

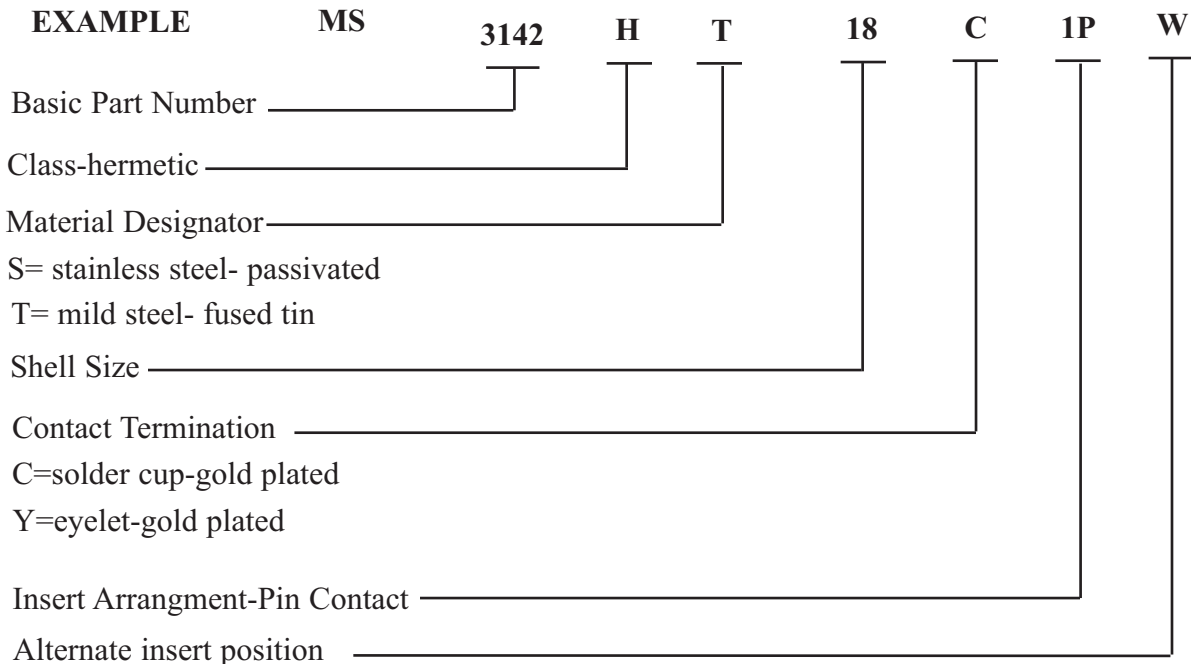


These connectors meet the latest revisions of MIL-C-5015 and the applicable MS drawings. The shell can be supplied with 300 Series stainless steel or mild steel. Standard plating of the mild steel is fused tin over copper. Contacts are plated 50 microinches minimum of gold. To improve the moisture resistance, these parts are supplied with a “cork and bottle” designed interfacial seal bonded to the mating face.



The need for hermetic class, MIL-C-5015 style connector existed long before this class was added to the MIL-Std. Because of this, Sealtron’s 8000 Series does not meet all specifications shown in the current MIL-Std. See Sealtron’s 6000 Series if connectors of the latest revision of MIL-C-5015 are needed. The majority of the 8000 Series are manufactured with an individual seal around each contact, however the specified test voltage may be reduced. Connectors having an all glass insert are available upon specific request, if the higher test voltages are required. For corrosive or severe ambient conditions these connectors can be supplied with bodies of 300 series stainless steel.

HOW-TO-ORDER



MIL-DTL-38999

Air Leakage (Hermeticity):

Leakage rate less than .01 micron per cubic foot per hour (1 x 10⁻⁷ CC³/sec) at 15 psi.

Insulation Resistance:

Greater than 5,000 megohms 500 VDC per MIL-STD-1344, method 3003.

Insert Retention:

Insert will withstand 100 psi without damage.

Dielectric Withstanding Voltage:

Connectors show no evidence of breakdown or flashover when tested at voltages shown in accordance with MIL-STD-1344, method 3001.

Altitude Feet	Service Rating M		Service Rating N		Service Rating I		Service Rating II	
	Mated	Unmated	Mated	Unmated	Mated	Unmated	Mated	Unmated
Sea Level	1300	1300	1000	1000	1800	1800	2300	2300
50,000	800	550	600	400	1000	600	1000	800
70,000	800	350	600	260	1000	400	1000	500
100,000	800	200	600	200	1000	200	1000	200

Corrosion:

Connectors will meet salt spray test per MIL-STD-1344, method 1001.

Thermal Shock :

No evidence of damage detrimental to the operation of connector after cycle testing at less than 4°C (39°F) to greater than 90°C (201°F).

Humidity:

Maintains insulation resistance of 100 megohms/100 VDC or greater per. MIL-STD-1344, method 1002.

Contact Resistance:

Contact Resistance will meet the following table of values when tested per MIL-STD-1344, method 3004.

Class	Contact Size	Wire Size	Test Amperes	Millivolt Drop Maximum	
				Initial	After Corrosion or Temperature Durability
Y and N	12	12	17	85	100
	16	16	10	85	100
	20	20	5	60	75
	220	22	3	85	95

MIL-C-5015

Air Leakage (Hermeticity):

Leakage rate less than .01 micron cubic foot per hour (1 x 10⁻⁶ CC³/SEC) at 15 psi.

Insert Retention:

Insert will withstand 200 psi without damage.

Thermal Shock :

No evidence of damage detrimental to operation of connector at -55°C(-67°F) to +175°C (+347°F).

Insulation Resistance:

Greater than 5,000 megohms/500 VDC 25° per MIL-STD-202, method 302.

Dielectric Withstanding Voltage:

Connectors show no evidence of breakdown or flashover when tested at voltages shown in accordance with MIL-

Service Rating	Test Voltage (RMS)	
	Sea Level	70,000 feet
INST.	1000	260
A	2000	360
D	2800	400
E	3500	440
B	4500	480
C	7000	560

Shock:

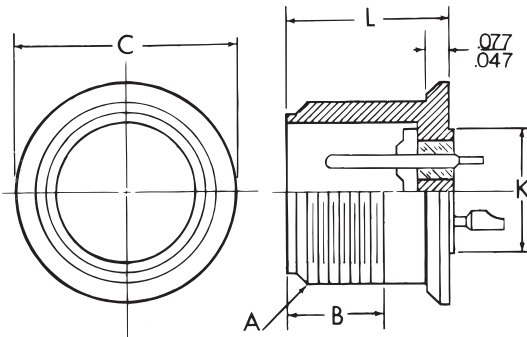
Mated connectors show no evidence of damage after shock test per MIL-C-5015.

Corrosion:

Connectors will meet salt spray test per MIL-STD-202, method 101.

6002 SERIES

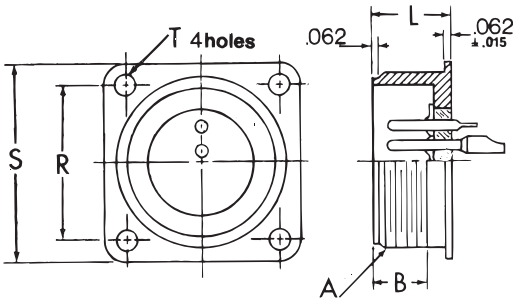
MS3143



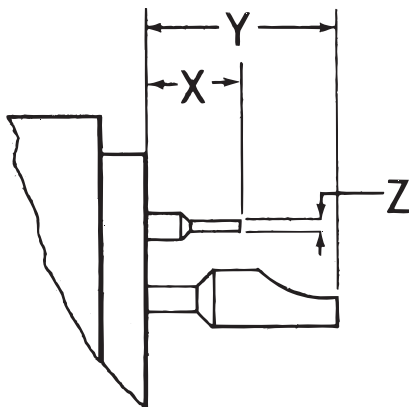
Shell Size	A Thread Class 2A	B Min.	C ± .010	K ± .010	L MAX.	
					#8,12, #16,&20	#4&0 CONT'S
8S	.500-28UNEF	.375	.750	.428	.730	-
10SL	.625-24 UNEF		.875	.490		-
12S	.750-20UNEF		1.000	.646		-
14S	.875-20UNEF		1.125	.709		
16S	1.000-20UNEF	▼	1.250	.834	▼	1.040
12	.750-20UNEF	.625	1.000	.646	.915	-
14	.875-20UNEF		1.125	.709		-
16	1.000-20 UNEF		1.250	.834		1.040
18	1.125-18 UNEF		1.375	.959		
20	1.250-18 UNEF		1.500	1.146		
22	1.375-18 UNEF		1.625	1.240		
24	1.500-18 UNEF		1.750	1.365		
28	1.750-18 UNS	▼	2.000	1.615	▼	▼
32	2.000-18 UNS	▼	2.250	1.865	▼	▼

6003 SERIES

MS3142

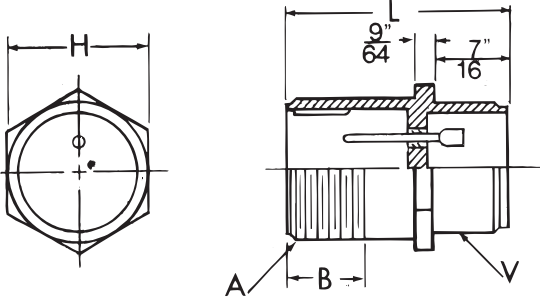


Shell Size	A Thread Class 2A	B Min.	R	L MAX.		S ±.031	T ±.005
				#8,12, #16,&20	#4&0 CONT'S		
8S	.500-28UNEF	.375	.594	.730	-	.875	.120
10SL	.625-24 UNEF		.719		-	1.000	
12S	.750-20UNEF		.812		-	1.094	
14S	.875-20UNEF		.906		-	1.188	
16S	1.000-20UNEF	▼	.969	▼	1.040	1.281	
12	.750-20UNEF	.625	.812	.915	-	1.094	
14	.875-20UNEF		.906		-	1.188	
16	1.000-20 UNEF		.969		1.040	1.281	
18	1.125-18 UNEF		1.062			1.375	
20	1.250-18 UNEF		1.156			1.500	
22	1.375-18 UNEF		1.250			1.625	▼
24	1.500-18 UNEF		1.375			1.750	.147
28	1.750-18 UNS	▼	1.562			2.000	.147
32	2.000-18 UNS	▼	1.750	▼	▼	2.250	.173



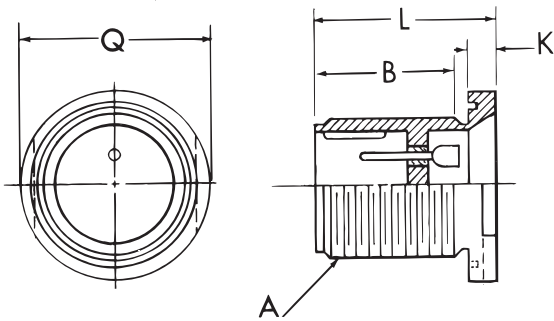
CONTACT SIZE	X Max.	Y Max.	Z Min.
16	.219	.375	.020
12	.281	.516	.020
8	-	.719	-
4	-	.980	-
0	-	.980	-

8004 SERIES

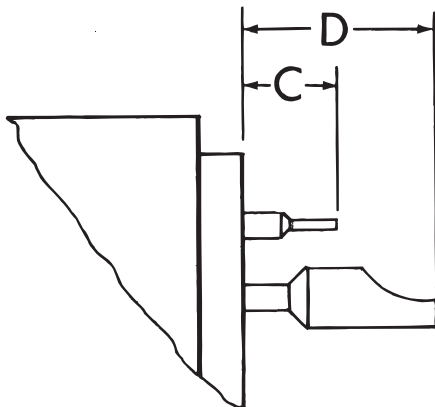


Shell Size	A Thread Class 2A	B Min.	H ± .015	L ± .010	V Thread Class 2A
8S	.500-28 UNEF	.375	.500	1.218	.375-32UNEF
10SL	.625-24 UNEF		.625		.500-28UNEF
12S	.750-20 UNEF		.750		.625-24UNEF
14S	.875-20 UNEF		.875		.750-20UNEF
16S	1.000-20 UNEF		1.000		.875-20UNEF
12	.750-20 UNEF	.625	.750	1.406	.625-24UNEF
14	.875-20 UNEF		.875		.750-20UNEF
16	1.000-20 UNEF		1.000		.875-20UNEF
18	1.125-18 UNEF		1.125		1.000-20UNEF
20	1.250-18 UNEF		1.250		1.125-18UNEF
22	1.375-18 UNEF		1.375		1.250-18UNEF
24	1.500-18 UNEF		1.500		1.375-18UNEF
28	1.750-18 UNS		1.750		1.625-18UNEF
32	2.000-18 UNS		2.000		1.875-18UNEF

8005 SERIES



Shell Size	A Thread Class 2A	B Min.	K ± .015	L ± .015	Q ± .010
8S	.500-28 UNEF	.687	.250	1.062	1.062
10SL	.625-24 UNEF	.687	.250		1.187
12S	.750-20 UNEF	.656	.281		1.312
14S	.875-20 UNEF	.656			1.437
16S	1.000-20 UNEF	.656			1.562
12	.750-20 UNEF	1.093		1.500	1.312
14	.875-20 UNEF				1.437
16	1.000-20 UNEF				1.562
18	1.125-18 UNEF				1.687
20	1.250-18 UNEF				1.812
22	1.375-18 UNEF				1.937
24	1.500-18 UNEF				2.062
28	1.750-18 UNS				2.312
32	2.000-18 UNS				2.562



CONTACT SIZE	G Max. (FP)	D max. (SP)	Max. (SSP)
16	7/32	3/8	1/4
12	9/32	33/64	21/64
8		23/32	

Hermetically Sealed Connectors

Example **8002-16S-1P-SP-A3**

8002 Shell Design
 16S Shell Size
 1P Insert Arrangement
 SP Pin Design
 A3 Plating Code

Pin Design

FP = Flattened and Pierced
 SP = Solder Pot
 SSP = Short Solder Pot
 RR = Round both ends for circuit board application
 PT = Pig-Tail for flex tape application.

Std. plating is fused tin over copper. Other plating is available upon request.

Insert Arrangement

Total Contacts	Shell Size	Arrangement Number	Contact Size				
			16	12	8	4	0
1	8,8S	1	1				
	10,10SL	2	1				
	12S,13	4	1				
	12S,13	5		1			
	14	3			1		
	16	2		1			
	16	12				1	
	20	2					1
2	12S,13	3	2				
	16S,17	4	2				
	16	11		2			
	16	13		2			
	18	14	1			1	
22	11	2					
32	5					2	
3	10SL,11	3	3				
	14S,15	7	3				
	16	7	2		1		
	16	10		3			
	18	5	1	2			
	22	9		3			
22	3				3		
28	21	2				1	
4	12S	10	4				
	14S,15	2	4				
	16	9	2	2			
	18	4	4				
	18	13		3	1		
	18	15		4			
	20	4	4				
	20	24	2		2		
	22	10	4				
	22	22				4	
32	17					4	
36	5					4	
5	14S,15	5	5				
	16S,17	8	5				
	18	11		5			
	20	14		3	2		
	22	12	3		2		
	24	12		3		2	
	28	5	2	1		2	
	32	1		3			2
	32	2	2				3

Total Contacts	Shell Size	Arrangement Number	Contact Size					
			16	12	8	4	0	
6	14S,15	6	6					
	18	12	6					
	20	8	4			2		
	20	17	1	5				
	20	22	3			3		
	22	5		4		2		
	22	15	1	5				
	28	22	3				3	
	36	3		3			4	
	36	6					2	
7	16S,17	1	7					
	18	9	5	2				
	20	15		7				
	24	2		7				
	24	10			7			
	24	16	3	3	1			
	24	27	7			3	2	
	28	10		3	3			
8	18	8	7	1				
	20	7	8					
	20	9	7	1				
	22	18	8					
	22	23		8				
	22	36		8				
	24	6		8				
	32	15		6			2	
	9	20	16	7	2			
		20	18	6	3			
20		21	8	1				
22		17	8	1				
22		20	9					
22		27	8			1		
24		11		6	3			
28		1		6	3			
28		4	7	2				
32		3	4	2		2	1	
10	18	1	10		1			
	24	21	9					
	28	19	6	4				
11	20	33	11					
	24	20	9	2				
12	28	8	10	2				
	28	9	6	6				
	28	18	12					
14	20	27	14					
	22	19	14					
	28	2	12	2				
	28	20	4	10				
	32	14	12			2		

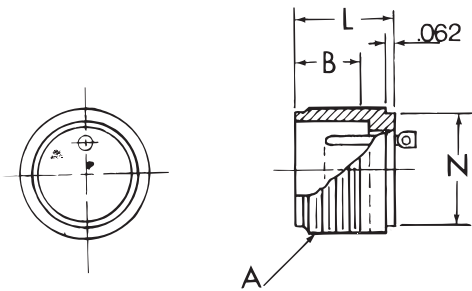
INSERT ARRANGEMENT (CONT.)

TOTAL CONTACTS	SHELL SIZE	ARRANGEMENT NUMBER	CONTACT SIZE				
			16	12	8	4	0
15	28	17	15				
	40	5		6	4	2	3
16	24	7	14	2			
17	20	29	17				
19	22	14	19				
22	28	11	18	4			
	40	7	18	2			2
23	24	80	23				
	32	6	16	2	3	2	
	32	13	18	5			
	40	2	23				
	40	3	18	4		1	
	40	4	16	2		3	2
24	24	28	24				
25	40	11	18	4	1	1	0
26	40	6	24	1			0
	28	12	26				
29	40	10	16		9	4	
30	32	8	24	6			
	40	1	24	6			
31	36	9	14	14	2	1	
35	28	15	35				
	32	7	28	7			
	36	15	35				
37	28	21	37				
46	32	73	46				
47	36	7	40	7			
	36	8	46	1			
	40	9	24	22	1		
48	36	10	48				
52	36	52	52				
54	32	22	54				
56	36	66	52	4			
60	40	62	60				
85	40	56	85				

Contact arrangement for MIL-C-5015 are specified in MIL-STD 1651. If a specific pattern is not shown above or you wish for information concerning alternate key positions, contact the factory or consult MIL-STD 1651.

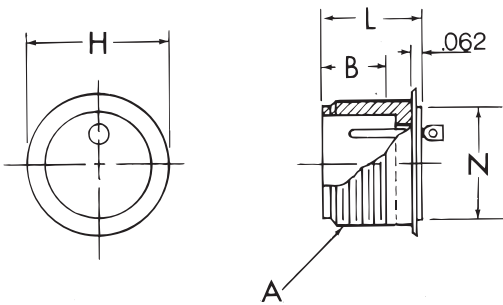
8001 SERIES

Shell Size	A Thread Class 2A	B Min.	N + .000 - .010	L Max.
8S	.500-28UNEF	.375	.437	.725
10SL	.625-24UNEF		.500	
12SL	.750-20UNEF		.656	
14SL	.875-20UNEF		.718	
16SL	1.000-20UNEF		.844	
12	.750-20UNEF	.625	.656	.910
14	.875-20UNEF		.718	
16	1.000-20UNEF		.844	
18	1.125-18UNEF		.968	
20	1.250-18UNEF		1.156	
22	1.375-18UNEF		1.250	
24	1.500-18UNEF		1.375	
28	1.750-18UNS		1.625	
32	2.000-18UNS		1.875	



8002 SERIES

Shell Size	A Thread Class 2A	B Min.	N + .000 - .010	L Max.	H ± .015
8S	.500-28UNEF	.375	.437	.725	.750
10SL	.625-24 NEF		.500		.875
12S	.750-20UNEF		.656		1.000
14S	.875-20UNEF		.718		1.125
16S	1.000-20UNEF		.844		1.250
12	.750-20UNEF	.625	.656	.910	1.000
14	.875-20UNEF		.718		1.125
16	1.000-20UNEF		.844		1.250
18	1.125-18 NEF		.968		1.375
20	1.250-18 NEF		1.156		1.500
22	1.375-18 NEF		1.250		1.625
24	1.500-18 NEF		1.375		1.750
28	1.750-18 NS		1.625		2.000
32	2.000-18 NS		1.875		2.250



8003 SERIES

Shell Size	A Thread Class 2A	B Min.	G ±.031	H ± .005	J ± .005	L MAX.
8S	.500-28UNEF	.375	.875	.594	.120	.725
10SL	.625-24 NEF		1.000	.718		
12S	.750-20UNEF		1.094	.812		
14S	.875-20UNEF		1.188	.906		
16S	1.000-20UNEF		1.281	.968		
12	.750-20UNEF	.625	1.094	.812		.910
14	.875-20UNEF		1.188	.906		
16	1.000-20UNEF		1.281	.968		
18	1.125-18 NEF		1.375	1.062		
20	1.250-18 NEF		1.500	1.156		
22	1.375-18 NEF		1.625	1.250		
24	1.500-18 NEF		1.750	1.375	.147	
28	1.750-18 NS		2.000	1.562		
32	2.000-18 NS		2.250	1.750		

