



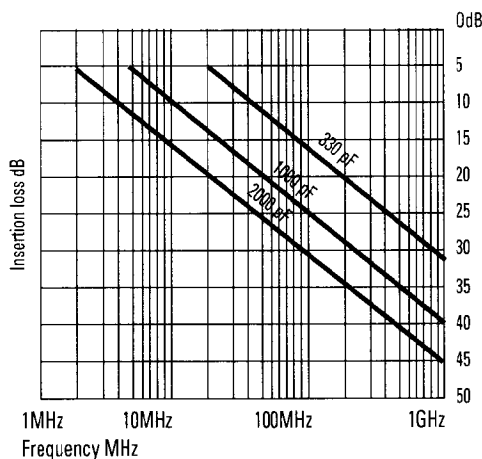
# FILTER D CONNECTORS

Edition 11/98

CINCH has been producing filter connectors for years and has acquired an in depth knowledge of EMC protection. CINCH offers fast delivery on a wide range of standard filtered connectors and will be your partner to design the product you need to meet European and FCC regulations.

## Features

- The Cinch Filter D Sub is a high quality turned pin contact connector.
- Tubular capacitors are individually inserted on each contact.
- The encapsulation of capacitors is made with epoxy for maximum resistance to hazardous environments.
- Cinch filter D Sub have the same size and footprint as standard D Sub connectors.
- Meets the relevant dimensional requirements of CECC 73301- 802, MIL-C 24308, DIN 41652, BS 9523 F0013, BT 217, HE501.
- Bright tin or nickel finish with grounding indent for EMI/RFI shielding.



Typical performance relates to 50 Ω system  
Mil -Std. - measured at 1 KHz 0.1 rms

- 1-1000 pF
- 2-2000 pF
- 3-330 pF

## Technical Data

<b>Termination options</b>	Solder bucket, Flow solder, Straight & 90° Mini wrap.
<b>Number of contacts</b>	9 15 25 27 50
<b>Maximum insertion and extraction force</b>	30 50 83 123 167N
<b>Performance level</b>	1,2 & 3
<b>Wire accommodation</b>	≤ 0,5 mm <sup>2</sup> (20 AWG)
<b>Plug contact material</b>	Copper alloy
<b>Socket contact material</b>	Copper alloy

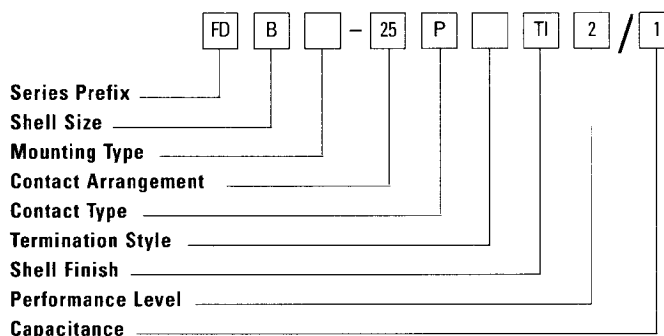
<b>Current rating</b>	5A
<b>Capacitance</b>	330 pF Tol + 50% - 20%, 1000 pF and 2000pF Tol + 80% - 20%
<b>Working voltage</b>	200 V d.c. or a.c. peak
<b>Contact resistance</b>	5 x 10 <sup>-3</sup> Ω max
<b>Insulation resistance</b>	≥ 5 x 10 <sup>9</sup> Ω
<b>Temperature range</b>	- 40° to + 125°C
<b>Insulator materials</b>	High impact Epoxy & GF Polyester UL94V-0 rated
<b>Shell materials</b>	Front: Steel-Bright tin finish with grounding indents on plugs Rear: Electrolytic Nickel

# FILTER D CONNECTORS

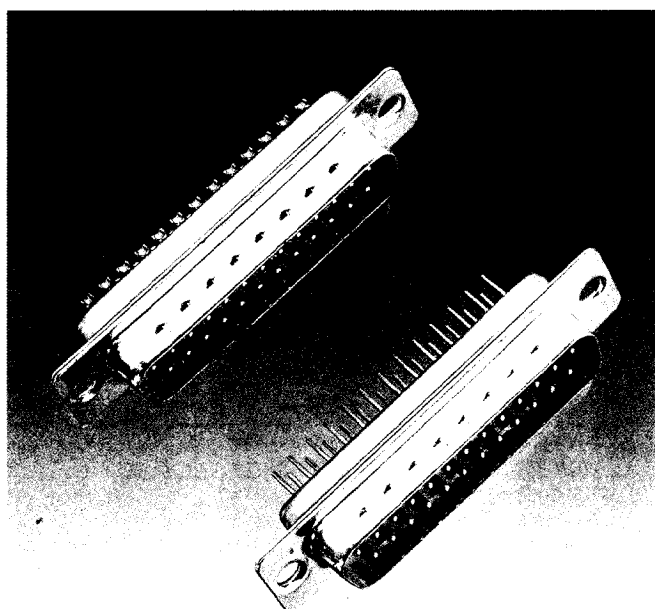


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## Part Numbering



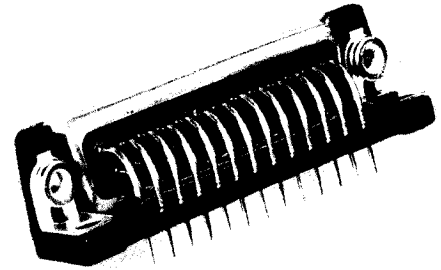
<b>Series Prefix</b>	<b>FD</b>	- Filtered D (Standard Prefix)
<b>Shell Size</b>	<b>E, A, B, C or D</b>	(All Standard)
<b>Mounting Type</b>	<b>B</b>	- 4-40 rivnut for rear panel mounting (Standard)
	<b>P</b>	- M3 rivnut for rear panel mounting
	<b>D</b>	- With female screw locks fitted
	<b>E</b>	- 4-40 clinch-nut for rear panel mounting with locking feature for high vibration applications
	<b>F</b>	- Float mount for rear panel mounting
	<b>Y</b>	- Universal float mount
	<b>No designation</b>	- Ø 3.05 mm mounting hole (Standard) 90° Flow Solder versions are not available with float mounts
<b>Contact Arrangement</b>	<b>9, 15, 25, 37 or 50</b>	(All Standard)
<b>Contact Type</b>	<b>P or S</b>	(Both Standard)
<b>Termination Style</b>		
		90° Flow Solder
<b>European Footprint</b>	<b>1A0N</b>	- Without brackets (Standard)
	<b>1A2N</b>	- With plastic brackets and keeper moulding
	<b>1AEN</b>	- With earthing straps on plastic brackets (Standard) with keeper moulding*
	<b>1ASN</b>	- With board locks, earthing straps, plastic (Standard) bracket and keeper moulding*
		*Please specify rivnuts or screw locks, mounting types B, P, or D (rivnuts Standard)
<b>Straight Flow Solder</b>	<b>OL2</b>	- Termination 0.6 mm, 5.3 mm long (Standard)
	<b>BL2</b>	- As OL2 with vertical Boardlocks 4/40 threads
	<b>F179A</b>	- 0.61 mm square section pins for up to 3 wrap.
		<b>Solder Bucket No designation required (Standard)</b>
<b>Shell Finish</b>	<b>T</b>	- Bright tin (Standard)
	<b>TI</b>	- Bright tin with grounding indents (plugs only) - Nickel on rear shell
(Standard)		
<b>Performance Level</b>	<b>1</b>	- Exceeds Din Class 2
	<b>2</b>	- Din Class 2 (Standard)
	<b>3</b>	- Exceeds DIN Class 3
<b>Capacitance</b>	<b>1</b>	- 1000 pF
	<b>2</b>	- 2000 pF
	<b>3</b>	- 330 pF
		Custom or selectively loaded products available. Consult sales office.





**Solder Bucket**

Number of Contacts	Performance Level	Capacitance Value		Plug	Socket
				Tin/Nickel Indent Plated Shell	Tin/Nickel Plated Shell
9	2	330pf	1,000pf	FDE-9PTI2/3	FDE-9ST2/3
				FDE-9PTI2/1	FDE-9ST2/1
15	2	330pf	1,000pf	FDA-15PTI2/3	FDA-15ST2/3
				FDA-15PTI2/1	FDA-15ST2/1
25	2	330pf	1,000pf	FDB-25PTI2/3	FDB-25ST2/3
				FDB-25PTI2/1	FDB-25ST2/1
37	2	330pf	1,000pf	FDC-37PTI2/3	FDC-37ST2/3
				FDC-37PTI2/1	FDC-37ST2/1
50	2	330pf	1,000pf	FDD-50PTI2/3	FDD-50ST2/3
				FDD-50PTI2/1	FDD-50ST2/1



**Straight PCB Mount**

Number of Contacts	Performance Level	Capacitance Value		Plug	Vertical Boardlock	Socket	Vertical Boardlock
				Tin/Nickel Indent Plated Shell	Tin/Nickel Plated Shell	Tin/Nickel Plated Shell	Tin/Nickel Plated Shell
9	2	330pf	1,000pf	FDE-9P0L2TI2/3	FDE-9PBL2TI2/3	FDE-9S0L2T2/3	FDE-9SBL2T2/3
				FDE-9P0L2TI2/1	FDE-9PBL2TI2/1	FDE-9S0L2T2/1	FDE-9SBL2T2/1
15	2	330pf	1,000pf	FDA-15P0L2TI2/3	FDA-15PBL2TI2/3	FDA-15S0L2T2/3	FDA-15SBL2T2/3
				FDA-15P0L2TI2/1	FDA-15PBL2TI2/1	FDA-15S0L2T2/1	FDA-15SBL2T2/1
25	2	330pf	1,000pf	FDB-25P0L2TI2/3	FDB-25PBL2TI2/3	FDB-25S0L2T2/3	FDB-25SBL2T2/3
				FDB-25P0L2TI2/1	FDB-25PBL2TI2/1	FDB-25S0L2T2/1	FDB-25SBL2T2/1
37	2	330pf	1,000pf	FDC-37P0L2TI2/3	FDC-37PBL2TI2/3	FDC-37S0L2T2/3	FDC-37SBL2T2/3
				FDC-37P0L2TI2/1	FDC-37PBL2TI2/1	FDC-37S0L2T2/1	FDC-37SBL2T2/1
50	2	330pf	1,000pf	FDD-50P0L2TI2/3	FDD-50PBL2TI2/3	FDD-50S0L2T2/3	FDD-50SBL2T2/3
				FDD-50P0L2TI2/1	FDD-50PBL2TI2/1	FDD-50S0L2T2/1	FDD-50SBL2T2/1

**90° PCB – Plug**

Number of Contacts	Performance Level	Capacitance Value		Open Frame	Earthing Straps	Snap In Boardlock
				Tin/Nickel Indent Plated Shell	Tin Indent Shell 4-40 Rivnut	Tin Indent Shell 4-40 Rivnut
9	2	330pf	1,000pf	FDE-9P1A0NTI2/3	FDEB-9P1AENTI2/3	FDEB-9P1ASNTI2/3
				FDE-9P1A0NTI2/1	FDEB-9P1AENTI2/1	FDEB-9P1ASNTI2/1
15	2	330pf	1,000pf	FDA-15P1A0NTI2/3	FDAB-15P1AENTI2/3	FDAB-15P1ASNTI2/3
				FDA-15P1A0NTI2/1	FDAB-15P1AENTI2/1	FDAB-15P1ASNTI2/1
25	2	330pf	1,000pf	FDB-25P1A0NTI2/3	FDBB-25P1AENTI2/3	FDBB-25P1ASNTI2/3
				FDB-25P1A0NTI2/1	FDBB-25P1AENTI2/1	FDBB-25P1ASNTI2/1
37	2	330pf	1,000pf	FDC-37P1A0NTI2/3	FDCB-37P1AENTI2/3	FDCB-37P1ASNTI2/3
				FDC-37P1A0NTI2/1	FDCB-37P1AENTI2/1	FDCB-37P1ASNTI2/1
50	2	330pf	1,000pf	FDD-50P1A0NTI2/3	FDDB-50P1AENTI2/3	FDDB-50P1ASNTI2/3
				FDD-50P1A0NTI2/1	FDDB-50P1AENTI2/1	FDDB-50P1ASNTI2/1

**90° PCB – Socket**

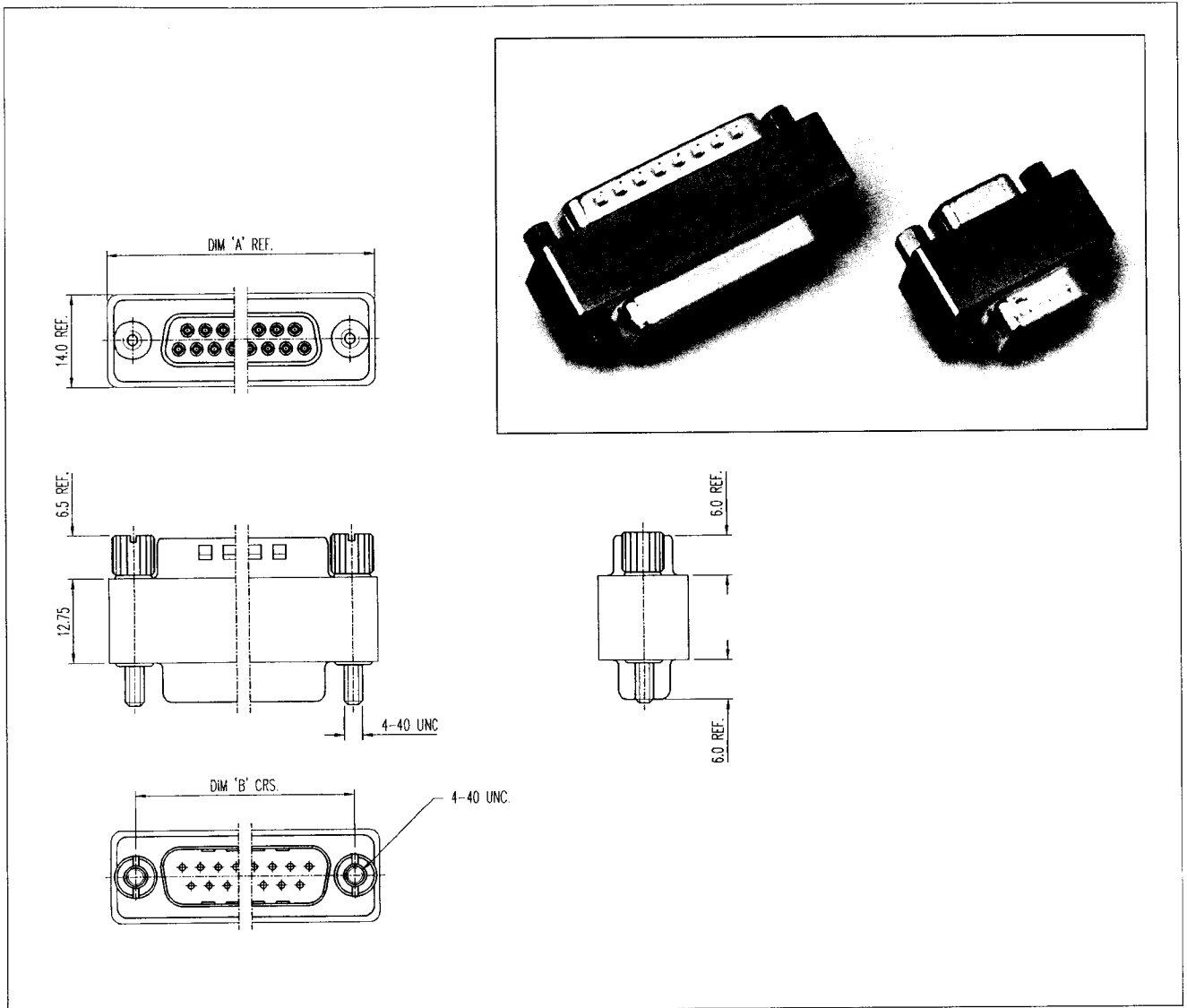
Number of Contacts	Performance Level	Capacitance Value		Open Frame	Earthing Straps	Snap In Boardlock
				Tin/Nickel Plated Shell	Tin Shell 4-40 Rivnut	Tin Shell 4-40 Rivnut
9	2	330pf	1,000pf	FDE-9S1A0NT2/3	FDEB-9S1AENT2/3	FDEB-9S1ASNT2/3
				FDE-9S1A0NT2/1	FDEB-9S1AENT2/1	FDEB-9S1ASNT2/1
15	2	330pf	1,000pf	FDA-15S1A0NT2/3	FDAB-15S1AENT2/3	FDAB-15S1ASNT2/3
				FDA-15S1A0NT2/1	FDAB-15S1AENT2/1	FDAB-15S1ASNT2/1
25	2	330pf	1,000pf	FDB-25S1A0NT2/3	FDBB-25S1AENT2/3	FDBB-25S1ASNT2/3
				FDB-25S1A0NT2/1	FDBB-25S1AENT2/1	FDBB-25S1ASNT2/1
37	2	330pf	1,000pf	FDC-37S1A0NT2/3	FDCB-37S1AENT2/3	FDCB-37S1ASNT2/3
				FDC-37S1A0NT2/1	FDCB-37S1AENT2/1	FDCB-37S1ASNT2/1
50	2	330pf	1,000pf	FDD-50S1A0NT2/3	FDDB-50S1AENT2/3	FDDB-50S1ASNT2/3
				FDD-50S1A0NT2/1	FDDB-50S1AENT2/1	FDDB-50S1ASNT2/1

# FILTER ADAPTOR



Edition 11/98

## Male / Female Filtering Adaptor



### Technical, Part Numbering Information

	Working Voltage	Proof Voltage	Capacitance To Ground	Capacitance Tolerance	Temperature Range	DIM "A" REF.	DIM "B" REF.
FA 9 PS/1 FA 9 PS/3	200V DC OR AC PEAK	500V	1000 pF	+80% - 20%	- 40° +125°C	32.7	24.99
			330 pF	+50% - 20%			
FA 15 PS/1 FA 15 PS/3	200V DC OR AC PEAK	500V	1000 pF	+80% - 20%	- 40° +125°C	41.0	33.32
			330 pF	+50% - 20%			
FA 25 PS/1 FA 25 PS/3	200V DC OR AC PEAK	500V	1000 pF	+80% - 20%	- 40° +125°C	54.9	47.04
			330 pF	+50% - 20%			
FA 37 PS/1 FA 37 PS/3	200V DC OR AC PEAK	500V	1000 pF	+80% - 20%	- 40° +125°C	71.2	63.50
			330 pF	+50% - 20%			

**GENERAL SPECIFICATION** – MECHANICAL, ELECTRICAL & ENVIROMENTAL PERFORMANCE IN LINE WITH REQUIREMENTS OF DIN CLASS 2