

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

AS85049/4

FEDERAL SUPPLY CLASS
5935

NOTICE

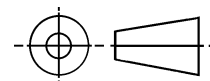
THIS DOCUMENT HAS BEEN TAKEN DIRECTLY FROM U.S. MILITARY SPECIFICATION MIL-C-85049/4A, AMENDMENT 1 AND CONTAINS ONLY MINOR EDITORIAL AND FORMAT CHANGES REQUIRED TO BRING IT INTO CONFORMANCE WITH THE PUBLISHING REQUIREMENTS OF SAE TECHNICAL STANDARDS. THE INITIAL RELEASE OF THIS DOCUMENT IS INTENDED TO REPLACE MIL-C-85049/4A, AMENDMENT 1. ANY PART NUMBERS ESTABLISHED BY THE ORIGINAL SPECIFICATION REMAIN UNCHANGED.

THE ORIGINAL MILITARY SPECIFICATION WAS ADOPTED AS AN SAE STANDARD UNDER THE PROVISIONS OF THE SAE TECHNICAL STANDARDS BOARD (TSB) RULES AND REGULATIONS (TSB 001) PERTAINING TO ACCELERATED ADOPTION OF GOVERNMENT SPECIFICATIONS AND STANDARDS. TSB RULES PROVIDE FOR (A) THE PUBLICATION OF PORTIONS OF UNREVISED GOVERNMENT SPECIFICATIONS AND STANDARDS WITHOUT CONSENSUS VOTING AT THE SAE COMMITTEE LEVEL, AND (B) THE USE OF THE EXISTING GOVERNMENT SPECIFICATION OR STANDARD FORMAT.

UNDER DEPARTMENT OF DEFENSE POLICIES AND PROCEDURES, ANY QUALIFICATION REQUIREMENTS AND ASSOCIATED QUALIFIED PRODUCTS LISTS ARE MANDATORY FOR DOD CONTRACTS. ANY REQUIREMENT RELATING TO QUALIFIED PRODUCTS LISTS (QPL'S) HAS NOT BEEN ADOPTED BY SAE AND IS NOT PART OF THIS SAE TECHNICAL DOCUMENT.

SAENORM.COM : Click to view the full PDF of as85049-4

THIRD ANGLE PROJECTION



ISSUED 2000-04

PREPARED BY SAE SUBCOMMITTEE AE-8C1

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

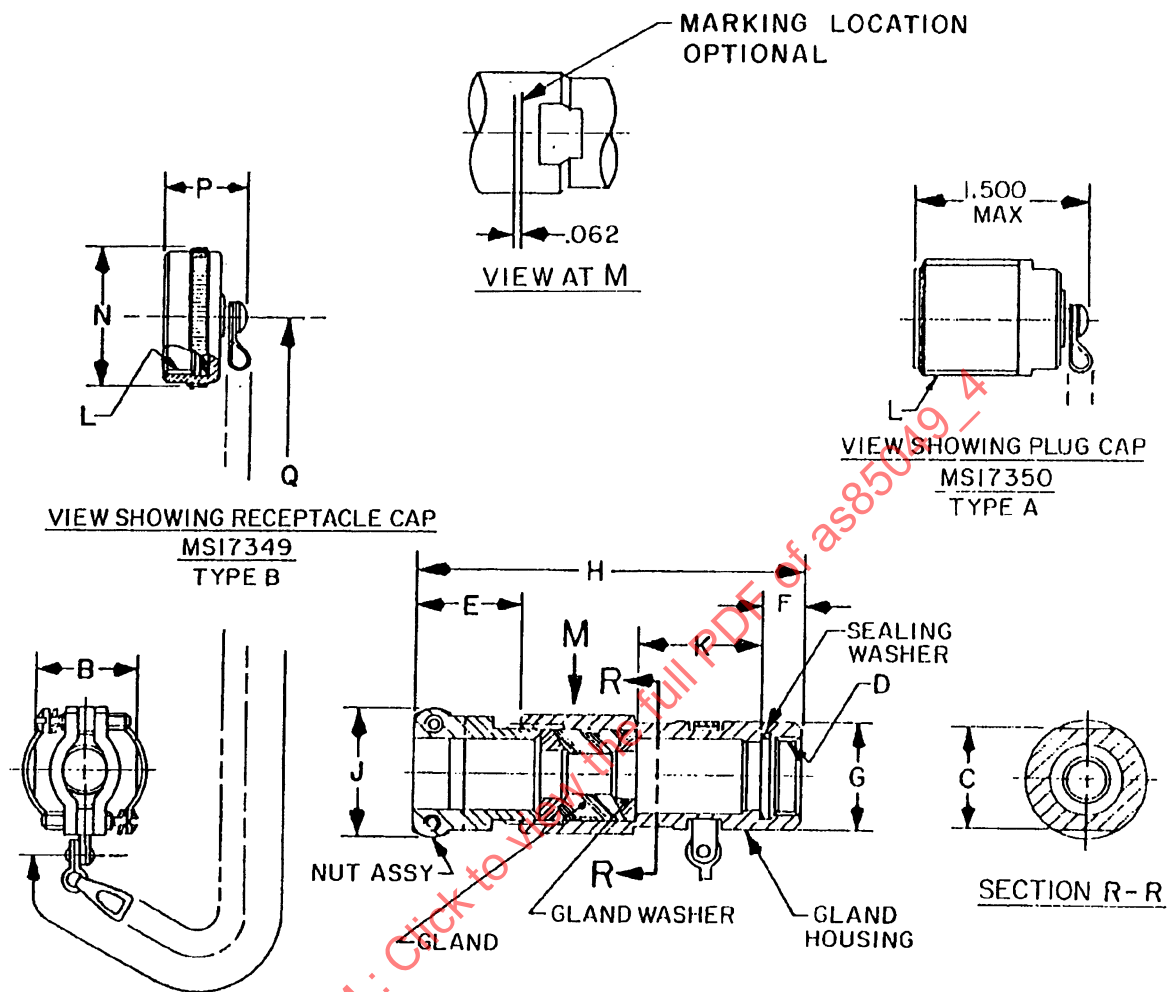
AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL, BACKSHELL, CABLE
SEALING, STRAIGHT, STEP-UP, CATEGORY 1A (FOR MIL-C-22992
CONNECTORS, CLASSES C, J, AND R)

AS85049/4
SHEET 1 OF 15

THE REQUIREMENTS FOR ACQUIRING THE ACCESSORIES DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF MIL-C-85049.

AS85049/4



CONFIGURATION A. STYLE 1 CABLE SEALING.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS.

Size number	Shell size	Cable range		B	C	D Thread Class 2B-LH	E Free length max	F + .016 - .020	G Dia + .010 - .020	H Max	J ± .031	K + .015 - .025	L Thread (plated) Class 2 (A or B)	N Dia max	P Max	Q within one link
		Max dia	Min dia													
1	12	.530	.436	1.000	.812	.7500-20 UNEF	1.062	.479	.938	4.275	1.375	1.219	.8750-0.1P-0.2L-DS	1.094	.765	5.00
2	12	.500	.406	.875	.938	.7500-20 UNEF	.969	.479	.938	3.678	1.125	.871	.8750-0.1P-0.2L-DS	1.094	.765	5.00
3	12	.405	.311	1.000	.812	.7500-20 UNEF	1.062	.479	.938	4.275	1.375	1.219	.8750-0.1P-0.2L-DS	1.094	.765	5.00
4	14	.605	.511	1.000	1.062	.8750-20 UNEF	1.062	.479	1.062	4.177	1.375	1.121	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
5	14	.625	.531	1.062	1.125	.8750-20 UNEF	1.062	.479	1.062	4.489	1.562	1.371	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
6	14	.530	.436	1.000	1.062	.8750-20 UNEF	1.062	.479	1.062	4.177	1.375	1.121	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
7	14	.405	.311	1.000	1.062	.8750-20 NEF	1.062	.479	1.062	4.177	1.375	1.121	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
8	18	.828	.715	1.188	1.250	1.1250-18 NEF	1.094	.479	1.312	4.584	1.688	1.343	1.2500-0.1P-0.2L-DS	1.469	.980	5.00
9	20	.750	.637	1.312	1.375	1.1250-18 NEF	1.094	.479	1.438	4.647	1.812	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
10	20	1.000	.875	1.546	1.375	1.1250-18 NEF	1.281	.479	1.438	4.896	2.125	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
11	20	.900	.787	1.312	1.375	1.2500-18 NEF	1.094	.479	1.438	4.647	1.812	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
12	20	1.055	.930	1.546	1.375	1.2500-18 NEF	1.281	.479	1.438	4.896	2.125	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
13	22	1.000	.875	1.546	1.625	1.3750-18 NEF	1.281	.479	1.562	4.896	2.125	1.371	1.5000-0.1P-0.2L-DS	1.688	.980	6.00
14	22	1.109	.984	1.546	1.625	1.3750-18 NEF	1.281	.479	1.562	4.896	2.125	1.371	1.5000-0.1P-0.2L-DS	1.688	.980	6.00

CONFIGURATION A. STYLE 1 CABLE SEALING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size number	Shell size	Cable range		B	C	D	E	F	G	H	J	K	L	N	P	Q
		Max	Min	Max	Min	Thread Class 2B-LH	Free length max		Dia	Max			Thread (plated) Class 2 (A or B)	Dia max	Max	Within one link
		(dia)	(dia)	+.000	-.010			+.016	+.010		±.031	+.015				
									-.020			-.025				
15	24	1.180	1.055	1.780	1.875	1.6250-18 UNEF	1.281	.479	1.812	4.959	2.469	1.372	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
16	24	1.310	1.185	1.780	1.875	1.6250-18 UNEF	1.281	.479	1.812	4.959	2.469	1.372	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
17	24	1.230	1.105	1.780	1.875	1.6250-18 UNEF	1.281	.479	1.812	4.959	2.469	1.372	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
18	24	1.375	1.250	2.000	1.875	1.6250-18 UNEF	1.281	.479	1.812	4.959	2.625	1.309	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
19	28	1.445	1.320	2.000	2.062	1.8750-16 UN	1.281	.479	2.062	5.021	2.625	1.371	2.0000-0.1P-0.2L-DS	2.219	.980	6.00
20	28	1.531	1.406	2.000	2.062	1.8750-16 UN	1.281	.479	2.062	5.021	2.625	1.371	2.0000-0.1P-0.2L-DS	2.219	.980	6.00
21	28	1.375	1.250	2.000	2.062	1.8750-16 UN	1.281	.479	2.062	5.021	2.625	1.371	2.0000-0.1P-0.2L-DS	2.219	.980	6.00
22	32	1.656	1.531	2.250	2.312	2.0625-16 UNS	1.281	.479	2.312	5.083	2.953	1.370	2.2500-0.1P-0.2L-DS	2.469	.980	6.00
23	32	1.828	1.700	2.438	2.312	2.0625-16 UNS	1.391	.479	2.312	5.385	3.171	1.375	2.2500-0.1P-0.2L-DS	2.469	.980	6.00
24	32	1.562	1.437	2.250	2.312	2.0625-16 UNS	1.281	.479	2.312	5.083	2.953	1.370	2.2500-0.1P-0.2L-DS	2.469	.980	6.00
25	32	1.730	1.605	2.438	2.312	2.0625-16 UNS	1.391	.479	2.312	5.385	3.171	1.375	2.2500-0.1P-0.2L-DS	2.469	.980	6.00
26	36	1.900	1.775	2.438	2.500	2.3125-16 UNS	1.391	.479	2.562	5.354	3.171	1.344	2.2500-0.1P-0.2L-DS	2.719	.980	6.00
27	36	1.730	1.605	2.438	2.500	2.3125-16 UNS	1.391	.479	2.562	5.354	3.171	1.344	2.2500-0.1P-0.2L-DS	2.719	.980	6.00

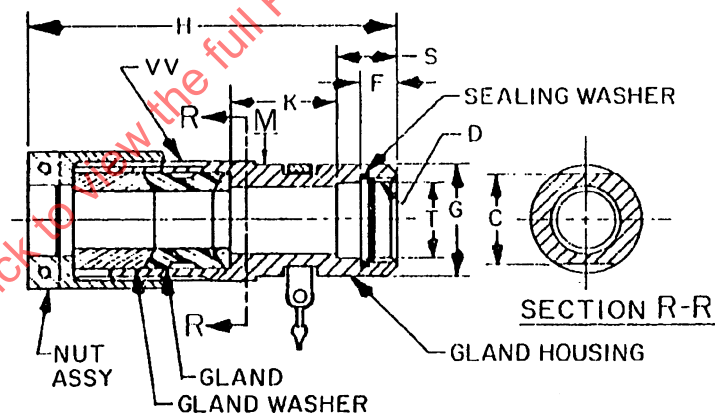
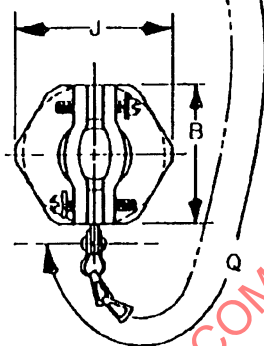
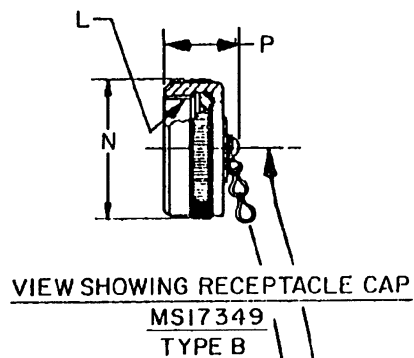
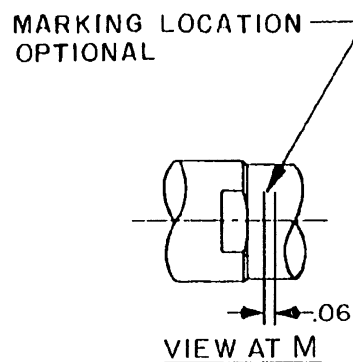
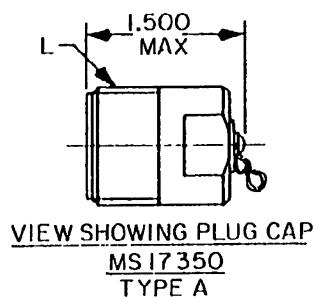
CONFIGURATION A. STYLE 1 CABLE SEALING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size no.	Shell size	Cable range		C	D Thread Class 2B-LH	E Free length max	F	G Dia + .010 - .020	H Max	J + .031 - .025	K + .015 - .025	L Thread (plated) Class 2 (A or B)	N Dia max	P Max	Q Within one link
		Max dia	Min dia												
28	36	1.825	1.700	2.438	2.500	2.3125-16 UNS	.479	2.562	5.354	3.171	1.344	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
29	36	1.984	1.859	2.438	2.500	2.3125-16 UNS	.479	2.562	5.354	3.171	1.344	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
30	36	2.062	1.917	2.750	2.500	2.3125-16 UNS	.479	2.562	5.385	3.375	1.375	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
31	40	2.375	2.230	3.000	2.812	2.6250-16 UN	.667	2.875	5.682	3.625	1.421	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
32	40	2.250	2.105	2.875	2.625	2.6250-16 UN	.667	2.875	5.682	3.500	1.421	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
33	40	2.145	2.000	2.750	2.625	2.6250-16 UN	.667	2.875	5.620	3.375	1.422	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
34	40	2.062	1.917	2.750	2.625	2.6250-16 UN	.667	2.875	5.620	3.375	1.422	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
35	44	2.328	2.183	2.875	2.750	2.8750-16 UN	1.382	3.125	6.471	3.531	2.218	3.0000-0.1P-0.2P-DS	3.217	.980	6.00

CONFIGURATION A. STYLE 1 CABLE SEALING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.



CONFIGURATION B. STYLE 2 CABLE SEALING.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size no.	Shell size	Cable range		B ±.005	C ±.000 -.010	D Thread Class 2B - LH	F ±.016	G DLA. ±.010 -.020	H Max.	J Max.	K ±.010
1	12	.521	.321	1.219	.938	0.7500-20 UNEF	.479	.938	4.000	1.320	.950
2	14	.646	.446	1.344	1.062	0.8750-20 UNEF	.479	1.062	4.100	1.420	1.075
3	16	.765	.565	1.469	1.188	1.0000-20 UNEF	.479	1.188	4.800	1.600	1.200
4	18	.890	.690	1.625	1.312	1.1250-18 NEF	.479	1.312	4.900	1.750	1.325
5	20	1.015	.815	1.750	1.438	1.2500-18 NEF	.479	1.438	4.900	1.900	1.325
6	22	1.180	.980	2.000	1.562	1.3750-18 NEF	.479	1.562	4.900	2.190	1.325
7	24	1.430	1.230	2.250	1.812	1.6250-18 NEF	.479	1.812	5.000	2.475	1.450
8	24	1.230	1.030	2.250	1.812	1.6250-18 NEF	.479	1.812	5.000	2.475	1.450
9	28	1.670	1.430	2.500	2.062	1.8750-18 UN	.479	2.062	5.300	2.715	1.700
10	32	1.860	1.660	2.750	2.312	2.0625-16 N	.479	2.312	5.600	2.900	1.950
11	36	2.110	1.860	3.062	2.562	2.3125-16 N	.479	2.562	5.725	3.250	1.950
12	40	2.400	2.200	3.437	2.875	2.6250-16 UN	.667	2.875	5.725	3.625	1.950
13	40	2.200	2.200	3.437	2.875	2.6250-16 UN	.667	2.875	5.725	3.625	1.950

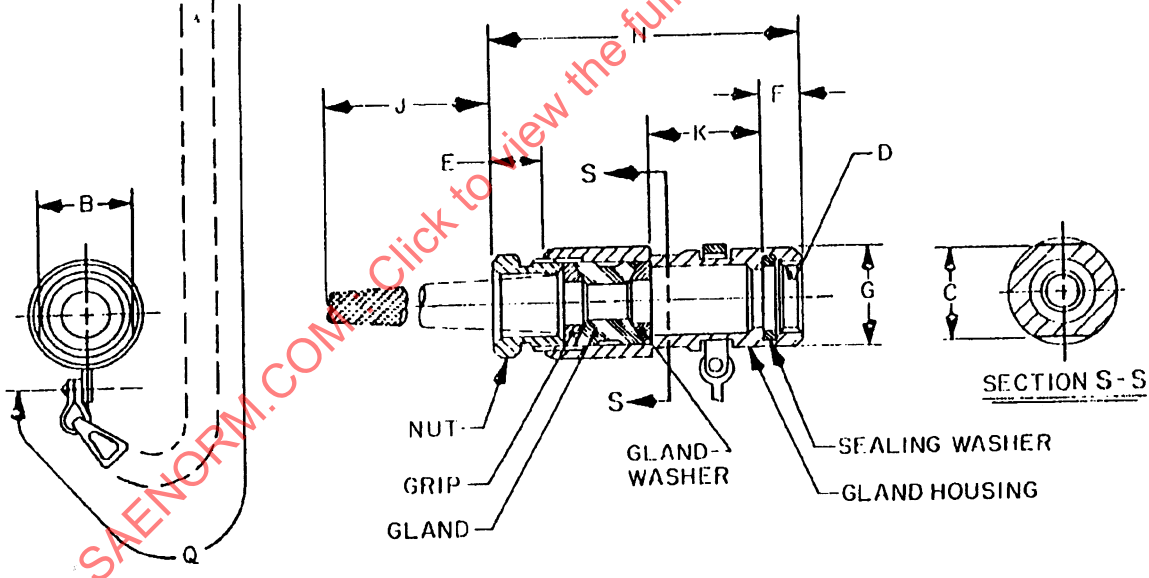
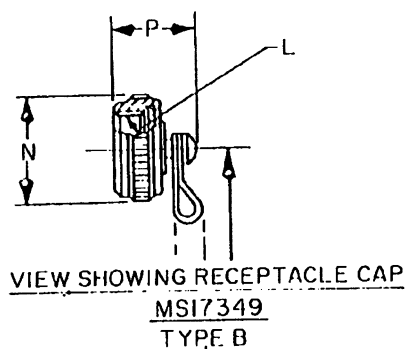
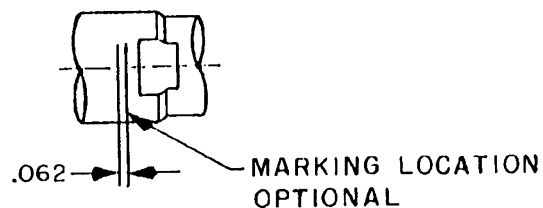
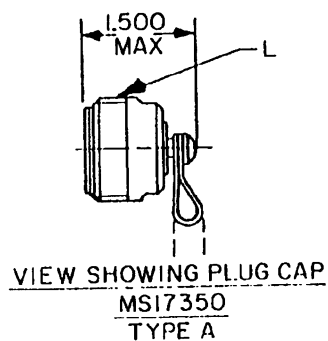
CONFIGURATION B. STYLE 2 CABLE SEALING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size number	Shell size	L Thread (plated) Class 2 (A or B)	N Dia max	P Max	Q Within one link	S ±.010	T Dia ±.005	VV Gland threads class 2-LH
1	12	.8750-0.1P-0.2L-DS	1.094	.765	5.00	1.425	.600	1.0625-18 UNEF
2	14	1.0000-0.1P-0.2L-DS	1.219	.765	5.00	1.425	.726	1.1875-18 NEF
3	16	1.1250-0.1P-0.2L-DS	1.344	.980	5.00	1.605	.845	1.3125-18 NEF
4	18	1.2500-0.1P-0.2L-DS	1.469	.980	5.00	1.605	.970	1.4375-18 NEF
5	20	1.3750-0.1P-0.2L-DS	1.562	.980	5.00	1.605	1.095	1.5625-18 NEF
6	22	1.5000-0.1P-0.2L-DS	1.688	.980	6.00	1.605	1.220	1.8125-16 N
7	24	1.7500-0.1P-0.2L-DS	1.938	.980	6.00	1.605	1.470	2.0625-16 N
8	28	2.0000-0.1P-0.2L-DS	2.219	.980	6.00	1.605	1.713	2.0625-16 N
9	28	2.0000-0.1P-0.2L-DS	2.219	.980	6.00	1.605	1.713	2.3125-16 N
10	32	2.2500-0.1P-0.2L-DS	2.469	.980	6.00	1.605	1.900	2.500-16 UN
11	36	2.5000-0.1P-0.2L-DS	2.719	.980	6.00	1.605	2.150	2.8750-16 UN
12	40	2.7500-0.1P-0.2L-DS	2.969	.980	6.00	1.605	2.460	3.1250-16 UN
13	40	2.7500-0.1P-0.2L-DS	2.969	.980	6.00	1.605	2.460	3.1250-16 UN

CONFIGURATION B. STYLE 2 CABLE SEALING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.



CONFIGURATION C. STYLE 3 CABLE SEALING AND GRIPPING.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size number	Shell size	Cable range		B	C	D	E	F	G	H	J	K	L	N	P	Q
		Max dia	Min dia	+ .000 - .010	+ .000 - .010	Thread Class 2B-LH	Free length max	+ .016 - .020	+ .010 - .020	Max	Approx- free length	+ .015 - .025	Thread (plated) Class 2 (A or B)	Dia max	Max	Within one link
1	12	.530	.436	1.000	.812	.7500-20 UNEF	.597	.479	.938	3.810	4.688	1.219	.8750-0.1P-0.2L-DS	1.094	.765	5.00
2	12	.500	.406	.875	.938	.7500-20 UNEF	.539	.479	.938	3.248	4.344	.871	.8750-0.1P-0.2L-DS	1.094	.765	5.00
3	12	.405	.316	1.000	.812	.7500-20 UNEF	.597	.479	.938	3.810	3.688	1.219	.8750-0.1P-0.2L-DS	1.094	.765	5.00
4	14	.625	.560	1.062	1.125	.8750-20 UNEF	.597	.479	1.062	4.024	6.188	1.371	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
5	14	.605	.511	1.000	1.062	.8750-20 UNEF	.597	.479	1.062	3.712	5.188	1.121	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
6	14	.530	.430	1.000	1.062	.8750-20 UNEF	.597	.479	1.062	3.712	4.688	1.121	1.0000-0.1P-0.2L-US	1.219	.765	5.00
7	14	.405	.316	1.000	1.062	.8750-20 UNEF	.597	.479	1.062	3.712	3.688	1.121	1.0000-0.1P-0.2L-DS	1.219	.765	5.00
8	18	.828	.715	1.125	1.250	1.1250-18 UNEF	.597	.479	1.312	4.087	6.688	1.343	1.2500-0.1P-0.2L-DS	1.459	.980	5.00
9	20	1.055	.930	1.500	1.375	1.2500-18 UNEF	.597	.479	1.438	4.212	7.688	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
10	20	1.000	.875	1.500	1.375	1.2500-18 UNEF	.597	.479	1.438	4.212	7.188	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
11	20	.900	.787	1.250	1.375	1.2500-18 UNEF	.597	.479	1.438	4.150	7.188	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00
12	20	.750	.637	1.250	1.375	1.2500-18 UNEF	.597	.479	1.438	4.150	7.188	1.371	1.3750-0.1P-0.2L-DS	1.562	.980	5.00

CONFIGURATION C. STYLE 3 CABLE SEALING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size number	Shell size	Cable range	B	C	D	E	F	G	H	J	K	L	N	P	Q
		Max dia	Min dia	+ .000 - .010	Thread Class 2B-LH	Free length max	+ .016 - .010	+ .010 - .020	Max	Approx- free length	+ .015 - .025	Thread (plated) Class 2 (A or B)	Dia max	Max	With one link
13	22	1.109	.984	1.500	1.625	1.3750-18 UNEF	.479	1.562	4.212	7.688	1.371	1.5000-0.1P-0.2L-DS	1.688	.980	6.00
14	22	1.000	.875	1.500	1.625	1.3750-18 UNEF	.479	1.562	4.212	7.188	1.371	1.5000-0.1P-0.2L-DS	1.688	.980	6.00
15	24	1.375	1.250	2.000	1.875	1.6250-18 UNEF	.479	1.812	4.275	9.688	1.309	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
16	24	1.310	1.185	1.750	1.875	1.6250-18 UNEF	.479	1.812	4.275	8.688	1.372	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
17	24	1.230	1.105	1.750	1.875	1.6250-18 UNEF	.479	1.812	4.275	8.188	1.372	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
18	24	1.180	1.055	1.750	1.875	1.6250-18 UNEF	.479	1.812	4.275	8.188	1.372	1.7500-0.1P-0.2L-DS	1.938	.980	6.00
19	28	1.531	1.406	2.000	2.062	1.3750-16 UN	.597	2.062	4.337	10.688	1.371	2.0000-0.1P-0.2L-DS	2.219	.980	6.00
20	28	1.445	1.320	2.000	2.062	1.8750-16 UN	.597	2.062	4.337	9.688	1.371	2.0000-0.1P-0.2L-DS	2.219	.980	6.00
21	28	1.375	1.250	2.000	2.062	1.8750-16 UN	.597	2.062	4.337	9.688	1.371	2.0000-0.1P-0.2L-DS	2.219	.980	6.00
22	32	1.825	1.700	2.438	2.312	2.0625-16 UNS	.710	2.312	4.704	13.688	1.371	2.2500-0.1P-0.2L-DS	2.469	.980	6.00
23	32	1.730	1.605	2.438	2.312	2.0625-16 UNS	.710	2.312	4.704	13.688	1.371	2.2500-0.1P-0.2L-DS	2.469	.980	6.00

CONFIGURATION C. STYLE 3 CABLE SEALING AND GRIPPING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.

Size number	Shell size	Cable range		B	C	D	E	F	G	H	J	K	L	N	P	Q
		Max dia	Min dia	+ .000 - .010	+ .000 - .010	Thread Class 2B-LH	Free length max	+ .016 - .010	Dia + .010 - .020	Max	Approx- free length	+ .015 - .025	Thread (plated) Class 2 (A or B)	Dia max	Max	Within one link
24	32	1.656	1.531	2.250	2.312	2.0625-16 UNS	.597	.479	2.312	4.399	12.688	1.370	2.2500-0.1P-0.2L-DS	2.469	.980	6.00
25	36	2.062	1.917	2.750	2.500	2.3125-16 UNS	.710	.479	2.562	4.704	14.188	1.375	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
26	36	1.984	1.859	2.438	2.500	2.3125-16 UNS	.710	.479	2.562	4.673	13.688	1.344	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
27	36	1.900	1.775	2.438	2.500	2.3125-16 UNS	.710	.479	2.562	4.673	13.688	1.344	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
28	36	1.825	1.700	2.438	2.500	2.3125-16 UNS	.710	.479	2.562	4.673	13.688	1.344	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
29	36	1.730	1.605	2.438	2.500	2.3125-16 UNS	.710	.479	2.562	4.673	13.688	1.344	2.5000-0.1P-0.2L-DS	2.719	.980	6.00
30	40	2.375	2.230	2.875	2.812	2.6250-16 UN	.709	.667	2.875	5.000	18.188	1.421	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
31	40	2.250	2.105	2.750	2.625	2.6250-16 UN	.709	.667	2.875	5.000	17.188	1.421	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
32	40	2.145	2.000	2.750	2.625	2.6250-16 UN	.710	.667	2.875	4.939	14.188	1.422	2.7500-0.1P-0.2L-DS	2.969	.980	6.00
33	40	2.062	1.917	2.750	2.625	2.6250-16 UN	.710	.667	2.875	4.939	14.188	1.422	2.7500-0.1P-0.2L-DS	2.969	.980	6.00

CONFIGURATION C. STYLE 3 CABLE SEALING AND GRIPPING - CONTINUED.

FIGURE 1. CONFIGURATIONS AND DIMENSIONS - CONTINUED.