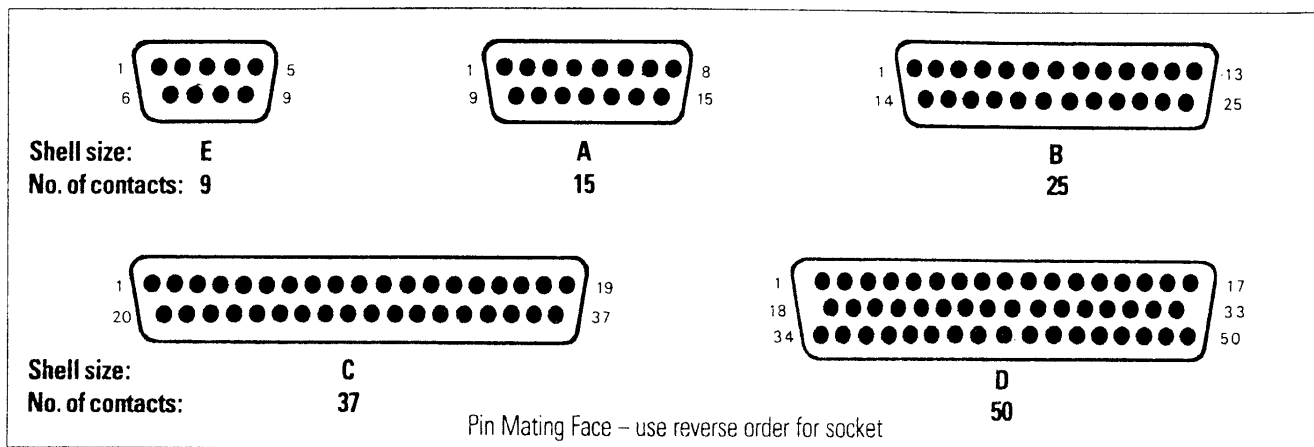




D SUB

TECHNICAL DATA

Standard contact arrangements / Layout



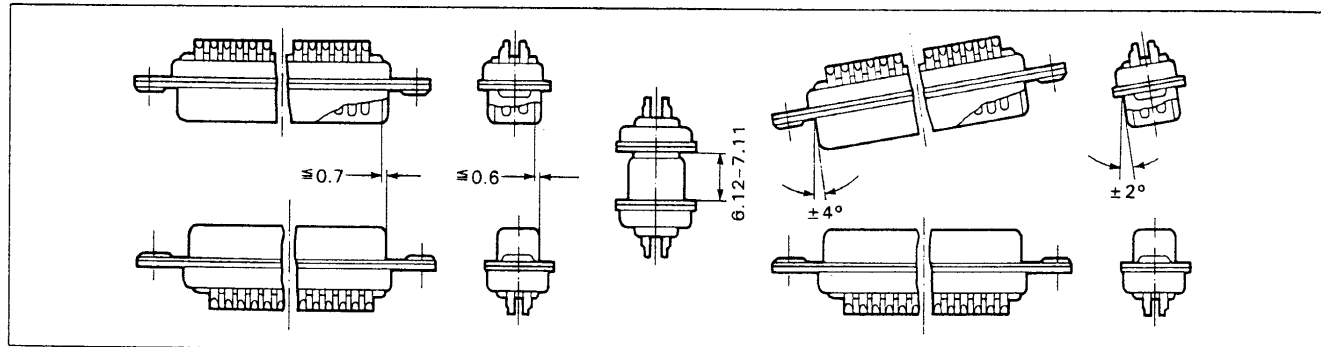
Plating Specification

Performance Level	Performance	Comments
1	500 matings minimum followed by 21 day industrial atmosphere test and 21 day damp heat test to BS 2011	Exceeds DIN class 2
2	250 matings minimum followed by 21 day damp heat test and 4 day industrial atmosphere test	Meets DIN class 2
3	250 matings minimum followed by 21 day damp heat at 93% relative humidity to BS 21011 Net contact resistance will not then exceeds 5 milliohms	Exceeds DIN class 3

Shell Finish

The traditional finish for D connector shells is zinc plating with a yellow chromate passivation. However, to meet the requirements of FCC Docket 20780, VDE NORM 0871 and BS 6527 the mated connector shells need to make positive electrical contact. This is achieved by grounding indents on the plug shells and by plating the shells with bright tin. Alternative shell finishes and materials are available e.g. nickel plated mild steel and gold plated brass. Please contact sales office for specific requirements.

Mating Details



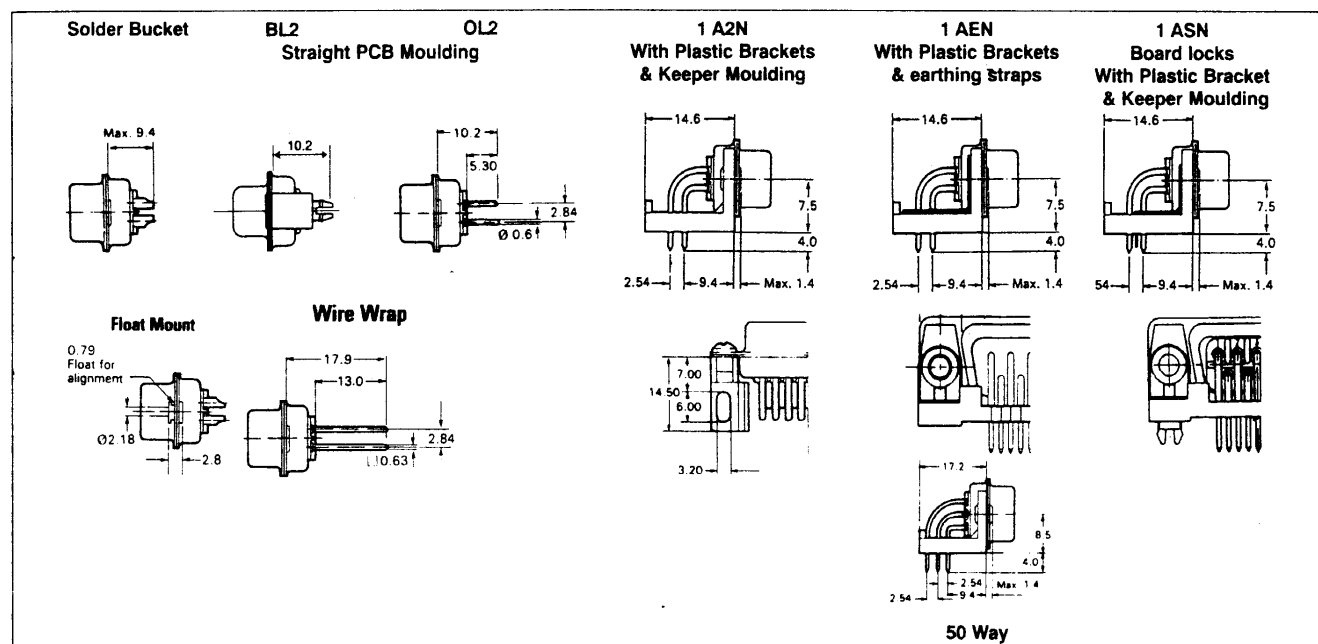
Mounting table

Type	Mounting Description	Type	Mounting Description
B	4-40 rivnut rear panel mount	BL2	Vertical board lock straight PCB Connectors
P	M3 rivnut rear panel mount	1A1N	Plastic Brackets
D	fitted with D-20418-0 female screwlocks	1A2N	Rivnetted Kooper Mould
E	4-40 clinch out rear panel mount, vibration feature	1A3N	Metal Brackets used with B, P or D above
Y	Universal Float Mount	1AEN	Keeper Mould and earthing strap used with B, P, or D above.
		1ASN	Keeper Mould, earthing strap and boardlocks used with B, P or D

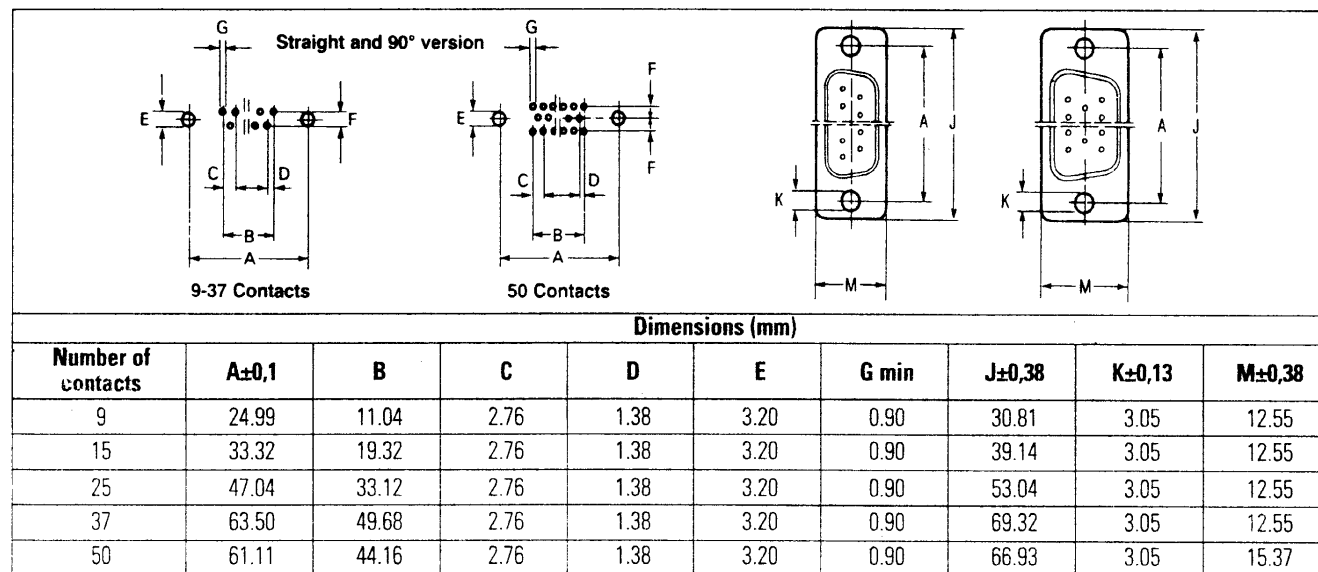
TECHNICAL DATA



Dimensions for D Subminiature Connectors

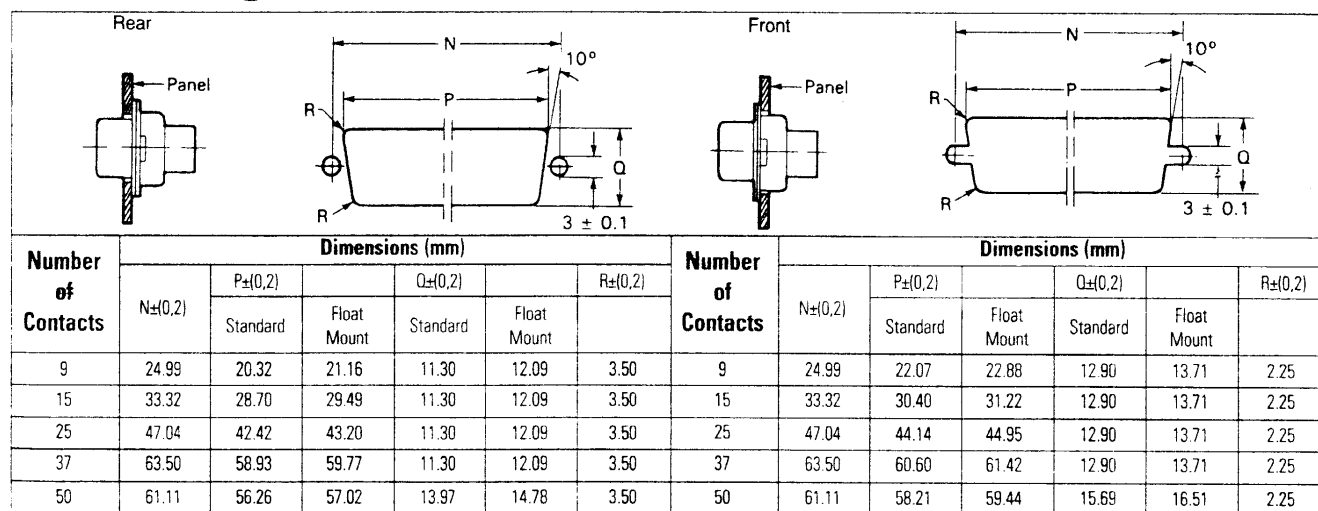


PCB Mounting Details



F - 2.84mm For Straight PCB Mount Versions / 2.54mm For 90° PCB Mount Versions

Panel Mounting



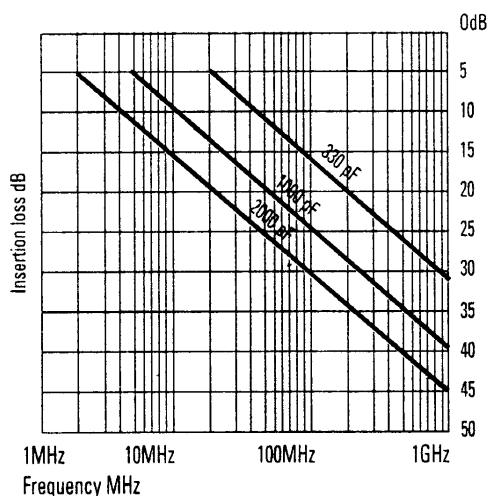


FILTER D CONNECTORS

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

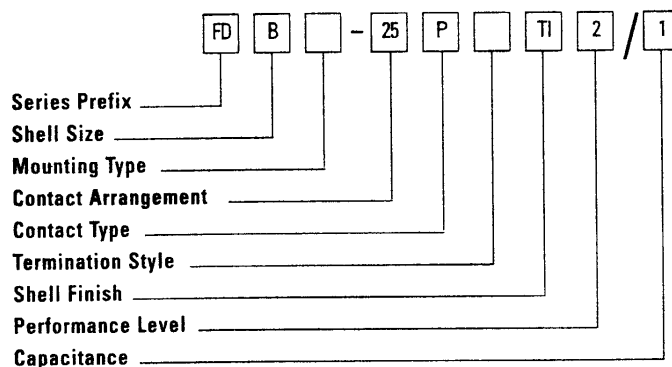
Termination options	Solder bucket, Flow solder, Straight & 90°, Mini wrap.				
Number of contacts	9	15	25	27	50
Maximum insertion and extraction force	30	50	83	123	167N
Performance level	1,2 & 3				
Wire accommodation	$\leq 0,5 \text{ mm}^2$				
Plug contact material	Copper alloy				
Socket contact material	Copper alloy				

Current rating	5A
Capacitance	330 pF, 1000 pF and 2000pF Tol + 80% -20%
Working voltage	200 V d.c. or a.c. peak
Contact resistance	5 m Ω max
Insulation resistance	$\geq 5 \times 10^9 \Omega$
Temperature range	-25° to + 85°
Insulator materials	High impact Epoxy & GF Polyester UL94V-0 rated
Shell materials	Steel-Bright tin finish with grounding indents on plugs

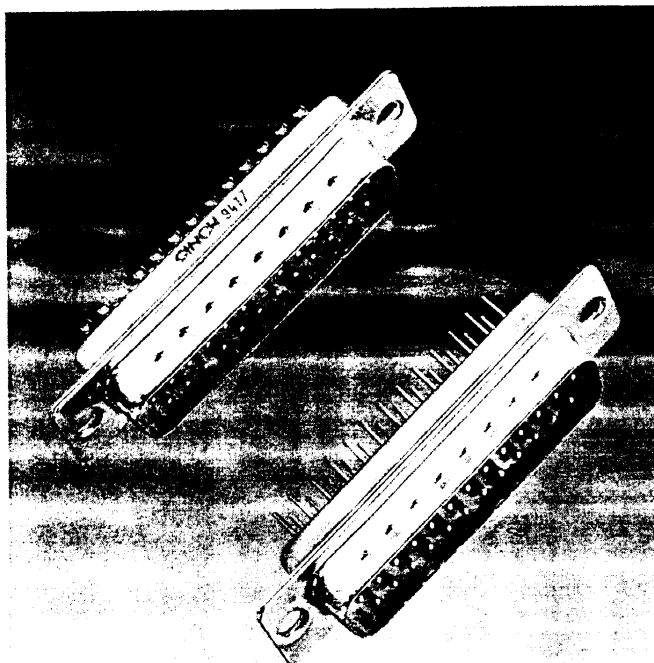
FILTER D CONNECTORS



Part Numbering



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



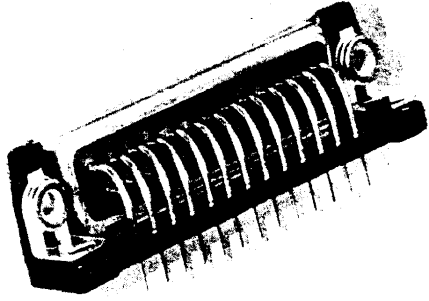


Best Sellers

FILTERED D

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-9PTI2/1	FDE-9ST2/3 FDE-9ST2/1
15	2	330pf	1,000pf	FDA-15PTI2/3 FDA-15PTI2/1	FDA-15ST2/3 FDA-15ST2/1
25	2	330pf	1,000pf	FDB-25PTI2/3 FDB-25PTI2/1	FDB-25ST2/3 FDB-25ST2/1
37	2	330pf	1,000pf	FDC-37PTI2/3 FDC-37PTI2/1	FDC-37ST2/3 FDC-37ST2/1
50	2	330pf	1,000pf	FDD-50PTI2/3 FDD-50PTI2/1	FDD-50ST2/3 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	Plated Shell
9	2	330pf	1,000pf	FDE-9POL2TI2/3 FDE-9POL2TI2/1	FDE-9PBL2TI2/3 FDE-9PBL2TI2/1	FDE-9SOL2T2/3 FDE-9SOL2T2/1	FDE-9SBL2T2/3 FDE-9SBL2T2/1
15	2	330pf	1,000pf	FDA-15POL2TI2/3 FDA-15POL2TI2/1	FDA-15PBL2TI2/3 FDA-15PBL2TI2/1	FDA-15SOL2T2/3 FDA-15SOL2T2/1	FDA-15SBL2T2/3 FDA-15SBL2T2/1
25	2	330pf	1,000pf	FDB-25POL2TI2/3 FDB-25POL2TI2/1	FDB-25PBL2TI2/3 FDB-25PBL2TI2/1	FDB-25SOL2T2/3 FDB-25SOL2T2/1	FDB-25SBL2T2/3 FDB-25SBL2T2/1
37	2	330pf	1,000pf	FDC-37POL2TI2/3 FDC-37POL2TI2/1	FDC-37PBL2TI2/3 FDC-37PBL2TI2/1	FDC-37SOL2T2/3 FDC-37SOL2T2/1	FDC-37SBL2T2/3 FDC-37SBL2T2/1
50	2	330pf	1,000pf	FDD-50POL2TI2/3 FDD-50POL2TI2/1	FDD-50PBL2TI2/3 FDD-50PBL2TI2/1	FDD-50SOL2T2/3 FDD-50SOL2T2/1	FDD-50SBL2T2/3 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 FDE-9P1A0NTI2/1	FDEB-9P1AENTI2/3 FDEB-9P1AENTI2/1	FDEB-9P1ASNTI2/3 FDEB-9P1ASNTI2/1
15	2	330pf	1,000pf	FDA-15P1A0NTI2/3 FDA-15P1A0NTI2/1	FDAB-15P1AENTI2/3 FDAB-15P1AENTI2/1	FDAB-15P1ASNTI2/3 FDAB-15P1ASNTI2/1
25	2	330pf	1,000pf	FDB-25P1A0NTI2/3 FDB-25P1A0NTI2/1	FDBB-25P1AENTI2/3 FDBB-25P1AENTI2/1	FDBB-25P1ASNTI2/3 FDBB-25P1ASNTI2/1
37	2	330pf	1,000pf	FDC-37P1A0NTI2/3 FDC-37P1A0NTI2/1	FDCB-37P1AENTI2/3 FDCB-37P1AENTI2/1	FDCB-37P1ASNTI2/3 FDCB-37P1ASNTI2/1
50	2	330pf	1,000pf	FDD-50P1A0NTI2/3 FDD-50P1A0NTI2/1	FDDB-50P1AENTI2/3 FDDB-50P1AENTI2/1	FDDB-50P1ASNTI2/3 FDDB-50P1ASNTI2/1

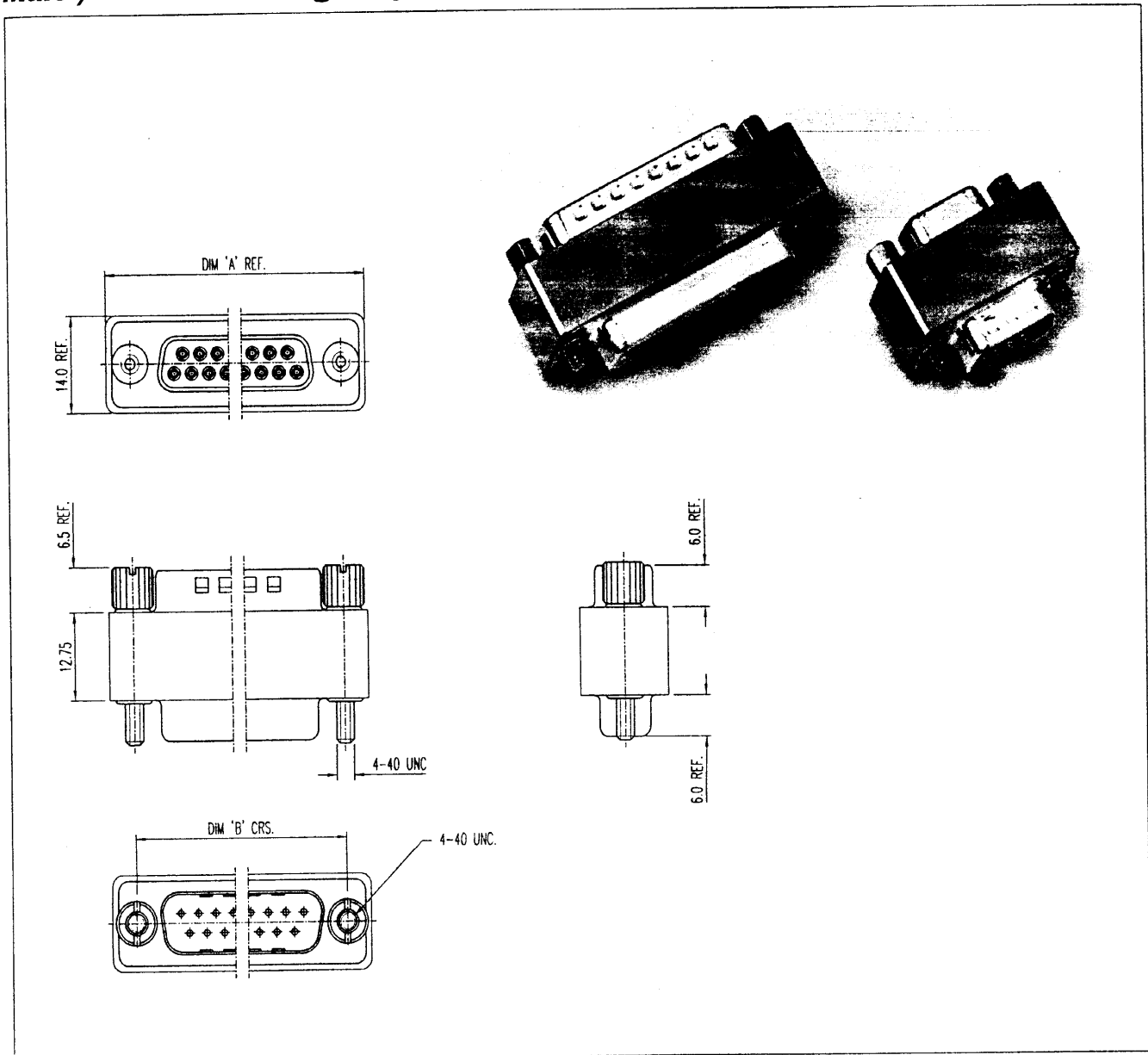
90° PCB - Socket

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-9S1A0NT2/3 FDE-9S1A0NT2/1	FDEB-9S1AENT2/3 FDEB-9S1AENT2/1	FDEB-9S1ASNT2/3 FDEB-9S1ASNT2/1
15	2	330pf	1,000pf	FDA-15S1A0NT2/3 FDA-15S1A0NT2/1	FDAB-15S1AENT2/3 FDAB-15S1AENT2/1	FDAB-15S1ASNT2/3 FDAB-15S1ASNT2/1
25	2	330pf	1,000pf	FDB-25S1A0NT2/3 FDB-25S1A0NT2/1	FDBB-25S1AENT2/3 FDBB-25S1AENT2/1	FDBB-25S1ASNT2/3 FDBB-25S1ASNT2/1
37	2	330pf	1,000pf	FDC-37S1A0NT2/3 FDC-37S1A0NT2/1	FDCB-37S1AENT2/3 FDCB-37S1AENT2/1	FDCB-37S1ASNT2/3 FDCB-37S1ASNT2/1
50	2	330pf	1,000pf	FDD-50S1A0NT2/3 FDD-50S1A0NT2/1	FDDB-50S1AENT2/3 FDDB-50S1AENT2/1	FDDB-50S1ASNT2/3 FDDB-50S1ASNT2/1

FILTER ADAPTOR



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%	-25° +85°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%	-25° +85°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%	-25° +85°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%	-25° +85°C	71.2	63.50
			330 pF	+50% -20%			

GENERAL SPECIFICATION - MECHANICAL ELECTRICAL & ENVIROMENTAL PERFORMANCE IN LINE WITH REQUIREMENTS OF DIN CLASS 2