FEDERAL SUPPLY CLASS
5935

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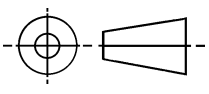

ISSUED 2001-07

PREPARED BY SAE SUBCOMMITTEE AE-8C1

SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL, MOUNTING DEVICE FLANGE TYPE, 1/4 MOUNTING PERIMETER DEVICE, TYPE III (LIGHT DUTY)

AS85049/96
SHEET 1 OF 9

Printed in the U.S.A.

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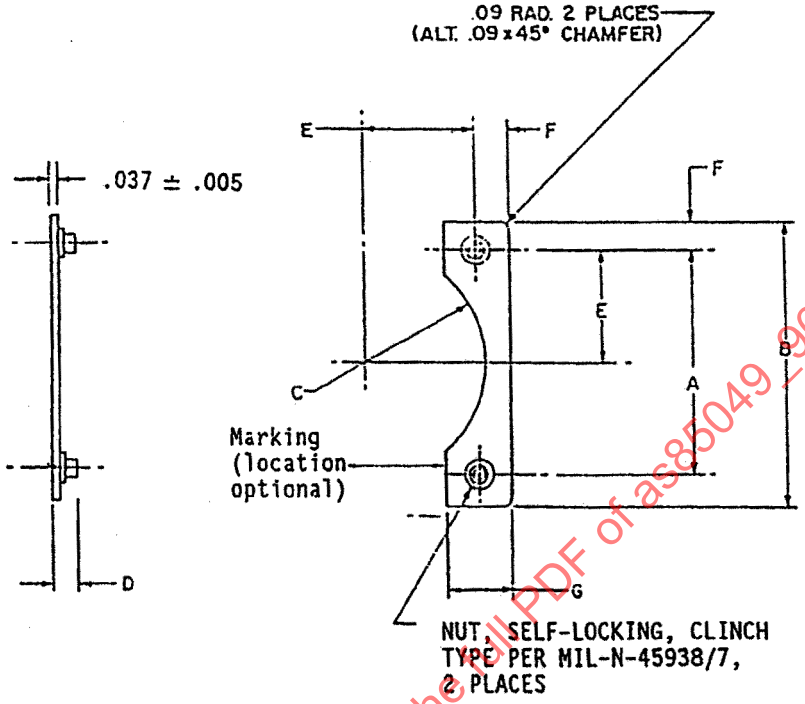


Notes:

1. Dimensions are inches.
2. Unless otherwise specified, tolerance is ± .010.
3. Classes represent shell size variations (see Table I).
4. For mounting flange cross reference information see Table III.

FIGURE 1. MOUNTING FLANGE, TYPE III.

TABLE I. MOUNTING FLANGES.

M85049/ 96-	SHELL SIZE	THRD UNJC -3B	A± .003	B± .015	C +.015 -.000	D	E± .001	F +.005 -.000	G +.010 -.000
3	3	4-40	.625	.925	.320	.106/ .166	.312	.150	.300
7	7	4-40	.719	1.016	.359	.106/ .166	.359	.149	.298
8	8	4-40	.594	.891	.277	.106/ .166	.297	.148	.296
10	10	4-40	.719	1.016	.359	.106/ .166	.359	.149	.298
12	12	4-40	.812	1.109	.425	.106/ .166	.406	.148	.296
14	14	4-40	.906	1.203	.492	.106/ .166	.453	.148	.296
16	16	4-40	.969	1.266	.547	.106/ .166	.484	.149	.298
18	18	4-40	1.062	1.390	.610	.106/ .166	.531	.164	.328
19	19	4-40	.906	1.203	.492	.106/ .166	.453	.148	.296
20	20	4-40	1.156	1.510	.672	.106/ .166	.578	.177	.354
22	22	4-40	1.250	1.640	.739	.106/ .166	.625	.195	.390
24	24	6-32	1.375	1.760	.797	.123/ .183	.687	.193	.386
25	25	6-32	1.500	1.859	.845	.123/ .183	.750	.179	.358
27	27	4-40	.969	1.266	.547	.106/ .166	.484	.149	.298
28	28	6-32	1.562	2.000	.920	.123/ .183	.781	.219	.438
32	32	6-32	1.750	2.312	1.058	.123/ .183	.875	.281	.562
36	36	6-32	1.938	2.500	1.170	.123/ .183	.969	.281	.562

TABLE I. MOUNTING FLANGES - (CONTINUED).

M85049/ 96-	SHELL SIZE	THRD UNJC -3B	A± .003	B± .015	C + .015 - .000	D	E± .001	F+.005 -.000	G+.010 -.000
37	37	4-40	1.187	1.500	.670	.106/ .166	.593	.157	.314
61	61	4-40	1.437	1.812	.812	.106/ .166	.718	.188	.376

TABLE II. QUALIFICATION.

Inspection	Requirement paragraph	Test paragraph
Examination of product	3.1, 3.2, 3.3, 3.4, 3.7	4.6.1
Protective coating	MIL-C-85049/96	MIL-C-85049/96
Marking	MIL-T-85049/96	4.6.1
Installation	MIL-T-85049/96	MIL-T-85049/96
Vibration	3.5.4	MIL-T-85049/96
Shock	3.5.5	4.6.6
Coupling thread strength	3.5.9	4.6.10
Salt spray	MIL-T-85049/96	MIL-T-85049/96
External bending moment	MIL-T-85049/96	4.6.11
Locking torque	MIL-T-85049/96	MIL-T-85049/96
Torque out	MIL-T-85049/96	MIL-T-85049/96
Push out	MIL-T-85049/96	MIL-T-85049/96

Requirements:

Material. Mounting flanges shall be of a construction with predrilled or punched holes in aluminum alloy 2024-T3 per QQ-A-250/4 or 6061-T6 per QQ-A-250/11; and incorporating self locking nuts, clinch type, per MIL-N-45938/7 (See protective coating paragraph).

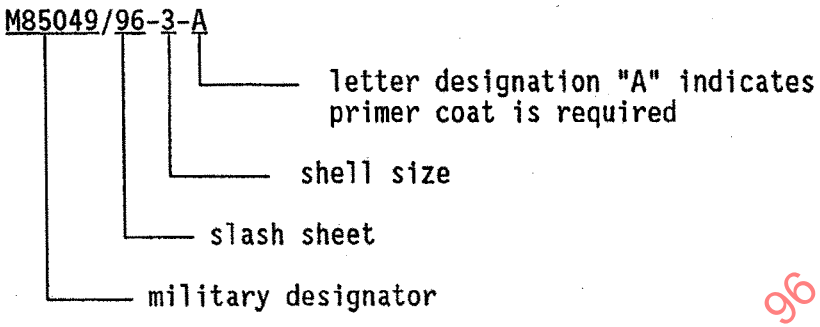
Protective coating: Alodine per MIL-C-5541, Class IA. When required, epoxy polyamide primer, 2 coats per MIL-P-23377, Type 1, shall be applied either before or after nut installation provided the performance characteristics of the nut are not degraded and all other requirements of the specification sheet are met. Clinch nuts shall be cleaned and descaled in accordance with ASTM A380 and passivated in accordance with QQ-P-35, followed by a solid film lubricant coating per MIL-L-46010.

Dimensions. Dimensions and tolerances shall be as stated herein and shall apply after plating and prior to supplemental lubrication.

Marking. Mounting flanges shall have the military part number and manufacturer's identification legibly and permanently marked as specified in MIL-C-85049. Military part number marking is optional on shell size 10 and smaller because of limited space (see example of military part number).

Military part number:

Example:



Installation. When tested as specified herein, evidence of cocking, looseness, splits or cracks shall be cause for rejection.

Salt spray. When tested as specified herein, there shall be no damage detrimental to the operation or function of the mounting flange.

External bending moment. After tested as specified herein, there shall be no shall not have any damage detrimental to the normal operation or function of the mounting flange.

Locking Torque. When tested as specified herein, samples shall meet the locking torque requirements specified in MIL-N-25027.

Torque out. The clinch nuts shall meet the torque out requirement of 15 in-lbs minimum for 4-40 threaded nuts and 20 in-lbs minimum for 6-32 threaded nuts, when tested as specified herein.

Push out. The clinch nuts shall meet the push out requirement of 100 lbs minimum for 4-40 threaded nuts and 110 lbs minimum for 6-32 threaded nuts, when tested as specified herein.

Qualification: See table II.

Tests:

Test panels. With the connector and mounting flange installed as shown in figure 2, the test panel shall show no evidence of bending or cracking or other damage when subject to the external bending moment test of this specification.

Protective coating. Examination and test of protective coating shall be in accordance with the applicable specification sheet. The protective coating shall be examined to insure compliance with the applicable finish requirements.

Installation. The mounting flange shall be installed as shown in figure 2. Installation forces shall be exerted so that the mounting flange will interface with the panel-flange type electrical connector. Properly installed samples shall be visually inspected under 10 diameters magnification. When applicable, the depth of embedment shall be measured using standard inspection equipment.

Vibration. Mounting flanges shall be subjected to the random vibration tests of MIL-STD-1344, method 2005, test condition VI, letter J, except the sample and fixture shall be as shown in the figure 2 herein.

Salt Spray. Samples taken as specified in MIL-C-85049 shall be subjected to the salt spray environment (Test condition C, 500 hours duration) as specified in method 1001 of MIL-STD-1344.

External bending moment. The sample shall be tested in accordance with MIL-C-85049, using the test configuration of figure 2 in lieu of figure 1 of MIL-C-85049.

Locking torque. Mounting flanges shall be subjected to the locking torque tests specified in MIL-N-25027.

Torque out. Mounting flanges shall be subjected to the torque out tests specified in MIL-N-45938.

Push out. Mounting flanges shall be subjected to the push out tests specified in MIL-N-45938.

Preparation for delivery:

Preservation and packaging. Preservation and packaging shall be level A or C in accordance with PPP-H-1581.

Packing. Packing shall be level A, B or C, as specified in PPP-H-1581.

Marking. Marking of unit packages and shipping containers shall be in accordance with PPP-H-1581.

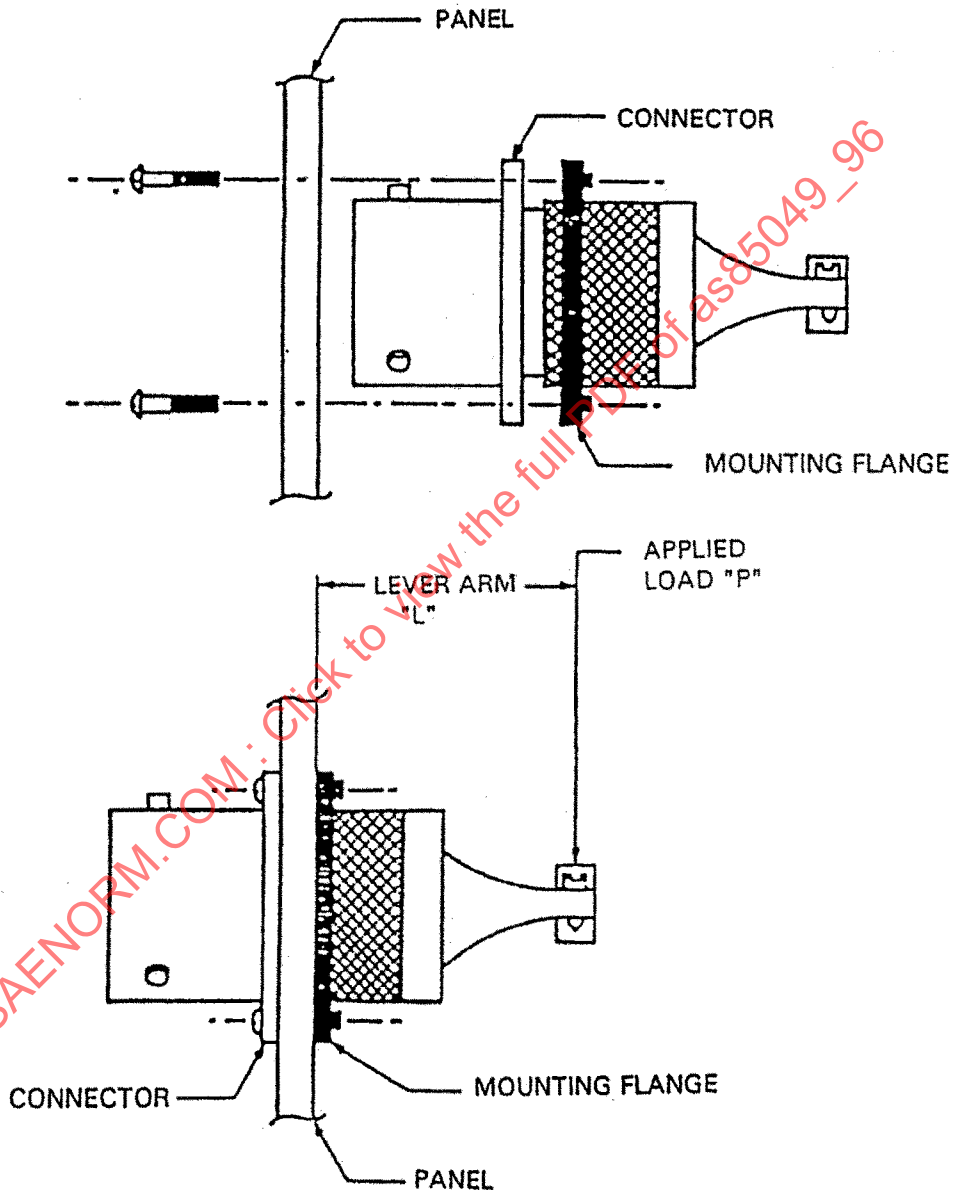


FIGURE 2. INSTALLATION - EXTERNAL BENDING MOMENT TEST SET-UP.

TABLE III. MOUNTING FLANGE CROSS REFERENCE TYPE III.

CONNECTOR	SHELL SIZES									
	M85049/96	8	10	12	14	16	18	20	22	24	25
MIL-C-5015	MS3100	8S	10	12S	14S	16S	18	20	22	24	--
		--	--	12	14	16					
" "	MS3102	8S	10	12S	14S	16S	18	20	22	24	--
		--	--	12	14	16					
" "	MS3400	8S	10	12S	14S	16S	18	20	22	24	--
		--	--	12	14	16					
" "	MS3402	8S	10	12S	14S	16S	18	20	22	24	--
		--	--	12	14	16					
" "	MS3450	8S	10	12S	14S	16S	18	20	22	24	--
		--	--	12	14	16					
" "	MS3452	8S	10	12S	14S	16S	18	20	22	24	--
		--	--	12	14	16					
MIL-C-22992	MS17343	--	--	12	14	16	18	20	22	--	--
MIL-C-26482	MS3110	8	10	12	14	16	18	20	22	24	--
" "	MS3112	8	10	12	14	16	18	20	22	24	--
" "	MS3120	8	10	12	14	16	18	20	22	24	--
" "	MS3122	8	10	12	14	16	18	20	22	24	--
" "	MS3470	8	10	12	14	16	18	20	22	24	--
" "	MS3472	8	10	12	14	16	18	20	22	24	--
MIL-C-27599	MS20026	9	11	13	15	17	19	21	23	25	--
" "	MS27334	8	10	12	14	16	18	20	22	24	--
" "	MS27335	8	10	12	14	16	18	20	22	24	--
MIL-C-38999	MS27466	--	9	11	13	15	17	19	21	23	25
" "	MS27469	--	9	11	13	15	17	19	21	23	25
" "	MS27472	8	10	12	14	16	18	20	22	24	--
" "	MS27475	8	10	12	14	16	18	20	22	24	--