	.831	.581	1.537	↑	↑	1.234	↑	.875	↑
-22	.956	.644	1.633	↓	↓	1.296	↑	1.000	↑
-24	1.081	.706	1.755	.375	.156	1.358	↓	1.125	↓
-28	1.187	.750	2.000	.500	.188	1.572	137	1.250	8-32
-32	1.250	.875	2.366	↑	↑	1.797	139	1.250	1/4-20
-36	1.375	.938	2.476	↓	↑	1.922	↑	1.500	↑
-40	1.500	.938	2.546	.500	↓	2.047	↑	1.500	↑
-44	1.750	1.188	2.840	.625	↓	2.296	↓	1.750	↓
-48	1.875	1.312	3.324	.625	.188	2.421	139	2.000	1/4-20
-61 <u>1/</u>	1.081	.706	1.755	.375	.156	1.388	137	1.125	8-32

1/ Not available on self-locking configuration.

Inch	mm	Inch	mm	Inch	mm	Inch	mm
0.015	0.380	0.885	22.470	1.420	36.060	2.135	54.220
0.020	0.500	0.890	22.600	1.431	36.340	2.200	55.880
0.032	0.810	0.930	23.620	1.436	36.470	2.219	56.360
0.062	1.570	0.938	23.820	1.468	37.280	2.228	56.590
0.125	3.170	0.956	24.280	1.500	38.100	2.270	57.650
0.156	3.960	0.968	24.580	1.510	38.350	2.296	58.310
0.187	4.740	0.984	24.990	1.530	38.860	2.366	60.090
0.188	4.770	0.994	25.240	1.532	38.910	2.372	60.240
0.204	5.180	1.000	25.400	1.537	39.030	2.390	60.700
0.250	6.350	1.010	25.650	1.572	39.920	2.395	60.830
0.286	7.260	1.020	25.900	1.585	40.250	2.421	61.490
0.291	7.390	1.026	26.060	1.592	40.430	2.435	61.840
0.351	8.910	1.050	26.670	1.593	40.460	2.450	62.230
0.375	9.520	1.081	27.450	1.620	41.140	2.469	62.710
0.416	10.560	1.087	27.600	1.633	41.470	2.476	62.890
0.476	12.090	1.100	27.940	1.635	41.520	2.520	64.000
0.500	12.700	1.110	28.190	1.650	41.910	2.528	64.210
0.501	12.720	1.112	28.240	1.653	41.980	2.546	64.666
0.518	13.150	1.125	28.570	1.697	43.100	2.560	65.020
0.540	13.710	1.126	28.600	1.700	43.180	2.570	65.270
0.581	14.750	1.135	28.820	1.741	44.220	2.591	65.810
0.617	15.670	1.137	28.870	1.750	44.450	2.635	66.920
0.625	15.870	1.171	29.740	1.755	44.570	2.685	68.190
0.626	15.900	1.183	30.040	1.760	44.700	2.716	68.980
0.644	16.350	1.188	30.170	1.797	45.640	2.719	69.060
0.669	16.990	1.210	30.730	1.822	46.270	2.770	70.350
0.702	17.830	1.218	30.930	1.853	47.060	2.840	72.130
0.706	17.430	1.234	31.340	1.875	47.620	2.841	72.160
0.730	18.540	1.250	31.750	1.885	47.870	2.885	73.270
0.734	18.640	1.257	31.920	1.890	48.000	2.890	73.400
0.746	18.940	1.270	32.250	1.900	48.260	2.935	74.540
0.750	19.050	1.246	32.910	1.922	48.810	2.969	75.410
0.777	19.730	1.299	32.990	1.947	49.450	2.970	75.430
0.780	19.810	1.312	33.320	1.950	49.530	3.011	76.470
0.805	20.440	1.339	34.010	1.969	50.010	3.060	77.720
0.812	20.620	1.345	34.160	1.978	50.240	3.135	79.620
0.831	21.100	1.358	34.490	2.000	50.800	3.216	81.680
0.858	21.79	1.375	34.920	2.047	51.990	3.219	81.760
0.860	21.840	1.376	34.950	2.070	52.570	3.324	84.420
0.867	22.020	1.385	35.170	2.072	52.620	3.385	85.976
0.875	22.220	1.388	35.250	2.108	53.540		

REQUIREMENTS:

1. Design and construction:
 - a. Dimensions and configuration: See figure 1 and table I.
 - b. Interface dimensions shall be in accordance with MIL-C-85049 figure 4.
 - c. This clamp will not accommodate connectors using size 8, 4 and 0 contacts.
 - d. Accessory consists of a coupling nut and follower. The coupling nut shall be captivated to and free to rotate on the follower.
 - e. Clamps shall have no protrusions or sharp edges which may pinch cables.
2. Material and finish: See Table II.

TABLE II. Material and finish.

Figure	Material	Finish
1 & 2	Aluminum alloy in accordance with MIL-C-85049	<u>1/</u> N, <u>2/</u> W A

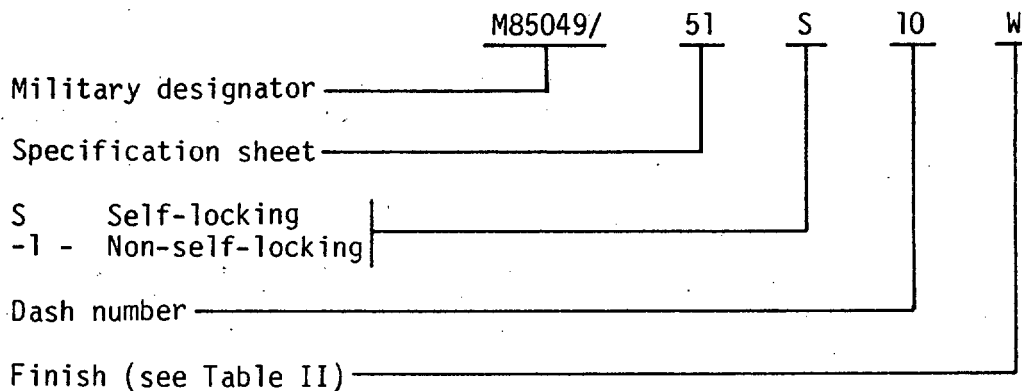
1/ Not for Navy use. Restricted to Air Force Space applications only.
2/ W finish is not for use in space application.

3. Qualification:

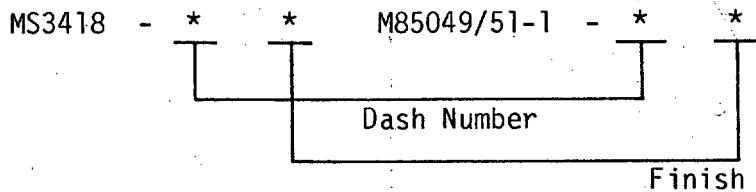
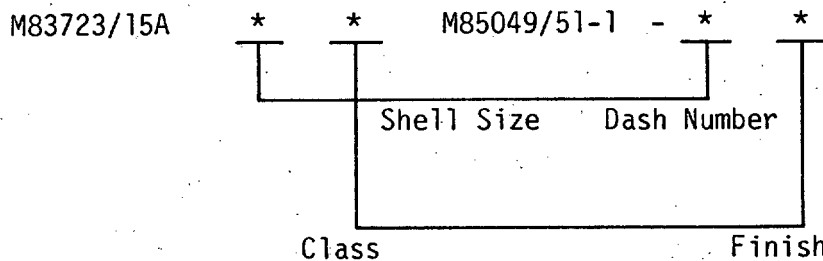
Non-self-locking and self-locking - See MIL-C-85049, category 4B.

Information pertaining to qualification of products may be obtained from the Commanding Officer, Naval Avionics Center, Attention: Code B/444, 6000 East 21st Street, Indianapolis, IN 46219-2189.

4. Part number: See example below:



5. Supersession data:

OldNewA
C
G
NW
W
A
NOldNewA
RW
N

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 E380, paragraph 4.5, Method A and ASTM E29, 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 back of the coupling nut.

Revision letters are not used to denote changes due to the extensiveness of the changes.

Custodians:

Army - CR
Navy - AS
Air Force - 85

Preparing activity:

Navy - AS
Project No. 5935-3734-02

Review activities:

Army - AR, MI
Navy - EC
Air Force - 11, 99
DLA - ES
NASA - JFK, LRC, GSF