

MS
CONNECTOR

MIL-DTL-26482

MC Connector
Series I



Summary

The MIL-DTL-26482 is a compact connector widely used in military communications equipment due to its excellent electrical, mechanical, and environmental characteristics. The five different guide keys allow accurate and stable coupling. Also, the bayonet coupling method allows it to be put on and off easily.

As a result, the coupling time is cut down to a minimum and left unaffected by vibrations. This pamphlet based the MS3110 series Class "E" or Class "F" connector, which uses soldering type to contact to cables, as the standard model. If you have any inquiries on different types, class, shape, or connection arrangements please contact us separately.

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Ordering information

How To Order

MC 3112 E 14 - 19 P W ** - FM
MS 3112 E 14 - 19 P W

Receptacle Body Style

Omit for standard style

FM - fully made by machining

(only for 3110/3111/3112/3114 type)

Finishes

A - Black Anodize

N - Electroless Nickel

Z - Olive drab chromate over zinc plate

Omit for standard finish (See page 3)

Alternate Insert Position

W, X, Y, Z Omit for normal

Contact Style

P - Pin contact

S - Socket contact

Contact Arrangement

See page 9

Shell Size

8, 10, 12, 14, 16, 18, 20, 22, 24

Class

A - General duty (Not MS approved)

B - General duty with strain relife without grommet and ferrules (May be used for potting when strain relief is desired, Not MS approved)

E - Supplied with a multi-holed grommet and clamping nut for moisture proofing individual open wires

F - Strain relife clamp and grommet for moisture proofing individual wires ; provides added wire bundle support

P - Potted

Shell style

3110 - Wall mounting receptacle

3111 - Cable connecting plug

3112 - Box mounting receptacle

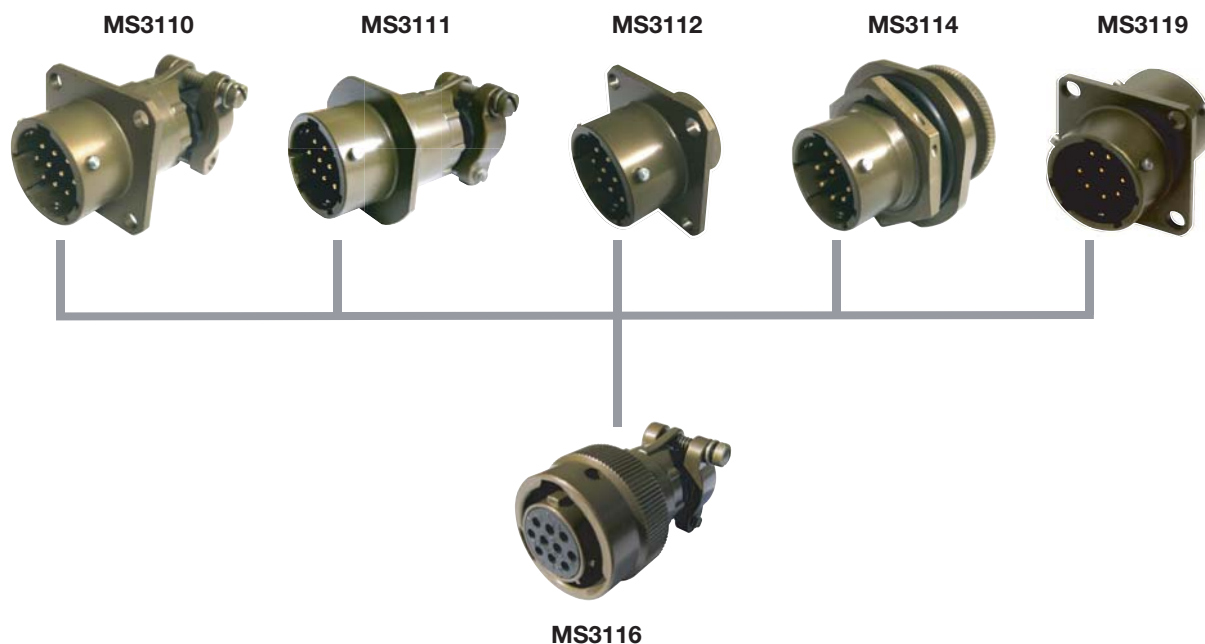
3114 - Jam nut receptacle

3116 - Straight plug

3119 - Thru - bulkhead receptacle

Prefix

Components



Technical Data

Standard Materials & Finishes

Shell	Aluminum alloy, conductive olive drab chromate over cadmium plate
Insulator	Polychloroprene rubber
Grommet & Seal	Polychloroprene rubber
Contacts	Copper alloy, gold plate per MIL-G-45204 Type II

Electrical Data

Contact Size	Pin Contact Dia. (mm)	Solder Pot Dia. (mm)	Current (A) Rating	Contact Resistance		Wire Range Accommodations		
				Test Current (A)	Potential Millivolt Drop (Max.)	Wire Size (A.W.G)	Wire Nomal Square (mm ²)	Dielectric Material O.D
20	1.0	1.1	7.5	7.5	55	24, 22, 20	0.5	1.52 ~ 2.10
16	1.6	1.9	22.0	13.0	49	20, 18, 16	1.3	1.68 ~ 2.77
12	2.4	3.0	23.0	20.0	42	12, 14	3.5	2.46 ~ 3.61

Dielectric Withstanding Voltage						
Service Rating	Operating Voltage		Test Voltage AC(rms), 60cps			
	AC	DC	Sea Level	50,000 (ft)	70,000 (ft)	110,000 (ft)
I	600	850	1,500	500	375	200
II	1,000	1,275	2,300	750	500	200

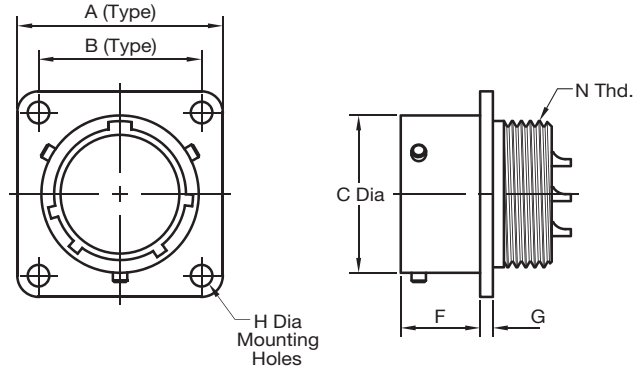
Insulation Resistance	5,000MΩ Min. (at 25°C)
Temperature Range	-55°C to 125°C
Durability	500 Cycle connection and Dis-connection

Contact Engaging & Separating Forces		
Contact Mating End Size	Minimum Separation Force (ounces)	Average Engagement Force (ounces)
20	0.75	10±10%
16	2.0	20±10%
12	3.0	20±10%

Wall Mounting Receptacle

MC3110 Class A/E/F/P

MS3110 Class A/E/F/P



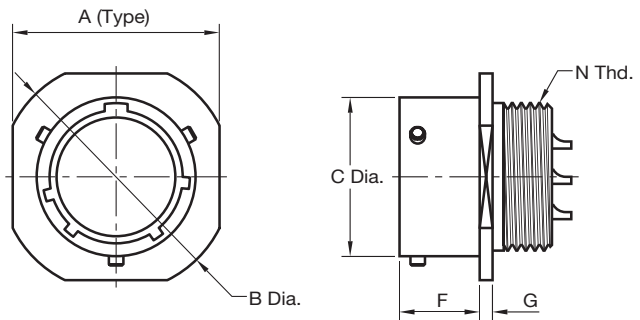
Units : mm

Shell Size	A Max.	B Mounting Holes	C Dia. +0.00 -0.12	F +0.78 -0.00	G ±0.40	H +0.10 -0.00	N Thread Class 2A
8	21.03	15.09	12.03	10.95	1.57	3.05	7/16-28UNEF
10	24.23	18.26	15.01	10.95	1.57	3.05	9/16-24UNEF
12	26.59	20.62	19.07	10.95	1.57	3.05	11/16-24UNEF
14	28.98	23.01	22.25	10.95	1.57	3.05	13/16-20UNEF
16	31.34	24.61	25.43	10.95	1.57	3.05	15/16-20UNEF
18	33.73	26.97	28.60	10.95	1.57	3.05	1 1/16-18UNEF
20	36.90	29.36	31.77	14.13	2.39	3.05	1 3/16-18UNEF
22	40.08	31.75	34.95	14.13	2.39	3.05	1 5/16-18UNEF
24	43.25	34.93	38.12	14.97	2.39	3.73	1 7/16-18UNEF

Cable Connecting Plug

MC3111 Class A/E/F/P

MS3111 Class A/E/F/P



Units : mm

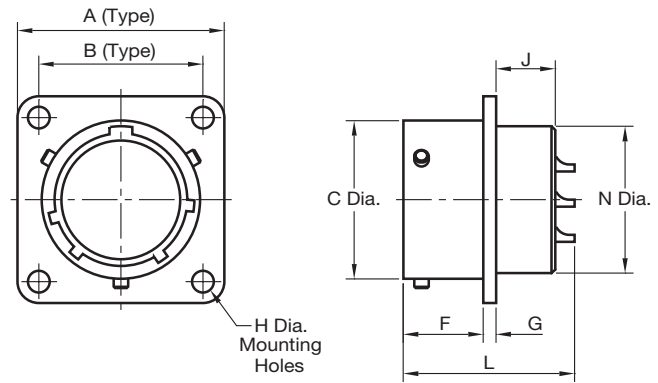
Shell Size	A Max.	B Dia. ±0.50	C Dia. +0.00 -0.12	F +0.78 -0.00	G ±0.40	N Thread Class 2A
8	21.03	23.82	12.03	10.16	2.39	7/16-28UNEF
10	24.23	26.97	15.01	10.16	2.39	9/16-24UNEF
12	26.59	29.36	19.07	10.16	2.39	11/16-24UNEF
14	28.98	31.75	22.25	10.16	2.39	13/16-20UNEF
16	31.34	34.14	25.42	10.16	2.39	15/16-20UNEF
18	33.73	36.52	28.60	10.16	2.39	1 1/16-18UNEF
20	36.90	39.67	31.77	13.59	2.92	1 3/16-18UNEF
22	40.08	42.88	34.95	13.59	2.92	1 5/16-18UNEF
24	43.25	46.02	38.12	14.43	2.92	1 7/16-18UNEF

MIL-DTL-26482 Series 1

Box Mounting Receptacle

MC3112 Class A/E/F/P

MS3112 Class A/E/F/P



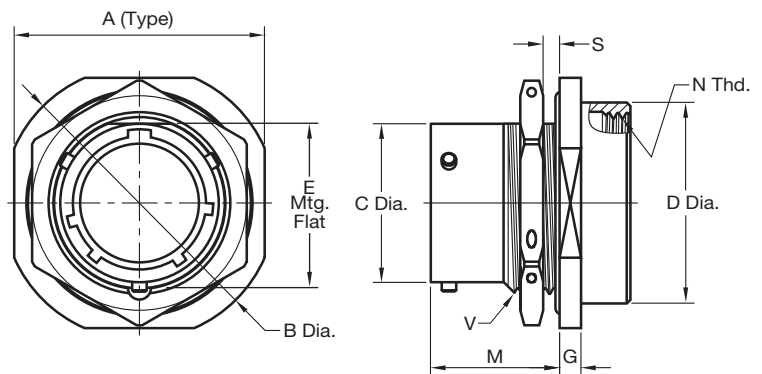
Units : mm

Shell Size	A Max.	B Mounting Holes	C Dia. +0.00 -0.12	F +0.78 -0.00	G ±0.40	H +0.12 -0.00	J Max.	L Max.	N +0.78 -0.40
8	21.03	15.09	12.03	10.95	1.57	3.05	8.99	24.84	11.12
10	24.23	18.26	15.01	10.95	1.57	3.05	8.99	24.84	14.27
12	26.59	20.62	19.07	10.95	1.57	3.05	8.99	24.84	17.48
14	28.98	23.01	22.25	10.95	1.57	3.05	8.99	24.84	20.62
16	31.34	24.61	25.42	10.95	1.57	3.05	8.99	24.84	23.82
18	33.73	26.97	28.60	10.95	1.57	3.05	8.99	24.84	26.97
20	36.90	29.36	31.77	14.13	2.39	3.05	10.59	30.37	30.18
22	40.08	31.75	34.95	14.13	2.39	3.05	10.59	30.37	33.32
24	43.25	34.92	38.12	14.97	2.39	3.73	11.30	30.37	36.52

Jam Nut Receptacle

MC3114 Class A/E/F/P

MS3114 Class A/E/F/P



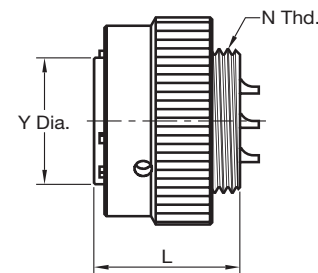
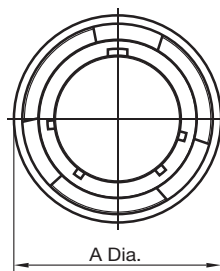
Units : mm

Shell Size	A Max.	B Dia. +0.00 -0.80	C Dia. +0.00 -0.12	D Dia. Max.	E +0.00 -0.12	G ±0.50	M +0.78 -0.00	N Thread Class 2B	S Panel Thk.		V Thread Class 2A
									Min.	Max.	
8	24.23	27.38	12.03	19.05	13.46	2.97	17.56	5/8-24UNEF	1.58	3.17	9/16-24UNEF
10	27.38	30.55	15.01	22.22	16.63	2.97	17.56	3/4-20UNEF	1.58	3.17	11/16-24UNEF
12	32.15	35.33	19.07	25.40	20.77	2.97	17.56	7/8-20UNEF	1.58	3.17	7/8-20UNEF
14	35.33	38.50	22.25	28.57	23.92	2.97	17.56	1-20UNEF	1.58	3.17	1-20UNEF
16	38.50	41.68	25.42	31.75	27.07	2.97	17.56	1 1/8-18UNEF	1.58	3.17	1 1/8-18UNEF
18	41.68	44.85	28.60	34.92	30.25	2.97	17.56	1 1/4-18UNEF	1.58	3.17	1 1/4-18UNEF
20	46.43	49.63	31.77	38.88	33.42	3.76	22.33	1 3/8-18UNEF	1.58	6.35	1 3/8-18UNEF
22	49.63	52.78	34.95	42.06	36.60	3.76	22.33	1 1/2-18UNEF	1.58	6.35	1 1/2-18UNEF
24	52.78	55.95	38.12	45.23	39.77	3.76	23.17	1 5/8-18UNEF	1.58	6.35	1 5/8-18UNEF

Straight Plug

MC3116 Class A/E/F/P

MS3116 Class A/E/F/P



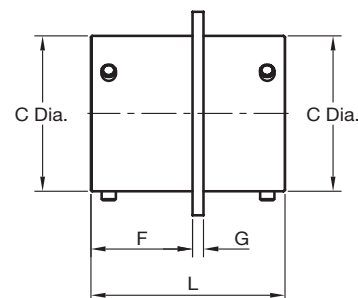
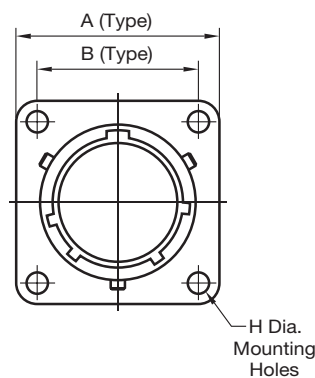
Units : mm

Shell Size	A Max.	Y Dia. +0.00 -0.12	L Max.	N Thread Class 2A
8	19.86	9.09	21.50	7/16-28UNEF
10	23.52	12.34	21.50	9/16-24UNEF
12	26.49	15.18	21.50	11/16-24UNEF
14	30.04	18.36	21.50	13/16-20UNEF
16	33.14	21.53	21.50	15/16-20UNEF
18	35.33	24.07	21.50	1 1/16-18UNEF
20	38.88	27.25	26.00	1 3/16-18UNEF
22	42.06	30.42	26.00	1 5/16-18UNEF
24	45.13	33.60	26.00	1 7/16-18UNEF

Thru-Bulkhead Receptacle

MC3119

MS3119



Units : mm

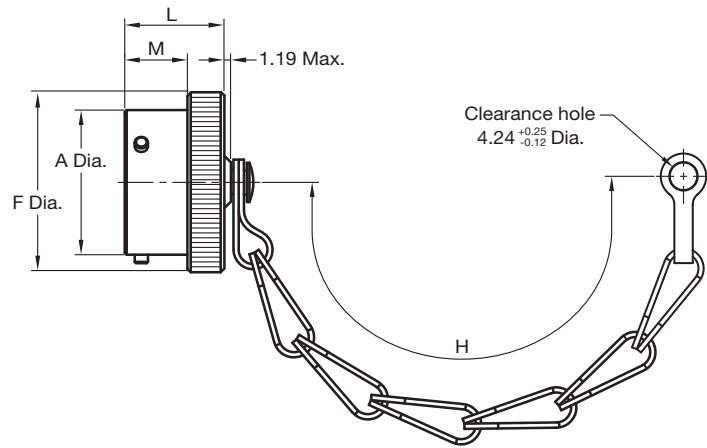
Shell Size	A Max.	B Mounting Holes	C Dia. +0.00 -0.12	F +0.78 -0.00	G ±0.40	H +0.12 -0.00	L Max.
8	21.03	15.09	12.03	14.28	1.57	3.05	28.57
10	24.23	18.26	15.01	14.28	1.57	3.05	28.57
12	26.59	20.62	19.07	14.28	1.57	3.05	28.57
14	28.98	23.01	22.25	14.28	1.57	3.05	28.57
16	31.34	24.61	25.42	14.28	1.57	3.05	28.57
18	33.73	26.97	28.60	14.28	1.57	3.05	28.57
20	36.90	29.36	31.77	17.48	2.39	3.05	35.71
22	40.08	31.75	34.95	17.48	2.39	3.05	35.71
24	43.25	34.93	38.12	17.48	2.39	3.73	35.71

MIL-DTL-26482 Series 1

Plug Protection Cover

MC3180

MS3180



Units : mm

Shell Size	A Dia. +0.00 -0.12	F Dia. Max.	H +12.7 -6.35	L Max.	M +0.78 -0.00
8	12.03	18.26	76.20	14.27	9.35
10	15.01	21.43	76.20	14.27	9.35
12	19.07	25.40	88.90	14.27	9.35
14	22.25	28.57	88.90	14.27	9.35
16	25.42	31.75	88.90	14.27	9.35
18	28.60	34.92	88.90	14.27	9.35
20	31.77	38.10	101.60	14.27	10.92
22	34.95	41.27	101.60	14.27	10.92
24	38.12	44.45	101.60	14.27	11.76

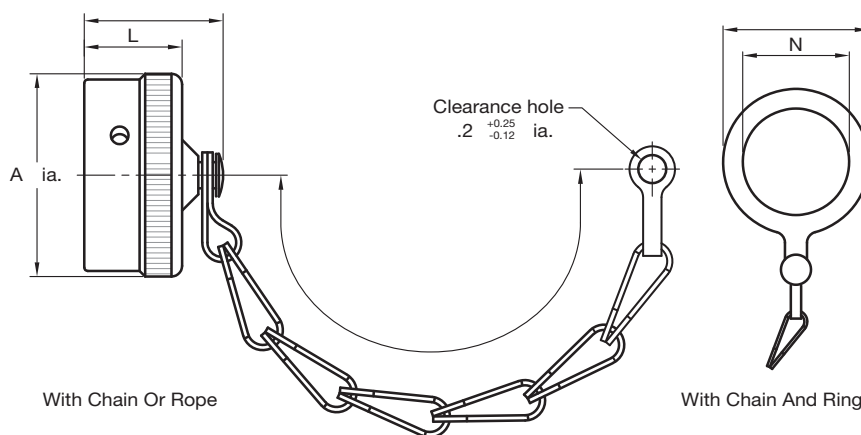
How To Order

MC3180	-	12	C	A	L	
MS3180	-	12	C	A	L	
						Length
						L - 127.0mm +12.7, -6.35 chain or rope in lieu of standard Length.
						Finish
						A - Black anodize
						N - Electroless nickel
						W - Olive drab chromate over cadmium plate
						Z - Olive drab chromate over zinc plate
						Dash NO.
						C - With chain
						R - With rope
						Shell Size
						Part Number

Receptacle Protection Cover

MC3181

MS3181



Units : mm

hell ize	A ia. a .	+12.7 -6.35	a .	L a .	N in.	a .
	1 .6	76.20	20.62	1 .27	1 .6	21. 3
10	21. 1	76.20	25. 0	1 .27	17. 6	21. 3
12	25. 0	. 0	30.17	1 .27	22.6	21. 3
1	2 .57	. 0	36.52	1 .27	25. 1	21. 3
16	31.75	. 0	3 .67	1 .27	2 .	21. 3
1	3 . 2	. 0	2. 7	1 .27	32.16	21. 3
20	3 .10	101.60	6.02	1 .27	35.3	21. 3
22	1.27	101.60	.22	1 .27	3 .51	21. 3
2	. 5	101.60	52.37	15.2	1.6	22.22

How To Order

MS3181
MS3181

-
-

12
12

C
C

A
A

L
L

Length

L - 127.0mm +12.7, -6.35 Chain or rope in lieu of standard length.

Finish

A - Black anodize
N - Electroless nickel
W - Olive drab chromate over cadmium plate
Z - Olive drab chromate over zinc plate

Dash NO.

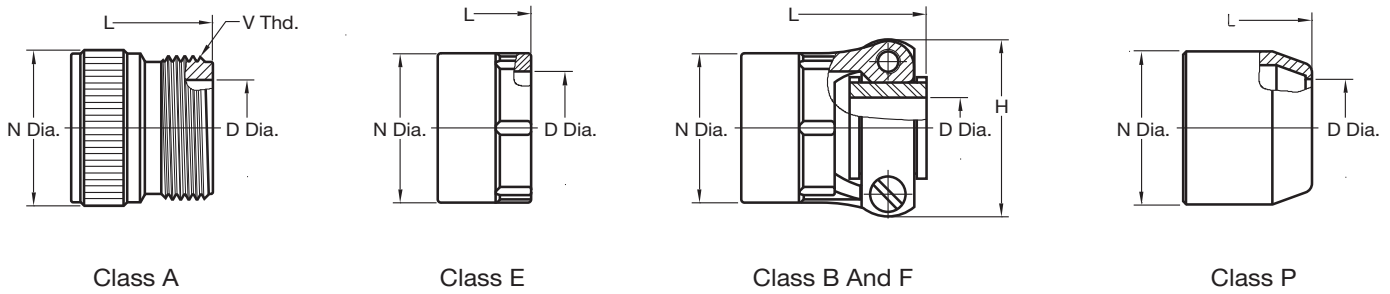
C - With chain
R - With rope
N - With chain and ring

Shell Size

Part Number

Termination Assemblys

Shell Style 3110/3111/3116

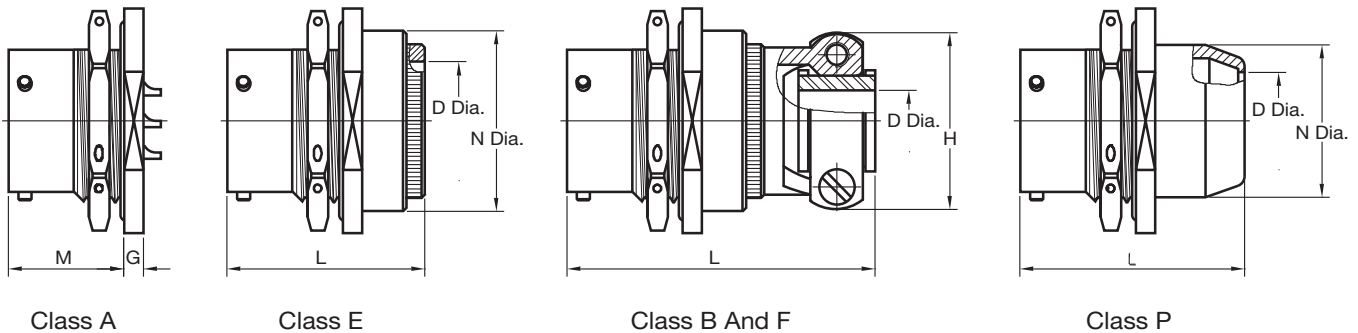


Units : mm

Shell Size	Class A				Class E			Class B And F				Class P		
	D Dia. Min.	L Max.	N Dia. Max.	V Thread Class 2A	D Dia. Min.	L Max.	N Dia. Max.	D Dia. ± 0.25	H Max.	L Max.	N Dia. Max.	D Dia. Min.	L Max.	N Dia. Max.
8	8.15	36.68	14.98	1/2-28UNEF	6.58	33.73	15.44	3.18	21.03	48.81	15.44	8.06	36.90	15.44
10	11.84	36.68	18.21	5/8-24UNEF	9.12	33.73	18.64	4.78	22.63	48.81	18.64	11.03	36.90	18.64
12	15.01	36.68	21.18	3/4-20UNEF	11.92	33.73	21.79	7.92	25.80	48.81	21.79	13.92	36.90	21.79
14	19.05	36.68	24.63	7/8-20UNEF	14.96	33.73	24.99	9.53	28.98	48.81	24.99	17.10	36.90	24.99
16	21.08	36.68	27.63	1-20UNEF	18.22	33.73	28.19	12.70	30.55	51.99	28.19	20.27	36.90	28.19
18	24.08	36.68	30.88	1 3/16-18UNEF	19.79	33.73	31.34	15.88	37.31	52.78	31.34	22.84	36.90	31.34
20	26.49	43.89	34.52	1 3/16-18UNEF	22.89	38.88	34.54	15.88	37.31	59.53	34.54	26.01	42.46	34.54
22	30.43	43.89	37.35	1 7/16-18UNEF	25.63	38.88	37.69	19.05	42.06	59.53	37.69	29.19	42.46	37.69
24	32.84	43.89	40.25	1 7/16-18UNEF	28.53	40.48	40.89	20.32	44.45	61.11	40.89	32.36	44.04	40.89

Termination Assemblys

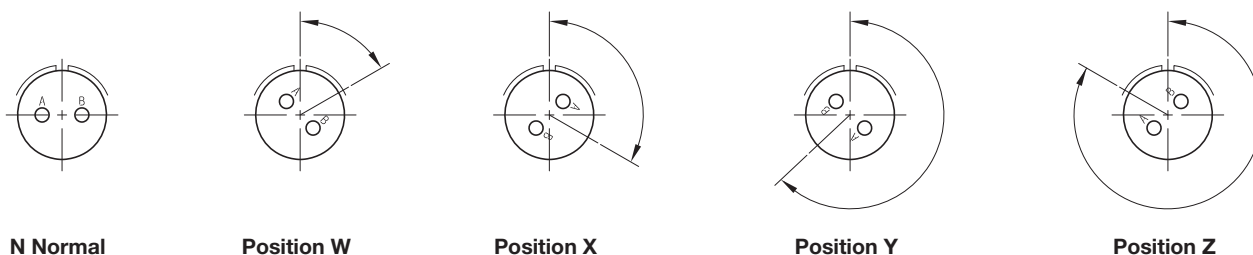
Shell Style 3114



Units : mm

Shell Size	Class A		Class E			Class B And F			Class P		
	M $+0.78$ -0.00	G ± 0.50	D Dia. Min.	L Max.	N Dia. Max.	D Dia. ± 0.25	H Max.	L Max.	D Dia. Min.	L Max.	N Dia. Max.
8	17.56	2.97	6.58	34.13	19.05	3.18	21.03	48.41	8.06	35.33	15.44
10	17.56	2.97	9.12	34.13	22.22	4.78	22.63	48.41	11.03	35.33	18.64
12	17.56	2.97	11.92	34.13	25.40	7.92	25.80	48.41	13.92	35.33	21.79
14	17.56	2.97	14.96	34.13	28.57	9.53	28.98	48.41	17.10	35.33	24.99
16	17.56	2.97	18.22	34.13	31.75	12.70	30.55	51.99	20.27	35.33	28.19
18	17.56	2.97	19.79	34.13	34.92	15.88	37.31	52.78	22.84	35.33	31.34
20	22.33	3.76	22.89	40.48	38.88	15.88	37.31	59.13	26.01	41.68	34.54
22	22.33	3.76	25.63	40.48	42.06	19.05	42.06	59.13	29.19	41.68	37.69
24	23.17	3.76	28.53	41.68	45.23	20.32	44.45	62.30	32.36	43.25	40.89

Alternate Insert Positions

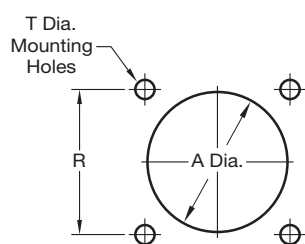


Views looking into front face of pin insert or rear face of socket insert.

Arrangement	Number Of Contacts	Service Rating	Contact Size		Alternate Insert Position				Arrangement	Number Of Contacts	Service Rating	Contact Size		Alternate Insert Position			
			#20	#16	W	X	Y	Z				#20	#16	W	X	Y	Z
8-2	2	I	2		58	122			16-26	26	I	26		60		275	338
8-3	3	I	3		60	210			16-99	23	I	21	2	66	156	223	340
8-4	4	I	4		45				18-11	11	II		11	62	119	241	340
8-33	3	I	3		90				18-30	30	I	29	1	180	193	285	350
10-6	6	I	6		90				18-32	32	I	32		85	138	222	265
10-98	6	I	6		60	180	240	270	20-16	16	II		16	238	318	333	347
12-3	3	II		3			180		20-24	24	I	24		70	145	215	290
12-8	8	I	8		90	112	203	292	20-27	27	I	27		72	144	216	288
12-10	10	I	10		60	155	270	295	20-39	39	I	37	2	63	144	252	333
14-5	5	II		5	40	92	184	273	20-41	41	I	41		45	126	225	
14-12	12	I	8	4	43	90			22-21	21	II		21	16	135	175	349
14-15	15	I	14	1	17	110	155	234	22-32	32	I	32		72	145	215	288
14-18	18	I	18		15	90	180	270	22-34	34	I	34		62	142	218	298
14-19	19	I	19		30	165	315		22-41	41	I	27	14	39	135	264	
16-8	8	II		8	54	152	180	331	22-55	55	I	55		30	142	226	314
16-23	23	I	22	1	158	270			24-61	61	I	61		90	180	270	324

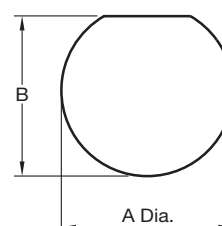
Panel Cutouts

Box And Wall Mounting Receptacle 3110/3112/3119 Style



Shell Size	A Dia. +0.25 -0.00	R	T Dia. ±0.12
8	15.70	15.09	3.17
10	18.67	18.26	3.17
12	21.82	20.62	3.17
14	25.02	23.01	3.17
16	28.27	24.61	3.17
18	31.37	26.97	3.17
20	34.57	29.36	3.17
22	37.72	31.75	3.17
24	40.92	34.92	3.94

Jam Nut Receptacle 3114 Style



Shell Size	A Dia. +0.25 -0.00	B +0.25 -0.12
8	15.70	15.09
10	18.67	18.26
12	21.82	20.62
14	25.02	23.01
16	28.27	24.61
18	31.37	26.97
20	34.57	29.36
22	37.72	31.75
24	40.92	34.92

Shell Size 8

Shell Size 10

								
Insert Arrangement	8-2	8-3	8-4	8-33	10-6	10-7	10-8	10-98
Service Rating	I	I	I	I	I	I	I	I
Number of Contacts	2	3	4	3	6	7	8	6
Contact Size	20	20	20	20	20	20	20	20

Shell Size 12

Shell Size 14

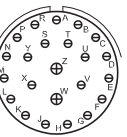
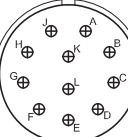
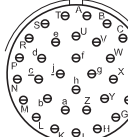
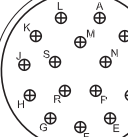
						
Insert Arrangement	12-3	12-4	12-8	12-10	14-5	14-12
Service Rating	II	II	I	I	II	I
Number of Contacts	3	4	8	10	5	8 4
Contact Size	16	16	20	20	16	20 16

Shell Size 16

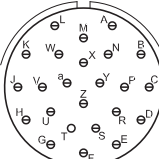
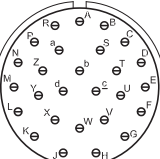
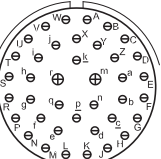
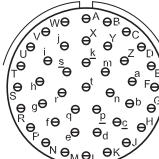
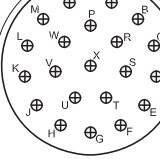
						
Insert Arrangement	14-15	14-18	14-19	16-8	16-23	16-26
Service Rating	I	I	I	II	I	I
Number of Contacts	14 1	18	19	8	22 1	26
Contact Size	20 16	20	20	16	20 16	20

Shell Size 18

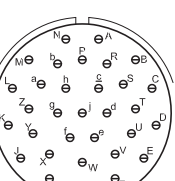
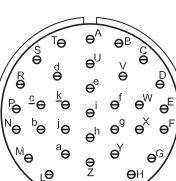
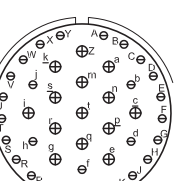
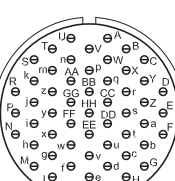
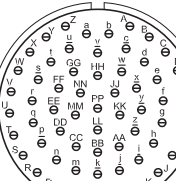
Shell Size 20

					
Insert Arrangement	16-99	18-11	18-30	18-32	20-16
Service Rating	I	II	I	I	II
Number of Contacts	21 2	11	29 1	32	16
Contact Size	20 16	16	20 16	20	16

Shell Size 22

					
Insert Arrangement	20-24	20-27	20-39	20-41	22-21
Service Rating	I	I	I	I	II
Number of Contacts	24	27	37 2	41	21
Contact Size	20	20	20 16	20	16

Shell Size 24

					
Insert Arrangement	22-32	22-34	22-41	22-55	24-61
Service Rating	I	I	I	I	I
Number of Contacts	32	34	27 14	55	61
Contact Size	20	20	20 16	20	20

MS

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MC Connector
MILCON

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