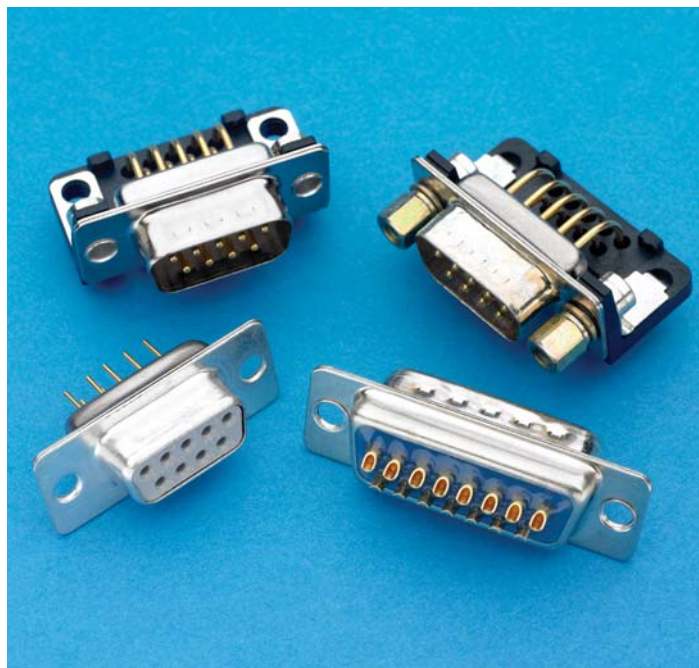
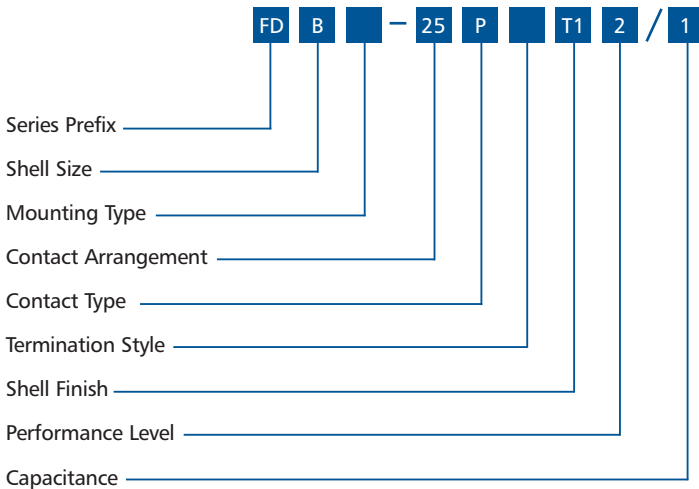


Part Numbering



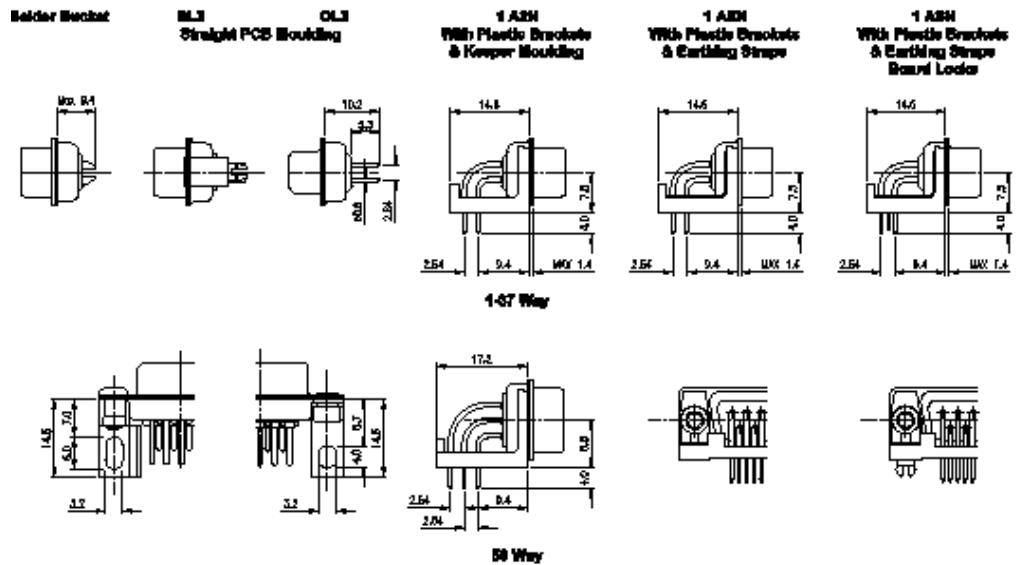
Series Prefix	FD	Filtered D (Standard Prefix)
Shell Size	E,A,B,C or D	(All Standard)
Mounting Type	B	4-40 rivnut for rear panel mounting (standard)
	P	M3 rivnut for rear panel mounting
	D	With female screw locks fitted
	F	Float mount for rear panel mounting
	Y	Universal float mount
	No designation	Ø3,05mm mounting hole (Standard)
Contact Arrangement		90° Flow Solder versions are not available with float mounts
Contact Type		9, 15, 25, 37 or 50 (All Standard)
Termination Style		P or S (Both Standard)
		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 brackets (Standard) 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)
		50 Way 90° PCB mounting available as 1A0N and 1A2N only
Straight Flow Solder	OL2	Termination 0.6mm. 5.3mm long (Standard)
	BL2	As OL2 with Vertical Boardlocks 4.40 threads
	F179A	0.61mm square section pins for up to 3 wrap
Shell Finish		Solder Bucket. No designation required. (Standard)
	T	Bright tin (Standard)
	TI	Bright tin with grounding indents (plugs only)
Performance Level		Nickel on rear shell (Standard)
	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

For Custom or Selectively loaded products specification please consult Cinch Sales Office.

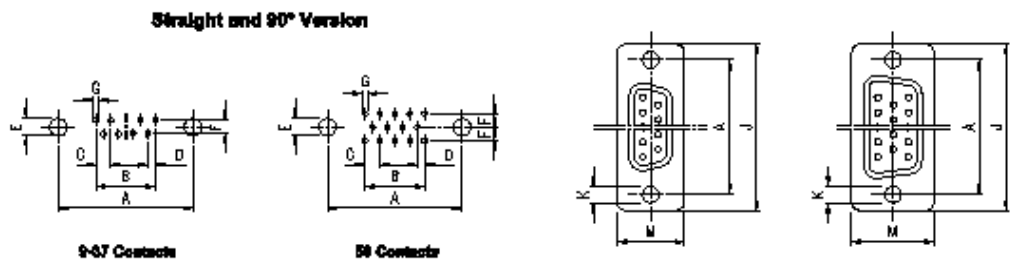
Plating Specification

Performance Level	Performance	Comments
1	500 matings minimum followed by 21 day industrial atmosphere test and 21 day damp heat test to BS2011	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 test at 93% relative humidity to BS21011 Net contact resistance will not then exceed 5 milliohms	Exceeds DIN Class 3

■ Dimensions for Filter D Connectors



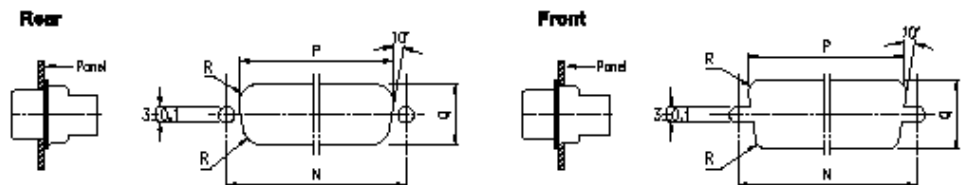
■ PCB Mounting Details



Number of contacts	Dimensions (mm)								
	A±0.1	B	C	D	E	G min	J±0.38	K±0.13	M±0.38
9	24.99	11.04	2.76	1.38	3.20	0.90	30.81	3.05	12.55
15	33.32	19.32	2.76	1.38	3.20	0.90	39.14	3.05	12.55
25	47.04	33.12	2.76	1.38	3.20	0.90	53.04	3.05	12.55
37	63.50	49.68	2.76	1.38	3.20	0.90	69.32	3.05	12.55
50	61.11	44.16	2.76	1.38	3.20	0.90	66.93	3.05	15.37

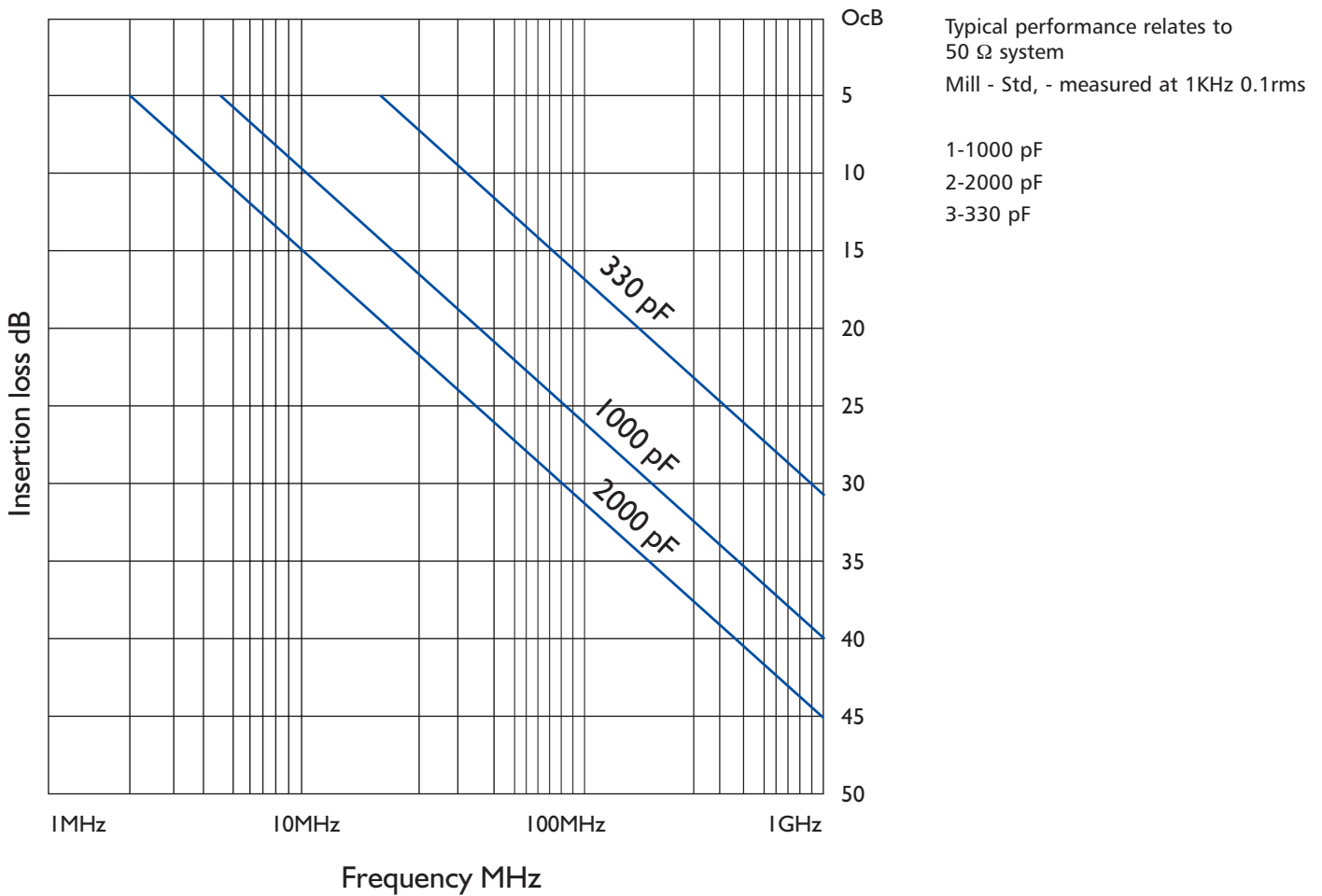
F - 2.84mm for Straight PCB Mount Versions
 - 2.54mm for 90° PCB Mount Versions

■ Panel Mounting



Number of contacts	Dimensions (mm)					
		P± (0.2)		Q± (0.2)		R± (0.2)
	N± (0.2)	Standard	Float Mount	Standard	Float Mount	
9	24.99	20.32	21.16	11.30	12.09	3.50
15	33.32	28.70	29.49	11.30	12.09	3.50
25	47.04	42.42	43.20	11.30	12.09	3.50
37	63.50	58.93	59.77	11.30	12.09	3.50
50	61.11	56.26	57.02	13.97	14.78	3.50

Number of contacts	Dimensions (mm)					
		P± (0.2)		Q± (0.2)		R± (0.2)
	N± (0.2)	Standard	Float Mount	Standard	Float Mount	
9	24.99	22.07	22.88	12.90	13.71	2.25
15	33.32	30.40	31.22	12.90	13.71	2.25
25	47.04	44.14	44.95	12.90	13.71	2.25
37	63.50	60.60	61.42	12.90	13.71	2.25
50	61.11	58.21	59.44	15.69	16.51	2.25



Termination options	Solder bucket Flow solder, Straight & 90°, Mini wrap.
Number of contacts	9 15 25 37 50
Maximum insertion and extraction force	30 50 83 123 167N
Performance level	1, 2 & 3
Wire accommodation	≤ 0,5mm ² (20 Awg)
Plug contact material	Copper alloy
Socket contact material	Copper alloy
Current rating	5A

Capacitance	330 pF, Tol + 50% - 20%, 1000 pF and 2000 pF, Tol + 80% - 20%
Working voltage	200 V d.c. or a.c. peak
Contact resistance	5 X 10 ⁻³ Ω max
Insulation resistance	≤ 5 X 10 ⁹ Ω
Temperature range	-25° to +125°
Insulator materials	High impact Epoxy & GF Polyester UL94V-0 rated
Shell materials	Front: Steel - Bright tin finish (Grounding indents on plugs only) Rear: Steel - Electrolytic nickel finish

For other filtering specification please consult Cinch sales offices

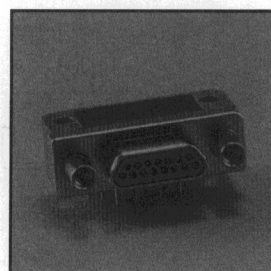
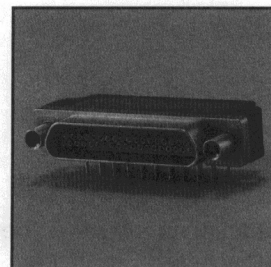
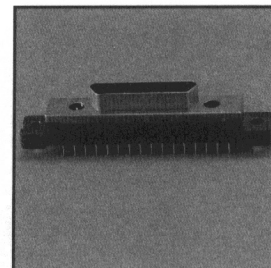
**Dura-Con
High Reliability
Metal Shell**

.050" (1.27mm) Density
PCB Mount Terminal Block

Cinch

FEATURES

- Plug & socket versions available in 9, 15, 21, 25, 31, 37, 51, and 100 positions.
- Flow-through design facilitates inspection and cleaning after soldering.
- All terminal block connectors use standard mounting hardware.
- Metal shell provides EMI/RFI shielding capability.
- Available in 3 styles: Straight mount, 90° right-angle mount, and 90° right-angle narrow profile mounting.
- Silicone elastomer interfacial seal protects contacts from moisture and isolates them from each other and from the metal shell.
- Meets requirements of MIL-C-83513.
- Choice of insulator materials.



MATERIALS

Insulator: UL94V-0 glass-filled polyester or diallyl phthalate
Contacts: Pins - Copper alloy, Sockets - Copper alloy (machined)
Contact Plating: .000050 in gold
Shell: Aluminum alloy
Shell Plating: Yellow chromate over cadmium (std.) or electroless nickel

ENVIRONMENTAL

Operating Temperature: -55°C to +135°C

ELECTRICAL

Current Rating: 3 Amps maximum
Withstanding Voltage: 600 VAC RMS @ sea level, 150 VAC @ 70,000 ft.
Contact Resistance: 8 milliohms maximum

MECHANICAL

Individual Contact: 6 oz. (170.40 g) maximum insertion force;
 0.5 oz. (14.20 g) minimum withdrawal force
Mating / Unmating Forces: See table

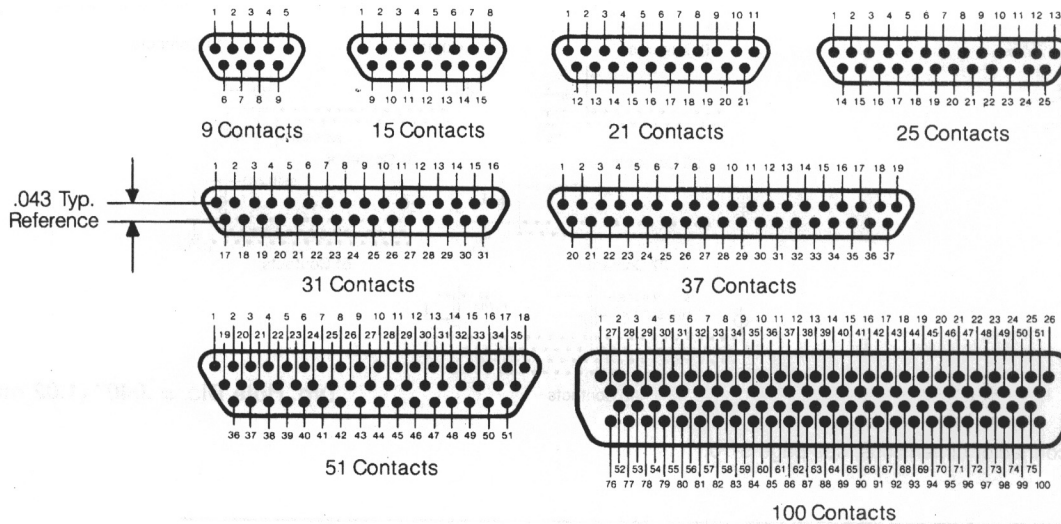
No. of Contacts	Maximum Mating Force		Minimum Unmating Force	
	Lb.	Kg	Lb.	Kg
9	5.63	2.56	.28	.13
15	9.38	4.26	.47	.21
21	13.13	5.96	.66	.30
25	15.63	7.10	.78	.35
31	19.38	8.80	.97	.44
37	23.13	10.50	1.16	.53
51	31.88	14.47	1.59	.72
100	62.50	28.38	3.13	1.42

Dura-Con
High Reliability
Metal Shell

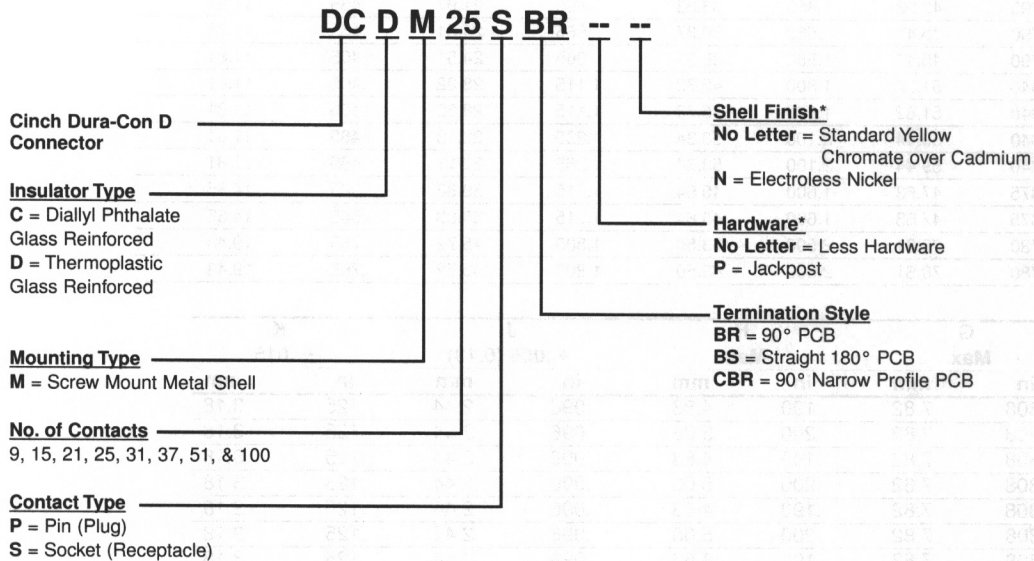
.050" (1.27mm) Density
 PCB Mount Terminal Block



Contact Arrangements



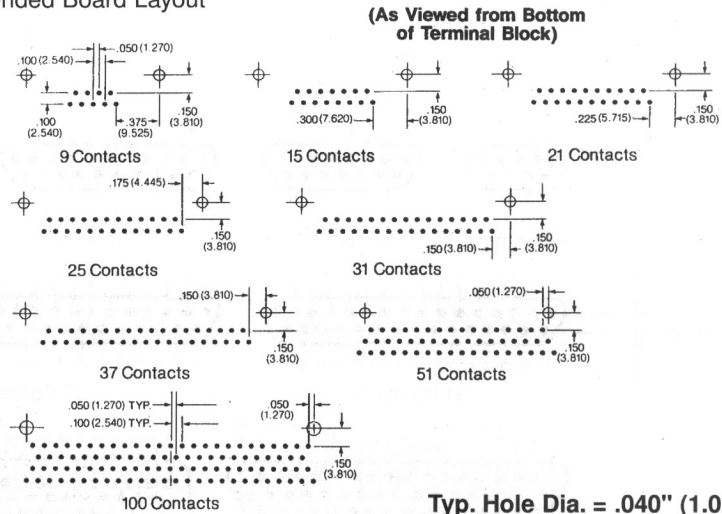
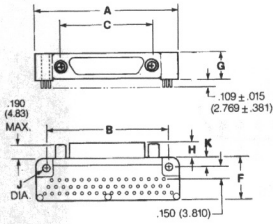
Ordering Information



* For other options consult factory.

90° Termination

Recommended Board Layout



NOTE: For additional connector dimensions, see page 5-10.

No. of Contacts	A Max.		B ± .007 (0.18)		C ± .005 (0.13)		F Max.	
	in	mm	in	mm	in	mm	in	mm
9 Plug	1.390	35.31	1.150	29.21	.565	14.35	.465	11.81
9 Socket	1.390	35.31	1.150	29.21	.565	14.35	.465	11.81
15 Plug	1.540	39.12	1.300	33.02	.715	18.16	.465	11.81
15 Socket	1.540	39.12	1.300	33.02	.715	18.16	.465	11.81
21 Plug	1.690	42.93	1.450	36.83	.865	21.97	.465	11.81
21 Socket	1.690	42.93	1.450	36.83	.865	21.97	.465	11.81
25 Plug	1.790	45.47	1.550	39.37	.965	24.51	.465	11.81
25 Socket	1.790	45.47	1.550	39.37	.965	24.51	.465	11.81
31 Plug	2.040	51.82	1.800	45.72	1.115	28.32	.465	11.81
31 Socket	2.040	51.82	1.800	45.72	1.115	28.32	.465	11.81
37 Plug	2.340	59.44	2.100	53.34	1.265	32.13	.465	11.81
37 Socket	2.340	59.44	2.100	53.34	1.265	32.13	.465	11.81
51 Plug	1.875	47.63	1.600	40.64	1.215	30.86	.565	14.35
51 Socket	1.875	47.63	1.600	40.64	1.215	30.86	.565	14.35
100 Plug	2.780	70.61	2.500	63.50	1.800	45.72	.765	19.43
100 Socket	2.780	70.61	2.500	63.50	1.800	45.72	.765	19.43

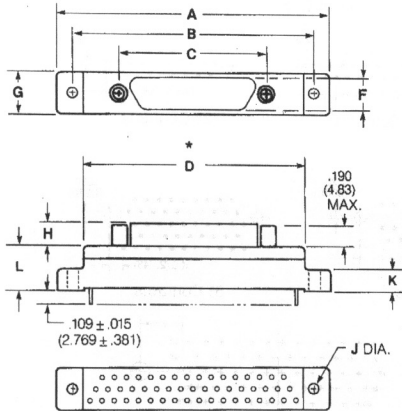
No. of Contacts	G Max.		H Max.		J ± .005 (0.13)		K ± .015	
	in	mm	in	mm	in	mm	in	mm
9 Plug	.308	7.82	.190	4.83	.096	2.44	.125	3.18
9 Socket	.308	7.82	.200	5.08	.096	2.44	.125	3.18
15 Plug	.308	7.82	.190	4.83	.096	2.44	.125	3.18
15 Socket	.308	7.82	.200	5.08	.096	2.44	.125	3.18
21 Plug	.308	7.82	.190	4.83	.096	2.44	.125	3.18
21 Socket	.308	7.82	.200	5.08	.096	2.44	.125	3.18
25 Plug	.308	7.82	.190	4.83	.096	2.44	.125	3.18
25 Socket	.308	7.82	.200	5.08	.096	2.44	.125	3.18
31 Plug	.308	7.82	.190	4.83	.096	2.44	.125	3.18
31 Socket	.308	7.82	.200	5.08	.096	2.44	.125	3.18
37 Plug	.308	7.82	.190	4.83	.096	2.44	.125	3.18
37 Socket	.308	7.82	.200	5.08	.096	2.44	.125	3.18
51 Plug	.351	8.92	.190	4.83	.096	2.44	.125	3.18
51 Socket	.351	8.92	.200	5.08	.096	2.44	.125	3.18
100 Plug	.394	10.00	.190	4.83	.125	3.18	.225	5.72
100 Socket	.394	10.00	.200	5.08	.125	3.18	.225	5.72

Dura-Con High Reliability Metal Shell

.050" (1.27mm) Density
PCB Mount Terminal Block

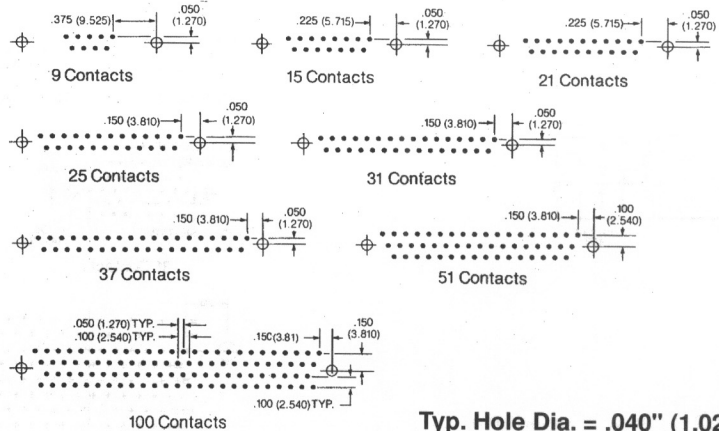


Straight (180°) Termination



Recommended Board Layout

(As Viewed from Bottom of Terminal Block)



Typ. Hole Dia. = .040" (1.02 mm)

NOTE: For additional connector dimensions, see page 5-10.

No. of Contacts	A		B		C		D		G	
	in	mm	in	mm	in	mm	in	mm	in	mm
9 Plug	1.390	35.31	1.150	29.21	.565	14.35	.885	22.48	.308	7.75
9 Socket	1.390	35.31	1.150	29.21	.565	14.35	.885	22.48	.308	7.75
15 Plug	1.390	35.31	1.150	29.21	.715	18.16	.945	24.0	.308	7.75
15 Socket	1.390	35.31	1.150	29.21	.715	18.16	.945	24.0	.308	7.75
21 Plug	1.690	42.93	1.450	36.83	.865	21.97	1.185	30.09	.308	7.75
21 Socket	1.690	42.93	1.450	36.83	.865	21.97	1.185	30.09	.308	7.75
25 Plug	1.740	44.20	1.500	38.10	.965	24.51	1.275	32.38	.308	7.75
25 Socket	1.740	44.20	1.500	38.10	.965	24.51	1.275	32.38	.308	7.75
31 Plug	2.040	51.82	1.800	45.72	1.115	28.32	1.575	40.00	.308	7.75
31 Socket	2.040	51.82	1.800	45.72	1.115	28.32	1.576	40.00	.308	7.75
37 Plug	2.340	59.44	2.100	53.34	1.265	32.13	1.875	47.62	.308	7.75
37 Socket	2.340	59.44	2.100	53.34	1.265	32.13	1.875	47.62	.308	7.75
51 Plug	2.270	57.66	2.000	50.80	1.215	30.86	1.775	45.08	.351	8.92
51 Socket	2.270	57.66	2.000	50.80	1.215	30.86	1.775	45.08	.351	8.92
100 Plug	3.070	77.98	2.800	71.12	1.800	45.72	2.585	65.55	.455	11.56
100 Socket	3.070	77.98	2.800	71.12	1.800	45.72	2.585	65.65	.455	11.56

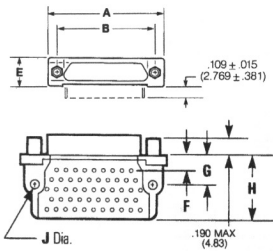
No. of Contacts	H		J		K		L	
	in	mm	in	mm	in	mm	in	mm
9 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
9 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
15 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
15 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
21 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
21 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
25 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
25 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
31 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
31 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
37 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
37 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
51 Plug	.190	4.83	.096	2.44	.165	4.19	.355	9.02
51 Socket	.200	5.08	.096	2.44	.165	4.19	.355	9.02
100 Plug	.190	4.83	.125	3.18	.300	7.62	.550	13.97
100 Socket	.200	5.08	.125	3.18	.300	7.62	.550	13.97

Dura-Con High Reliability Metal Shell

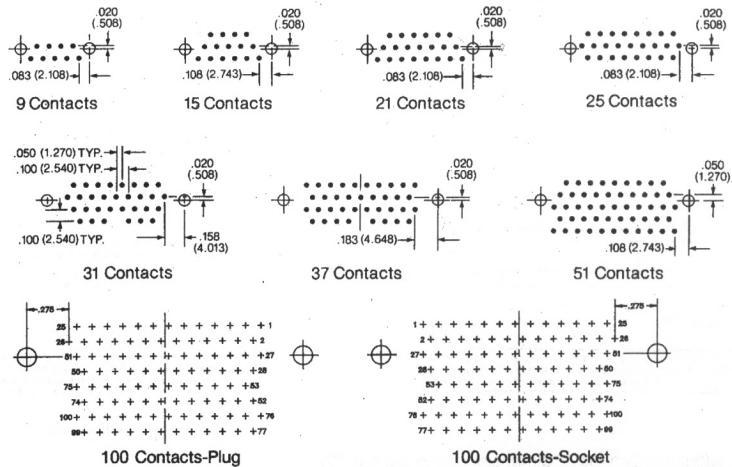
.050" (1.27mm) Density
PCB Mount Terminal Block



90° Narrow Termination



Recommended Board Layout



(As Viewed from Bottom
of Terminal Block)

NOTE: For additional connector dimensions, see page 5-10.

Typ. Hole Dia. = .040" (1.02 mm)

No. of Contacts	A Max.		B ± .005 (0.13)		C Max.	
	in	mm	in	mm	in	mm
9 Plug	.785	19.94	.565	14.35	.308	7.82
9 Socket	.785	19.94	.565	14.35	.308	7.82
15 Plug	.935	23.75	.715	18.16	.308	7.82
15 Socket	.935	23.75	.715	18.16	.308	7.82
21 Plug	1.085	27.56	.865	21.97	.308	7.82
21 Socket	1.085	27.56	.865	21.97	.308	7.82
25 Plug	1.085	30.10	.965	24.51	.308	7.82
25 Socket	1.185	30.10	.965	24.51	.308	7.82
31 Plug	1.335	33.91	1.115	28.32	.308	7.82
31 Socket	1.335	33.91	1.115	28.32	.308	7.82
37 Plug	1.485	37.72	1.265	32.13	.308	7.82
37 Socket	1.485	37.72	1.265	32.13	.308	7.82
51 Plug	1.435	36.45	1.215	30.86	.351	8.92
51 Socket	1.435	36.45	1.215	30.86	.351	8.92
100 Plug	2.175	55.25	1.800	45.72	.394	10.00
100 Socket	2.175	55.25	1.800	45.72	.394	10.00

No. of Contacts	F ± .010 (0.25)		G ± .010 (0.25)		H Max.		J ± .005 (0.13)	
	in	mm	in	mm	in	mm	in	mm
9 Plug	.230	5.84	.250	6.35	.420	10.67	.096	2.44
9 Socket	.230	5.84	.250	6.35	.420	10.67	.096	2.44
15 Plug	.130	3.30	.250	6.35	.420	10.67	.096	2.44
15 Socket	.130	3.30	.250	6.35	.420	10.67	.096	2.44
21 Plug	.130	3.30	.250	6.35	.420	10.67	.096	2.44
21 Socket	.130	3.30	.250	6.35	.420	10.67	.096	2.44
25 Plug	.130	3.30	.250	6.35	.420	10.67	.096	2.44
25 Socket	.130	3.30	.250	6.35	.420	10.67	.096	2.44
31 Plug	.130	3.30	.250	6.35	.520	13.21	.096	2.44
31 Socket	.130	3.30	.250	6.35	.520	13.21	.096	2.44
37 Plug	.130	3.30	.250	6.35	.520	13.21	.096	2.44
37 Socket	.130	3.30	.250	6.35	.520	13.21	.096	2.44
51 Plug	.150	3.81	.300	7.62	.650	16.51	.096	2.44
51 Socket	.150	3.81	.300	7.62	.650	16.51	.096	2.44
100 Plug	.200	5.08	.400	10.16	1.000	25.40	.125	3.18
100 Socket	.200	5.08	.400	10.16	1.000	25.40	.125	3.18

5

