



ITT Cannon has developed a line of filter connectors to meet the industry's demand for improved control of Radio Frequency and Electro-Magnetic Interference (RFI/EMI). These TD1\* filter connectors, have been designed to combine the functions of a standard electrical connector and feed-thru filters into one compact package. In addition to offering greater design flexibility and system reliability, they are designed for applications where space and weight are prime considerations. These connectors are intermateable with all standard D subminiature

connectors. They are also intermateable with MIL-C-24308 types and meet applicable portions of that specification.

ALL TD1\* filter contact assemblies are tested 100% during in-process and final inspection, for capacitance, insulation resistance and dielectric withstanding voltage. Attenuation is checked as required for each type of filter to assure performance to guaranteed levels.

Note: The TD1\* replaces the obsolete TD\*J and D\*J Series

## How to Order

<p><b>FILTER SERIES INDICATOR</b> _____</p> <p><b>SERIES PREFIX</b> _____</p> <p><b>ONE (1) PIECE SHELL</b> _____</p> <p><b>SHELL SIZE</b> _____</p> <p><b>CONTACT ARRANGEMENTS</b> _____</p> <p><b>FILTER TYPE</b> _____</p> <p><b>CONTACT TYPE</b> _____</p> <p><b>CONTACT TERMINATION</b> _____</p> <p><b>MODIFIER</b> _____</p>	<p><b>T D 1 E 9 L P H - C</b></p> <p>A 15 M S M</p> <p>B 25 T P</p> <p>C 37 H</p> <p>D 50</p>
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<p><b>FILTER SERIES INDICATOR</b> T - Transverse Monolith</p> <p><b>SERIES PREFIX</b> D - Miniature, rectangular, solder termination</p> <p><b>SHELL SIZE (one piece shell)</b> E, A, B, C, D</p> <p><b>CONTACT ARRANGEMENTS</b> See page 305</p>	<p><b>FILTER TYPE</b> L - Low frequency M - Mid-range frequency T - Standard frequency H - High frequency</p> <p><b>CONTACT TYPE</b> P - Pin contacts S - Socket contacts</p>	<p><b>PRINTED CIRCUIT CONTACTS</b> Consult factory. Both 90° and straight types are available.</p> <p><b>CONTACT TERMINATION</b> See page 305 Lack of termination indicator signifies solder cup.</p> <p><b>MODIFIER</b> C - Clinch nut</p>
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## Performance and Material Specifications

### ELECTRICAL DATA

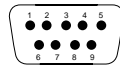
Available Filter	Low Freq.	Mid Freq.	Std Freq.	High Freq.	
Catalog Indication - letter	L	M	T	H	
Voltage Rating (working)	100 VDC		200 VDC		
Current Rating (amp DC)	7.5	7.5	7.5	7.5	
Insulation Resistance, 2 min. electrification time max. at 25°C, and 100 VDC	5000 megohms minimum	10,000 megohms minimum	10,000 megohms minimum	10,000 megohms minimum	
DWV, sea level, with 500 microamps max. charge/discharge	300 VDC	500 VDC	500 VDC	500 VDC	
Capacitance at 1 KHz, 0.1 V rms picofarads	50,000 minimum	7200 12,000	3000 5,000	780 1,300	
	Freq. MHz		Attenuation (dB)		
Attenuation per MIL-STD-220 @ 25°C with no applied voltage or current.	0.1	2 min.	-	-	
	1	15 min.	2 min.	-	
	2	20 min.	5 min.	2 min.	
	10	35 min.	15 min.	9 min.	2 min.
	100	60 min.	55 min.	50 min.	30 min.
	500 to 10,000	65 min.	60 min.	55 min.	50 min.
Filter Type	Pi	Pi	Pi	Pi	

### MATERIALS AND FINISHES

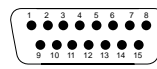
Description	Material	Finish
Contacts	Copper alloy	Gold plate per MIL-G-45204 Type 1, Class 1
Shell	Aluminum alloy 6061-T6	Electroless nickel per per QQ-A-225/8 or MIL-C-26074 QQ-A-200/8
Insulator: Socket	Polyphenylene Sulfide/ Epoxy	None
Pin	Epoxy	None
Ground Spring	Beryllium Copper	Silver plate

## Contact Arrangements

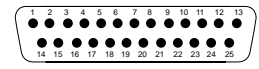
### Face View Pin Insert



**E**  
9  
#20

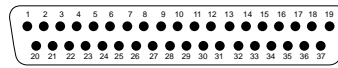


**A**  
15  
#20

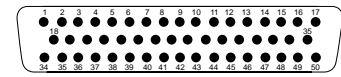


**B**  
25  
#20

Shell Size  
Contact Arrangement  
Contact Size



**C**  
37  
#20

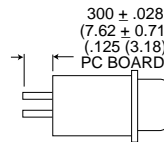


**D**  
50  
#20

Shell Size  
Contact Arrangement  
Contact Size

## Contacts

### Straight Printed Circuit

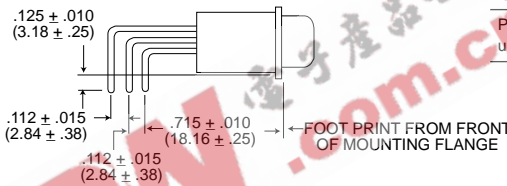
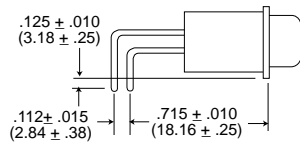


### Modifier

H: .040 (1.02) Dia. terminals and accommodates up to 1/8 Max. thick P.C. boards.

M: .030 (.76) Dia. terminals and accommodates up to 1/8 Max. thick P.C. boards.

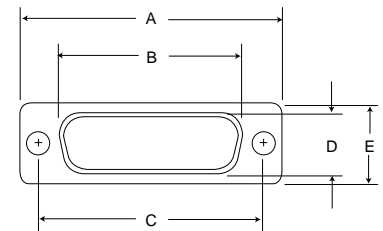
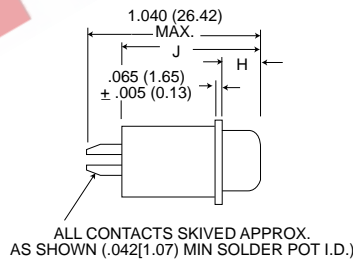
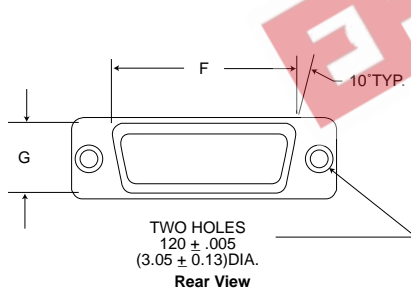
### Right Angle Printed Circuit



### Modifier

P: .030 (.76) Dia. terminals and accommodates P.C. boards up to 3/32 Max. Thickness.

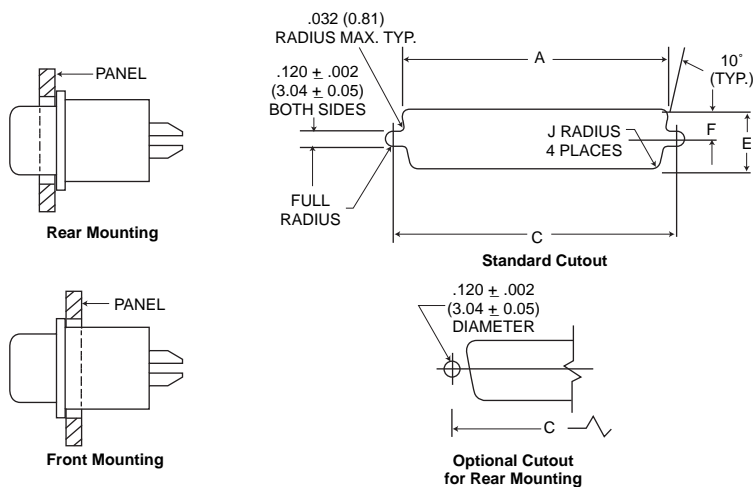
## Standard Shell Dimensions



**Front View**

Shell Size	A ± .015 (0.38)	B ± .010 (0.25)	C ± .005 (0.13)	D ± .010 (0.25)	E ± .005 (0.13)	F ± .010 (0.25)	G ± .010 (0.25)	H ± .010 (0.25)	J ± .010 (0.25)
9P	1.213 (30.81)	.738 (18.75)	.984 (24.99)	.400 (10.16)	.502 (12.75)	.792 (20.12)	.469 (11.91)	.236 (5.99)	.841 (21.36)
9S	1.213 (30.81)	.642 (16.31)	.984 (24.99)	.310 (7.87)	.502 (12.75)	.792 (20.12)	.469 (11.91)	.243 (6.17)	.852 (21.64)
15P	1.541 (39.14)	1.066 (27.08)	1.312 (33.32)	.400 (10.16)	.502 (12.75)	1.116 (28.35)	.469 (11.91)	.236 (5.99)	.841 (21.36)
15S	1.541 (39.14)	.970 (24.64)	1.312 (33.32)	.310 (7.87)	.502 (12.75)	1.116 (28.35)	.469 (11.91)	.243 (6.17)	.852 (21.64)
25P	2.087 (53.01)	1.606 (40.79)	1.852 (47.04)	.400 (10.16)	.502 (12.75)	1.664 (42.27)	.469 (11.91)	.231 (5.87)	.841 (21.36)
25S	2.087 (53.01)	1.510 (38.35)	1.852 (47.04)	.310 (7.87)	.502 (12.75)	1.664 (42.27)	.469 (11.91)	.243 (6.17)	.852 (21.64)
37P	2.729 (69.32)	2.254 (57.25)	2.500 (63.50)	.400 (10.16)	.502 (12.75)	2.316 (58.83)	.469 (11.91)	.231 (5.87)	.841 (21.36)
37S	2.729 (69.32)	2.158 (54.81)	2.500 (63.50)	.310 (7.87)	.502 (12.75)	2.316 (58.83)	.469 (11.91)	.243 (6.17)	.852 (21.64)
50P	2.635 (66.93)	2.151 (54.64)	2.406 (61.11)	.512 (13.00)	.612 (15.54)	2.198 (55.83)	.576 (14.63)	.231 (5.87)	.841 (21.36)
50S	2.635 (66.93)	2.064 (52.43)	2.406 (61.11)	.422 (10.72)	.612 (15.54)	2.198 (55.83)	.576 (14.63)	.243 (6.17)	.852 (21.64)

## Mounting Panel Cutout Dimensions



Connector	Mounting Method	A ± .005 (0.13)	C ± .005 (0.13)	E ± .005 (0.13)	F ± .005 (0.13)	J ± .005 (0.13)
TD1E	Front Mounting	.833 (21.16)	.984 (24.99)	.485 (12.32)	.243 (6.17)	.065 (1.65)
	Rear Mounting	.806 (20.47)	.984 (24.99)	.449 (11.40)	.225 (5.72)	.132 (3.35)
TD1A	Front Mounting	1.161 (29.49)	1.312 (33.32)	.485 (12.32)	.243 (6.17)	.065 (1.65)
	Rear Mounting	1.134 (28.80)	1.312 (33.32)	.449 (11.40)	.225 (5.72)	.132 (3.35)
TD1B	Front Mounting	1.700 (43.18)	1.852 (47.04)	.485 (12.32)	.243 (6.17)	.065 (1.65)
	Rear Mounting	1.674 (42.52)	1.852 (47.04)	.449 (11.40)	.225 (5.72)	.132 (3.35)
TD1C	Front Mounting	2.349 (59.66)	2.500 (63.50)	.485 (12.32)	.243 (6.17)	.065 (1.65)
	Rear Mounting	2.326 (59.08)	2.500 (63.50)	.449 (11.40)	.225 (5.72)	.132 (3.35)
TD1D	Front Mounting	2.254 (57.25)	2.406 (61.11)	.593 (15.06)	.297 (7.54)	.065 (1.65)
	Rear Mounting	2.218 (56.34)	2.406 (61.11)	.555 (14.09)	.278 (7.06)	.132 (3.35)