

# **AEF Solutions**

Solutions for Electro Magnetic Interference (EMC, EMP)



## **Filtered Connectors MIL- 38999/26482**

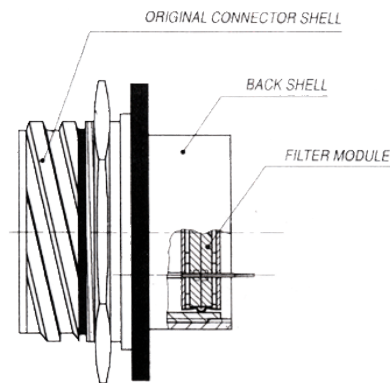
**Standard connector sizes**

## Hybrid Filter Assembly

### A Flexible Simple and Cost-Effective Solution

AEF's EMI/RFI filter connector assembly offers several advantages over standard filter pins resulting in greater immunity to environmental stress – such as shock and vibration – as well as the high density of the filter module. The AEF assembly is based on the integration of surface-mount devices (SMDs) technology, EMI filtering (capacitors, ferrite beads) with every connector pin into the filter module. This achieves high performance filter modules and gives the user greater flexibility in the application of protection strategies – in addition to the added benefit of compatibility with existing connector arrangements.

Not only does the AEF solution offer far greater reliability and vastly improved performance, it also enables the application of multi-stage filters, with EMI and EMP stages, ESD protection devices as well as common and differential mode filtering.



## Technical Specifications

Five types of RFI filters are available

- "Pi" Filters
- "C" Filters
- "L" Filters (Right)
- "L" Filters (Left)
- Inductor

Each type of RFI filter can be implemented to any contact in any arrangement.

### Electrical Characteristics

Working Voltage (WV) (line to case)	200 Vdc Max (see pages 5,6)
Dielectric Withstanding Voltage (DWV) (line to case)	500 Vdc Max (see pages 5,6)
Max. Current Rating	7.5A dc for #20 contact 5.0A dc for #22 contact
Minimum Insulation Resistance (IR) (line to case, line to line)	5 G ohms @ 100 V dc/ 2 minutes

### Environmental Characteristics

#### Climatic

Temperature Range	-55 degrees C to +125 degrees C
Humidity	Up to 95% R.H. @ Operating Temp.
Salt Spray	48 hours per MIL-STD-1344


#### Dynamics

Shock	100g X 11 msec (Half Sine)
Vibration (Sine)	15g Peak ; 10 + 2000Hz
Vibration (Random)	40g RMS; 50 + 2000Hz


#### Material and Finish

Connector	Per MIL-C-38999 & MIL-C-26482
Add-on Shell	Aluminium, Conversion treatment
Contacts	Brass, Gold Plated over Nickel
Potting	Silicone/Epoxy


### Series M – Military ADD-ON Filtered Connectors

"Pi" filters													
Attenuation Level Code No.	Max Cap. (pf)	WV DC (V)	DWV DC (V)	IR G	Cur (A)	Minimum Attenuation Measured (per MIL-STD-220) Frequency (MHz)							
						1	5	10	50	100	500	1000	1800
01	110	200	500	>5	7.5	-	-	-	2	7	50	69	43
02	1100	200	500	>5	7.5	-	2	4	20	35	67	58	39
03	8600	200	500	>5	7.5	3	13	20	58	66	63	60	40
04	11000	200	500	>5	7.5	4	14	21	61	69	66	66	40
05	24000	50 *	125	>5	7.5	5	20	36	76	66	62	57	38

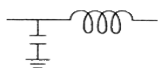
\* Higher WV can be provided

"C" filters													
Attenuation Level Code No.	Max Cap. (pf)	WV DC (V)	DWV DC (V)	IR G	Cur (A)	Minimum Attenuation Measured (per MIL-STD-220) Frequency (MHz)							
						1	5	10	50	100	500	1000	1800
01	55	200	500	>5	7.5	-	-	-	-	2	33	47	30
02	110	200	500	>5	7.5	-	-	-	1	6	33	69	44
03	550	200	500	>5	7.5	-	-	1	11	20	43	37	26
04	1100	200	500	>5	7.5	-	2	4	16	21	60	55	36
05	4300	200	500	>5	7.5	1	9	15	31	48	41	37	27
06	5500	200	500	>5	7.5	1	11	16	33	49	43	39	29
07	8600	200	500	>5	7.5	3	15	20	36	77	59	57	39
08	11000	200	500	>5	7.5	4	16	21	34	73	58	58	45
09	12000	50 *	125	>5	7.5	4	17	22	39	40	41	36	23
10	24000	50 *	125	>5	7.5	5	22	27	52	57	55	55	38
11	38000	25 *	50	>5	7.5	15	28	36	44	39	41	38	26
12	76000	25 *	50	>5	7.5	22	33	35	60	54	57	56	40


\* Higher WV can be provided

"L" filter (RIGHT)													
Attenuation Level Code No.	Max Cap. (pf)	WV DC (V)	DWV DC (V)	IR G	Cur (A)	Minimum Attenuation Measured (per MIL-STD-220) Frequency (MHz)							
						1	5	10	50	100	500	1000	1800
01	55	200	500	>5	7.5	-	-	-	2	4	34	48	32
02	550	200	500	>5	7.5	-	1	2	14	22	42	38	33
03	4300	200	500	>5	7.5	1	10	15	33	50	41	39	29
04	5500	200	500	>5	7.5	1	12	17	36	52	43	41	32
05	12000	50 *	125	>5	7.5	4	20	28	45	41	40	41	29
06	38000	25 *	50	>5	7.5	16	30	39	50	43	42	41	32

\* Higher WV can be provided

"L" filter (LEFT)													
Attenuation Level Code No.	Max Cap. (pf)	WV DC (V)	DWV DC (V)	IR G	Cur (A)	Minimum Attenuation Measured (per MIL-STD-220) Frequency (MHz)							
						1	5	10	50	100	500	1000	1800
01	55	200	500	>5	7.5	-	-	-	1	4	34	49	25
02	550	200	500	>5	7.5	-	1	2	13	23	43	38	23
03	4300	200	500	>5	7.5	1	10	15	32	45	42	41	25
04	5500	200	500	>5	7.5	1	12	17	36	51	42	40	21
05	12000	50 *	125	>5	7.5	4	20	28	45	41	40	40	29
06	38000	25 *	50	>5	7.5	16	29	38	48	42	43	40	22

\* Higher WV can be provided

Inductor													
Attenuation Level Code No.	WV DC (V)	DWV DC (V)	IR G	Cur (A)	Minimum Attenuation Measured (per MIL-STD-220) Frequency (MHz)								
					1	5	10	50	100	500	1000	1800	
01	200	500	>5	7.5	-	-	-	2	3	2	17	12	
02	200	500	>5	7.5	-	n-	1	3	4	3	18	15	

## ORDER CODES

### ADD-ON FILTER INSTALL MIL-C-38999/SERIES 1

Circular Connectors      M    1    1    A    15    A    35    P    N    T    P    04

**Product series**

M = Military/Professional series

**Series**

1 = MIL-C-38999  
2 = MIL-C-26482

**Series**

1 = Series 1  
2 = Series 2  
3 = Series 3

**Shell style**

A = Wall mount receptacle  
C = Straight plug

**Shell size**

9, 11, 13, 15, 17, 19, 21, 23, 25

**Finish**

A = Bright cadmium over electroless nickel  
B = Olive drab cadmium over electroless nickel  
C = Electroless nickel  
D = Corrosion resistant stainless steel

**Contact arrangement**

**Contact style**

P = Pin  
S = Socket

**Insert position**

**Termination**

T = Pcb contact  
R = Solder cup

**Filter type**

C = Capacitor only  
D = Custom request  
F = Inductor only  
J = L Filter (Left)  
L = L Filter (Right)  
P = Pi Filter

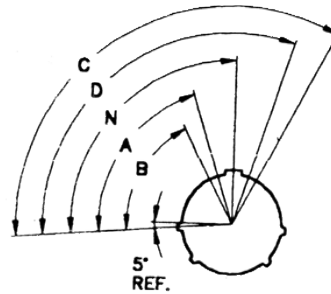
**Attenuation level**

01-12 – See [Filter Types](#)  
99 – Custom request – Please contact customer support





















**ADD-ON FILTER INSTALL MIL-C-38999/SERIES 1**

**Insert Position – Angle of Rotation**

Shell Size	N	A	B	C	D
9	95 °	77 °	–	–	113 °
11	95 °	81 °	67 °	123 °	109 °
13	95 °	75 °	63°	127 °	115 °
15	95 °	74 °	61°	129 °	116 °
17	95 °	77 °	65°	125 °	113 °
19	95 °	77 °	65°	125 °	113 °
21	95 °	77 °	65°	125 °	113 °
23	95 °	80 °	69°	121 °	110 °
25	95 °	80 °	69°	121 °	110 °



### ADD-ON FILTER INSTALL MIL-C-38999/SERIES 1 CONTACT ARRANGEMENT

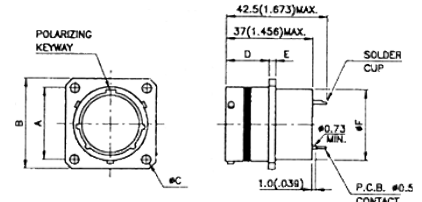
#16	#20	#22
 15-5 5 CONTACTS	 9-9B 3 CONTACTS	 9-35 6 CONTACTS
	 11-5 5 CONTACTS	 11-35 13 CONTACTS
	 11-90 6 CONTACTS	 13-35 22 CONTACTS
	 13-98 10 CONTACTS	 15-35 37 CONTACTS
	 15-18 18 CONTACTS	 17-35 35 CONTACTS
	 17-26 26 CONTACTS	 19-35 66 CONTACTS
	 19-32 32 CONTACTS	 21-35 79 CONTACTS
	 21-41 41 CONTACTS	 23-35 100 CONTACTS
	 23-55 55 CONTACTS	 25-35 128 CONTACTS
	 25-61 61 CONTACTS	



**ADD-ON FILTER INSTALL MIL-C-38999/SERIES 1**

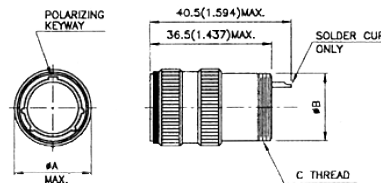
**Wall Mount Receptacle**

Shell Size	A	B ±0.5 ±.02	C DIA +0.25 -0.13 +.010 -.005	D +.000 -0.13 +.000 -.005	E +0.38 -0.00 +.015 -.000	F DIA ±0.2 ±.008
9	18.26 .719	23.83 .938	3.25 .128	16.05 .632	2.16 .085	14 .551
11	20.62 .812	26.19 1.031	3.25 .128	16.05 .632	2.16 .085	17.2 .677
13	23.01 .906	28.58 1.125	3.25 .128	16.05 .632	2.16 .085	20.4 .803
15	24.61 .969	30.96 1.219	3.25 .128	16.05 .632	2.16 .085	23.6 .929
17	26.97 1.062	33.32 1.312	3.25 .128	16.05 .632	2.16 .085	26.8 1.055
19	29.36 1.156	36.53 1.438	3.25 .128	16.05 .632	2.16 .085	30 1.181
21	31.75 1.250	39.67 1.562	3.25 .128	15.29 .602	2.92 .115	33.1 1.303
23	34.93 1.375	42.88 1.688	3.73 .147	15.29 .602	2.92 .115	36.3 1.429
25	38.10 1.500	46.02 1.812	3.73 .147	15.29 .602	2.92 .115	39.5 1.555



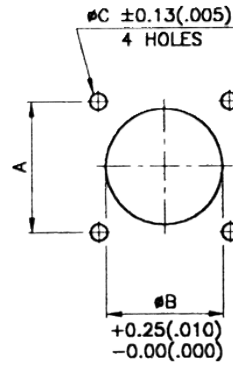
**STRAIGHT PLUG**

Shell Size	A DIA	B DIA	C Thread UNEF
9	21.82 .859	14 .551	7/16-28
11	24.99 .984	17.2 .667	9/16-24
13	29.36 1.156	20.4 .803	11/16-24
15	32.54 1.281	23.6 .929	13/16-20
17	35.71 1.406	26.8 1.055	15/16-20
19	38.51 1.516	30 1.181	1-1/16-18
21	41.68 1.641	33.1 1.303	1-3/16-18
23	43.86 1.766	36.3 1.429	1-5/16-18
25	48.03 1.891	39.5 1.555	1-7/16-18



**WALL MOUNT PANEL CUT OUT**

Shell Size	A	B DIA	C DIA
9	18.26 .719	16.89 .665	3.18 .125
11	20.62 .812	20.62 .812	3.18 .125
13	23.01 .906	24.51 .965	3.18 .125
15	24.61 .969	27.55 1.085	3.18 .125
17	26.97 1.062	30.73 1.210	3.18 .125
19	29.36 1.156	33.57 1.322	3.18 .125
21	31.75 1.250	36.75 1.447	3.18 .125
23	34.93 1.375	39.85 1.569	3.86 .152
25	38.10 1.500	43.25 1.073	3.86 .152



## ORDER CODES

### ADD-ON FILTER INSTALL MIL-C-38999/SERIES 2

Circular Connectors      M      1      2      A      14      A      35      P      N      T      P      04

**Product series**

M = Military/Professional series

**Series**

- 1 = MIL-C-38999
- 2 = MIL-C-26482

**Series**

- 1 = Series 1
- 2 = Series 2
- 3 = Series 3

**Shell style**

- A = Wall mount receptacle
- B = Jam nut receptacle
- C = Straight plug

**Shell size**

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

**Finish**

- A = Bright cadmium over electroless nickel
- B = Olive drab cadmium over electroless nickel
- C = Electroless nickel
- D = Corrosion resistant stainless steel

**Contact arrangement**

**Contact style**

- P = Pin
- S = Socket

**Insert position**

**Termination**

- T = Pcb contact
- R = Solder cup

**Filter type**

- C = Capacitor only
- D = Custom request
- F = Inductor only
- J = L Filter (Left)
- L = L Filter (Right)
- P = Pi Filter

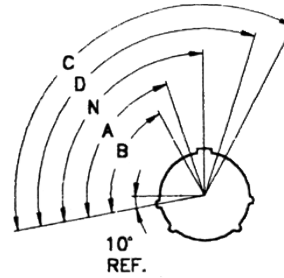
**Attenuation level**

- 01-12 – See [Filter Types](#)
- 99 – Custom request – Please contact customer support





















**ADD-ON FILTER INSTALL MIL-C-38999/SERIES 2**

**Insert Position – Angle of Rotation**

Shell Size	N	A	B	C	D
8	100 °	82 °	–	–	118 °
10	100 °	86 °	72 °	128 °	114 °
12	100 °	80 °	68 °	132 °	120 °
14	100 °	79 °	66 °	134 °	121 °
16	100 °	82 °	70 °	130 °	118 °
18	100 °	82 °	70 °	130 °	118 °
20	100 °	82 °	70 °	130 °	118 °
22	100 °	85 °	74 °	126 °	115 °
24	100 °	85 °	74 °	126 °	115 °



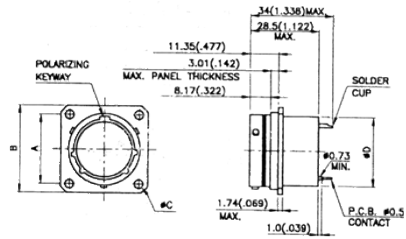
### ADD-ON FILTER INSTALL MIL-C-38999/SERIES 2 CONTACT ARRANGEMENT

#16	#20	#22
 14-5 5 CONTACTS	 8-98 3 CONTACTS	 8-35 6 CONTACTS
	 10-5 5 CONTACTS	 10-35 13 CONTACTS
	 10-98 6 CONTACTS	 12-35 22 CONTACTS
	 12-98 10 CONTACTS	 14-35 37 CONTACTS
	 14-18 18 CONTACTS	 16-35 53 CONTACTS
	 16-26 26 CONTACTS	 18-35 66 CONTACTS
	 18-32 32 CONTACTS	 20-35 79 CONTACTS
	 20-41 41 CONTACTS	 22-35 100 CONTACTS
	 22-35 55 CONTACTS	 24-35 128 CONTACTS
	 24-61 61 CONTACTS	

ADD-ON FILTER INSTALL MIL-C-38999/SERIES 2

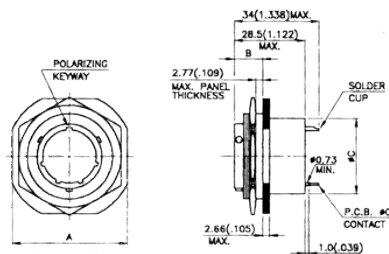
Wall Mount Receptacle

Shell Size	A	B max	C DIA +0.25 -0.13 +.010 -.005	D DIA ±.02 ±0.008
8	15.08 .594	21.03 .828	3.05 .120	14 .551
10	18.26 .719	24.23 .954	3.05 .120	17.2 .667
12	20.62 .812	26.59 1.047	3.05 .120	20.4 .803
14	23.02 .906	28.98 1.141	3.05 .120	23.6 .929
16	24.62 .969	31.34 1.234	3.05 .120	26.8 1.055
18	26.98 1.062	33.73 1.328	3.05 .120	30 1.181
20	29.36 1.156	36.91 1.453	3.05 .120	33.1 1.303
22	31.76 1.250	40.08 1.578	3.05 .120	36.3 1.429
24	34.92 1.375	43.26 1.703	3.73 .147	39.5 1.555



JAM NUT RECEPTACLE

Shell Size	A ± 0.4 ± .16	B	C dia ±0.2 ±.008
8	31.75 1.250	11.13 .438	14 .551
10	34.95 1.375	11.13 .438	17.2 .667
12	38.1 1.5	11.13 .438	20.4 .803
14	41.28 1.625	11.13 .438	23.6 .929
16	45.24 1.781	11.13 .438	26.8 1.055
18	48.00 1.89	11.13 .438	30 1.181
20	51.21 2.016	11.79 .464	33.1 1.303
22	54.36 2.14	11.79 .464	36.3 1.429
24	57.53 2.265	11.79 .464	39.5 1.555

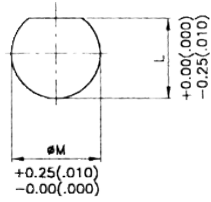


<b>STRAIGHT PLUG</b>			
Shell Size	A DIA MAX	B DIA ±0.2 ±.008	C Thread UNEF
8	19.05 .75	14 .551	7/16-28
10	21.82 .859	17.2 .667	9/16-24
12	26.19 1.031	20.4 .803	11/16-24
14	29.36 1.156	23.6 .929	13/16-20
16	32.54 1.281	26.8 1.055	15/16-20
18	35.71 1.406	30 1.181	1-1/16-18
20	38.89 1.531	33.1 1.303	1-3/16-18
22	41.68 1.641	36.3 1.429	1-5/16-18
24	44.86 1.766	39.5 1.555	1-7/16-18

<b>WALL MOUNT PANEL CUTOUT</b>			
Shell Size	A	C DIA	K DIA
8	15.09 .594	3.18 .125	15.49 .610
10	18.26 .719	3.18 .125	18.64 .734
12	20.62 .812	3.18 .125	21.84 .860
14	23.01 .906	3.18 .125	25.02 .985
16	24.61 .969	3.18 .125	28.19 1.110
18	26.97 1.062	3.18 .125	31.34 1.234
20	29.36 1.156	3.18 .125	35.54 1.360
22	31.75 1.250	3.18 .125	37.69 1.484
24	34.93 1.375	3.86 .152	40.92 1.611

### JAM NUT PANEL CUTOUT

Shell Size	L	M DIA
8	21.08 .830	22.48 .885
10	24.26 .955	25.65 1.010
12	27.56 1.085	28.82 1.135
14	30.73 1.210	32.00 1.260
16	33.91 1.335	35.18 1.385
18	37.08 1.460	38.35 1.510
20	40.26 1.585	41.53 1.635
22	43.43 1.710	44.70 1.760
24	46.61 1.835	47.88 1.885





## ORDER CODES

### ADD-ON FILTER UNIT INSTALL MIL-C-38999/SERIES 3

Circular Connectors      M      1      3      A      15      A      35      P      N      T      P      04

**Product series**

M = Military/Professional series

**Series**

- 1 = MIL-C-38999
- 2 = MIL-C-26482

**Series**

- 1 = Series 1
- 2 = Series 2
- 3 = Series 3

**Shell style**

- A = Wall mount receptacle
- B = Jam nut receptacle
- C = Straight plug

**Shell size**

9, 11, 13, 15, 17, 19, 21, 23, 25

**Finish**

- A = Bright cadmium over electroless nickel
- B = Olive drab cadmium over electroless nickel
- C = Electroless nickel
- D = Corrosion resistant stainless steel

**Contact arrangement**

**Contact style**

- P = Pin
- S = Socket

**Insert position**

**Termination**

- T = Pcb contact
- R = Solder cup

**Filter type**

- C = Capacitor only
- D = Custom request
- F = Inductor only
- J = L Filter (Left)
- L = L Filter (Right)
- P = Pi Filter

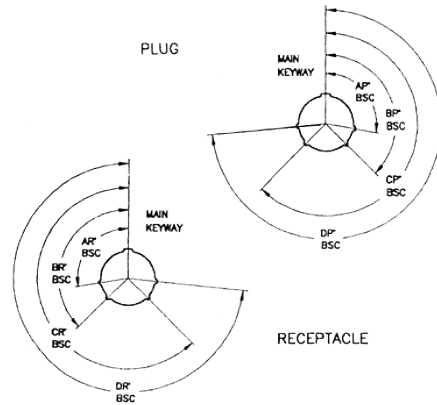
**Attenuation level**

- 01-12 – See [Filter Types](#)
- 99 – Custom request – Please contact customer support





















**ADD-ON FILTER INSTALL MIL-C-38999/SERIES 3**

**Insert Position – Angle of Rotation**

Shell Size	Insert Position Letter	AR or AP	BR or BP	CR or CP	DR or DP
9	N	105 °	140 °	215 °	265 °
	A	102 °	132 °	248 °	320 °
	B	80 °	118 °	230 °	312 °
	C	35 °	140 °	205 °	275 °
	D	64 °	155 °	234 °	304 °
11 13 and 15	N	95 °	141 °	208 °	236 °
	A	113 °	156 °	182 °	292 °
	B	90 °	145 °	195 °	252 °
	C	53 °	156 °	220 °	255 °
	D	119 °	146 °	176 °	298 °
17 and 19	N	80 °	142 °	196 °	293 °
	A	135 °	170 °	200 °	310 °
	B	49 °	169 °	200 °	244 °
	C	66 °	140 °	200 °	257 °
	D	62 °	145 °	180 °	280 °
21 23 and 25	N	80°	142 °	196 °	293 °
	A	135 °	170 °	200 °	310 °
	B	49 °	169 °	200 °	244 °
	C	66 °	140 °	200 °	257 °
	D	62 °	145 °	180 °	280 °
E	79 °	153 °	197 °	272 °	



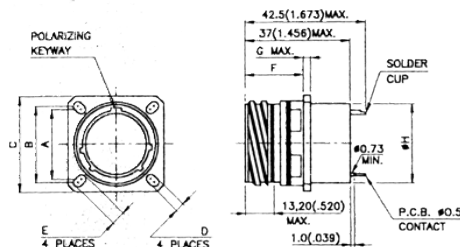
### ADD-ON FILTER INSTALL MIL-C-38999/SERIES 3 CONTACT ARRANGEMENT

#16	#20	#22
 15-5 5 CONTACTS	 9-98 3 CONTACTS	 9-35 6 CONTACTS
	 11-5 5 CONTACTS	 11-35 13 CONTACTS
	 11-98 6 CONTACTS	 13-35 22 CONTACTS
	 13-98 10 CONTACTS	 15-35 37 CONTACTS
	 15-18 18 CONTACTS	 17-35 55 CONTACTS
	 17-26 26 CONTACTS	 19-35 66 CONTACTS
	 19-32 32 CONTACTS	 21-35 79 CONTACTS
	 21-41 41 CONTACTS	 23-35 100 CONTACTS
	 23-55 55 CONTACTS	 25-35 128 CONTACTS
	 25-61 61 CONTACTS	

**ADD-ON FILTER INSTALL MIL-C-38999/SERIES 3**

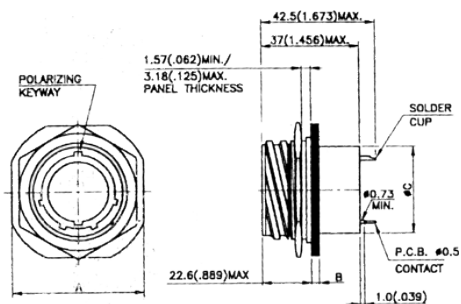
**Wall Mount Receptacle**

Shell Size	A	B	C ±0.3 ±0.12	D ±.02 ±0.008	E ±.02 ±0.008	F MAX ±1.4 ±.055	G	H DIA ±.02 ±.008
9	15.09 .594	18.26 .719	23.80 .937	3.25 .128	5.49 .216	19.50 .768	2.50 .098	15.00 .591
11	18.26 .719	20.62 .812	26.20 1.031	3.25 .128	4.93 .194	19.50 .750	2.50 .098	18.00 .709
13	20.62 .812	23.01 .906	28.60 1.126	3.25 .128	4.93 .173	19.50 .750	2.50 .098	21.00 .827
15	23.01 .906	24.61 .969	31.00 1.220	3.25 .128	4.93 .194	19.50 .750	2.50 .098	25.00 .984
17	24.61 .969	26.97 1.062	33.30 1.311	3.25 .128	4.93 .194	19.50 .750	2.50 .098	28.00 1.102
19	26.97 1.062	29.36 1.156	36.50 1.437	3.25 .128	4.93 .194	19.50 .750	2.50 .098	31.00 1.220
21	29.36 1.156	31.75 1.250	39.70 1.563	3.25 .128	4.93 .194	18.70 .736	3.20 .126	34.00 1.339
23	31.75 1.250	34.93 1.375	42.90 1.689	3.91 .154	6.15 .242	18.70 .736	3.20 .126	37.00 1.457
25	34.93 1.375	38.10 1.500	46.00 1.811	3.91 .154	6.15 .242	18.70 .736	3.20 .126	40.00 1.574



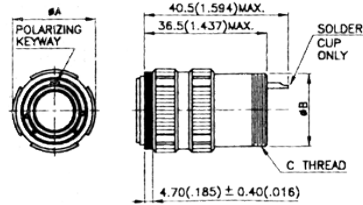
**JAM NUT RECEPTACLE**

Shell Size	A ± 0.3 ± .012	B +0.7 -0.1 + .027 - .004	C dia ±0.2 ±.008
9	27.00 1.062	2.2 .086	15 .590
11	31.8 1.251	2.2 .086	18 .708
13	34.9 1.374	2.2 .086	21 .826
15	38.1 1.5	2.2 .086	25 .984
17	41.3 1.625	2.2 .086	28 1.102
19	44.5 1.751	3.0 .118	31 1.220
21	49.2 1.937	3.0 .118	34 1.338
23	52.4 1.062	3.0 .118	37 1.456
25	55.6 2.188	3.0 .118	40 1.574



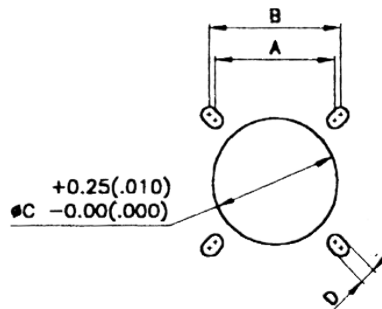
**STRAIGHT PLUG**

Shell Size	A DIA max	B DIA ± 0.2 ± .006	C THREAD
9	21.8 .858	15 .590	M12X1
11	25.0 0.984	18 .708	M15X1
13	29.4 1.157	21 .826	M18X1
15	32.5 1.279	25 .984	M22X1
17	35.7 1.405	28 1.102	M25X1
19	38.5 1.515	31 1.220	M28X1
21	41.7 1.641	34 1.338	M31X1
23	44.9 1.767	37 1.456	M34X1
25	48.0 1.889	40 1.574	M37X1



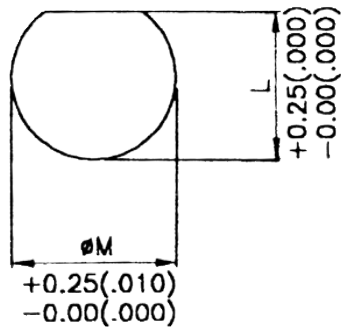
**WALL MOUNT PANEL CUTOUT**

Shell Size	A	B	C DIA	D
9	15.09 .594	18.26 .719	15.90 .626	3.4 .134
11	18.26 .719	20.62 .812	19.08 .751	3.4 .134
13	20.62 .812	23.01 .906	22.25 .876	3.4 .134
15	23.01 .906	24.61 .969	25.43 .1001	3.4 .134
17	24.61 .969	26.97 1.062	30.18 1.188	3.4 .134
19	26.97 1.062	29.36 1.156	31.78 1.251	3.4 .134
21	29.36 1.156	31.75 1.125	34.95 1.376	3.4 .134
23	31.75 1.250	34.92 1.375	38.38 1.511	4.06 .160
25	34.92 1.375	38.10 1.500	41.30 1.626	4.06 .160



### JAM NUT PANEL CUTOUT

Shell Size	L	M DIA
9	17.02 .670	17.78 .700
11	19.59 .770	20.96 .825
13	24.26 .955	25.65 1.010
15	27.56 1.085	28.83 1.135
17	30.73 1.210	32.01 1.260
19	33.91 1.335	35.18 1.385
21	37.08 1.460	38.35 1.510
23	40.26 1.585	41.53 1.635
25	43.43 1.710	44.70 1.760

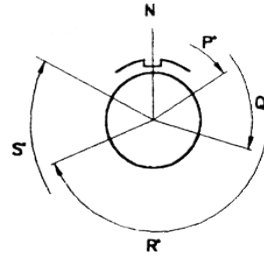


## ORDER CODES ADD-ON FILTER INSTALL MIL-C-26482/SERIES 1 (MS 3120 ONLY)

<b>Circular Connectors</b>	<b>M</b>	<b>2</b>	<b>1</b>	<b>A</b>	<b>14</b>	<b>B</b>	<b>18</b>	<b>P</b>	<b>N</b>	<b>T</b>	<b>P</b>	<b>03</b>
<b>Product series</b>												
M = Military/Professional series												
<b>Series</b>												
1 = MIL-C-38999												
2 = MIL-C-26482												
<b>Series</b>												
1 = Series 1												
2 = Series 2												
<b>Shell style</b>												
A = Wall mount receptacle												
<b>Shell size</b>												
8, 10, 12, 14, 16, 18, 20, 22, 24												
<b>Finish</b>												
B = Olive drab cadmium over electroless nickel												
<b>Contact arrangement</b>												
<b>Contact style</b>												
P = Pin												
S = Socket												
<b>Insert position</b>												
<b>Termination</b>												
T = Pcb contact												
R = Solder cup												
<b>Filter type</b>												
C = Capacitor only												
D = Custom request												
F = Inductor only												
J = L Filter (Left)												
L = L Filter (Right)												
P = Pi Filter												
<b>Attenuation level</b>												
01-12 – See <a href="#">Filter Types</a>												
99 – Custom request – Please contact customer support												






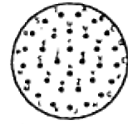
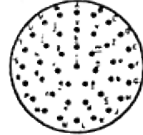
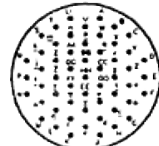
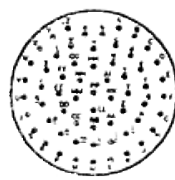
**ADD-ON FILTER INSTALL MIL-C-26482/SERIES 1  
(MS3120 ONLY)**

<b>Insert Position – Angle of Rotation</b>					
<b>Shell Size</b>	<b>ARRANGEMENT</b>	<b>P</b>	<b>Q</b>	<b>R</b>	<b>S</b>
8	98	–	–	–	–
10	98	90 °	180 °	240 °	270 °
14	5	40 °	92°	184 °	273 °
	18	15 °	90°	180 °	270 °
16	26	60 °	–	275 °	338 °
18	32	85 °	138°	222 °	265 °
20	41	45 °	126°	225 °	–
22	55	30 °	142°	226 °	314 °
24	61	90 °	180°	270 °	324 °



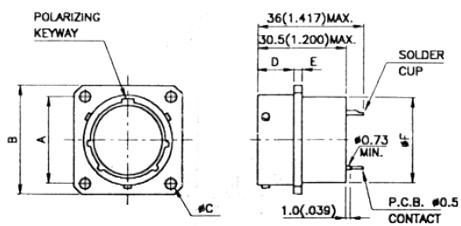


**ADD-ON FILTER INSTALL MIL-C-26482/SERIES 1  
(MS3120 ONLY)  
CONTACT ARRANGEMENT**

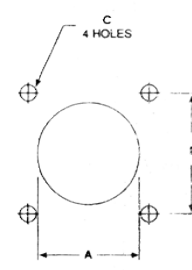
#16	#20
 <p>14-5 5 CONTACTS</p>	 <p>8-98 3 CONTACTS</p>
	 <p>10-98 6 CONTACTS</p>
	 <p>14-18 18 CONTACTS</p>
	 <p>16-26 26 CONTACTS</p>
	 <p>18-32 32 CONTACTS</p>
	 <p>20-41 41 CONTACTS</p>
	 <p>22-55 55 CONTACTS</p>
	 <p>24-61 61 CONTACTS</p>

**ADD-ON FILTER INSTALL MIL-C-26482/SERIES 1  
(MS3120 ONLY)**

<b>Wall Mount Receptacle</b>						
Shell Size	A	B	C ±0.13 ±0.005	D +0.78 - 0.00 +.031 -.000	E ±.04 ±0.016	F dia ±.02 ±.008
8	15.09 .594	21.03 .828	3.05 .120	10.95 .431	1.57 .062	14.0 .551
10	18.26 .719	24.23 .954	3.05 .120	10.95 .431	1.57 .062	17.2 .677
12	20.62 .812	26.59 1.047	3.05 .120	10.95 .431	1.57 .062	20.4 .803
14	23.01 .906	28.98 1.141	3.05 .120	10.95 .431	1.57 .062	23.60 .929
16	24.61 .969	31.34 1.234	3.05 .120	10.95 .431	1.57 .062	26.8 1.055
18	26.97 1.062	33.73 1.328	3.05 .120	10.95 .431	1.57 .062	30.0 1.181
20	29.36 1.156	36.91 1.453	3.05 .120	14.12 .556	2.40 .094	33.1 1.303
22	31.75 1.250	40.08 1.578	3.05 .120	14.12 .556	2.40 .094	36.3 1.429
24	34.93 1.375	43.26 1.703	3.73 .147	14.96 .589	2.40 .094	39.5 1.555



<b>PANEL CUTOUT</b>			
Shell Size	A +0.25 - 0.00 +.010 -.000	B	C DIA ± 0.13 ±.005
8	15.70 .618	15.09 .594	3.17 .125
10	18.67 .735	18.26 .719	3.17 .125
12	21.82 .859	20.62 .812	3.17 .125
14	25.02 .985	23.01 .906	3.17 .125
16	28.27 1.113	24.61 .969	3.17 .125
18	31.37 1.235	26.97 1.062	3.17 .125
20	34.57 1.361	29.36 1.156	3.17 .125
22	37.72 1.485	31.75 1.250	3.17 .125
24	40.92 1.611	34.92 1.375	3.94 .155



## ORDER CODES

### ADD-ON FILTER INSTALL MIL-C-26482/SERIES 2

Circular Connectors      M    2    2    A    14    B    18    P    N    T    P    03

**Product series**

M = Military/Professional series

**Series**

- 1 = MIL-C-38999
- 2 = MIL-C-26482

**Series**

- 1 = Series 1
- 2 = Series 2

**Shell style**

- A = Wall mount receptacle
- B = Jam nut receptacle
- C = Straight plug

**Shell size**

8, 10, 12, 14, 16, 18, 20, 22, 25

**Finish**

B = Olive drab cadmium over electroless nickel

**Contact arrangement**

**Contact style**

- P = Pin
- S = Socket

**Insert position**

**Termination**

- T = Pcb contact
- R = Solder cup

**Filter type**

- C = Capacitor only
- D = Custom request
- F = Inductor only
- J = L Filter (Left)
- L = L Filter (Right)
- P = Pi Filter

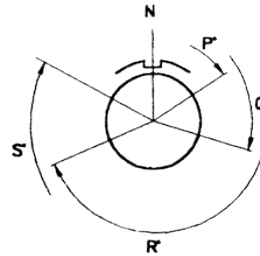
**Attenuation level**

- 01-12 - See Filter Types
- 99 - Custom request - Please contact customer support






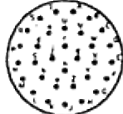
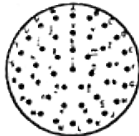
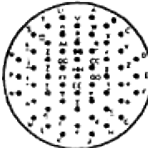
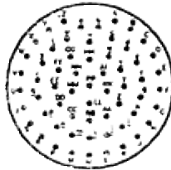
## ADD-ON FILTER INSTALL MIL-C-26482/SERIES 2

## Insert Position – Angle of Rotation

Shell Size	ARRANGEMENT	P	Q	R	S
8	98	–	–	–	–
10	98	90 °	180 °	240 °	270 °
14	5	40 °	92 °	184 °	273 °
	18	15 °	90 °	180 °	270 °
16	26	60 °	–	275 °	338 °
18	32	85 °	138 °	222 °	265 °
20	41	45 °	126 °	225 °	–
22	55	30 °	142 °	226 °	314 °
24	61	90 °	180 °	270 °	324 °



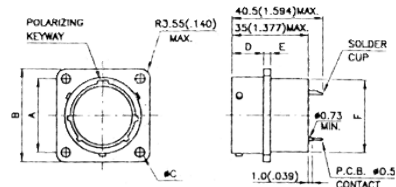
**ADD-ON FILTER INSTALL MIL-C-26482/SERIES 2  
CONTACT ARRANGEMENT**

#16	#20
 <p>14-5 5 CONTACTS</p>	 <p>8-98 3 CONTACTS</p>
	 <p>10-98 6 CONTACTS</p>
	 <p>14-18 18 CONTACTS</p>
	 <p>16-26 26 CONTACTS</p>
	 <p>18-32 32 CONTACTS</p>
	 <p>20-41 41 CONTACTS</p>
	 <p>22-55 55 CONTACTS</p>
	 <p>24-61 61 CONTACTS</p>

**ADD-ON FILTER INSTALL MIL-C-26482/SERIES 2**

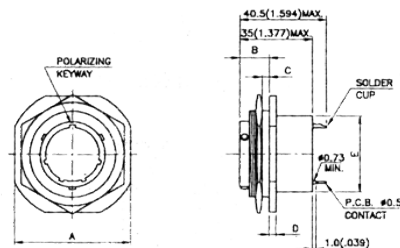
**Wall Mount Receptacle**

Shell Size	A	B	C DIA	D max	E max	F DIA ±.02 ±.008
8	15.08 .594	21.03 .828	3.05 .120	11.73 .462	1.98 .078	15.7 .618
10	18.26 .719	24.23 .954	3.05 .120	11.73 .462	1.98 .078	18.8 .740
12	20.62 .812	26.59 1.047	3.05 .120	11.73 .462	1.98 .078	22.0 .886
14	23.01 .906	28.98 1.141	3.05 .120	11.73 .462	1.98 .078	25.2 .992
16	24.61 .969	31.34 1.234	3.05 .120	11.73 .462	1.98 .078	28.4 1.118
18	26.97 1.062	33.73 1.328	3.05 .120	11.73 .462	1.98 .078	30.0 1.181
20	29.36 1.156	36.91 1.453	3.05 .120	14.91 .587	2.79 .110	33.1 1.303
22	31.75 1.250	40.08 1.578	3.05 .120	14.91 .587	2.79 .110	36.3 1.429
24	34.93 1.375	43.26 1.703	3.73 .147	15.75 .620	2.79 .110	39.5 1.555

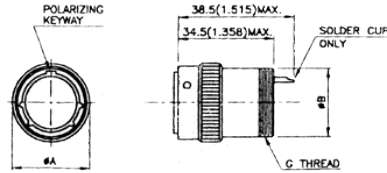


**JAM NUT RECEPTACLE**

Shell Size	A max	B max	C max	D max	C dia ±0.2 ±.008
8	24.23 .954	17.95 .707	4.75 .187	2.87 .113	15.7 .618
10	27.38 1.078	17.95 .707	4.75 .187	2.87 .113	18.8 .740
12	32.16 1.266	17.95 .707	4.75 .187	2.87 .113	22.0 .866
14	35.33 1.391	17.95 .707	4.75 .187	2.87 .113	25.2 .992
16	38.51 1.516	17.95 .707	4.75 .187	2.87 .113	28.4 1.118
18	41.68 1.641	17.95 .707	4.75 .187	2.87 .113	30.0 1.181
20	46.43 1.828	19.61 .772	6.35 .250	3.76 .148	33.1 1.303
22	49.63 1.954	19.61 .772	6.35 .250	3.76 .148	36.3 1.429
24	52.78 2.078	19.61 .772	5.56 .219	3.76 .148	39.5 1.555

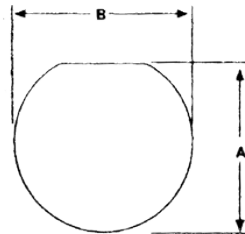


<b>STRAIGHT PLUG</b>			
Shell Size	A DIA	B DIA	C THREAD UNEF
8	19.86 .782	15.7 .618	1/2-20 UNF
10	23.52 0.926	18.8 .740	5/8-24
12	26.49 1.043	22.0 .866	3/4-20
14	30.5 1.183	25.2 .922	7/8-20
16	33.15 1.305	28.4 1.181	1-20
18	35.33 1.391	30.0 1.118	1 1/16-18
20	38.89 1.531	33.1 1.303	1 3/16-18
22	42.06 1.656	36.3 1.429	1 5/16-18
24	45.14 1.777	39.5 1.555	1 7/16-18



**JAM NUT PANEL CUTOUT**

Shell Size	A ± 0.13 ± .005	B DIA ± 0.13 ± .005
8	13.75 .541	14.6 .575
10	16.79 .661	17.70 .697
12	20.93 .824	22.73 .895
14	24.08 .948	25.65 1.010
16	27.23 1.072	28.33 1.135
18	30.40 1.197	32.00 1.260
20	33.58 1.322	35.18 1.385
22	36.75 1.447	38.35 1.510
24	39.93 1.572	41.53 1.635



WALL MOUNT PANEL CUTOUT			
Shell Size	C DIA +0.25 -0.00 +.010 -.000	D DIA ±0.13 ±.005	E DIA
8	15.75 .620	15.09 .594	3.17 .125
10	18.80 .740	18.26 .719	3.17 .125
12	21.95 .864	20.67 .812	3.17 .125
14	25.15 .990	23.01 .906	3.17 .125
16	28.40 1.118	24.61 .969	3.17 .125
18	31.50 1.240	26.97 1.062	3.17 .125
20	34.70 1.366	29.36 1.156	3.17 .125
22	37.85 1.490	31.75 1.250	3.17 .125
24	41.05 1.616	34.92 1.375	3.97 .155

