MIL-C-26482 Series 2/-83723 Series 1 Filter Connectors TPV



These miniature circular filter connectors are designed to combine the functions of a standard electrical connector and a feed-thru filter into one compact package.
TPV filter connectors are designed to meet the applicable portions of military specifications MIL-C-26482 and MIL-C-83723. They are also intermateable with the NAS1599 and the NASA 40M39569 type connectors. These connectors feature three-point bayonet lock coupling, five keyway polarization, and have contact arrangements that will accommodate up to 61 contacts in shell sizes, with both pin and socket contact versions available.

Performance and Material Specification

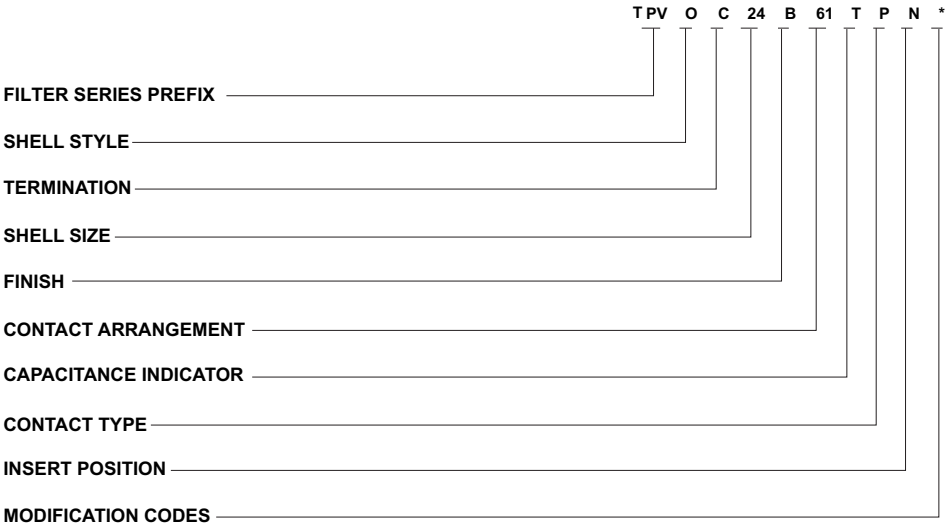
MATERIALS AND FINISHES

Jam Nut	Material:	Aluminum Alloy	
	Finish:	Class "B" Series Olive drab chromeplate over cadimium finish per QQ-P-416	Class "G" Series Electroless nickel plating Per MII-C-26074
Coupling Pins	Material:	Copper Alloy	
	Finish:	Passivated	
Contacts	Material:	Copper Alloy	
	Finish:	Gold plated per MIL-G-45204, Type 1 Class 1 with nickel underplate per QQ-N-290	
Insulator	Material:	Suitable high termperature plastic/epoxy	
	Finish:	none	
Interfacial and	Material:	Fluorosilicone rubber (ITT Cannon blend)	
Peripheral Seals	Finish:	none	
O ring	Material:	Silicone rubber (ITT Cannon blend)	
(Jam Nut Mounting Only)	Finish:	none	
Ground Spring	Material:	Beryllium Copper	
	Finish:	Gold Plated	

ELECTRICAL (Size #16 and #20 Contacts)

Filter Description		Low Freq.	Mid Freq.	Std. Freq	High Freq.
Catalog Indicator		L	M	T	H
Voltage Rating			200 VDC - 120 VAC rms 400 Hz		
Current Rating (amp DC)			15 amp, size 16/7.5 amp, size 20		
Insulation Resistance, 2 min. electrification time max. at 25˚C			5000, megohms min. @ 100 VDC		
DWV, sea level, with 500 microamps max. charge/discharge		500 VDC size 16 & 20		500 VDC	
Capacitance at 1 KHz 0.1V rms Picofarads		32000 45000	8000 12000	3300 5000	850 1300
	Freq. MHz				
Attenuation per MIL-STD-220 @ 25˚C with no applied voltage or current.	0.1	2 min.	-	-	-
	1.0	10 min.	2 min.	-	-
	2	16 min.	7 min.	2 min.	-
	10	40 min.	18 min.	8 min.	2 min.
	100	60 min.	55 min.	45 min.	30 min.
	500 to 1000	60 min.	60 min.	55 min.	50 min.
Filter Type/Construction		Pi	Pi	Pi	Pi
Consult factory for higher or mixed attenuation values and higher voltage ratings.					

How to Order



FILTER SERIES PREFIX
TPV - MIL-C-26482 Series 2, MIL-C-83723 Series 1 type filter connectors, solder termination. ITT Cannon designation.

SHELL STYLE
0 - Flange mounting receptacle
7 - Jam nut mounting receptacle

TERMINATION
C - Solder Pot Termination
E - P.C. Tail
S - Crimp Piggyback
W - Wire Wraps

SHELL SIZE
10, 12, 14, 16, 18, 20, 22, 24

FINISH
A - Bright cadmium over nickel plate
B - Olive drab chromate over cadmium finish
G - Electorless nickel finish (preferred)

CONTACT ARRANGEMENTS
See page 14

CAPACITANCE INDICATOR
M - Mid-range frequency
L - Low frequency
T - Standard frequency
H - High frequency

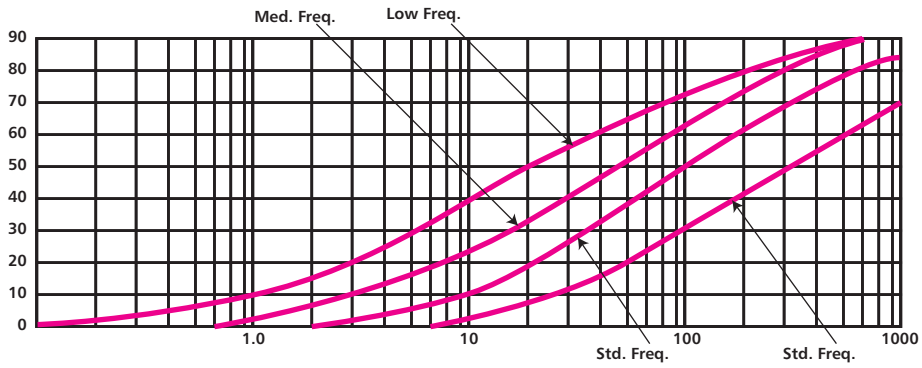
CONTACT TYPE
P - Pin contacts
S - Socket contacts

INSERT POSITION
N - (Normal); Alternates - W, X, Y, Z
See page 16.

MODIFICATION CODES
For backshell assembly contact Customer Service.

NOTES:
1) Backshell threads and teeh - none provided.
2) Hermetic versions of the filter connectors can be provided. Contact Customer Service

Typical Filter Performance



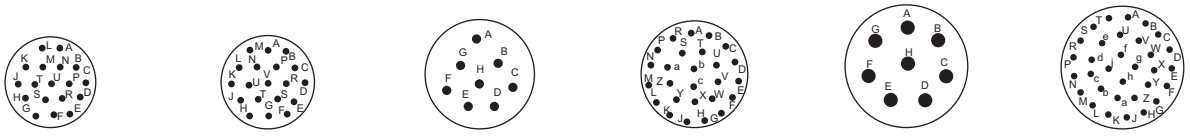
Dimensions shown in inch (mm)
Specifications and dimensions subject to change

Contact Arrangements

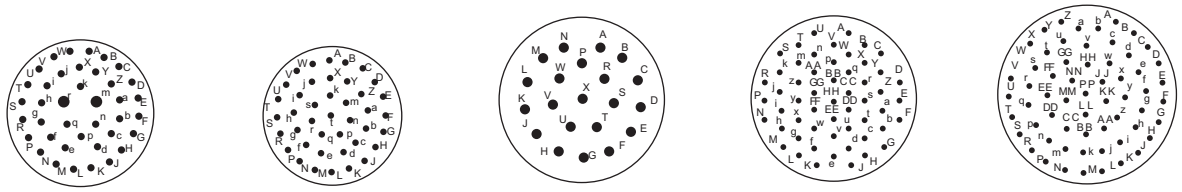
(Face view, pin insert)



Shell Size/Arr. No.	10-6	12-8	12-10	14-5	14-21	14-15
No. of Contacts	6	8	10	5	4 B	1 14
Contacts Size	#20	#20	#20	#16	#16 #20	#16 #20



Shell Size/Arr. No.	14-18	14-19	16-8	16-26	18-8	18-32
No. of Contacts	18	19	8	26	8	32
Contacts Size	#20	#20	#16	#20	#12	#20



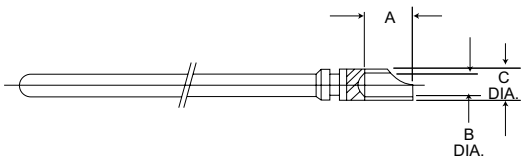
Shell Size/Arr. No.	20-39	20-41	22-21	22-55	24-61
No. of Contacts	2 37	41	21	55	61
Contacts Size	#16 #20	#20	#16	#20	#20

Consult factory for availability of other contact arrangements. Available for In-Line Adapters also.

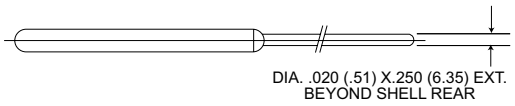
Contact - Pin and Socket

Standard Contact Terminations

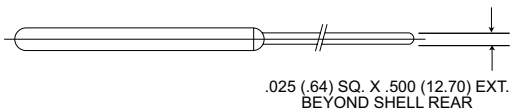
Finish: Gold plate per MIL-G-45204, Type 1, Class 1, over nickel plate per QQ-N-290.



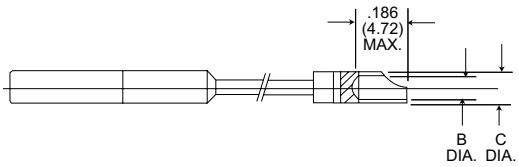
Pin/Solder Pot



Pin/Printed Circuit



Pin/Square Post



Socket/Solder Pot

Contact Size	A	B Dia.	C Dia.
#20	.125 (3.18) .110 (2.79)	.049 (1.24) .045 (1.14)	.073 (1.85) .068 (1.73)
#16	.160 (4.06) .150 (3.81)	.077 (1.96) .068 (1.73)	.104 (2.64) .097 (2.46)

Note: Solder pot extension typically will be .200 (5.08) max. beyond shell rear.

ITT

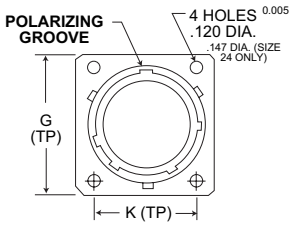
Dimensions shown in inch (mm)
Specifications and dimensions subject to change

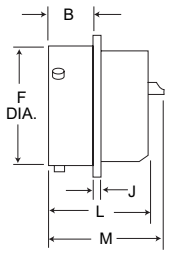
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Flange Mounting Receptacle

TPV0





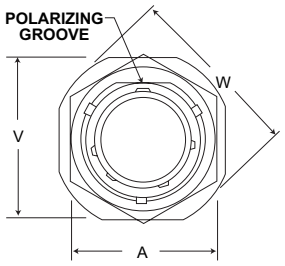


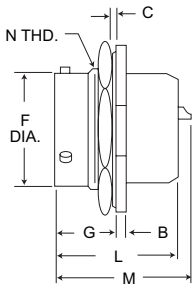
Shell Size	B Max.	F Max.	L Max.	M Max.	J Max.	K	G Max.
10	.462 (11.73)	.591 (15.01)	1.215 (30.86)	1.530 (38.86)	.078 (1.98)	.719 (18.26)	.954 (24.23)
12	.462 (11.73)	.751 (19.08)	1.215 (30.86)	1.530 (38.86)	.078 (1.98)	.812 (20.62)	1.047 (26.59)
14	.462 (11.73)	.876 (22.25)	1.215 (30.86)	1.530 (38.86)	.078 (1.98)	.906 (23.01)	1.141 (28.98)
16	.462 (11.73)	1.001 (25.43)	1.215 (30.86)	1.530 (38.86)	.078 (1.98)	.969 (24.61)	1.234 (31.34)
18	.462 (11.73)	1.126 (28.60)	1.215 (30.86)	1.530 (38.86)	.078 (1.98)	1.062 (26.97)	1.328 (33.73)
20	.587 (14.91)	1.251 (31.78)	1.275 (32.39)	1.590 (40.38)	.110 (2.79)	1.156 (29.36)	1.453 (36.91)
22	.587 (14.91)	1.376 (34.95)	1.275 (32.39)	1.590 (40.38)	.110 (2.79)	1.250 (31.75)	1.578 (40.08)
24	.620 (15.75)	1.501 (38.13)	1.275 (32.39)	1.590 (40.38)	.110 (2.79)	1.375 (34.93)	1.703 (43.26)

Jam Nut Receptacle

TPV7



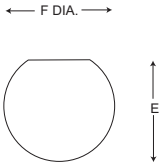




Shell Size	V Max.	A Max.	B Max.	F Max.	G ± .009 (0.23)	C Panel Thickness	L Max.	M Max.	W Dia.	N Thread Class 2A
10	1.078 (27.38)	.892 (22.66)	.113 (2.87)	.591 (15.01)	.698 (17.73)	.187 (4.75)	1.215 (30.86)	1.530 (38.86)	1.203 (30.56)	11/16-24UNEF
12	1.266 (32.16)	1.079 (27.41)	.113 (2.87)	.751 (19.08)	.698 (17.73)	.187 (4.75)	1.215 (30.86)	1.530 (38.86)	1.391 (35.33)	7/8-20 UNEF
14	1.391 (35.33)	1.205 (30.61)	.113 (2.87)	.876 (22.25)	.698 (17.73)	.187 (4.75)	1.215 (30.86)	1.530 (38.86)	1.516 (38.51)	1 -20UNEF
16	1.516 (38.51)	1.329 (33.76)	.113 (2.87)	1.001 (25.43)	.698 (17.73)	.187 (4.75)	1.215 (30.86)	1.530 (38.86)	1.641 (41.68)	1-1/8-18UNEF
18	1.641 (41.68)	1.455 (36.96)	.113 (2.87)	1.126 (28.60)	.698 (17.73)	.187 (4.75)	1.215 (30.86)	1.530 (38.86)	1.766 (44.86)	1-1/4-18UNEF
20	1.828 (46.43)	1.579 (40.11)	.148 (3.76)	1.251 (31.78)	.763 (19.38)	.250 (6.35)	1.275 (32.39)	1.590 (40.39)	1.954 (49.63)	1-3/8-18UNEF
22	1.954 (49.63)	1.705 (43.31)	.148 (3.76)	1.376 (34.95)	.763 (19.38)	.250 (6.35)	1.275 (32.39)	1.590 (40.39)	2.078 (52.78)	1-1/2-18UNEF
24	2.078 (52.78)	1.829 (46.46)	.148 (3.76)	1.501 (38.13)	.763 (19.38)	.219 (5.56)	1.275 (32.39)	1.590 (40.39)	2.203 (55.96)	1-5/8-18UNEF

Panel Mounting

Single Hole Mount Jam Nut Receptacle



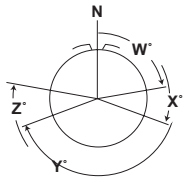
Shell Size	E ±.010 (0.25)	F Dia. ±.005 (0.13)
10	.661 (16.79)	.697 (17.70)
12	.824 (20.93)	.895 (22.73)
14	.948 (24.08)	1.010 (25.65)
16	1.072 (27.23)	1.135 (28.33)
18	1.197 (30.40)	1.260 (32.00)
20	1.322 (33.58)	1.385 (35.18)
22	1.447 (36.75)	1.510 (38.35)
24	1.572 (39.93)	1.635 (41.53)

Dimensions shown in inch (mm)
Specifications and dimensions subject to change

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Alternate Polarizing Positions

Face view, pin insert



Contact arrangements requiring reduced diameter for lead-in chamfer on outer row of contact cavities as indicated below.

Shell	Contact Arrangements	Contact Cavities
8	33, 38	A, B, C
12	10	C, G
14	12	A, B, C, D, E, F, G, and H
14	18	A, C, E, G, J, and L
14	19	B, D, F, H, K, and M
16	26	A, B, C, D, E, F, G, H, J, K, L, M, N, P, and R)
18	32	A, B, C, D, E, F,G, H, J, K, L, M, N, P, R, S, and T
22	41	A, B, C, D, E, F, G, H, J, K, L, M, N, P, R, S, T, U, V, W, X, and Y

SHELL SIZE	ARRANGE-MENT	N	W	POS CODE X	Y	Z
8	33	0°	90°	-	-	-
	98	0°	-	-	-	-
10	6	0°	90°	-	-	-
12	3	0°	-	-	180°	-
	8	0°	90°	112°	203°	292°
	10	0°	60°	155°	270°	295°
14	4	0°	45°	-	-	-
	5	0°	40°	92°	184°	273°
	12	0°	43°	90°	-	-
	15	0°	17°	110°	155°	234°
	18	0°	15°	90°	180°	270°
	19	0°	30°	165°	315°	-
16	8	0°	54°	152°	180°	331°
	23	0°	158°	270°	-	-
	26	0°	60°	-	275°	338°
18	8	0°	180°	-	-	-
	11	0°	62°	119°	241°	340°
	32	0°	85°	138°	222°	265°
20	16	0°	238°	318°	333°	347°
	39	0°	63°	144°	252°	333°
	41	0°	45°	126°	225°	-
22	21	0°	16°	135°	175°	349°
	41	0°	39°	135°	264°	-
	55	0°	30°	142°	226°	314°
24	19	0°	30°	165°	315°	-
	31	0°	90°	225°	225°	-
	61	0°	90°	180°	270°	324°

Special In-line Cable Filter Adapters



Filter adapters are designed to be engaged between connectors in an existing circuit to provide instant filtering without having to rewire. They have pin contacts in the plug end and socket contacts in the end that mates with the receptacle. The filter is concentric around the central pin-socket contact. Electrical and operating characteristics are the same as in the standard TPV file connectors.

THese adapters will mate with all MIL-C-26482 and MIL-C-83723 connectors having like contact arrangements. For proper performance both the mating receptacle and panel must have conductive finish. Please contact Customer Service for dimensions.

Flange mounted in-line connectors, similar to MS3119, are also available. They are environmentally sealed and use the same filters as in regular TPV receptacles. Design permits engaging cable plugs to both ends.

Contact Customer Service for proper nomenclature and availability of the in-line cable adapters and in-line flange mounted TPV connectors.