



## Applications

All electronics equipments

## Standards

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



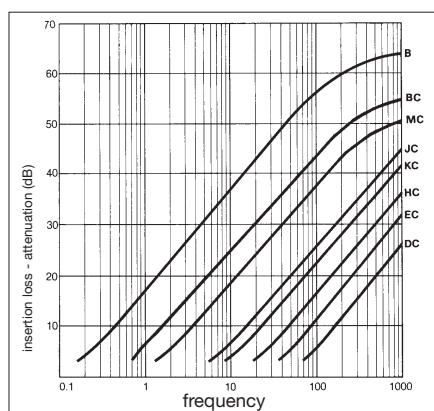
## Description

- 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.

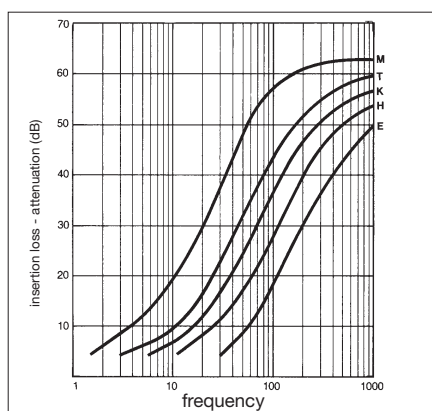
- Mechanical design and 100% testing carried out in production ensure a high level of quality to Souriau filter connectors.

## Typical performance

capacitive filter



$\pi$  network filter



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

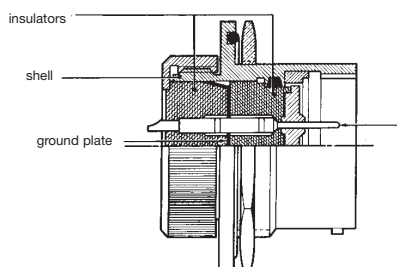
## General characteristics

- **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  $\pi$  filters from 100 pF up to 0.1  $\mu$ F.

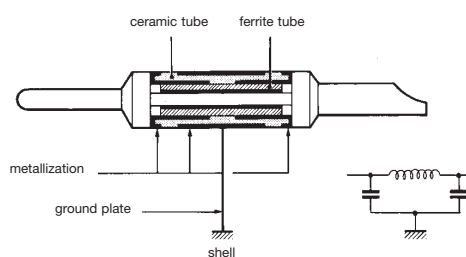
## Schematic diagrams

The mechanical concept is based on the shape of the filter : tubular or planar. Therefore two assembly methods are used.

### Tubular filter connectors

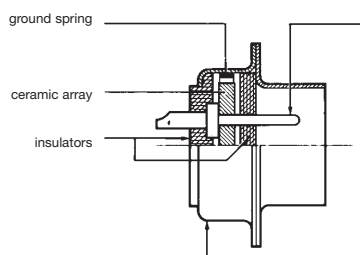


Circular connectors fitted with tubular filters

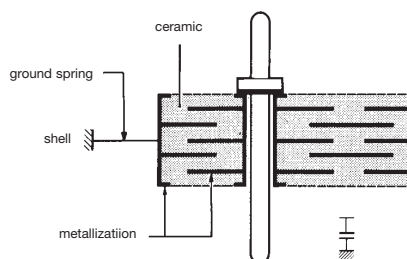


Note : ferrite is not used in the capacitive filter

### Planar array filter connectors



D-Sub connectors fitted with a capacitive planar array



# 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 intermateable 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
	30	42	28	20
	100	48	50	41
	300	50	55	55
1000	50	55	55	

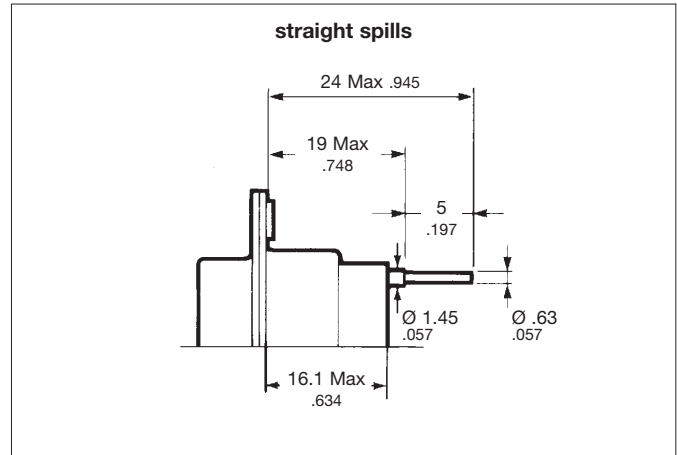
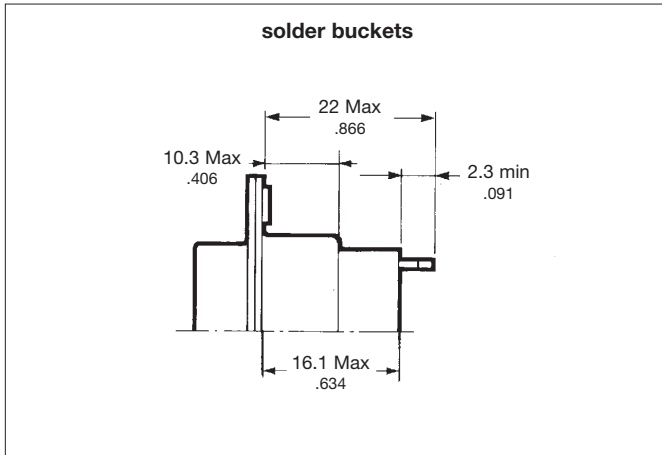
## Ordering information

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

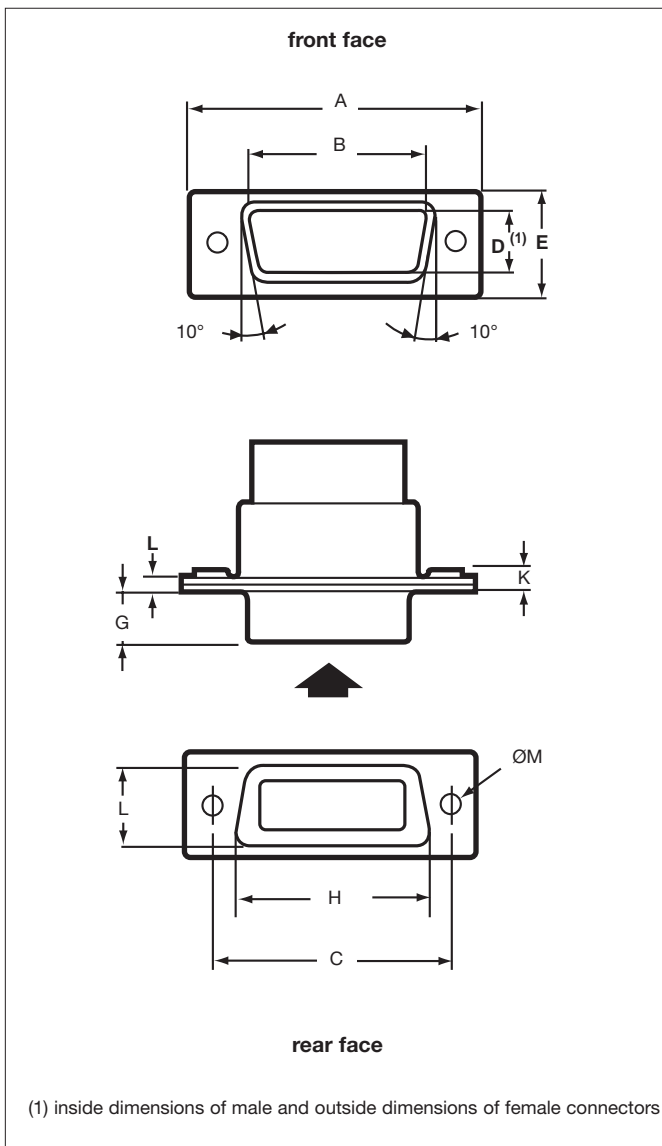
# D\*J-SUB



## 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\*JP-SUB



## Applications

- Military
- Aeronautical
- Industrial

## Standards

based on :

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



## Description

**D\*JP** subminiature filter connectors are designed for various industrial, data processing, telecommunication and general electronic applications. Their usage is recommended to comply with FCC, VDE, CISPR regulations.

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

D\*JP connectors are fitted with  $\pi$  filters.

## Characteristics

### Mechanical

D\*JP 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, 0.5 micron min gold over 2 microns min nickel on contact area

### Environmental

Temperature -55°C → 125°C

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

Humidity 240 h 95% RH/40°C

MIL-STD 1344, method 1002, type I condition A - NFC 20703

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

Durability 300 cycles - mating/unmating

Vibration 15 g - MIL-STD 1344, method 2005, condition III  
NFC 20706

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

## Electrical and filter types

Filter designation	T	K	H	E	
Filter type	$\pi$ filter				
Max. voltage rating	200Vdc-120Vac rms 50 Hz or 400Hz				
Max. current rating	5.0 A				
Insulation resistance, 25°C, 2mn electrification time	> 5000 M $\Omega$ (under 100 Vdc)				
DWV, sea level, 25°C	500Vdc				
Contact resistance	7,5 m $\Omega$ Max				
Capacitance at 1kHz : 0.1Vrms at 25°C	2300 pF to 5000 pF	1000 pF to 2000 pF	500 pF to 1000 pF	250 pF to 600 pF	
Attenuation per MIL-STD 220 at 25°C (with no applied voltage or current, in 50 $\Omega$ system)	frequency (MHz)	minimum attenuation (dB)			
	3	3			
	10	9	3	2	
	30	20	11	7	3
	100	41	30	20	13
	300	55	50	38	31
1000	55	55	50	50	

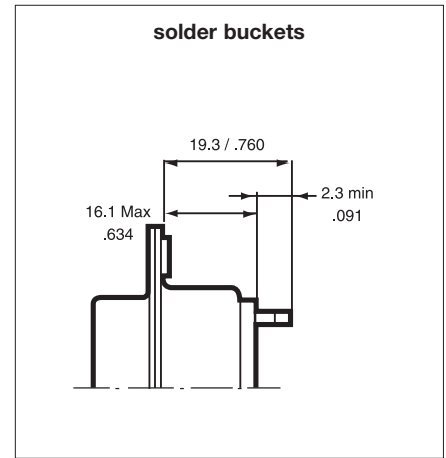
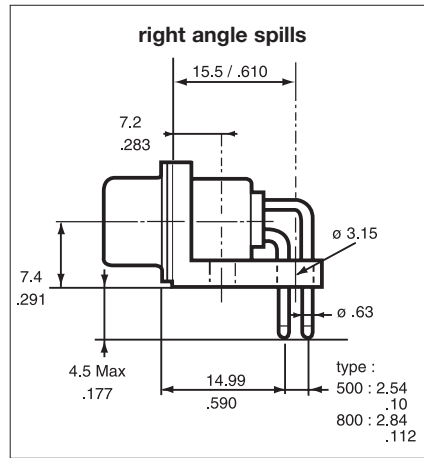
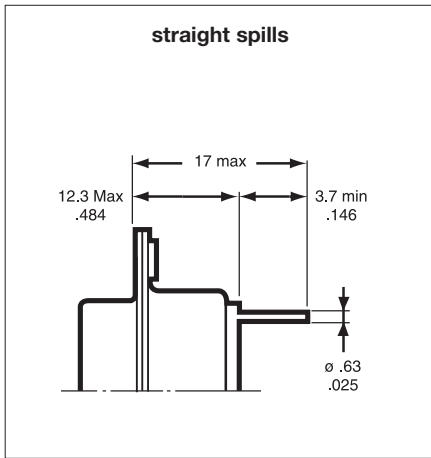
## Ordering information

<b>basic series</b>	<b>D</b>				<b>B</b>	<b>JP</b>	<b>25</b>	<b>P</b>	<b>300</b>	<b>H</b>	<b>-***</b>	<b>L-</b>	<b>R</b>
<b>shell size</b>	<b>E</b> - 9 cts <b>A</b> - 15 cts	<b>B</b> - 25 cts <b>C</b> - 37 cts	<b>D</b> - 50 cts										
<b>contact arrangement :-</b>	<b>09-15-25-37-50</b>												
<b>contact type</b>	<b>P</b> - pin	<b>S</b> - socket											
<b>termination</b>	<b>without indication</b> - solder bucket <b>300</b> - straight spill, $\varnothing$ 0.63 mm <b>500</b> - right angle spill, $\varnothing$ 0.63 mm - 2.54 mm pitch between rows (9 → 37 cts) <b>800</b> - right angle spill, $\varnothing$ 0.63 mm - 2.84 mm pitch between rows (9 → 37 cts)												
<b>filter type</b>	- $\pi$ filters : <b>T - K - H - E</b>												
<b>special modifiers</b>	- partially loaded filter connector (with grounded or non filtered contacts) - connector with different types of filters (in this case the preceding letter does not appear) - non standard filters												
<b>specification</b>	<b>L</b> : right angle spills without bracket												
	<b>R</b> : mandatory suffix for straight and angle spills termination												

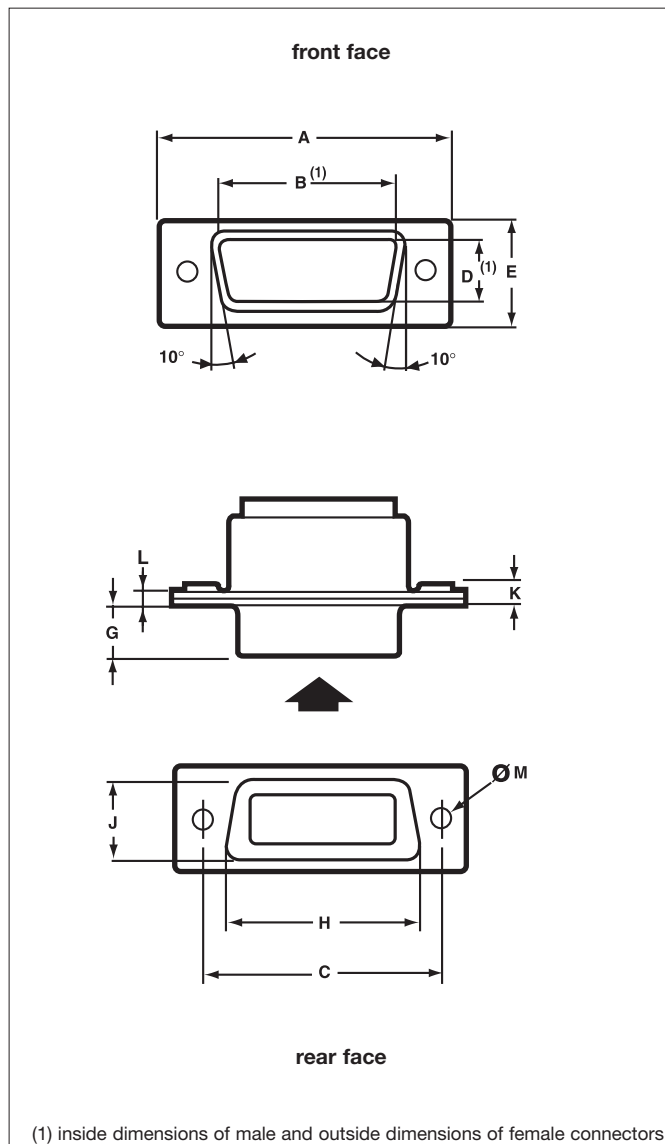
# D\*JP-SUB



## Dimensions (mm/inches)



Note : consult factory for special dimensions



Dim.	Contact Type	Shell Size				
		E	A	B	C	D
A	P/S	30.43	38.76	52.65	68.94	66.55
		1.198	1.526	2.073	2.714	2.620
B	P	16.79	25.12	38.84	55.30	52.68
	S	.661	.989	1.529	2.177	2.074
C	P/S	16.21	24.54	38.25	54.71	52.30
		.638	.966	1.506	2.154	2.059
D	P/S	24.99	33.32	47.04	63.50	61.11
		.984	1.312	1.852	2.500	2.406
E	P	8.23	8.23	8.23	8.23	10.95
		.324	.324	.324	.324	.431
F	S	7.77	7.77	7.77	7.77	10.62
		.306	.306	.306	.306	.418
G	P/S	12.17	12.17	12.17	12.17	14.99
		.479	.479	.479	.479	.590
H	P	5.90	5.90	5.70	5.70	5.70
		.232	.232	.224	.224	.224
I	S	6.10	6.10	6.10	6.10	6.10
		.240	.240	.240	.240	.240
J	P/S	19.02	27.25	41.02	57.45	55.07
		.749	1.073	1.615	2.262	2.168
K	P/S	10.46	10.46	10.46	10.46	13.31
		.412	.412	.412	.412	.524
L	P	1.10	1.10	1.10	1.50	1.50
		.043	.043	.043	.059	.059
M	S	1.10	1.10	1.10	1.10	1.10
		.043	.043	.043	.043	.043
N	P	0.80	0.80	0.80	1.00	1.00
		.031	.031	.031	.039	.039
O	S	0.80	0.80	0.80	0.80	0.80
		.031	.031	.031	.031	.031
P	P/S	3.10	3.10	3.10	3.10	3.10
		.122	.122	.122	.122	.122

# D\*TP-SUB

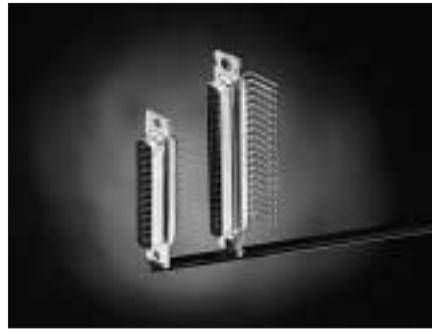


## Applications

- Military
- Aeronautical
- Industrial
- Telecom

## Standards

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



## Description

**D\*TP** subminiature filter connectors are designed for various industrial, data processing, telecommunication and general electronic applications.

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

D\*TP connectors are fitted with planar array filters.

## Characteristics

### Mechanical

D\*TP connectors are fitted with planar array filters : see description on page 417.

- Shells : copper alloy or steel, tin lead plated
- Insulators : self-extinguishing thermoplastic (UL-94-VO)
- Contacts : machined copper-alloy, gold plated, 0.76 micron min gold over 2 microns min nickel on contact area

### Environmental

Temperature	-55°C → 125°C MIL-STD 1344, method 1005.1
Humidity	240 h 95% RH/40°C MIL-STD 1344, method 1002, type I condition A - NFC 20703
Salt spray	48 h - MIL-STD 1344, method 1001, condition B NFC 20711
Durability	300 cycles - mating/unmating
Vibration	15 g - MIL-STD 1344, method 2005, condition III NFC 20706
Shock	50 g - 11 ms - MIL-STD 1344, method 2004, condition A NFC 20727

## Electrical and filter types

Filter type	SERIES D*TP capacitive type								SERIES D*TP Pi filter						
	BC	MC	JC	KC	HC	EC	DC	B	M	T	K	H	E		
Filter designation	BC	MC	JC	KC	HC	EC	DC	B	M	T	K	H	E		
Symbol type	C	C	C	C	C	C	C	Π	Π	Π	Π	Π	Π		
Max. voltage rating	200 Vdc-120 Vac 50 or 400 Hz								200 Vdc-120 Vac 50 or 400 Hz						
DWW, sea level, 25°C, 50 mA max. charge/discharge	500 Vdc								500 Vdc						
Max. current rating	5.0 A								5.0 A						
Max. RF current	0.25 Amps								0.25 Amps						
Insulation resistance, 25°C, 2 mm electrification time	> 5000 MΩ (under 100 Vdc)								> 5000 MΩ (under 100 Vdc)						
Contact resistance	≤ 7,5 mΩ max.								≤ 7,5 mΩ max.						
Fitted with	Planar array								Planar array						
Capacitance at 1kHz : 0.1Vrms at 25°C	10000 at 15000 pF	4000 at 6000 pF	1500 at 2500 pF	1000 at 1600 pF	640 at 1000 pF	400 at 600 pF	160 at 240 pF	20000 at 30000 pF	8000 at 12000 pF	3000 at 5000 pF	1200 at 2000 pF	800 at 1200 pF	300 at 500 pF		
Attenuation per MIL-STD-220 at 25°C (with no applied voltage or current, in 50 Ω system)	Frequency (MHz)	Minimum attenuation in dB								Minimum attenuation in dB					
	1	5							8	3					
	3	13	5	2					15	9	4				
	10	23	13	8	5	2			33	19	12	5	3		
	30	33	23	17	12	9	4	1	50	39	23	13	10		
100	42	33	28	22	19	13	7	55	55	45	32	24			
300	45	45	42	40	35	30	23	55	55	55	50	40			
1000	45	45	45	45	45	45	45	55	55	55	55	55			

## Ordering information

basic series	<b>D B TP 25 P MC 3 -***</b>												
shell size	<b>E</b> - 9 cts <b>A</b> - 15 cts		<b>B</b> - 25 cts <b>C</b> - 37 cts			<b>D</b> - 50 cts							
contact arrangement	- 09-15-25-37-50												
contact type	<b>P</b> - pin			<b>S</b> - socket									
filter type	<b>BC - MC - JC - KC - HC - EC - DC</b> - capacitive filters <b>B - M - T - K - H - E</b> - π filters												
termination	without indication - solder bucket <b>1</b> - straight spill, Ø 1.02 mm <b>2</b> - straight spill, Ø 0.76 mm <b>3</b> - straight spill, Ø 0.63 mm <b>5</b> - right angle spill, Ø 0.63 mm - 9.4 foot print -2.54 mm pitch between rows <b>15</b> - right angle spill, Ø 0.63 mm - 14.99 foot print -2.84 mm pitch between rows <b>16</b> - right angle spill, Ø 0.76 mm - 14.99 foot print -2.84 mm pitch between rows For other types of termination consult us												
special modifiers	- specific filtering - specific plating - optional mounting / accessories (see page 324)												

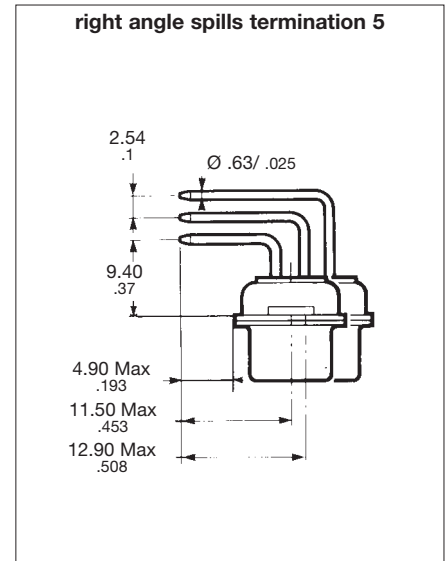
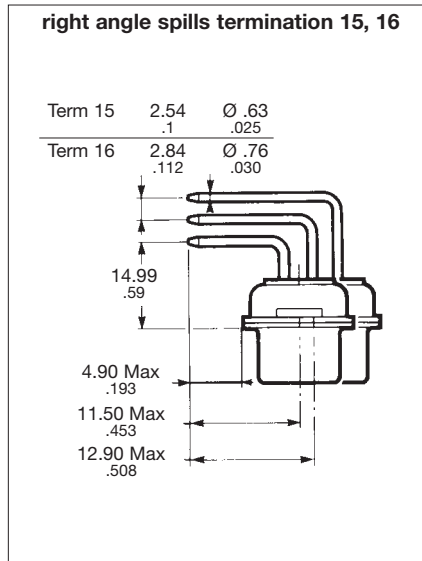
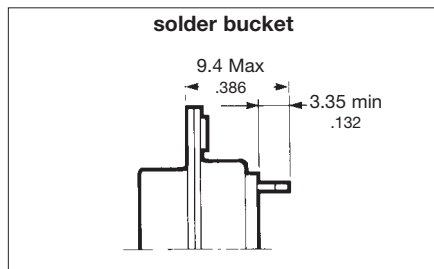
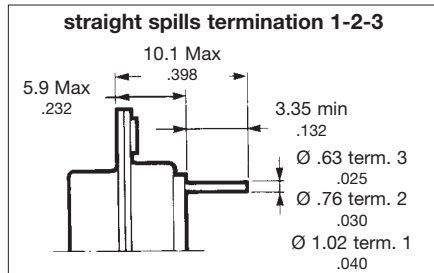
# D\*TP-SUB



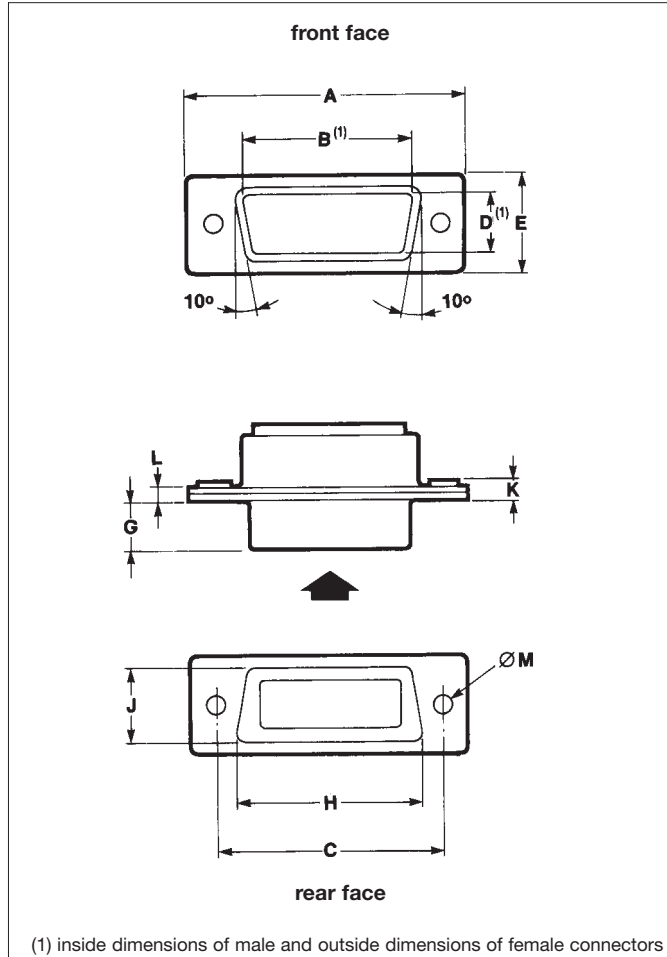
## Capacitive filter

### Dimensions (mm/inches)

The straight spill termination 3, right angle spills 5 and solder bucket version with capacitive filters have the same dimensions as the standard non-filtered D-sub range.



Note : consult factory for special dimensions or other termination styles



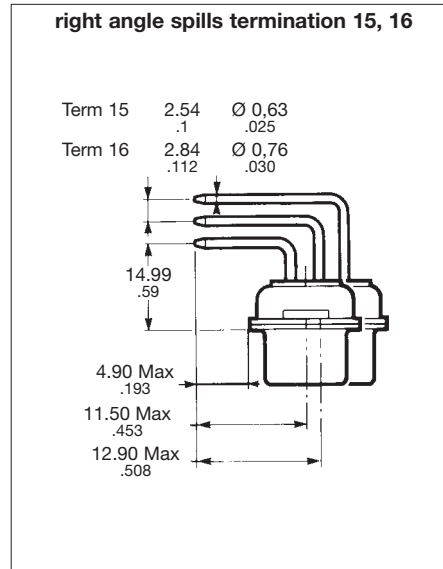
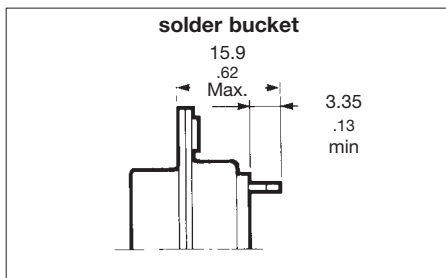
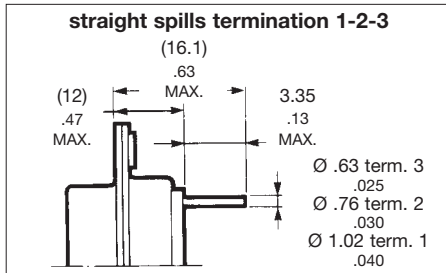
Dim.	Contact Type	Shell Size				
		E	A	B	C	D
A	P/S	30.43 1.198	38.76 1.526	52.65 2.073	68.94 2.714	66.55 2.620
	P	16.79 .661	25.12 .989	38.84 1.529	55.30 2.177	52.68 2.074
B	S	16.21 .638	24.54 .966	38.25 1.506	54.71 2.154	52.30 2.059
	P/S	24.99 .984	33.32 1.312	47.04 1.852	63.50 2.500	61.11 2.406
C	P	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
D	P/S	12.17 .479	12.17 .479	12.17 .479	12.17 .479	14.99 .590
	P	5.90 .232	5.90 .232	5.70 .224	5.70 .224	5.70 .224
E	S	6.10 .240	6.10 .240	6.10 .240	6.10 .240	6.10 .240
	P/S	19.02 .749	27.25 1.073	41.02 1.615	57.45 2.262	55.07 2.168
G	P/S	10.46 .412	10.46 .412	10.46 .412	10.46 .412	13.31 .524
	P	1.10 .043	1.10 .043	1.10 .043	1.50 .059	1.50 .059
H	S	1.10 .043	1.10 .043	1.10 .043	1.10 .043	1.10 .043
	P	0.80 .031	0.80 .031	0.80 .031	1.00 .031	1.00 .031
J	S	0.80 .031	0.80 .031	0.80 .031	0.80 .031	0.80 .031
	P/S	3.10 .122	3.10 .122	3.10 .122	3.10 .122	3.10 .122

# D\*TP-SUB

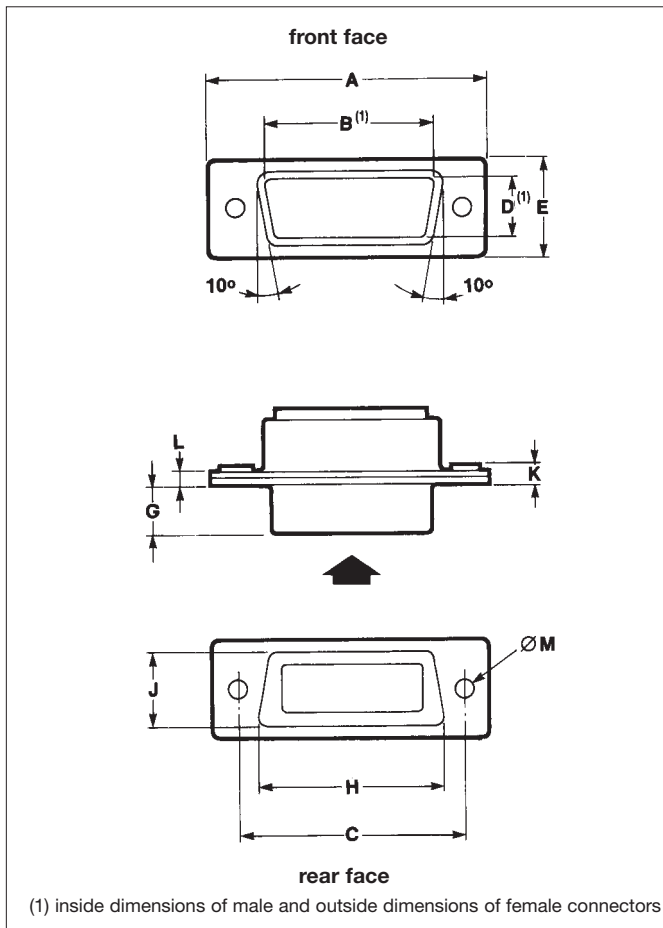


## π filter

### Dimensions (mm/inches)



Note : consult factory for special dimensions or other termination styles



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	5.90 .232	5.90 .232	5.70 .224	5.70 .224	5.70 .224
	S	6.10 .240	6.10 .240	6.10 .240	6.10 .240	6.10 .240
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	1.10 .043	1.10 .043	1.10 .043	1.50 .059	1.50 .059
	S	1.10 .043	1.10 .043	1.10 .043	1.10 .043	1.10 .043
L	P	0.80 .031	0.80 .031	0.80 .031	1.00 .039	1.00 .039
	S	0.80 .031	0.80 .031	0.80 .031	0.80 .031	0.80 .031
M	P/S	3.10 .122	3.10 .122	3.10 .122	3.10 .122	3.10 .122

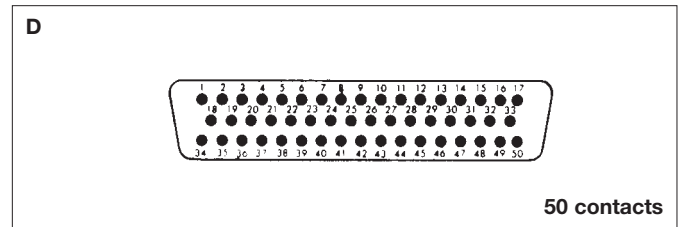
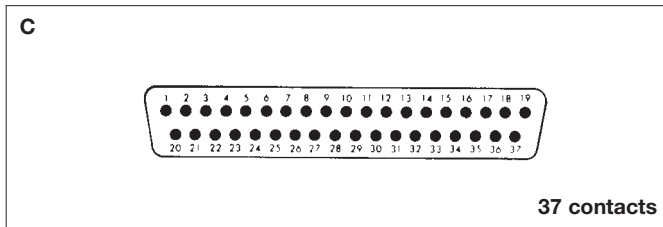
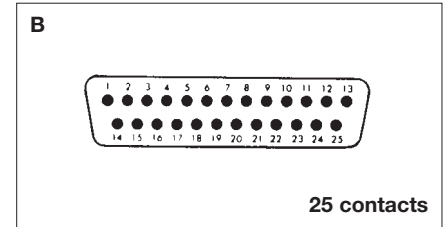
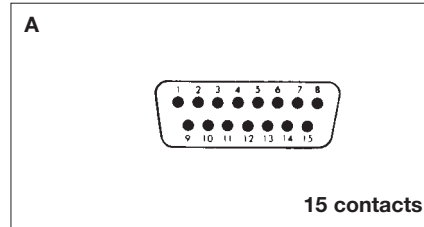
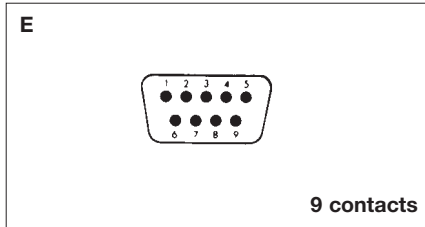


# D\*J/D\*JP/D\*TP-SUB



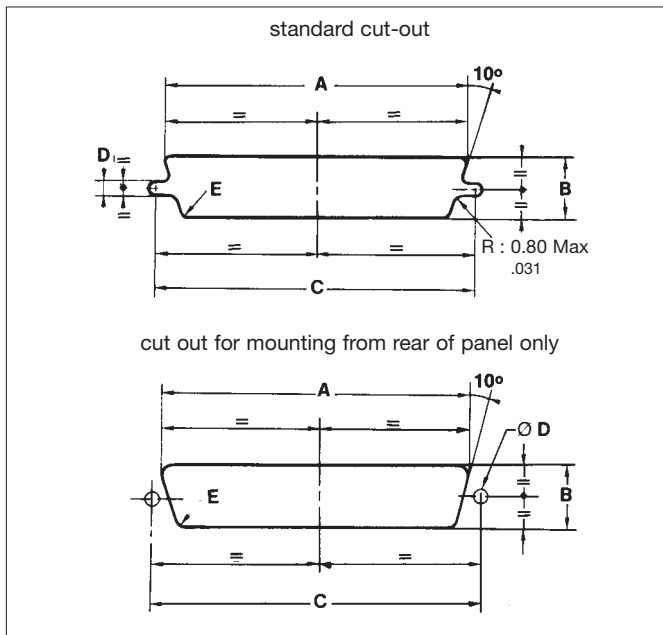
## Layouts

Male insulator front view



Contacts are individually numbered on both sides of the insulator

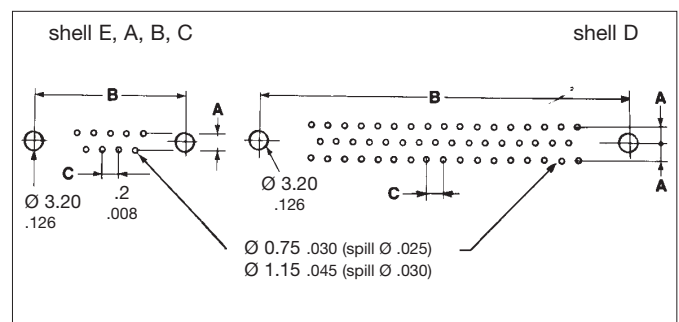
## Panel cut outs



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	

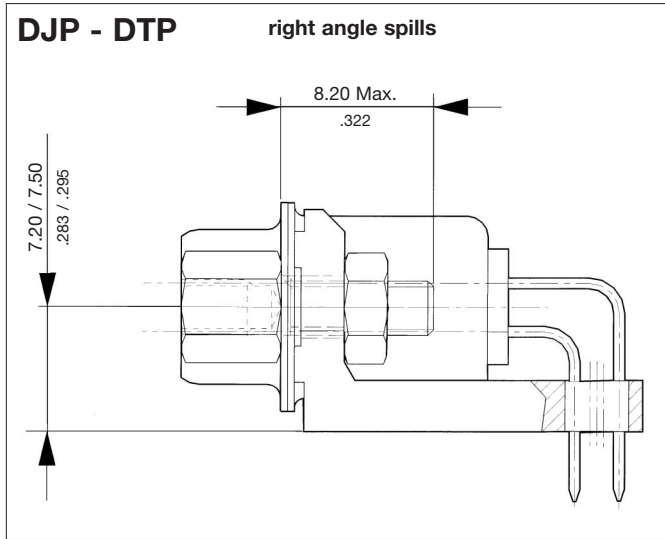


# Accessories DJ/DJP/DTP

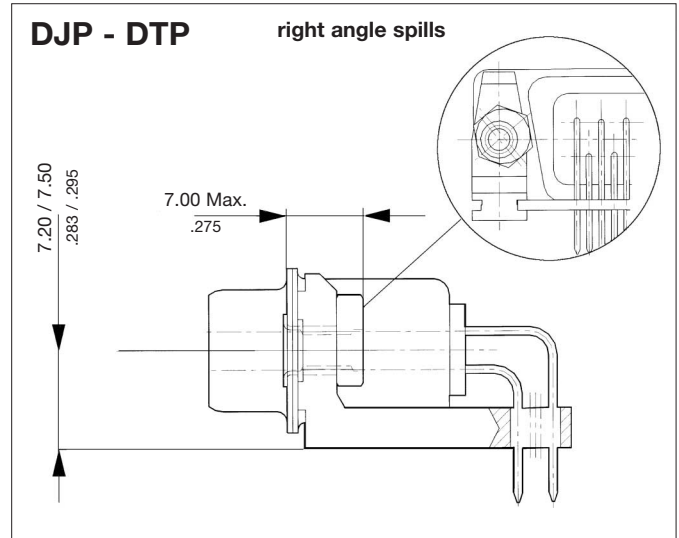


## Optional mounting

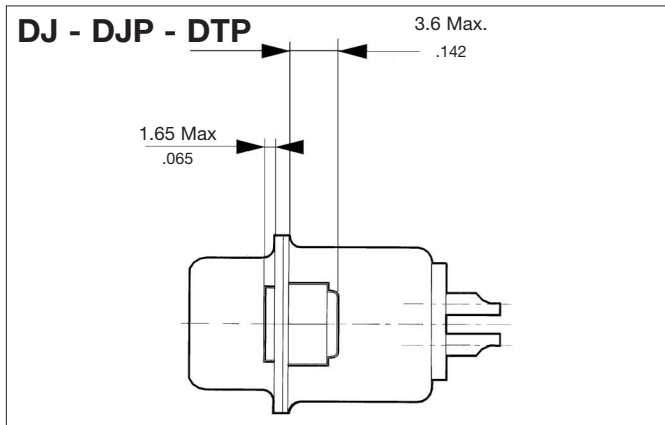
Plastic bracket and female screw lock  
4.40 UNC



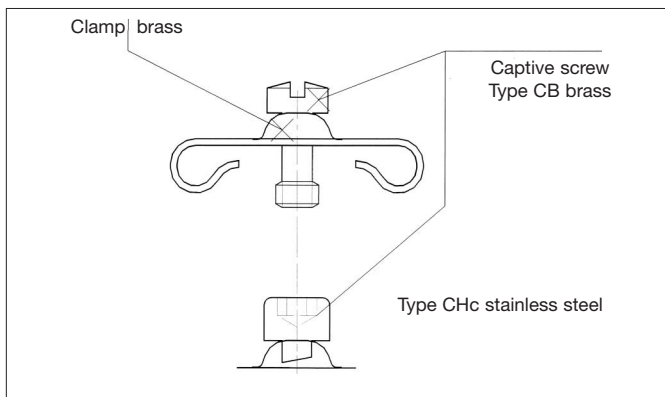
Plastic bracket and clinch screwnuts M3 or 4.40 UNC



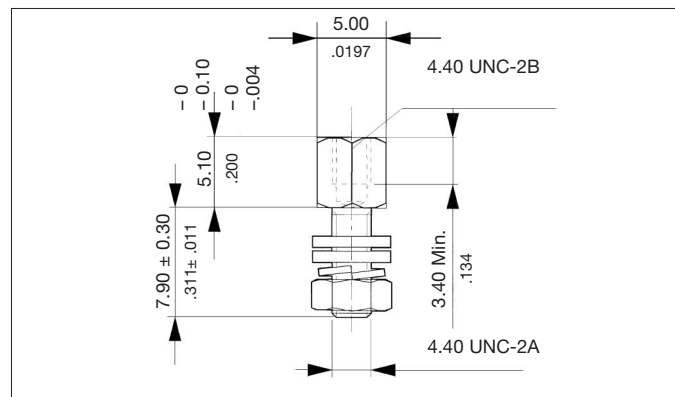
Clinch screwnuts no selflocking : M3 or 4.40 UNC  
selflocking : 4.40 UNC (stainless steel)



## Male screw lock



## Female screw lock



Note : for reference including optional mounting, consult us.

# 8F51/8AF51 8F526/8AF526



## Applications

- Military
- Aeronautical
- Industrial

## Standards

8F51/8AF51 Series	8F526/8AF526 Series
MIL-C 26482 G Series I	MIL-C 26482 G Series II
NFC 93422, HE 301 B	NFC 93422, HE 312
BS 9522 - F 17	EL 2112 Pattern 602
VG 95328	NAS 1599



## Description

**8F51** and **8F526** circular filter connectors are widely used in industrial, military and aeronautical applications. They are suitable for severe operating conditions.

They are intermeatable and interchangeable as to the mounting with standard connectors of the same series.

**8AF51** and **8AF526** adapters are the solution to easily retrofit existing non filtered equipments.

## Characteristics

### Mechanical

8F51/8AF51 and 8F526/8AF526 connectors are fitted with tubular filters.

- Shells : aluminum alloy, olive green cadmium or nickel plated.
- Insulators : thermo-setting plastic.
- Interfacial and peripheral seals :
  - 8F51/8AF51 : neoprene
  - 8F526/8AF526 : fluoro-silicone rubber.
- Contacts : machined copper alloy, gold plated, 1.27 micron min. gold over 2 microns min nickel on contact area.  
Contact retention force : 67 N min

### Environmental

- Temperature -55°C → 125°C - MIL-STD 1344, method 1003, condition A - NFC 20714
- Sealing leakage < 16 cm<sup>3</sup>/h - NFC 20717 Essai Qa - mated connectors, with differential pressure of 2 bars
- Humidity 10 cycles 24 h - MIL-STD 1344, method 1002, type II except step 7b - NFC 20703
- Salt spray
  - 48 h - L plating - MIL-STD 1344, method 1001, condition B - NFC 20711
  - 500 h-W plating - MIL-STD 1344, method 1001, condition C
- Durability 500 cycles - mating/unmating
- Vibration
  - 15 g (8F51/8AF51) - MIL-STD 1344, method 2005, condition III - NFC 20706
  - 43,92 Grms (8F526) - MIL-STD 202, method 214, condition II, letter J
- Shock
  - 50 g - 11 ms (8F51/8AF51) - MIL-STD 1344, method 2004, condition A - NFC 20727
  - 300 g - 3 ms (8F526) - MIL-STD 1344, method 2004, condition D

## Electrical and filter types

Filter designation	B	M (# 16)	M (# 20)	T	H	
Filter type	C filter	π filter				
Max. voltage rating	200 Vdc 120 Vac	360 Vdc 220 Vac	200 Vdc 120 Vac rms 50 Hz or 400 Hz			
Max. current rating	7.5 A	13 A	7.5 A			
Insulation resistance, 25°C, 2mn electrification time	> 5000 MΩ (under 100 Vdc)					
DWV, sea level, 25°C	500 Vdc	900 Vdc	500 Vdc			
Contact resistance	7,5 mΩ max.					
Capacitance at 1kHz : 0.1Vrms at 25°C	100 000 pF min	6 000 pF to 12 000 pF	6 000 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)				
	0.1	4				
	0.3	11				
	1	22	2	2		
	3	29	7	7	3	
	10	38	18	18	10	
	30	44	35	35	22	
	100	50	55	55	50	
	300	50	60	60	55	
1000	50	60	60	55		

The capacitance, insulation resistance and dielectric withstanding voltage are tested 100% on all contacts.

Note : • M filter is the most popular filter. If you require other filter types, indicate the maximum operating voltage, maximum capacitance and minimum attenuation required at various frequencies.

- B filter is substantially more expensive than other filters.

# 8F51/8AF51 8F526/8AF526



## Ordering information

### Connector

<b>basic series</b>	<b>8F526 07 G 20 41 P 1 N M -***</b>
<ul style="list-style-type: none"> <li>• <b>8F51</b> : MIL-C 26482 Series I, HE 301 B type</li> <li>• <b>8F526</b> : MIL-C 26482 Series II, HE 312 type</li> </ul>	
<b>shell type</b>	<b>00</b> - square flange receptacle <b>07</b> - jam nut receptacle
<b>plating</b>	<b>G</b> - olive green cadmium (standard) <b>W</b> - olive green cadmium (salt spray 500 h) <b>L</b> - nickel
<b>shell size</b>	- 10-12-14-16-18-20-22-24
<b>contact layout</b>	see table next page
<b>type contact</b>	<b>P</b> - pin <b>S</b> - socket
<b>termination</b>	<b>without indication</b> - solder bucket <b>1</b> - straight spill
<b>orientation</b>	- N-W-X-Y-Z
<b>filter type</b>	- B-M-T-H
<b>special modifiers</b>	- partially loaded filter connector (with ground or non-filtered contacts) - connector with different types of filters (in this case the preceding letter does not appear) - non-standard filters

### Adapter

<b>basic series</b>	<b>8AF526 20 G 20 41 P N M -***</b>
<ul style="list-style-type: none"> <li>• <b>8AF51</b> : MIL-C 26482 Series I, HE 301 B type</li> <li>• <b>8AF526</b> : MIL-C 26482 Series II, HE 312 type</li> </ul>	
<b>shell type</b>	<b>20</b> - adapter versions - bayonet locking
<b>plating</b>	<b>W</b> - olive green cadmium (salt spray 500 h) <b>L</b> - nickel
<b>shell size</b>	- 10-12-14-16-18-20-22-24
<b>contact layout</b>	(see table next page)
<b>type contact</b>	<b>P</b> - pin <b>S</b> - socket Indicate contact type of mating receptacle
<b>orientation</b>	- N-W-X-Y-Z
<b>filter type</b>	- B-M-T-H
<b>special modifiers</b>	- partially loaded filter adapter (with ground or non-filtered contact) - adapter with different types of filters (in this case the preceding letter does not appear) - non-standard filters

# 8F51/8AF51 8F526/8AF526



## Contact layouts

viewed from front face of male insulator

shells				
10	<p>6</p> <p>6 Ø 1 (# 20)</p>			
12	<p>10</p> <p>10 Ø 1 (# 20)</p>			
14	<p>5</p> <p>5 Ø 1.6 (# 16)</p>	<p>12</p> <p>8 Ø 1 (# 20) 4 Ø 1.6 (# 16)</p>	<p>15</p> <p>14 Ø 1 (# 20) 1 Ø 1.6 (# 16)</p>	<p>19</p> <p>19 Ø 1 (# 20)</p>
16	<p>8</p> <p>8 Ø 1.6 (# 16)</p>	<p>26</p> <p>26 Ø 1 (# 20)</p>		
18	<p>32</p> <p>32 Ø 1 (# 20)</p>			
20	<p>39</p> <p>37 Ø 1 (# 20) 2 Ø 1.6 (# 16)</p>	<p>41</p> <p>41 Ø 1 (# 20)</p>		
22	<p>55</p> <p>55 Ø 1 (# 20)</p>			
24	<p>61</p> <p>61 Ø 1 (# 20)</p>			

- available male contact layouts
- available female contact layouts
- ◆ available contact layouts for adapters

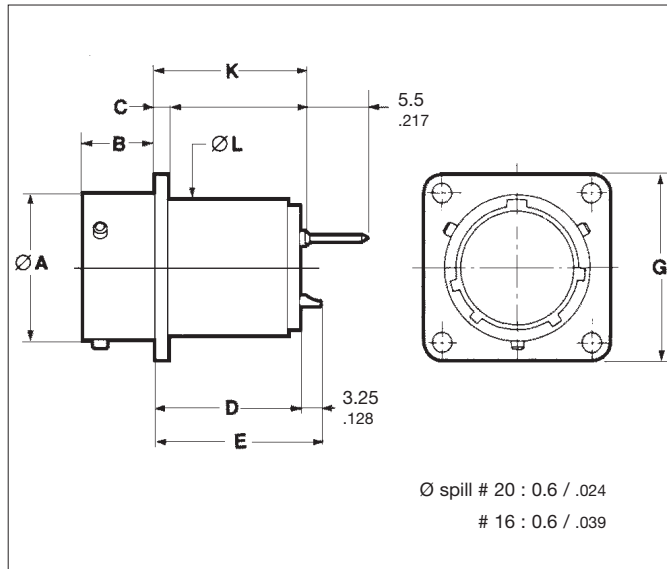
Consult factory for other contact layout availability

# 8F51/8AF51 8F526/8AF526



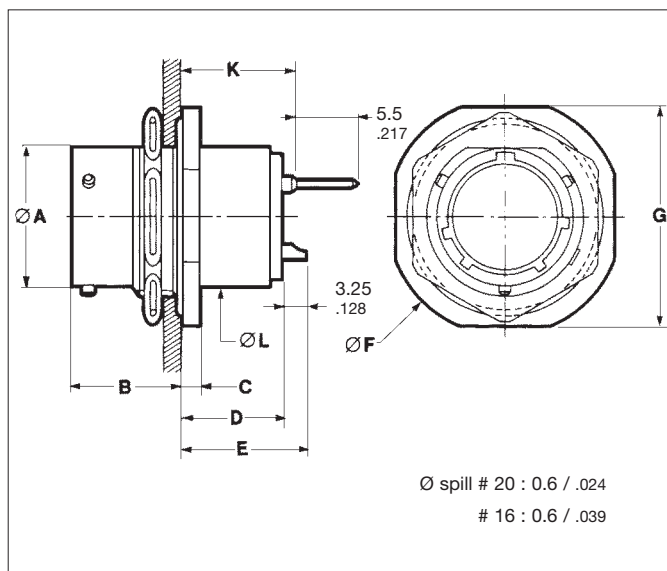
## Dimensions (mm/inches)

### Square flange receptacle 00 type



Dim.	Shell Size								
	8	10	12	14	16	18	20	22	24
A Max	12.03 .474	15.01 .591	19.07 .751	22.25 .876	25.42 1.001	28.60 1.126	31.77 1.251	34.95 1.376	38.12 1.501
B	11.60 .457	11.60 .457	11.60 .457	11.60 .457	11.60 .457	11.60 .457	14.25 .561	14.25 .561	15.10 .594
C	1.95 .077	1.95 .077	1.95 .077	1.95 .077	1.95 .077	1.95 .077	2.75 .108	2.75 .108	2.75 .108
D	22.74 .895	22.74 .895	22.74 .895	22.74 .895	22.74 .895	22.74 .895	21.64 .852	21.64 .852	20.77 .818
E	26.50 1.043	26.50 1.043	26.50 1.043	26.50 1.043	26.50 1.043	26.50 1.043	25.40 1.000	25.40 1.000	24.55 .967
G Max	21.00 .827	24.20 .953	26.55 1.045	28.95 1.140	31.30 1.232	33.70 1.327	36.90 1.453	40.08 1.578	43.25 1.703
K	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	21.25 .837	21.25 .837	20.40 .803
L Max	12.20 .480	15.40 .606	18.90 .744	22.10 .870	25.25 .994	26.80 1.055	30.00 1.181	33.20 1.307	36.35 1.431

### Jam nut receptacle 07 type



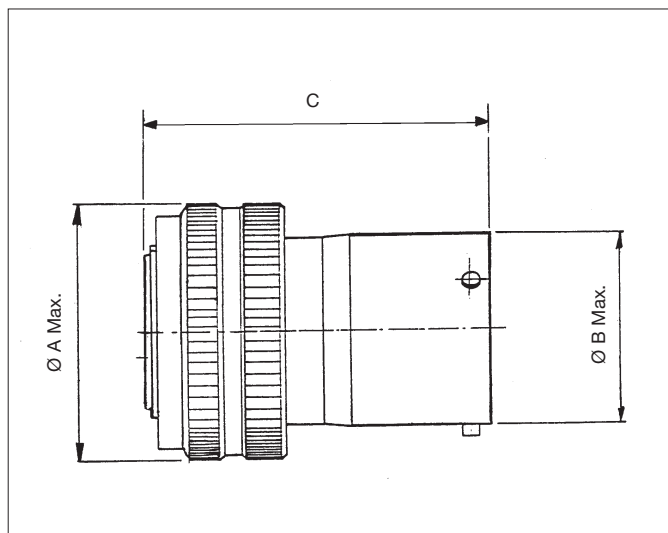
Dim.	Shell Size								
	8	10	12	14	16	18	20	22	24
A Max	12.03 .474	15.01 .591	19.07 .751	22.25 .876	25.42 1.001	28.60 1.126	31.77 1.251	34.95 1.376	38.12 1.501
B	17.55 .691	17.55 .691	17.55 .691	17.55 .691	17.55 .691	17.55 .691	19.15 .754	19.15 .754	19.15 .754
C	2.46 .097	2.46 .097	2.46 .097	2.46 .097	2.46 .097	2.46 .097	3.25 .128	3.25 .128	3.25 .128
D	16.74 .659	16.74 .659	16.74 .659	16.74 .659	16.74 .659	16.74 .659	16.70 .657	16.70 .657	16.70 .657
E	20.50 .807	20.50 .807	20.50 .807	20.50 .807	20.50 .807	20.50 .807	20.45 .805	20.45 .805	20.45 .805
F Max	27.25 1.073	30.40 1.197	35.20 1.386	38.40 1.512	41.50 1.634	44.70 1.760	49.50 1.949	52.60 2.071	55.80 2.197
G Max	24.10 .949	27.25 1.073	32.05 1.262	35.20 1.386	38.40 1.512	41.55 1.636	46.30 1.823	49.50 1.949	52.65 2.073
K	16.35 .644	16.35 .644	16.35 .644	16.35 .644	16.35 .644	16.35 .644	16.30 .642	16.30 .642	16.30 .642
L Max	12.20 .480	15.40 .606	18.90 .744	22.10 .870	25.25 .994	26.80 1.055	30.00 1.181	33.20 1.307	36.35 1.431

Note : in order to reduce the space used behind the receptacle, it is possible to manufacture the connector with the mounting flange re-positioned nearer the back. Consult factory.

# 8F51/8AF51 8F526/8AF526

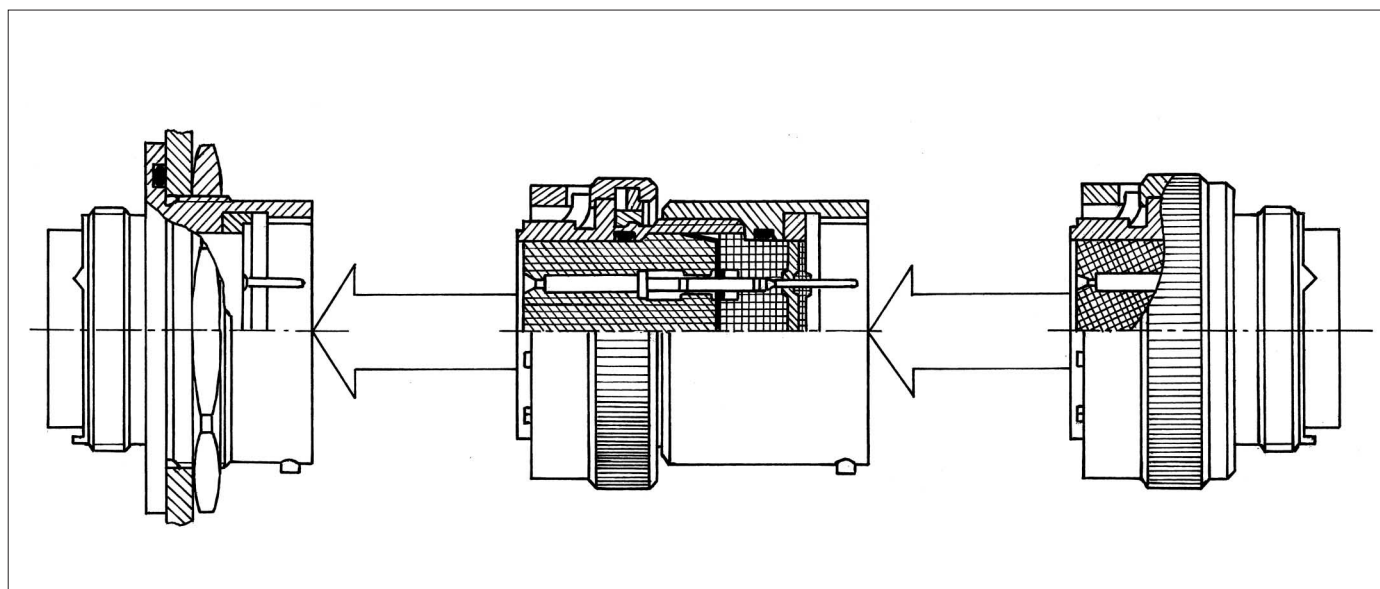


## Dimensions (mm/inches)



Dim.	Shell Size							
	10	12	14	16	18	20	22	24
<b>A Max</b>	22.60 .890	25.70 1.012	29.70 1.169	32.90 1.295	35.30 1.390	38.70 1.524	41.80 1.646	45.00 1.772
<b>B Max</b>	14.96 .589	19.02 .749	22.20 .874	25.37 .999	28.55 1.124	31.72 1.249	34.90 1.374	38.07 1.499
<b>C</b>	42.80 1.685	42.80 1.685	42.80 1.685	42.80 1.685	42.80 1.685	44.40 1.748	44.40 1.748	44.40 1.748

## Installation of the filter adapter





# 8FLT/8FT/8FST/8FD

## Applications

## Standards

- **8FLT** MIL-C 38999 series I  
NFC 93422, HE 308  
DTAT C 5935X0001
- **8FT** MIL-C 38999 series II  
NFC 93422, HE 309  
PAN 6433-1  
BS 9522 N 003
- **8FST** VG 96912 series I  
PAN 6433-2
- **8FD** MIL-C 38999 series III



## Description

**MIL-C 38999** circular filter connectors are widely used in military and aeronautical applications. They are suitable for severe operating conditions. These connectors are based directly on standard specifications. They are intermeatable and interchangeable as to the mounting with standard connectors of the same series.

## Characteristics

### Mechanical

These connectors are fitted with tubular filters : see description on page 417.

- Shells : aluminum alloy, olive green cadmium or nickel plated
  - Insulators : thermo-setting plastic
  - Interfacial and peripheral seals : fluoro-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 cm<sup>3</sup>/h - NFC 20717 with differential pressure of 2 bars - altitude immersion (8FD) MIL-STD 1344, method 1004
- Humidity 10 cycles 24 h - MIL-STD 1344, method 1002, type II except step 7b - NFC 20703
- Salt spray
  - 48 h - L plating - MIL-STD 1344, method 1001, condition B - NFC 20711
  - 500 h-B plating - MIL-STD 1344, method 1001, condition C
- Durability 500 cycles - mating/unmating
- Vibration
  - 30 g (sine) - MIL-STD 202, method 204, condition G
  - 41,7 Grms (random) - MIL-STD 1344, method 2005, condition VI, letter J
- Shock 300 g - 3 ms - MIL-STD 1344, method 2004 condition D

## Ordering information

<b>basic series</b>	<b>8FLT 00</b>	<b>—</b>	<b>13</b>	<b>G</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>M</b>	<b>—***</b>
- <b>8FLT</b> : 38999 Series I, HE 308 type									
- <b>8FT</b> : 38999 Series II, HE 309 type									
- <b>8FST</b> : VG 96912 Series 1 type									
- <b>8FD</b> : 38999 Series III type									
<b>shell type</b>	- <b>00</b> : square flange receptacle								
	- <b>03</b> : square flange receptacle (rear mounting) (series I and II only)								
	- <b>07</b> : jam nut receptacle								
<b>termination</b>	- <b>—</b> : solder bucket								
	- <b>C</b> : straight spill								
<b>shell size</b>	<b>8FLT-8FD : 09-11-13-15-17-19-21-23-25</b>								
	<b>8FT-8FST : 08-10-12-14-16-18-20-22-24</b>								
<b>plating • for 8FLT, 8FT, 8FST Series</b>	- <b>B</b> : olive green cadmium (salt spray 500 h)								
	- <b>F</b> : nickel								
<b>• for 8FD Series III :</b>	- <b>W</b> : olive green cadmium (salt spray 500 h)								
	- <b>F</b> : nickel								
<b>contact layout</b>	(see table page 430)								
<b>type contact</b>	- <b>P</b> : pin								
	- <b>S</b> : socket								
<b>orientation</b>	<b>N-A-B-C-D</b> and <b>E</b> (for 8FD Series)								
<b>filter type</b>	<b>B-M-T-H</b>								
<b>special modifiers</b>	- partially loaded filter connector (with ground or non-filtered contacts)								
	- connector with different types of filters (in this case the preceding letter does not appear)								
	- non-standard filters								



# 8FLT/8FT/8FST/8FD



## Electrical and filter types

### Size # 16 and # 20 contacts

Filter designation	B	M (# 16)	M (# 20)	T	H	
Filter type	C filter	$\pi$ filter				
Max. voltage rating	200 Vdc 120 Vac	360 Vdc 220 Vac	200 Vdc 120 Vac rms 50 Hz & 400 Hz			
Max. current rating	7.5 A	13 A	7.5 A			
Insulation resistance, 25°C, 2 mn electrification time	> 5000 M $\Omega$ (under 100 Vdc)					
DWV, sea level, 25°C	500 Vdc	900 Vdc	500 Vdc			
Contact resistance	7.5 m $\Omega$ Max					
Capacitance at 1kHz : 0.1 Vrms at 25°C	100 000 pF min	6 000 pF to 12 000 pF	6 000 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 $\Omega$ system)	frequency (MHz)	minimum attenuation (dB)				
	0.1	4				
	0.3	11				
	1	22	2	2		
	3	29	7	7	3	
	10	38	18	18	10	2
	30	44	35	35	22	10
	100	50	55	55	50	25
	300	50	60	60	55	40
1000	50	60	60	55	50	

### Size # 22 contacts

Filter designation	B	M	T	H	
Filter type	C filter	$\pi$ filter			
Max. voltage rating	100 Vdc	200 Vdc - 120 Vac rms 50 Hz or 400 Hz			
Max. current rating		5 A			
Insulation resistance, 25°C, 2mn electrification time	> 500 M $\Omega$ (under 100 Vdc)	> 5000 M $\Omega$ (under 100 Vdc)			
DWV, sea level, 25°C	250 Vdc	500 Vdc			
Contact resistance	7,5 m $\Omega$ Max				
Capacitance at 1kHz : 0.1 Vrms at 25°C	50 000 pF to min.	4000 pF to 12000 pF	2000 pF to 5000 pF	500 pF to 1300 pF	
Attenuation per MIL-STD 220 at 25°C (with no applied voltage or current, in 50 $\Omega$ system)	frequency (MHz)	minimum attenuation (dB)			
	0.3	5			
	1	15			
	3	24	5	2	
	10	33	13	8	2
	30	42	30	20	7
	100	45	50	41	24
	300	50	55	55	40
1000	50	55	55	50	

The capacitance, insulation resistance and dielectric withstanding voltage are tested 100% on all contacts.

Note : • M filter is the most popular filter. If you require other filter types, indicate the maximum operating voltage, maximum capacitance and minimum attenuation required at various frequencies.

- B filter is substantially more expensive than other filters.

# 8FLT/8FT/8FST/8FD



## Contact layouts - viewed from front face of male insulator

shells size			
8FLT/8FD	8FT/8FST		
09	08	35 6 # 22 D	
11	10	35 13 # 22 D	98 6 # 20
13	12	35 22 # 22 D	98 10 # 20
15	14	35 37 # 22 D	19 19 # 20 05 5 # 16
17	16	35 55 # 22 D	26 26 # 20 08 8 # 16
19	18	35 66 # 22 D	32 32 # 20
21	20	35 79 # 22 D	41 41 # 20
23	22	35 100 # 22 D	53 53 # 20
25	24	35 128 # 22 D	61 61 # 20

8FLT, 8FD, 8FST : pin and socket layout

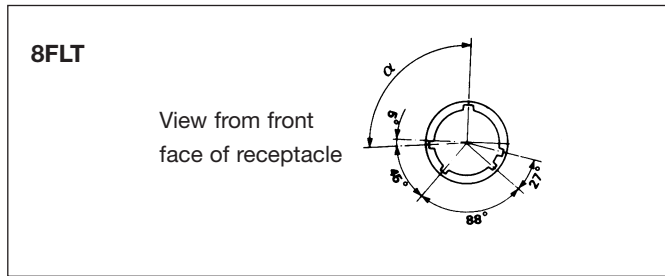
8FT : pin layout only

Other layout : consult factory

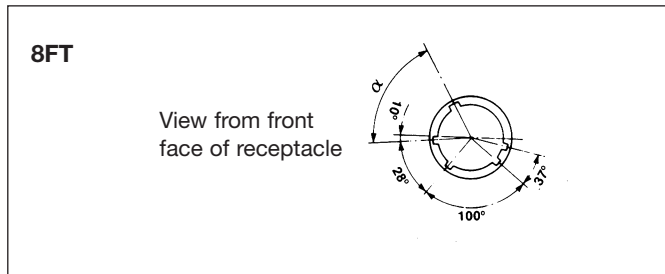
# 8FLT/8FT/8FST/8FD



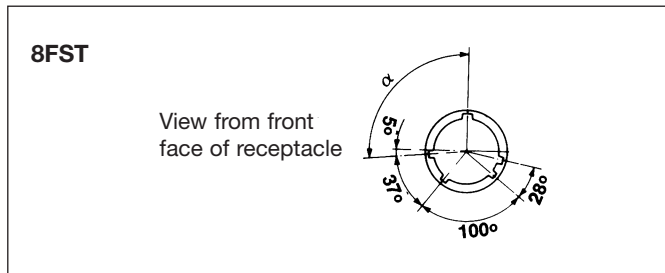
## MIL-C 38999 orientations



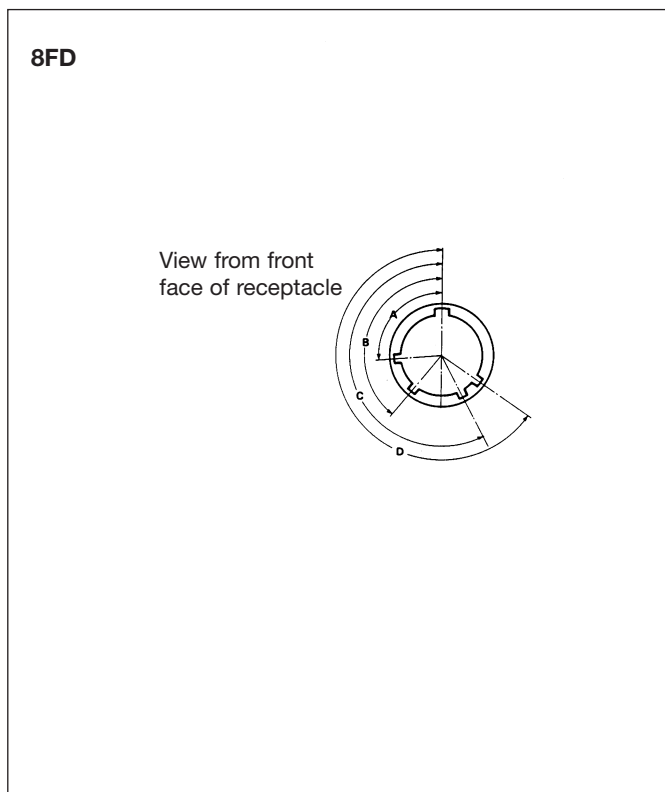
shell size	$\alpha$ angle in degrees				
	N	A	B	C	D
09	95	77	—	—	113
11	95	81	67	123	109
13	95	75	63	127	115
15	95	74	61	129	116
17	95	77	65	125	113
19	95	77	65	125	113
21	95	77	65	125	113
23	95	80	69	121	110
25	95	80	69	121	110



shell size	$\alpha$ angle in degrees				
	N	A	B	C	D
08	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



shell size	$\alpha$ angle in degrees				
	N	A	B	C	D
08	95	77	—	—	113
10	95	81	67	123	109
12	95	75	63	127	115
14	95	74	61	129	116
16	95	77	65	125	113
18	95	77	65	125	113
20	95	77	65	125	113
22	95	80	69	121	110
24	95	80	69	121	110



shell size	angles	$\alpha$ angle in degrees					
		N	A	B	C	D	E
9	A°	105	102	80	35	64	91
	B°	140	132	118	140	155	131
	C°	215	248	230	205	234	197
	D°	265	320	312	275	304	240
11	A°	95	113	90	53	119	51
	B°	141	156	145	156	146	141
	C°	208	182	195	220	176	184
	D°	236	292	252	255	298	242
13	A°	95	113	90	53	119	51
	B°	141	156	145	156	146	141
	C°	208	182	195	220	176	184
	D°	236	292	252	255	298	242
15	A°	95	113	90	53	119	51
	B°	141	156	145	156	146	141
	C°	208	182	195	220	176	184
	D°	236	292	252	255	296	242
17	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272
19	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272
21	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272
23	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272
25	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272

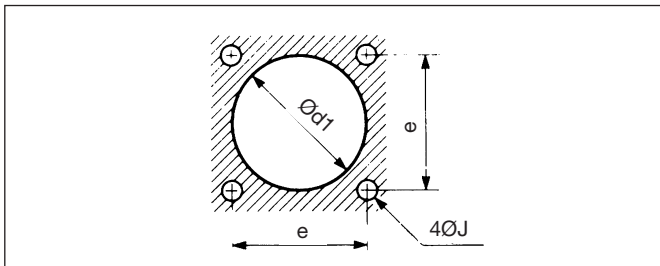
# 8FLT/8FT/8FST/8FD



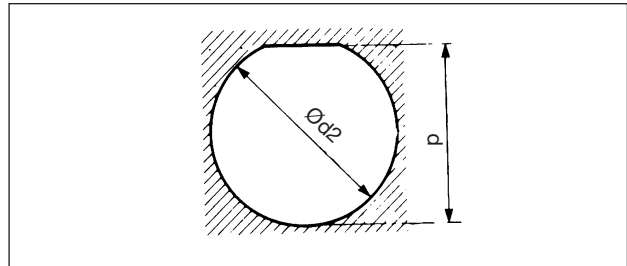
## MIL-C 38999

### panel cut-out

#### Square flange receptacle



#### Jam nut receptacle



#### 8FLT, Series I

shell		9	11	13	15	17	19	21	23	25
d1 min.	AV	12.70 .500	15.90 .626	19.40 .764	22.60 .890	25.70 1.012	27.30 1.075	30.60 1.205	33.80 1.331	37.00 1.457
	AR	16.66 .656	20.22 .796	23.70 .933	26.90 1.059	30.96 1.219	32.94 1.297	36.12 1.422	39.29 1.547	42.47 1.672
d2	$+0.25$ 0	17.70 .697	20.88 .822	25.58 1.007	28.80 1.134	31.98 1.259	35.15 1.384	38.28 1.507	41.50 1.634	44.68 1.759
J	$\pm 0.15$	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
e		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
p	$0$ $-0.25$	16.99 .669	19.53 .769	24.26 .955	27.53 1.084	30.68 1.208	33.86 1.333	37.06 1.459	40.01 1.575	43.41 1.709

#### 8FST

shell		8	10	12	14	16	18	20	22	24
d1	$+0.35$ 0	AV .500	16.00 .630	19.00 .748	22.20 .874	25.50 1.004	28.50 1.122	31.70 1.248	35.00 1.378	38.80 1.528
	AR	14.00 .551	17.00 .669	22.00 .866	25.00 .984	28.00 1.102	31.00 1.220	34.50 1.358	37.50 1.476	41.00 1.614
d2	$+0.35$ 0	14.50 .571	17.70 .697	22.70 .894	25.70 1.012	28.80 1.134	32.00 1.260	35.10 1.382	38.00 1.496	42.00 1.654
J	$\pm 0.13$	3.30 .130	3.30 .130	3.30 .130	3.30 .130	3.30 .130	3.30 .130	3.30 .130	3.30 .130	3.88 .153
e		15.10 .594	18.30 .720	20.60 .811	23.00 .906	24.60 .969	27.00 1.063	29.40 1.157	31.80 1.252	34.90 1.374
p	$+0.35$ 0	13.60 .535	16.80 .661	20.90 .823	24.10 .949	27.20 1.071	30.40 1.197	33.60 1.323	36.80 1.449	39.90 1.571

#### 8FT, Series II

shell		8	10	12	14	16	18	20	22	24
d1 min.	AV	12.70 .500	15.90 .626	19.40 .764	22.60 .890	25.70 1.012	27.30 1.075	30.60 1.205	33.80 1.331	37.00 1.457
	AR	14.50 .571	17.32 .682	21.69 .854	24.87 .979	28.04 1.104	31.22 1.229	34.39 1.354	37.57 1.479	40.74 1.604
d2	$+0.25$ 0	22.45 .884	25.58 1.007	28.80 1.134	31.98 1.259	35.15 1.384	38.28 1.507	41.50 1.634	44.68 1.759	47.85 1.884
J	$\pm 0.15$	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.25 .128	3.91 .154
e		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
p	$0$ $-0.25$	21.08 .830	24.26 .955	27.53 1.084	30.68 1.208	33.86 1.333	37.06 1.459	40.03 1.576	43.21 1.701	46.38 1.826

#### 8FD, Series III

shell		9	11	13	15	17	19	21	23	25
d1 min.	AV	13.11 .516	15.88 .625	19.05 .750	23.01 .906	25.81 1.016	28.98 1.141	32.16 1.266	34.93 1.375	37.69 1.484
	AR	16.66 .656	20.22 .796	23.42 .922	26.59 1.047	30.96 1.219	32.94 1.297	36.12 1.422	39.29 1.547	42.47 1.672
d2	$+0.25$ 0	17.70 .697	20.88 .822	25.58 1.007	28.80 1.134	31.98 1.259	35.15 1.384	38.28 1.507	41.50 1.634	44.68 1.759
J	$\pm 0.15$	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
e		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
p	$0$ $-0.25$	16.99 .669	19.53 .769	24.26 .955	27.53 1.084	30.68 1.208	33.86 1.333	37.06 1.459	40.24 1.584	43.41 1.709

AV : front mounting

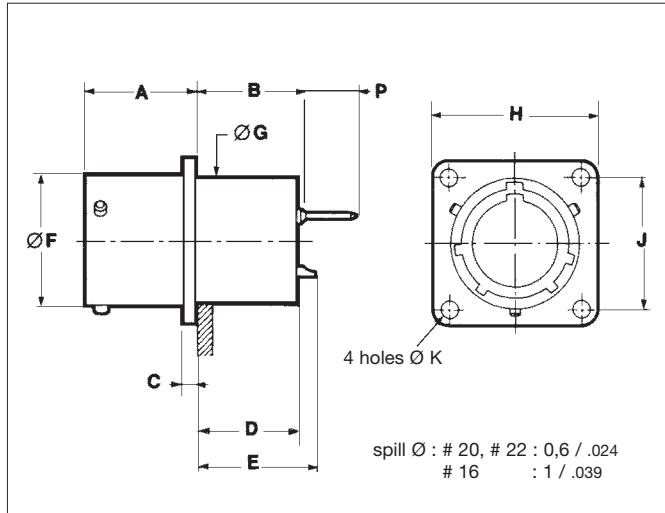
AR : rear mounting

# 8FLT



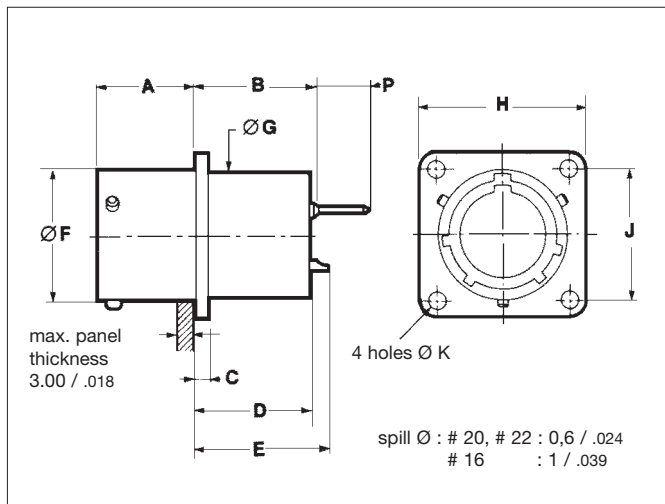
## Dimensions (mm/inches)

### Square flange receptacle, front mounting, 00 type



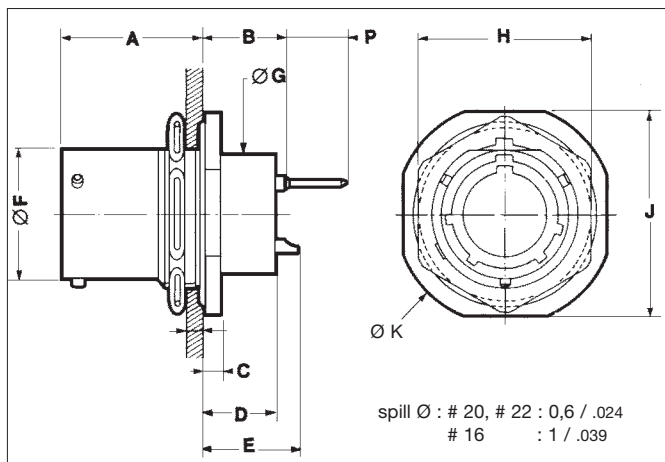
Dim.	Contact Size	Shell Size								
		9	11	13	15	17	19	21	23	25
A Max		18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720
B	#16-#20	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880
	#22	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817
C		2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.95 .116	2.95 .116	2.95 .116
D		19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750
E		22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890
F 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
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H		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
J		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
K		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
P	#16-#20	5.60 .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

### Square flange receptacle, rear mounting, 03 type



Dim.	Contact Size	Shell Size								
		9	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	20.07 .790	20.07 .790	20.07 .790
B	#16-#20	19.75 .778	19.75 .778	19.75 .778	19.75 .778	19.75 .778	19.75 .778	20.40 .803	20.40 .803	20.40 .803
	#22	18.15 .715	18.15 .715	18.15 .715	18.15 .715	18.15 .715	18.15 .715	18.80 .740	18.80 .740	18.80 .740
C		2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.95 .116	2.95 .116	2.95 .116
D		16.60 .654	16.60 .654	16.60 .654	16.60 .654	16.60 .654	16.60 .654	17.35 .683	17.35 .683	17.35 .683
E		20.00 .787	20.00 .787	20.00 .787	20.00 .787	20.00 .787	20.00 .787	20.65 .813	20.65 .813	20.65 .813
F 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
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H		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
J		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
K		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
P	#16-#20	5.60 .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

### Jam nut receptacle, 07 type



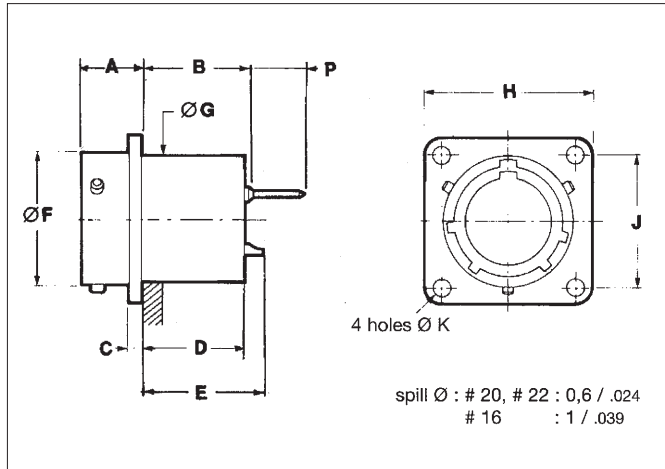
Dim.	Contact Size	Shell Size								
		9	11	13	15	17	19	21	23	25
A Max		23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917
B	#16-#20	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679
	#22	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616
C		2.80 .110	2.80 .110	2.80 .110	2.80 .110	2.80 .110	3.60 .142	3.60 .142	3.60 .142	3.60 .142
D		14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557
E		17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687
F 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
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H Max		22.65 .892	25.80 1.016	30.60 1.205	33.75 1.329	36.95 1.455	40.10 1.579	43.30 1.705	46.45 1.829	51.20 2.016
J		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
K		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
P	#16-#20	5.60 .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

Note : in order to reduce the space used behind the receptacle, it is possible to manufacture the connector with the mounting flange re-positioned nearer the back. Consult factory.



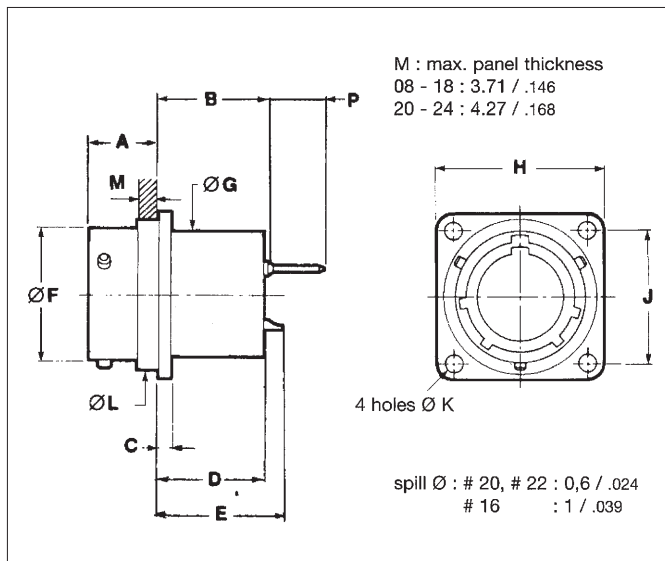
## Dimensions (mm/inches)

### Square flange receptacle, front mounting, 00 type



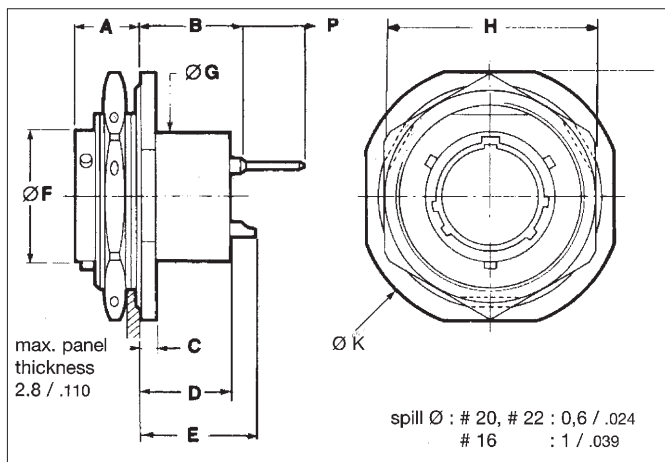
Dim.	Contact Size	Shell Size								
		8	10	12	14	16	18	20	22	24
A Max		9.67 .381	9.67 .381	9.67 .381	9.67 .381	9.67 .381	9.67 .381	9.67 .381	9.67 .381	9.67 .381
B	#16-#20	22.30 .878	22.30 .878	22.30 .878	22.30 .878	22.30 .878	22.30 .878	22.30 .878	22.30 .878	22.30 .878
	#22	20.70 .815	20.70 .815	20.70 .815	20.70 .815	20.70 .815	20.70 .815	20.70 .815	20.70 .815	20.70 .815
C		1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058
D		19.15 .754	19.15 .754	19.15 .754	19.15 .754	19.15 .754	19.15 .754	19.15 .754	19.15 .754	19.15 .754
E		22.55 .888	22.55 .888	22.55 .888	22.55 .888	22.55 .888	22.55 .888	22.55 .888	22.55 .888	22.55 .888
F Max		12.04 .474	15.02 .591	19.08 .751	22.25 .876	25.43 1.001	28.61 1.126	31.76 1.250	34.95 1.376	38.13 1.501
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H Max		21.01 .827	24.22 .954	26.60 1.047	28.99 1.141	31.35 1.234	33.71 1.327	36.91 1.453	40.09 1.578	43.26 1.703
J		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
K		3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.73 .147
P	#16-#20	5.60 .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

### Square flange receptacle, rear mounting, 03 type



Dim.	Contact Size	Shell Size								
		8	10	12	14	16	18	20	22	24
A Max		11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444
B	#16-#20	20.60 .811	20.60 .811	20.60 .811	20.60 .811	20.60 .811	20.60 .811	20.60 .811	20.60 .811	20.60 .811
	#22	19.00 .748	19.00 .748	19.00 .748	19.00 .748	19.00 .748	19.00 .748	19.00 .748	19.00 .748	19.00 .748
C		1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058	1.47 .058
D		17.50 .689	17.50 .689	17.50 .689	17.50 .689	17.50 .689	17.50 .689	17.50 .689	17.50 .689	17.50 .689
E		20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823	20.90 .823
F Max		12.04 .474	15.02 .591	19.08 .751	22.25 .876	25.43 1.001	28.61 1.126	31.76 1.250	34.95 1.376	38.13 1.501
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H Max		21.01 .827	24.22 .954	26.60 1.047	28.99 1.141	31.35 1.234	33.71 1.327	36.91 1.453	40.09 1.578	43.26 1.703
J		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
K		3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.73 .147
L Max		13.25 .522	16.20 .638	20.50 .807	23.70 .933	26.85 1.057	30.00 1.181	33.20 1.307	36.35 1.431	39.55 1.557
P	#16-#20	5.60 .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

### Jam nut receptacle, 07 type



Dim.	Contact Size	Shell Size								
		8	10	12	14	16	18	20	22	24
A Max		11.05 .435	11.05 .435	11.05 .435	11.05 .435	11.05 .435	11.05 .435	11.71 .461	11.71 .461	11.71 .461
B	#16-#20	20.80 .819	20.80 .819	20.80 .819	20.80 .819	20.80 .819	20.80 .819	20.15 .793	20.15 .793	20.15 .793
	#22	19.20 .756	19.20 .756	19.20 .756	19.20 .756	19.20 .756	19.20 .756	18.55 .730	18.55 .730	18.55 .730
C		2.14 .084	2.14 .084	2.14 .084	2.14 .084	2.14 .084	2.14 .084	2.14 .084	2.14 .084	2.14 .084
D		17.73 .698	17.73 .698	17.73 .698	17.73 .698	17.73 .698	17.73 .698	17.03 .670	17.03 .670	17.03 .670
E		20.05 .789	20.05 .789	20.05 .789	20.05 .789	20.05 .789	20.05 .789	20.40 .803	20.40 .803	20.40 .803
F Max		12.04 .474	15.02 .591	19.08 .751	22.25 .876	25.43 1.001	28.61 1.126	31.78 1.251	34.95 1.376	38.13 1.501
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H Max		27.40 1.079	30.60 1.205	33.75 1.329	36.95 1.455	40.10 1.579	43.30 1.705	46.45 1.829	51.20 2.016	54.40 2.142
J		31.80 1.252	34.96 1.376	38.15 1.502	41.31 1.626	45.28 1.783	48.04 1.891	51.25 2.018	54.40 2.142	57.57 2.267
K		35.00 1.378	38.18 1.503	41.36 1.628	44.53 1.753	49.30 1.941	51.30 2.020	54.45 2.144	57.60 2.268	60.80 2.394
P	#16-#20	5.60 .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

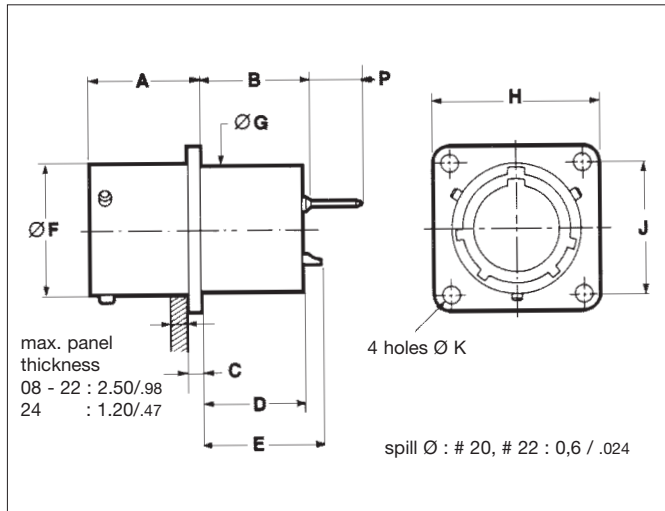
Note : in order to reduce the space used behind the receptacle, it is possible to manufacture the connector with the mounting flange re-positioned nearer the back. Consult factory.

# 8FST



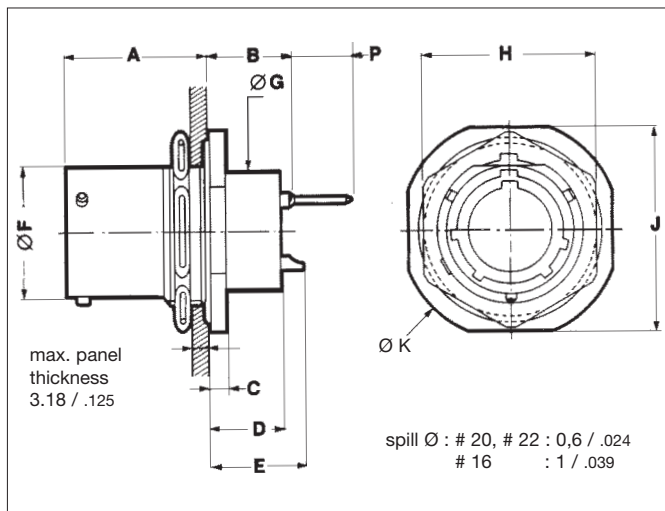
## Dimensions (mm/inches)

### Square flange receptacle, front mounting, 00 type



Dim.	Contact Size	Shell Size								
		08	10	12	14	16	18	20	22	24
A Max		18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720	18.29 .720
B	#16-#20	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880	22.35 .880
	# 22	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817	20.75 .817
C		2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.19 .086	2.95 .116	2.95 .116	2.95 .116
D		19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750	19.05 .750
E		22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890	22.60 .890
F Max		12.04 .474	15.02 .591	19.80 .780	22.25 .876	25.43 1.001	28.61 1.126	31.76 1.251	34.95 1.376	38.13 1.501
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H Max		21.01 .827	24.22 .954	26.60 1.047	28.99 1.141	31.35 1.234	33.71 1.327	36.91 1.453	40.09 1.578	43.26 1.703
J		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
K		3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.05 .120	3.73 .147
P	#16-#20	5.60 .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

### Jam nut receptacle, 07 type



Dim.	Contact Size	Shell Size								
		08	10	12	14	16	18	20	22	24
A Max		23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917	23.30 .917
B	#16-#20	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679	17.25 .679
	#22	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616	15.65 .616
C		2.80 .110	2.80 .110	2.80 .110	2.80 .110	2.80 .110	2.80 .110	3.60 .142	3.60 .142	3.60 .142
D		14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557	14.15 .557
E		17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687	17.45 .687
F Max		12.04 .474	15.02 .591	19.08 .751	22.25 .876	25.43 1.001	28.61 1.126	31.78 1.251	34.95 1.376	38.13 1.501
G Max		11.55 .455	14.55 .573	18.75 .738	21.90 .862	25.00 .984	26.85 1.057	30.15 1.187	33.35 1.313	35.95 1.415
H Max		19.45 .766	22.55 .888	27.35 1.077	30.50 1.201	33.65 1.325	36.85 1.451	40.00 1.575	43.20 1.701	46.35 1.825
J		24.15 .951	27.35 1.077	32.15 1.266	34.96 1.376	38.45 1.514	41.65 1.640	46.35 1.825	49.55 1.951	52.75 2.077
K		26.95 1.061	30.20 1.189	34.85 1.372	38.10 1.500	41.30 1.626	44.45 1.750	49.25 1.939	52.40 2.063	55.55 2.187
P	#16-#20	5.60 .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

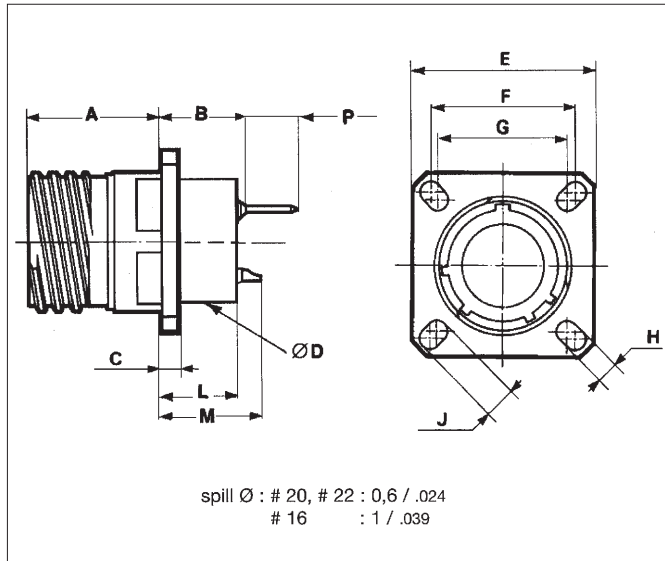
Note : in order to reduce the space used behind the receptacle, it is possible to manufacture the connector with the mounting flange re-positioned nearer the back. Consult factory.

# 8FD



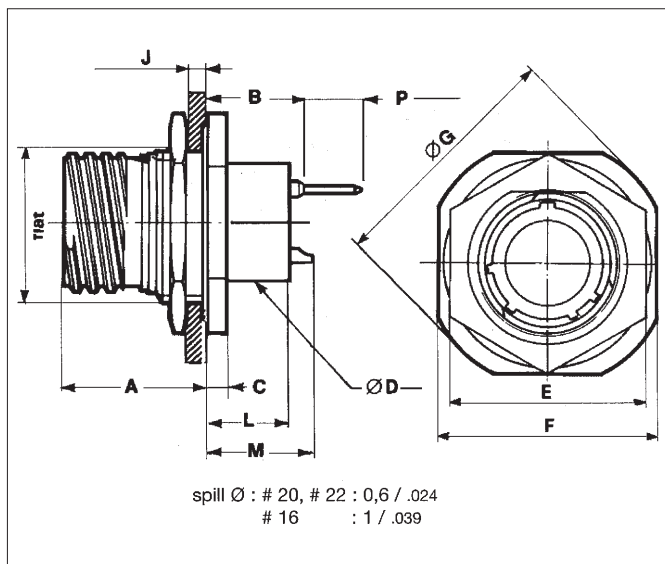
## Dimensions (mm/inches)

### Square flange receptacle, front mounting, 00 type



Dim.	Contact Size	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	#16-#20	20.05 .789	20.05 .789	20.05 .789	20.05 .789	20.05 .789	20.05 .789	20.80 .819	20.80 .819	20.80 .819
	#22	18.45 .726	18.45 .726	18.45 .726	18.45 .726	18.45 .726	18.45 .726	19.20 .756	19.20 .756	19.20 .756
C		2.25 .089	2.25 .089	2.25 .089	2.25 .089	2.25 .089	2.25 .089	3.00 .118	3.00 .118	3.00 .118
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	33.80 1.331	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		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
L		16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	17.70 .697	17.70 .697	17.70 .697
M		20.30 .799	20.30 .799	20.30 .799	20.30 .799	20.30 .799	20.30 .799	21.05 .829	21.05 .829	21.05 .829
B	#16-#20	5.60 .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

### Jam nut receptacle, 07 type



Dim.	Contact Size	Shell Size								
		09	11	13	15	17	19	21	23	25
A		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	#16-#20	18.70 .736	18.70 .736	18.50 .728	18.50 .728	18.50 .728	18.50 .728	18.50 .728	18.50 .728	18.50 .728
	#22	17.10 .673	17.10 .673	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665	16.90 .665
C		2.50 .098	2.50 .098	2.50 .098	2.50 .098	2.50 .098	2.50 .098	3.30 .130	3.30 .130	3.30 .130
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 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
L		15.50 .610	15.50 .610	15.35 .604	15.35 .604	15.35 .604	15.35 .604	15.35 .604	15.35 .604	15.35 .604
M		18.90 .744	18.90 .744	18.75 .738	18.75 .738	18.75 .738	18.75 .738	18.75 .738	18.75 .738	18.75 .738
P	#16-#20	5.60 .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

Note : in order to reduce the space used behind the receptacle, it is possible to manufacture the connector with the mounting flange re-positioned nearer the back. Consult factory.



# 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

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



# 8TFLT/8TFD



## Contact layouts - view from front face of male insulator

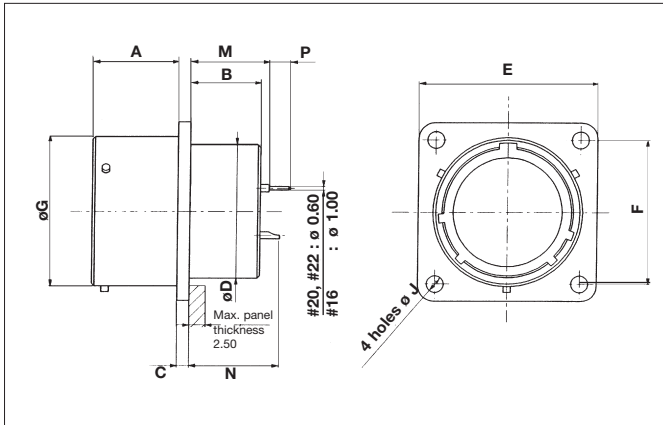
shells 09	09-35 6 #22		09-98 3 #20		
	11-35 13 #22 D		11-98 6 #20		
13	13-35 22 #22 D		13-98 10 #20		
	15-35 37 #22 D		15-19 19 #20		15-18 18 #20
17	17-35 55 #22 D		17-26 26 #20		
	19-35 66 #22 D		19-32 32 #20		
21	21-35 79 #22 D		21-41 41 #20		
	23-35 100 #22 D		23-53 53 #20		
25	25-35 128 #22 D		25-61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

# 8TFLT



## 8TFLT 00

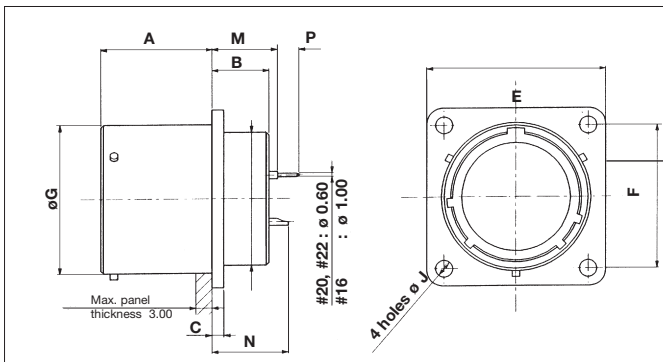
Square flange receptacle, front mounting



Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
<b>A Max</b>	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>B Max</b>	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
<b>C Max</b>	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
<b>D Max</b>	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	37.0 1.457
<b>E</b>	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
<b>F</b>	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
<b>G Max</b>	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
<b>J</b>	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
<b>M</b>	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
<b>N</b>	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
<b>P</b>	# 20 5.60 .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
	# 16 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
	# 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

## 8TFLT 03

Square flange receptacle, rear mounting

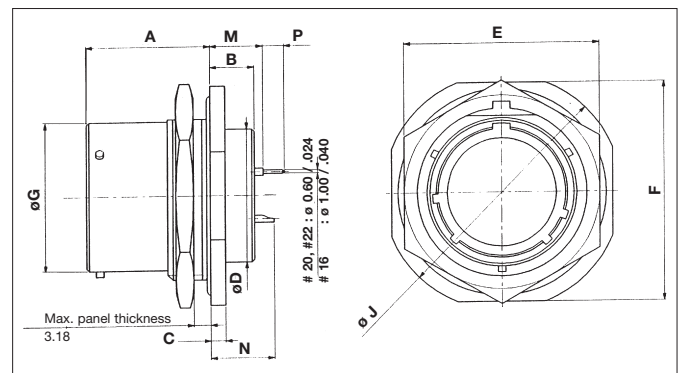


Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
<b>A Max</b>	20.83 .820	20.83 .820	20.83 .820	20.83 .820	20.83 .820	20.83 .820	20.08 .791	20.08 .791	20.08 .791
<b>B Max</b>	10.54 .415	10.54 .415	10.54 .415	10.54 .415	10.54 .415	10.54 .415	11.29 .444	11.29 .444	11.29 .444
<b>C Max</b>	2.48 .098	2.48 .098	2.48 .098	2.48 .098	2.48 .098	2.48 .098	3.24 .128	3.24 .128	3.24 .128
<b>D Max</b>	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
<b>E</b>	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
<b>F</b>	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
<b>G Max</b>	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
<b>J</b>	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
<b>M</b>	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
<b>N</b>	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
<b>P</b>	# 20 5.60 .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
	# 16 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
	# 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

Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
<b>A Max</b>	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>B Max</b>	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
<b>C Max</b>	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
<b>D Max</b>	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
<b>E Max</b>	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
<b>F</b>	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
<b>G Max</b>	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
<b>J</b>	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
<b>M</b>	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
<b>N</b>	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
<b>P</b>	# 20 5.60 .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
	# 16 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
	# 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

## 8TFLT 07

Jam nut receptacle

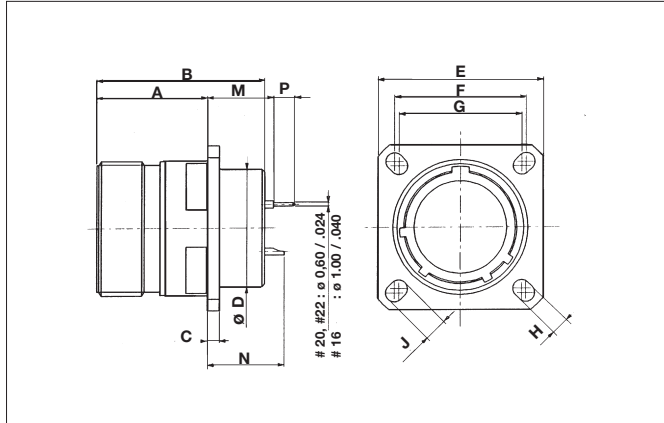


# 8TFD



## 8TFD 00

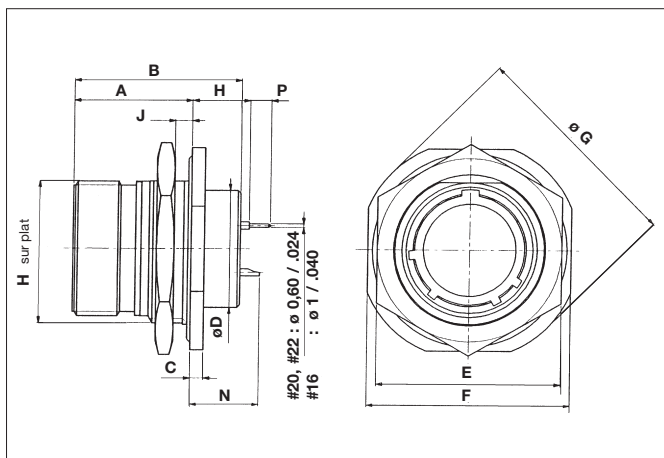
Square flange receptacle, front mounting



Dim.	Shell Size								
	09	11	13	15	17	19	21	23	25
<b>A Max</b>	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>B Max</b>	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
<b>C Max</b>	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
<b>D Max</b>	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
<b>E</b>	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
<b>F</b>	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
<b>G</b>	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
<b>H</b>	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
<b>J Max</b>	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
<b>M</b>	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
<b>N</b>	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
<b>P</b>	#20 5.60 .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
<b>A Max</b>	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>B Max</b>	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
<b>C Max</b>	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
<b>D Max</b>	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
<b>E Max</b>	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
<b>F</b>	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
<b>G</b>	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
<b>H</b>	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
<b>J</b>	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
<b>M</b>	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
<b>N</b>	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
<b>P</b>	#20 5.60 .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

# 8FA10



## Application

- Military communication

## Standards

- VG 96934



## Description

**8FA10** filter audio miniature connectors are designed for military, aeronautical and other environmental applications.

They are intermateable and interchangeable as to the mounting with **8A10** Series.

## Characteristics

### Mechanical

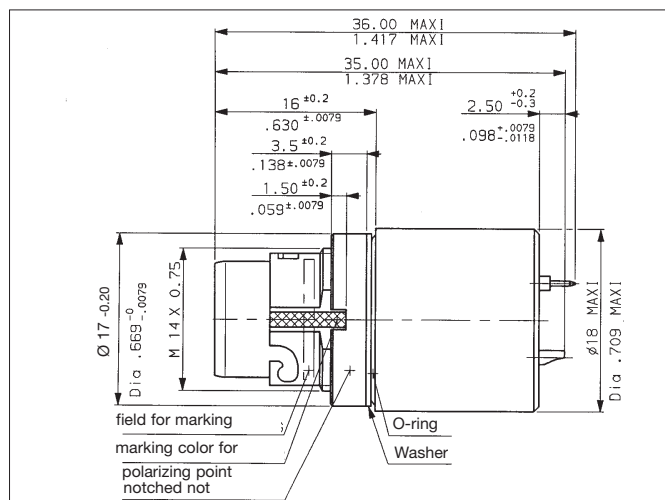
8FA10 Series is fitted with tubular filters :

See technical characteristics for 8A10 series, except shell plating : black cadmium.

### Electrical and filter types

Filter designation	B	M	T	H	
Filter type	C filter	$\pi$ filter			
Max. voltage rating	50 Vdc				
Max. current rating, min current rating	500 mA, 30 $\mu$ A				
Insulation resistance, 25°C, 2mn electrification time	> 5000 M $\Omega$ (under 100 Vdc)				
DWV, sea level, 25°C, 50 mA Max. charge/discharge	300 Vdc	500 Vdc			
Contact resistance	20 m $\Omega$ max. (+25°C), 100 m $\Omega$ max. (-50°C)				
Capacitance at 1kHz : 0.1 Vrms 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 $\Omega$ 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	

## Dimensions



## Ordering information

basic series    8 FA 10    AC    1    B 1    T    -XXX

receptacle

orientation

- A1 : solder bucket
- B1 : straight spill

filter type (if one only)

special modifier :

- mixed filtering
- partially loaded
- ground and filter contacts available
- non-standard

# Varistor Connectors



## Applications

Military  
Aerospace

## Standards

Based on :  
- MIL-C 24308  
- MIL-C 26482  
- MIL-C 38999



## Description

Protection against lightning or nuclear originated pulse has become a major concern for equipment manufacturers.

The use of composite materials on the frame and semi-conductors in the electronics make the equipment very vulnerable.

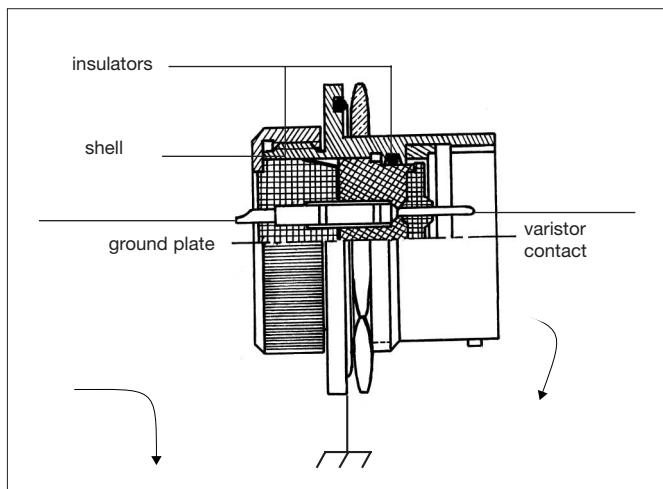
The integration of the varistor into the equipment interface connector allow to separate the protection function and the electronics, as well as to reduce to a minimum the distance between the surge protector component and the grounding on the equipment.

The tubular varistors can be fitted into any filter connectors series using tubular technology.

## Characteristics

P/N	maximum ratings (+125°C)				characteristics (+25°C)						leakage current @ V <sub>t</sub> (DC)					
	continuous		transient		varistor voltage @ 1 mA DC test current			max. clamping voltage V <sub>c</sub> @ test current (8/20µs)		capacitance f = 1 MHz		+25°C		+125°C		V <sub>t</sub> DC
	RMS volt.	DC volt.	energy (10/1000µs)	peak current (8/20/µs)												
	vm(ac)	vm(dc)	wtm	itm	mini.	wn(dc)	Maxi.	vc	ip	mini.	Maxi.	II Typ.	II Max.	II Typ.	II Max.	Volt
	Volt	Volt	Joule	Amp	Volt	Volt	Volt	Volt	Amps	Picofarad		µA	µA	µA	µA	
V14CP22	10.0	14.0	1.5	250	18.5	22.0	25.5	42.0	10	1600	2950	0.5	5.0	5.0	50	14
V31CP22	25.0	31.0	1.5	250	35.0	39.0	48.0	85.0	5	450	1950	0.5	5.0	5.0	50	28
V38CP22	30.0	38.0	1.5	250	42.0	47.0	58.0	100.0	5	450	1950	0.5	5.0	5.0	50	36
V130CP22	130.0	130.0	2.4	300	184.0	200.0	228.0	375.0	5	150	350	0.5	5.0	25.0	100	130
V31CP20	25.0	31.0	2.0	300	35.0	39.0	48.0	85.0	10	700	2200	0.5	5.0	5.0	50	28
V38CP20	30.0	38.0	2.0	300	42.0	47.0	58.0	100.0	10	650	1950	0.5	5.0	5.0	50	36
V130CP20	130.0	130.0	3.0	400	184.0	200.0	228.0	375.0	10	150	400	0.5	5.0	25.0	100	130

## Schematic diagram



## part numbers

Add or replace the "F" of filter in the series P/N by "V".

Example :

	Filter	Varistor
D-SUB	DJ	D* JV
26482 I & II	8F51 / 8F526	8V51 / 8V526
38999 I & III	8FLT / 8FD	8VLT / 8VD

Note : varistor contacts are available only in # 20 size