

EMI/RFI

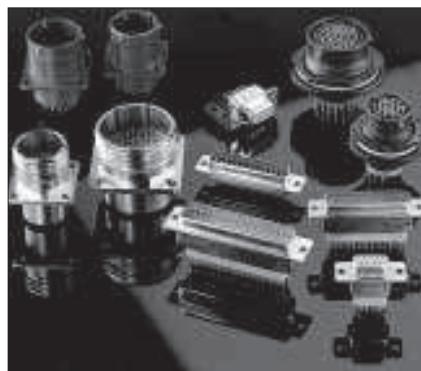


Applications

All electronics equipments

Standards

Concerned equipments :
FCC, VDE, MIL-STD 461, GAMEG 13...

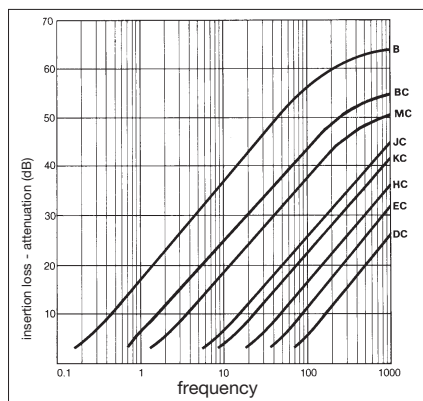


Description

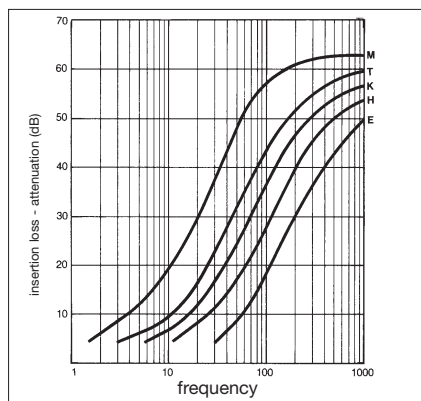
- Filter connectors have been developed from standard specifications. They are interchangeable as to the mounting and intermateable with standard connectors of the same series.
- Different types of contacts can be fitted in these connectors : filter, non filter, ground contacts. The filter contacts attenuate signals in different frequency ranges from approximately 100 kHz.
- Capacitive and inductive components used for filtering are made of metallized ceramics and ferrites respectively. They have the shape of tubes inserted individually on to each contact, or planar arrays over all the connector contacts.
- Mechanical design and 100% testing carried out in production ensure a high level of quality to Souriau filter connectors.

Typical performance

capacitive filter



π network filter



Note : For filter selection, refer to the table of each series

General characteristics

- **Voltage rating :**
200 Vdc or 100 Vdc, according to filter type.
- **Current rating :**
5 A, 7.5 A or 13 A according to contact type.
- **Filters :**
capacitive, L or π filters from 100 pF up to 0.1 μ F.

D*J-SUB



Applications

Space, military, aeronautical

Standards

based on :

- MIL-C 24308
- NFC 93425/HE 501
- BS 9523 - N-001



Description

D*J subminiature filter connectors are designed for aeronautical, military and other environmental applications. A non-magnetic version for space applications is also available.

These filter connectors are directly based on the standard specifications : MIL-C 24308, NFC 93425 (HE 501) and BS 9523 - N-001. They are interchangeable and interchangeable as to the mounting with standard connectors of the same series.

For the high reliability range approved by the European Space Agency, please, report to the corresponding catalogue.

Characteristics

Mechanical

D*J connectors are fitted with tubular filters :

- Shells : copper alloy or steel, tin lead plated
- Insulators : self-extinguishing thermoset (UL-94-VO)
- Contacts : machined copper alloy, gold plated, 1.27 micron min gold over 2 microns min nickel on contact area
Contact retention force in insulator : 40N min

Environmental

Temperature -55°C → 125°C

MIL-STD 1344, method 1003, condition A - NFC 20714

Humidity 10 cycles 24 h - MIL-STD 1344, method 1002, type II except step 7 b - NFC 20703

Salt spray 48 h - MIL-STD 1344, method 1001, condition B
NFC 20711

Durability 500 cycles - mating/unmating

Vibration 20 g - MIL-STD 1344, method 2005, condition IV NFC 20706

Shock 50 g - 11 ms - MIL-STD 1344, method 2004, condition E
NFC 20727

Electrical and filter types

Filter designation	B	M	T	H	
Filter type	c filter	π filter			
Max. voltage rating	100Vdc	200Vdc-120Vac rms 50 Hz or 400Hz			
Max. current rating	5A				
Insulation resistance, 25°C, 2mn electric. time	> 5000 MΩ (under 100 Vdc)				
DWV, sea level, 25°C	300Vdc	500Vdc			
Contact resistance	7,5 mΩ Max				
Capacitance at 1KHz : 0.1Vrms at 25°C	50 000 pF min	4 000 pF to 12 000 pF	2 300 pF to 5 000 pF	500 pF to 1 300 pF	
Attenuation per MIL-STD 220 at 25°C (with no applied voltage or current, in 50 Ω system)	frequency (MHz)	minimum attenuation (dB)			
	0.3	5			
	1	15			
	3	24	5	3	
	10	33	13	9	2
	30	42	28	20	7
	100	48	50	41	20
300	50	55	55	38	
1000	50	55	55	50	

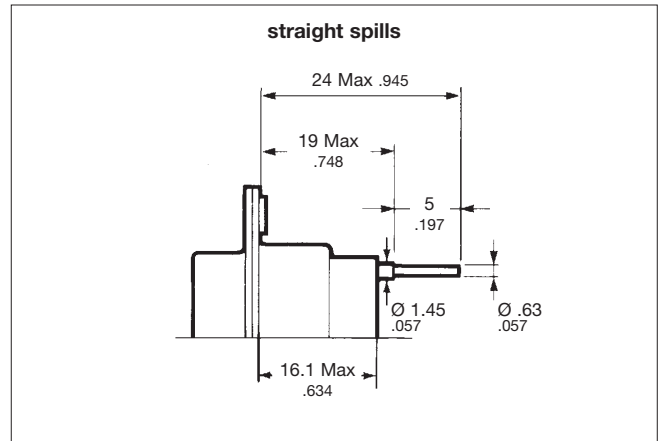
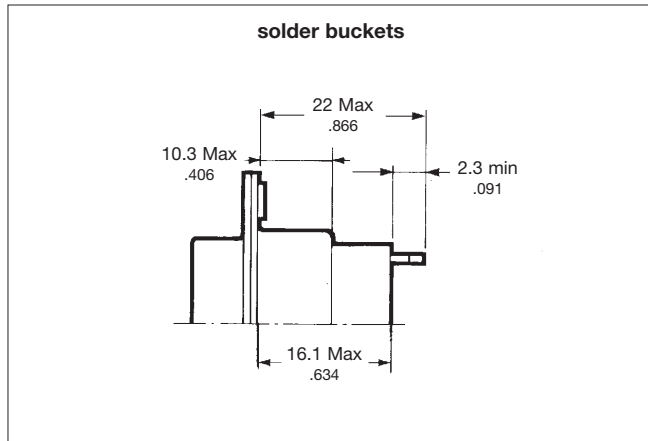
Ordering information

basic series	D	B	J	25	P	300	H	-***	NM
shell size	E - 9 cts A - 15 cts	B - 25 cts C - 37 cts	D - 50 cts						
contact arrangement	- 09-15-25-37-50								
contact type	P - pin	S - socket							
termination	without indication - solder bucket			300 - straight spill, Ø 0.63 mm					
filter type	B - capacitive filters			M-T-H - π filters					
special modifiers	<ul style="list-style-type: none"> - partially loaded filter connector (with grounded or non filtered contact) - connector with different types of filters (in this case the preceding letter does not appear) - non standard filters 								
Specification	<ul style="list-style-type: none"> - copper alloy tin-lead plated NM - non magnetic gold plated shell (1.27 micron) NMA - non magnetic tin lead plated shell 								

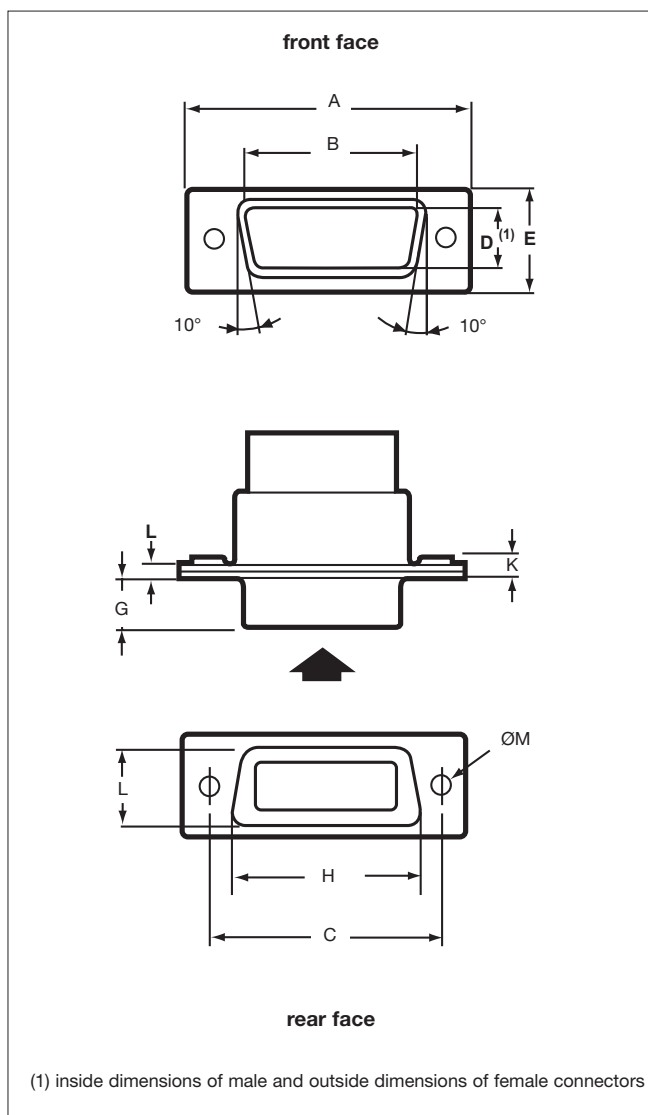
D*J-SUB



Dimensions (mm/inches)



Note : consult factory for special dimensions



Dim.	Contact Type	Shell Size				
		E	A	B	C	D
A	P/S	30.43 1.198	38.76 1.526	52.65 2.073	68.94 2.714	66.55 2.620
B	P	16.79 .661	25.12 .989	38.84 1.529	55.30 2.177	52.68 2.074
	S	16.21 .638	24.54 .966	38.25 1.506	54.71 2.154	52.30 2.059
C	P/S	24.99 .984	33.32 1.312	47.04 1.852	63.50 2.500	61.11 2.406
D	P	8.23 .324	8.23 .324	8.23 .324	8.23 .324	10.95 .431
	S	7.77 .306	7.77 .306	7.77 .306	7.77 .306	10.62 .418
E	P/S	12.17 .479	12.17 .479	12.17 .479	12.17 .479	14.99 .590
G	P	5.80 .228	5.80 .228	5.70 .224	5.70 .224	5.70 .224
	S	6.05 .238	6.05 .238	6.05 .238	6.05 .238	6.05 .238
H	P/S	19.02 .749	27.25 1.073	41.02 1.615	57.45 2.262	55.07 2.168
J	P/S	10.46 .412	10.46 .412	10.46 .412	10.46 .412	13.31 .524
K	P	0.90 .035	0.90 .035	0.90* .035	1.27 .050	1.27 .050
	S	0.90 .035	0.90 .035	0.90* .035	0.90 .035	0.90 .035
L	P	0.72 .028	0.72 .028	0.74* .029	0.94 .037	0.94 .037
	S	0.72 .028	0.72 .028	0.72 .028	0.72 .028	0.72 .028
M	P/S	3.10 .122	3.10 .122	3.10 .122	3.10 .122	3.10 .122

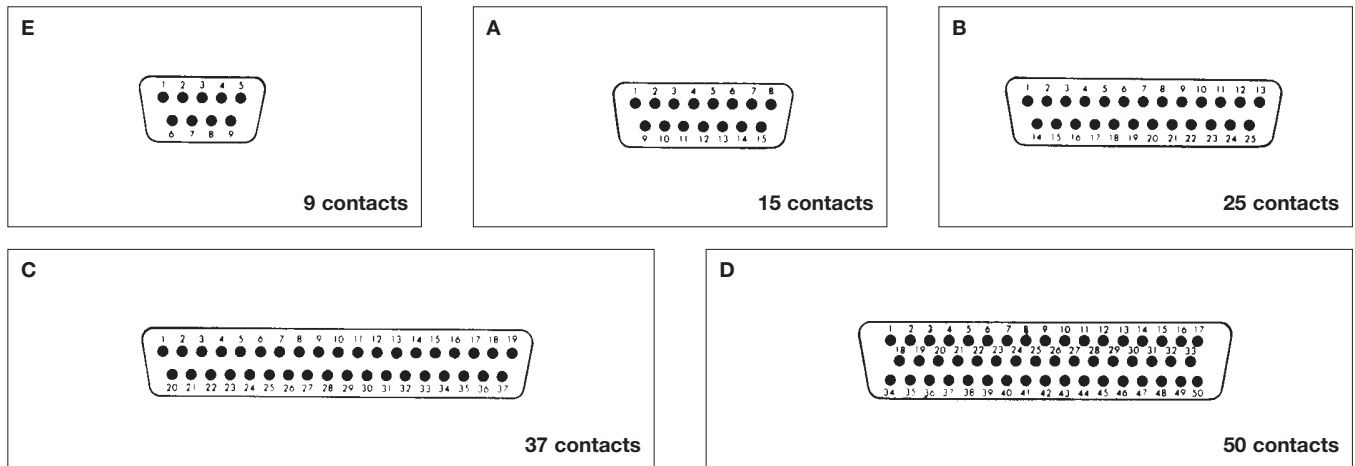
(*non-magnetic version, K = 1.27 and L = 0.94)

D*J/D*JP/D*TP-SUB



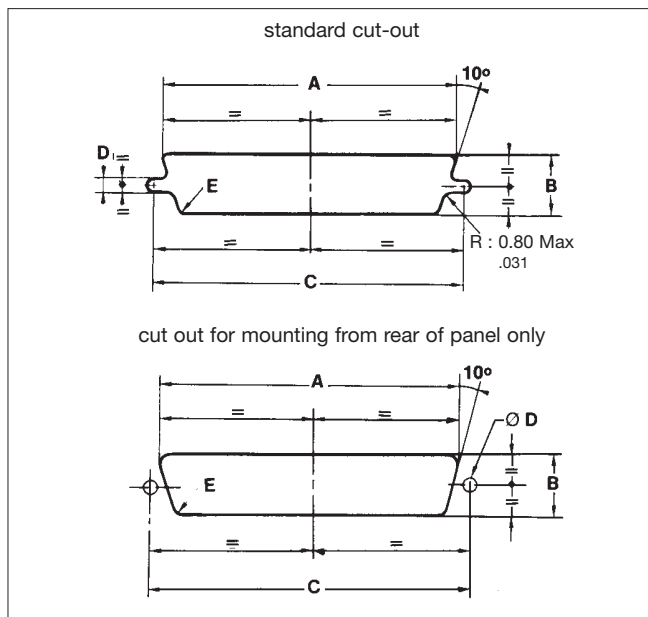
Layouts

Male insulator front view



Contacts are individually numbered on both sides of the insulator

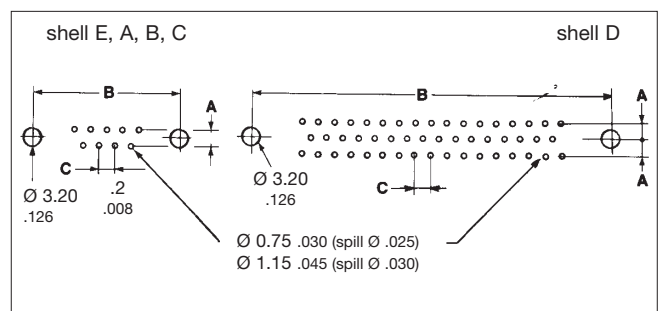
Panel cut outs



Dim.	Mounting position	Shell Size				
		E	A	B	C	D
A	Front	22.20 .874	30.50 1.201	44.30 1.744	60.70 2.390	58.30 2.295
	Rear	20.50 .807	28.80 1.134	42.30 1.665	59.10 2.327	56.30 2.217
B	Front	13.00 .512	13.00 .512	13.00 .512	13.00 .512	15.80 .622
	Rear	11.40 .449	11.40 .449	11.40 .449	11.40 .449	14.10 .555
C	Front	24.99 .984	33.32 1.312	47.04 1.852	63.50 2.500	61.11 2.406
	Rear	24.99 .984	33.32 1.312	47.04 1.852	63.50 2.500	61.11 2.406
D	Front	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126
	Rear	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126
E	Front	2.10 .083	2.10 .083	2.10 .083	2.10 .083	2.10 .083
	Rear	3.30 .130	3.30 .130	3.30 .130	2.10 .083	3.30 .130

PC card drilling dimensions

Dim.	Mounting position	Shell Size					
		E	A	B	C	D	
A	Termination	3-300	2.84 .112	2.84 .112	2.84 .112	2.84 .112	2.84 .112
		5-500	2.54 .100	2.54 .100	2.54 .100	2.54 .100	2.54 .100
		15/16-800	2.84 .112	2.84 .112	2.84 .112	2.84 .112	2.84 .112
B		24.99 .984	33.32 1.312	47.04 1.852	63.50 2.500	61.11 2.406	
C		2.74 .108	2.74 .108	2.76 .109	2.76 .109	2.76 .109	

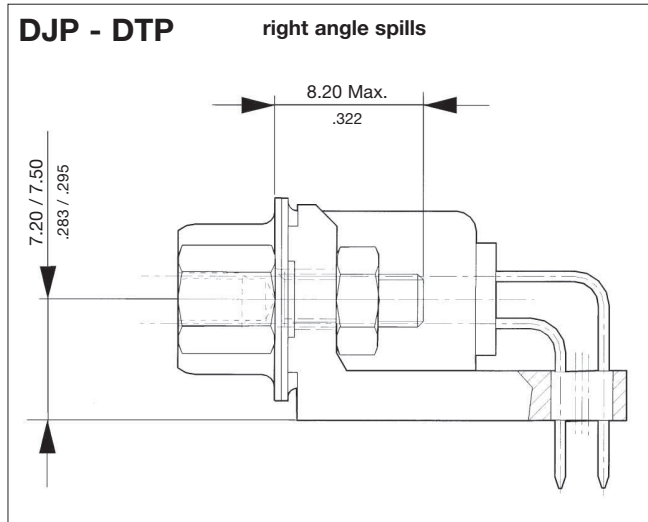




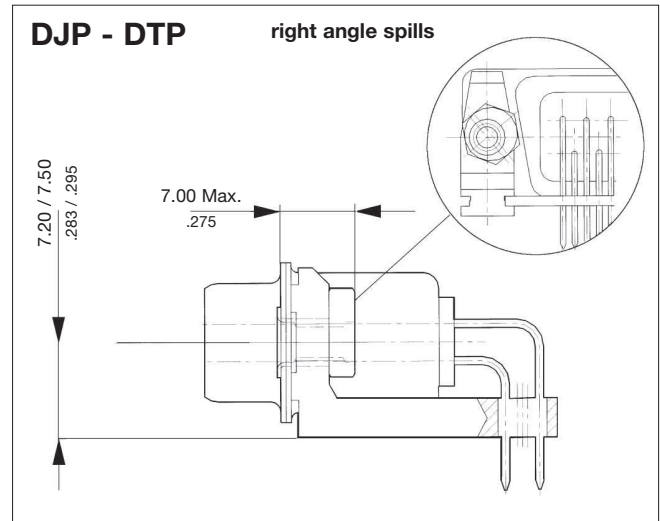
Accessories DJ/DJP/DTP

Optional mounting

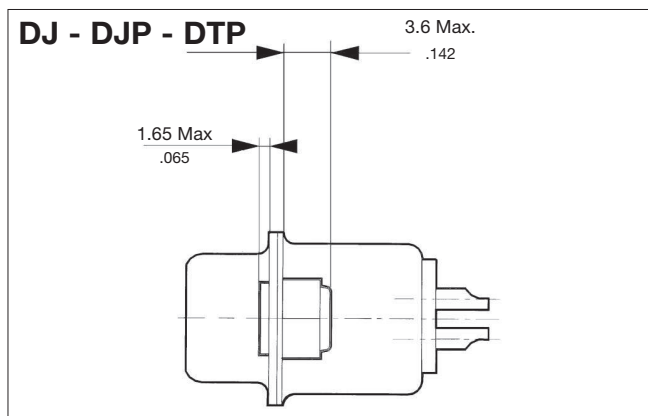
**Plastic bracket and female screw lock
4.40 UNC**



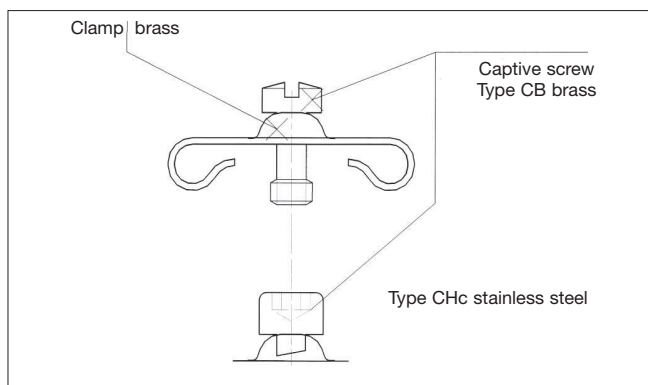
**Plastic bracket and clinch screwnuts M3 or
4.40 UNC**



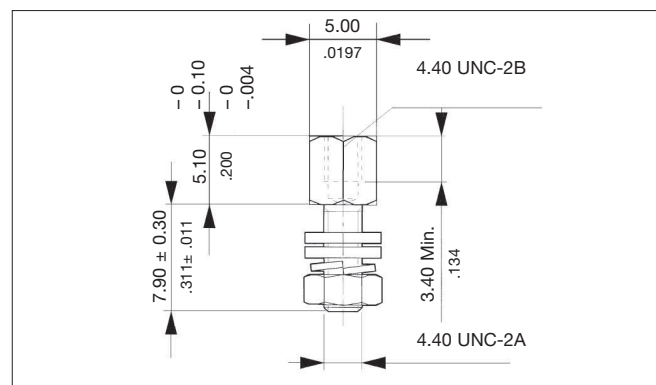
**Clinch screwnuts no selflocking : M3 or 4.40 UNC
selflocking : 4.40 UNC (stainless steel)**



Male screw lock



Female screw lock



Note : for reference including optional mounting, consult us.

8TFLT/8TFD

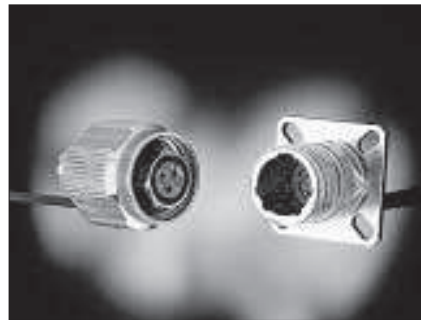


Applications

- Military
- Aeronautical

Standards

- 8TFLT : MIL-C 38999 Series I
NFC 93422 HE 308
DTAT C 5935 x 0001
- 8TFD : MIL-C 38999 Series III



Description

8TFLT and 8 TFD filter connectors are equipped with planar arrays filters. These connectors have the same length as the standard connectors of the same series so as to be directly interchangeable, and allow an easy implementation of the filtering at all stage of equipment development and life.

Characteristics

Mechanical

- Shells : aluminum alloy, olive green cadmium or nickel plated
- Insulators : thermoplastic
- Interfacial and peripheral seals : silicone rubber
- Contacts : machined copper alloy gold plated, 1.27 micron min gold over 2 microns min nickel on contact area
Contact retention force :
#22 : 45 Nmin - #16, #20 : 67 Nmin

Environmental

Temperature	-55°C / + 125°C	MIL-STD 1344 method 1003 condition A NFC 20714
Sealing	Leakage < 16 cm³/h altitude immersion (8FD)	NFC 20717 with differential pressure of 2 bars MIL-STD 1344, method 1004
Humidity	10 cycles 24h 56 days	MIL-STD 1344, method 1002, type II except step 7b NFC 20703
Salt spray	48 h - L plating 500 h - B and W plating	MIL-STD 1344, method 1001, condition B NFC 20711 MIL-STD 1344, method 1001, condition C
Durability	500 cycles	mating/unmating
Vibrations	30 g (sinus) 41.7 Gms (random)	MIL-STD 202, method 204, condition G MIL-STD 1344, method 2005, condition VI, letter J
Shock	300 g 3 ms	MIL-STD 1344, method 2004, condition D

Ordering information

Basic series :	8 T F D 00 C 15 W 35 P N M ***
- 8TFLT : 38999 Series I, HE308 type	
- 8TFD : 38999 Series III type	
planar Array filter	
shell type	00 - square flange receptacle 03 - square flange receptacle (rear mounting) (series 1 only) 07 - jam nut receptacle
Termination	— : solder bucket C : Straight spill
shell size	09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25
Plating	
8 TFLT : (series I)	B - 500 h salt spray green olive cadmium F - Nickel
8 TFD : (series III)	W - 500 h salt spray green olive cadmium F - Nickel
contact layouts	(see table page 341)
contact type	P - pin S - socket
orientation	8 TFLT : N - A - B - C - D 8 TFD : N - A - B - C - D - E
filter type (see page ???)	- capacitive BC, MC, TC, KC, EC - Pi type A, P, M, T, H
special modifier	- mixed filtering - specific filters - specific dimensions

8TFLT/8TFD



Electrical characteristics capacitive filter types

Filter designation		BC	MC	TC	KC	EC
Filter type		Capacitive				
Max. voltage rating	# 22 # 20 # 16	200 Vdc 120 Vac rms 50 Hz or 400 Hz				
Max. current rating	# 22 # 20 # 16	5 A 7.5 A 13 A				
Insulation resistance, 25°C		> 5000 MΩ (under 100 VDC)				
DWV, sea level, 25°C		500 Vdc				
Contact resistance	# 22 # 20 # 16	17 mΩ 8,5 mΩ 4,5 mΩ				
Capacitance at 1kHz : 0.1Vrms at 25°C		12 000 pF to 24 000 pF	6 000 pF to 12 000 pF	3 000 pF to 6 000 pF	1 500 pF to 3 000 pF	350 pF to 750 pF
	frequency (MHz)	minimum attenuation (dB)				
Attenuation per MIL-STD-220 at 25°C (with no applied voltage or current, in 50 Ω system)	0.3					
	1	5	2			
	3	12	9	4	2	
	10	22	19	13	8	
	30	30	25	20	16	4
	100	40	35	30	25	12
	300	45	42	38	34	23
	1000	55	50	45	42	30







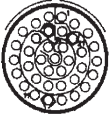

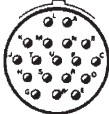
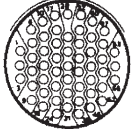
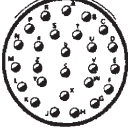
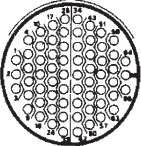
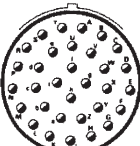
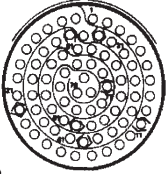
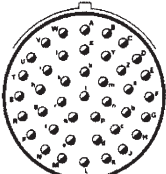
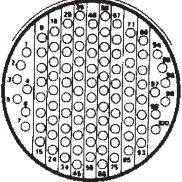
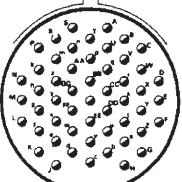
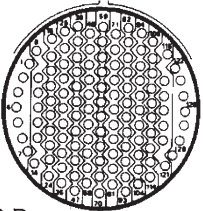
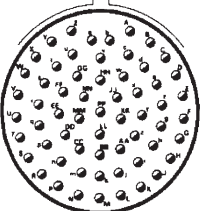
Electrical characteristics for Pi filter types

Filter designation		A	P	M	T	H
Filter type		π Type				
Max. voltage rating	# 22 # 20 # 16	200 Vdc 120 Vac 50 Hz or 400 Hz				
Max. current rating	# 22 # 20 # 16	5 A 7.5 A 13 A				
Insulation resistance, 25°C, 2mn electrification time		> 5000 MΩ (under 100 VDC)				
DWV, sea level, 25°C		500 Vdc				
Contact resistance	# 22 # 20 # 16	17 mΩ 8,5 mΩ 4,5 mΩ				
Capacitance at 1kHz : 0.1Vrms at 25°C		24 000 pF to 48 000 pF	12 000 pF to 24 000 pF	6 000 pF to 12 000 pF	3 000 pF to 6 000 pF	700 pF to 1500 pF
	frequency (MHz)	minimum attenuation (dB)				
Attenuation per MIL-STD-220 at 25°C (with no applied voltage or current, in 50 Ω system)	0.3	2				
	1	8	5	2		
	3	15	10	7	3	
	10	38	28	18	9	2
	30	58	48	35	22	7
	100	65	60	55	45	24
	300	65	65	60	55	40
	1000	65	65	60	55	55

8TFLT/8TFD



Contact layouts - view from front face of male insulator

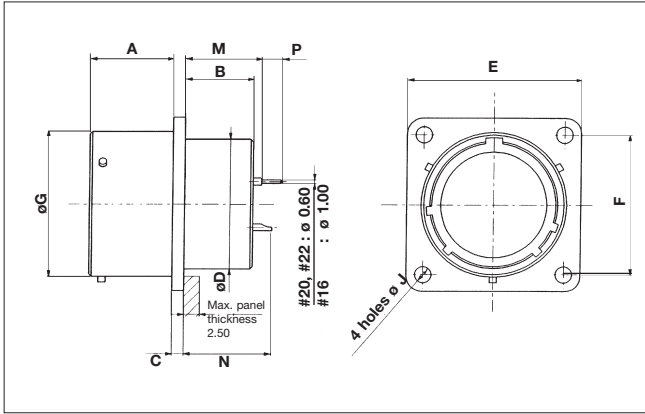
shells 09	09-35 6 #22 	09-98 3 #20 	
	11 13 #22 D 	11-98 6 #20 	
13	13-35 22 #22 D 	13-98 10 #20 	
	15 37 #22 D 	15-19 19 #20 	15-18 18 #20 
17 55 #22 D 	17-26 26 #20 		
19	19-35 66 #22 D 	19-32 32 #20 	
	21 79 #22 D 	21-41 41 #20 	
23	23-35 100 #22 D 	23-53 53 #20 	
	25 128 #22 D 	25-61 61 #20 	

8TFLT



8TFLT 00

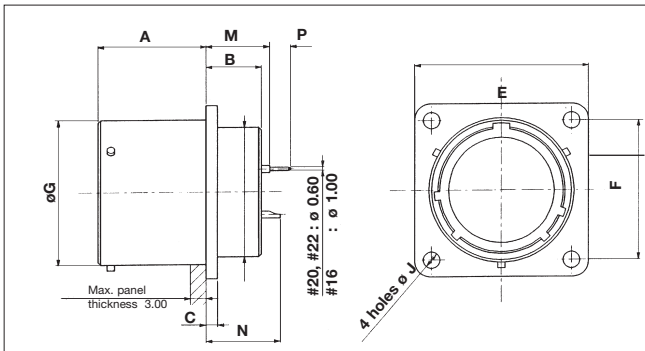
Square flange receptacle, front mounting



Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
A Max	16.05 .632	16.05 .632	16.05 .632	16.05 .632	16.05 .632	16.05 .632	15.29 .602	15.29 .602	15.29 .602
B Max	13.33 .525	13.33 .525	13.33 .525	13.33 .525	13.33 .525	13.33 .525	13.33 .525	13.33 .525	13.33 .525
C Max	2.48 .098	2.48 .098	2.48 .098	2.48 .098	2.48 .098	2.48 .098	3.24 .128	3.24 .128	3.24 .128
D Max	12.00 .472	15.00 .591	18.00 .709	22.00 .866	25.00 .984	28.00 1.102	31.00 1.220	34.00 1.339	37.00 1.457
E	23.95 .943	26.35 1.037	28.75 1.132	31.10 1.224	33.45 1.317	36.65 1.443	39.85 1.569	43.00 1.693	46.25 1.821
F	18.26 .719	20.62 .812	23.01 .906	24.61 .969	26.97 1.062	29.36 1.156	31.75 1.250	34.93 1.375	38.10 1.500
G Max	14.53 .572	17.78 .700	21.59 .850	24.77 .975	27.94 1.100	30.66 1.207	33.83 1.332	37.00 1.457	40.18 1.582
J	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.73 .147	3.73 .147
M	14.75 .581	14.75 .581	14.75 .581	14.75 .581	14.75 .581	14.75 .581	14.75 .581	14.75 .581	14.75 .581
N	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665
P	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220
	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283

8TFLT 03

Square flange receptacle, rear mounting

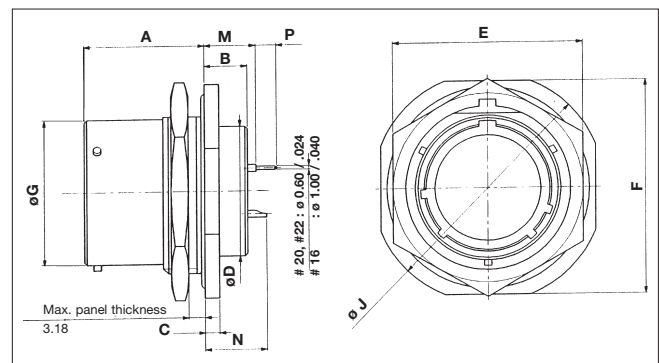


Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
A Max	20.83 .820	20.83 .820	20.83 .820	20.83 .820	20.83 .820	20.83 .820	20.08 .791	20.08 .791	20.08 .791
B Max	10.54 .415	10.54 .415	10.54 .415	10.54 .415	10.54 .415	10.54 .415	11.29 .444	11.29 .444	11.29 .444
C Max	2.48 .098	2.48 .098	2.48 .098	2.48 .098	2.48 .098	2.48 .098	3.24 .128	3.24 .128	3.24 .128
D Max	12.00 .472	15.00 .591	18.00 .709	22.00 .866	25.00 .984	28.00 1.102	31.00 1.220	34.00 1.339	37.00 1.457
E	23.95 .943	26.35 1.037	28.75 1.132	31.10 1.224	33.45 1.317	36.65 1.443	39.85 1.569	43.00 1.693	46.25 1.821
F	18.26 .719	20.62 .812	23.01 .906	24.61 .969	26.97 1.062	29.36 1.156	31.75 1.250	34.93 1.375	38.10 1.500
G Max	14.53 .572	17.78 .700	21.59 .850	24.77 .975	27.94 1.100	30.66 1.207	33.83 1.332	37.00 1.457	40.18 1.582
J	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.73 .147	3.73 .147
M	12.15 .478	12.15 .478	12.15 .478	12.15 .478	12.15 .478	12.15 .478	12.91 .508	12.91 .508	12.91 .508
N	14.32 .564	14.32 .564	14.32 .564	14.32 .564	14.32 .564	14.32 .564	15.08 .594	15.08 .594	15.08 .594
P	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220
	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283

Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
A Max	23.36 .920	23.36 .920	23.36 .920	23.36 .920	23.36 .920	23.36 .920	23.36 .920	23.36 .920	23.36 .920
B Max	8.32 .328	8.32 .328	8.32 .328	8.32 .328	8.32 .328	8.32 .328	8.32 .328	8.32 .328	8.32 .328
C Max	3.00 .118	3.00 .118	3.00 .118	3.00 .118	3.00 .118	3.00 .118	3.79 .149	3.79 .149	3.79 .149
D Max	12.00 .472	15.00 .591	18.00 .709	22.00 .866	25.00 .984	28.00 1.102	31.00 1.220	34.00 1.339	37.00 1.457
E Max	22.35 .880	25.55 1.006	30.30 1.193	33.45 1.317	36.65 1.443	39.80 1.567	43.00 1.693	46.15 1.817	50.95 2.006
F	27.00 1.063	31.75 1.250	34.95 1.376	38.15 1.502	41.30 1.626	46.02 1.812	49.24 1.939	52.40 2.063	55.58 2.188
G Max	14.53 .572	17.78 .700	21.59 .850	24.77 .975	27.94 1.100	30.66 1.207	33.83 1.332	37.00 1.457	40.18 1.582
J	30.25 1.191	34.95 1.376	38.10 1.500	41.35 1.628	44.45 1.750	49.25 1.939	52.35 2.061	55.65 2.191	58.72 2.312
M	9.68 .381	9.68 .381	9.68 .381	9.68 .381	9.68 .381	9.68 .381	9.68 .381	9.68 .381	9.68 .381
N	11.83 .466	11.83 .466	11.83 .466	11.83 .466	11.83 .466	11.83 .466	11.83 .466	11.83 .466	11.83 .466
P	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220	# 20 5.60 .220
	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283	# 22 7.20 .283

8TFLT 07

Jam nut receptacle

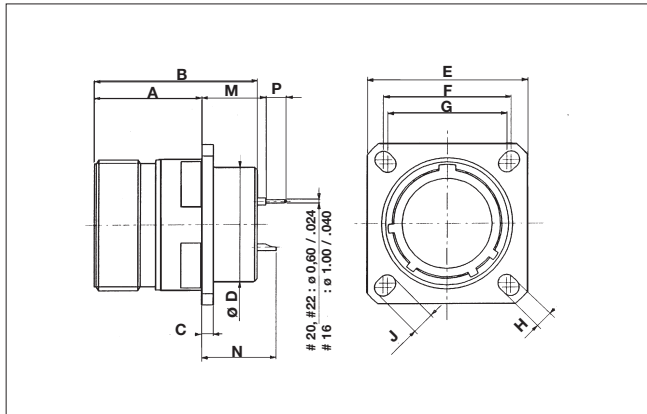


8TFD



8TFD 00

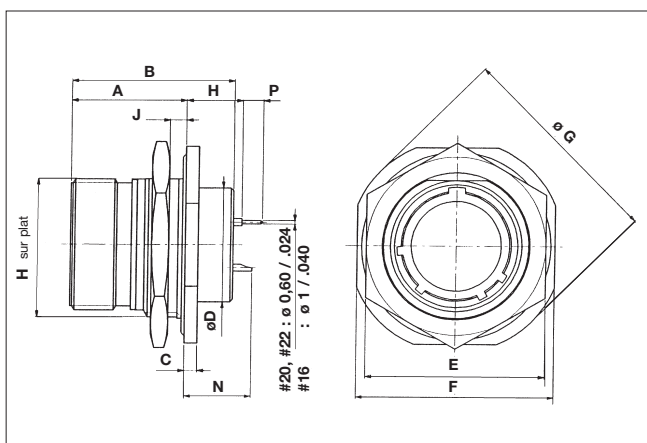
Square flange receptacle, front mounting



Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
A Max	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.10 .791	20.10 .791	20.10 .791
B Max	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240
C Max	2.50 .098	2.50 .098	2.50 .098	2.50 .098	2.50 .098	2.50 .098	3.20 .126	3.20 .126	3.20 .126
D Max	12.00 .472	15.00 .591	18.50 .728	22.00 .866	25.00 .984	28.00 1.102	31.00 1.220	34.00 1.339	37.00 1.457
E	23.80 .937	26.20 1.031	28.60 1.126	31.00 1.220	33.30 1.311	36.50 1.437	39.70 1.563	42.90 1.689	46.00 1.811
F	18.26 .719	20.62 .812	23.01 .906	24.61 .969	26.97 1.062	29.36 1.156	31.75 1.250	34.93 1.375	38.10 1.500
G	15.09 .594	18.26 .719	20.62 .812	23.01 .906	24.61 .969	26.97 1.062	29.36 1.156	31.75 1.250	34.93 1.375
H	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.91 .154	3.91 .154
J Max	5.49 .216	4.93 .194	4.93 .194	4.93 .194	4.93 .194	4.93 .194	4.93 .194	6.15 .242	6.15 .242
M	12.35 .486	12.35 .486	12.35 .486	12.35 .486	12.35 .486	12.35 .486	13.15 .518	13.15 .518	13.15 .518
N	14.50 .571	14.50 .571	14.50 .571	14.50 .571	14.50 .571	14.50 .571	15.30 .602	15.30 .602	15.30 .602
P	#20 5.60 #16 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220
	#22 7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283

8TFD 07

Jam nut receptacle



Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
A Max	22.25 .876	22.25 .876	22.40 .882	22.40 .882	22.40 .882	22.40 .882	22.40 .882	22.40 .882	22.40 .882
B Max	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240	31.50 1.240
C Max	2.70 .106	2.70 .106	2.70 .106	2.70 .106	2.70 .106	2.70 .106	3.50 .138	3.50 .138	3.50 .138
D Max	12.00 .472	15.00 .591	18.00 .709	22.00 .866	25.00 .984	28.00 1.102	31.00 1.220	34.00 1.339	37.00 1.457
E Max	24.00 .945	27.00 1.063	32.00 1.260	36.00 1.417	37.00 1.457	41.00 1.614	46.00 1.811	50.00 1.969	51.23 2.017
F	27.00 1.063	31.80 1.252	34.90 1.374	38.10 1.500	41.30 1.626	46.00 1.811	49.20 1.937	52.40 2.063	55.60 2.189
G	30.20 1.189	34.90 1.374	38.10 1.500	41.30 1.626	44.50 1.752	49.20 1.937	52.40 2.063	55.60 2.189	58.70 2.311
H	16.53 .651	19.07 .751	23.82 .938	26.97 1.062	30.15 1.187	33.32 1.312	36.50 1.437	39.67 1.562	42.85 1.687
J	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126	3.20 .126
M	11.00 .433	11.00 .433	10.80 .425	10.80 .425	10.80 .425	10.80 .425	10.80 .425	10.80 .425	10.80 .425
N	13.13 .517	13.13 .517	12.95 .510	12.95 .510	12.95 .510	12.95 .510	12.95 .510	12.95 .510	12.95 .510
P	#20 5.60 #16 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220	5.60 .220
	#22 7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283	7.20 .283