

DURA-CON

All-Plastic

Strip Connectors

Metal Shell

Mil-C-83513 Connectors

Terminal Blocks

Microedge

.050" D-microminiature



Cinch

Cinch Dura-Con™ connectors are designed for applications that require a rugged, durable, and high-performance interconnect. Dura-Con is the ideal connector for applications where weight and space must be kept to a minimum while maintaining maximum reliability. Miniaturized airborne electronics and data processing equipment, where shorter signal paths are needed, represent typical applications for these unique connectors.

The heart of the Dura-Con system is the Dura-Con pin contact. The Cinch Dura-Con pin contact is made from a precision miniature spring cable with a welded tip. The expanded cable provides seven spring members peripherally around the pin so that contact is maintained with the mating socket wall no matter what radial forces are applied. This spring may be flexed many times without any evidence of metal fatigue. Reliable mating is further ensured by protecting the pin contact in a tightly tolerated recessed cavity.

Cinch's family of Dura-Con connectors includes MIL-C-83513 Series connectors along with our own commercial equivalents. The commercial Dura-Con product line offers an expanded range of termination and hardware options for all-plastic and metal shell wire versions and right-angle and straight PC board mount "terminal blocks". Cinch also packages the Dura-Con contact in a very low profile plastic strip connector on .050" centers and in a line of high-density microminiature edge (Microedge) board connectors that meet the requirements of MIL-C-55302. Cinch has created a line of plastic and metal shell Dura-Con connector savers for very high mating cycle applications such as test equipment.

Termination Options:

Cinch offers the following termination methods for its Dura-Con connectors:

Insulated Wire - Insulated wire is crimped to the Dura-Con contacts then epoxy backpotted at the factory. Wire is available in standard lengths of 18, 24, 36, and 48 inches.

Uninsulated Wire - 24 AWG, gold-plated, uninsulated wire is crimped to the Dura-Con contact at the factory. Wire is available in standard lengths of 0.5, 1.0, and 2.0 inches. This option allows the user greater flexibility when installing the connector.

Solder Cup - For applications that require the lowest contact resistance, Cinch offers Dura-Con connectors with solder cups for termination by the user.



Dura-Con is a trademark of Cinch Connectors.

Custom Capabilities:

Standard Cinch Dura-Con connectors satisfy a wide variety of applications. Cinch's line of Dura-Con D-microminiature connectors is one of the most versatile in the industry. There are over 50,000 possible combinations of Cinch standard options such as connector type, size, materials, hardware, and termination.

When special application requirements arise, Cinch Dura-Con connectors take this versatility to the next level. Whether specific needs entail new variations of simple end-to-end connector assemblies or more complex and intricate harness assemblies, Cinch Connector Division has the state-of-the-art engineering resources and research facilities in place to meet your needs. Cinch approaches your business with a well-defined goal: to ensure the integrity of your design and to execute our contribution to it in a responsible, cost-effective manner. This philosophy has led Cinch to a position of industry leadership.

For complete information regarding the total capabilities of the Dura-Con connector series, or for custom application assistance, contact your nearest Cinch Connectors sales office.



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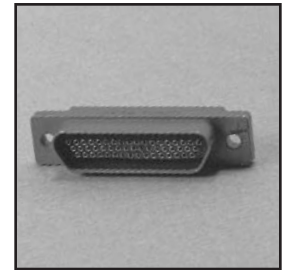
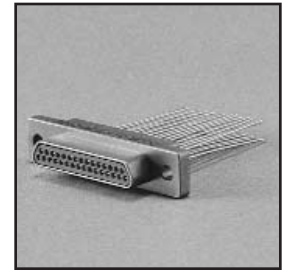
Dura-Con
High Reliability
Metal Shell

.050" (1.27mm) Density
 Solder Cup/Wire
 D-Microminiature



FEATURES

- Both plug and socket available in 9, 15, 21, 25, 31, 37, 51, and 100 positions.
- Several styles of mounting are available for cable-to-cable, cable-to-panel mount, and cable-to-board mount.
- Aluminum shell provides extra strength and EMI/RFI shielding capability. Plating options available.
- Silicone elastomer compression interfacial seal protects contacts from moisture and humidity and isolates contacts from each other and the metal shell.
- Meets requirements of MIL-C-83513 except where noted.
- Rugged twist-pin contacts resistant to shock and vibration make metal shell Dura-Con an excellent choice for harsh environments such as airborne or space applications.



MATERIALS

Insulator: UL94V-0 rated 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
Contact Resistance: 8 milliohms maximum

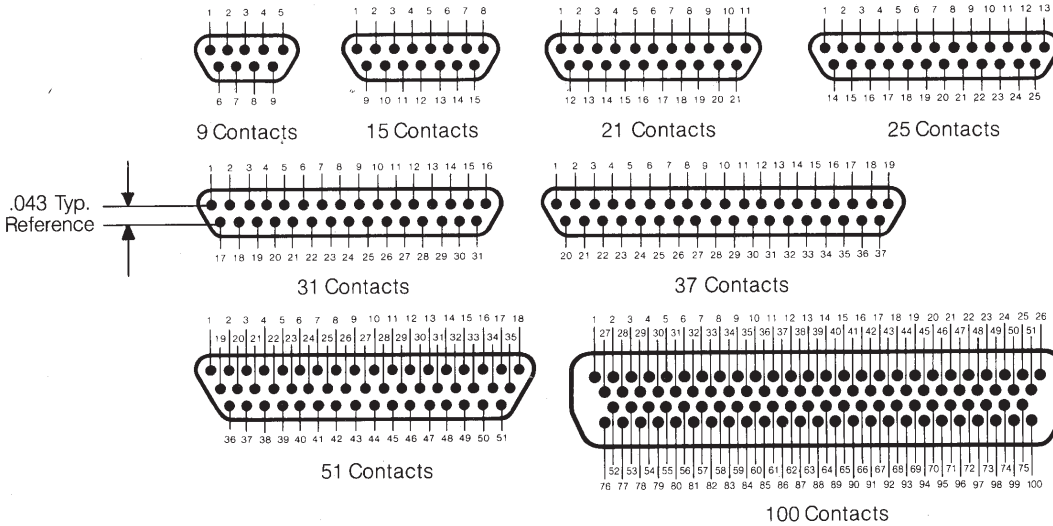
MECHANICAL

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

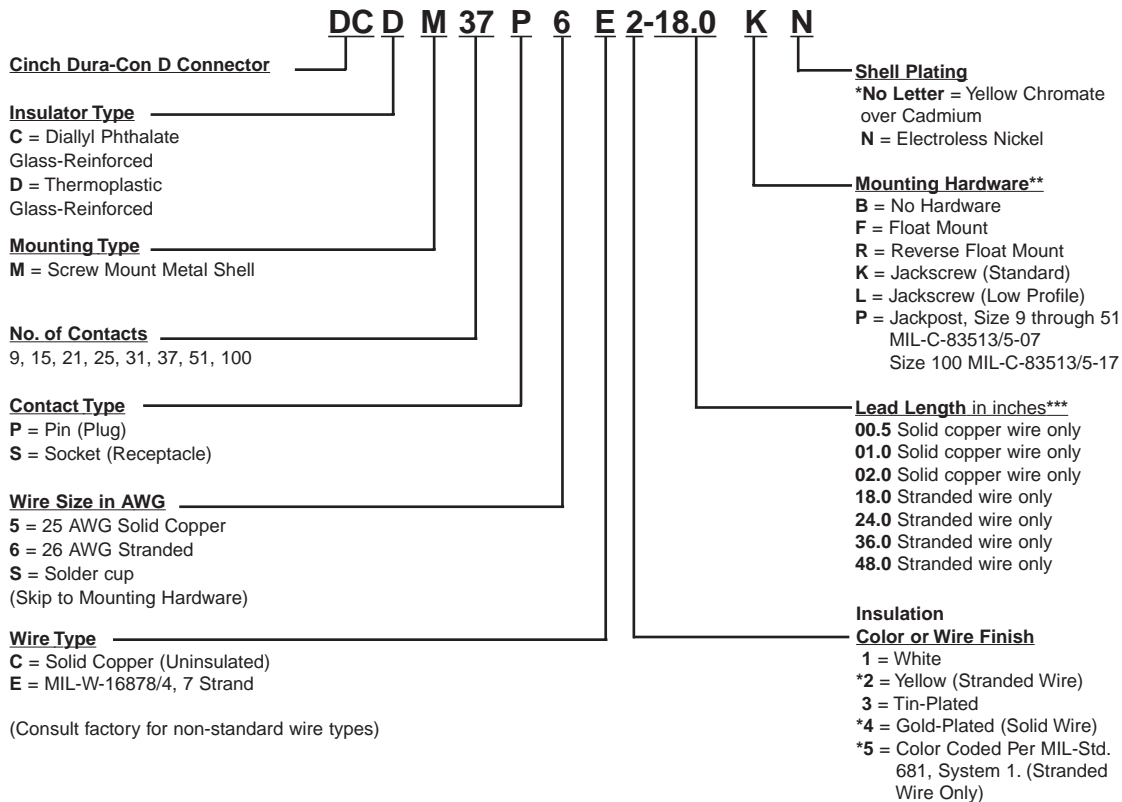
No. of Contacts	Maximum Mating Force		Minimum Unmating Force	
	Lb.	Kg	Lb.	Kg
9	5.63	2.56	.28	.13
15	9.38	4.26	.47	.21
21	13.13	5.96	.66	.30
25	15.63	7.10	.78	.35
31	19.38	8.80	.97	.44
37	23.13	10.50	1.16	.53
51	31.88	14.47	1.59	.72
100	62.50	28.38	3.13	1.42

Contact Arrangements

(Face view of pin insert)
 (Use reverse order for socket side)



Ordering Information

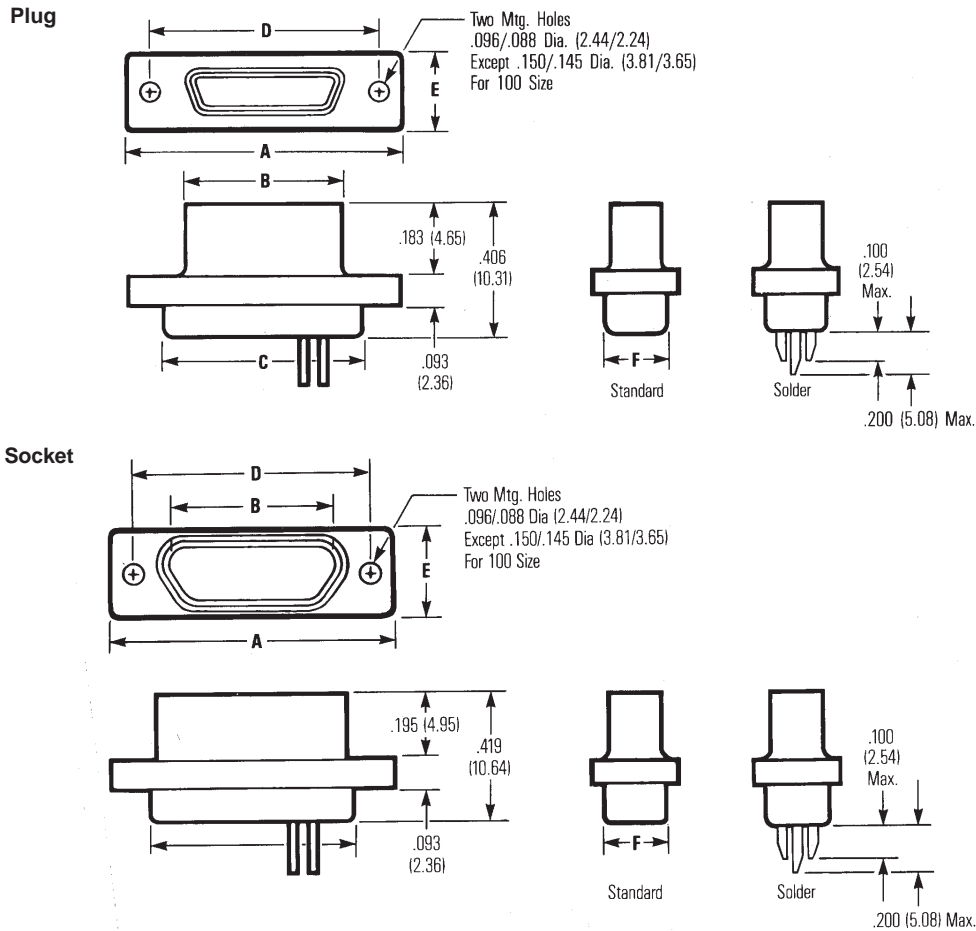


* - Indicates Cinch std. option.

** - See p. 5-12 for std. hardware dims. See p. 5-13 for non-std. hardware & p. 5-31 for Mil spec. hardware both sold separately.

*** - Length Tolerance: solid wire = $\pm 3/32"$, standard wire = $\pm 1/4"$.

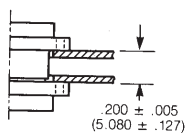
Connector Dimensions - Metal Shell



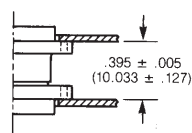
No. of Contacts	A		B Max.		C		D		E		F Max.	
	± .010 (.254)				+ .010 (.254) - .018 (.457)		± .005 (.127)		± .010 (.254)			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
9 Plug	.775	19.68	.333	8.46	.390	9.91	.565	14.35	.298	7.57	.270	6.86
9 Socket	.775	19.68	.396	10.06	.390	9.91	.565	14.35	.298	7.57	.270	6.86
15 Plug	.925	23.50	.483	12.27	.540	13.72	.715	18.16	.298	7.57	.270	6.86
15 Socket	.925	23.50	.546	13.87	.540	13.72	.715	18.16	.298	7.57	.270	6.86
21 Plug	1.075	27.30	.633	16.08	.690	17.53	.865	21.97	.298	7.57	.270	6.86
21 Socket	1.075	27.30	.696	17.68	.690	17.53	.865	21.97	.298	7.57	.270	6.86
25 Plug	1.175	29.84	.733	18.62	.790	20.07	.965	24.51	.298	7.57	.270	6.86
25 Socket	1.175	29.84	.796	20.22	.790	20.07	.965	24.51	.298	7.57	.270	6.86
31 Plug	1.325	33.66	.883	21.16	.940	23.88	1.115	28.32	.298	7.57	.270	6.86
31 Socket	1.325	33.66	.946	24.03	.940	23.88	1.115	28.32	.298	7.57	.270	6.86
37 Plug	1.475	37.46	1.033	26.24	1.090	27.69	1.265	32.13	.298	7.57	.270	6.86
37 Socket	1.475	37.46	1.096	27.84	1.090	27.69	1.265	32.13	.298	7.57	.270	6.86
51 Plug	1.425	36.20	.983	24.97	1.040	26.42	1.215	30.86	.341	8.66	.310	7.87
51 Socket	1.425	36.20	1.046	26.57	1.040	26.42	1.215	30.86	.341	8.66	.310	7.87
100 Plug	2.160	54.86	1.383	35.13	1.432	36.38	1.800	45.71	.384	9.75	.360	9.15
100 Socket	2.160	54.86	1.446	36.73	1.432	36.38	1.800	45.71	.384	9.75	.360	9.15

Panel Mounting Dimensions

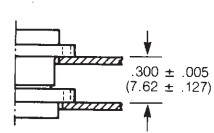
Pin and socket,
rear mounted



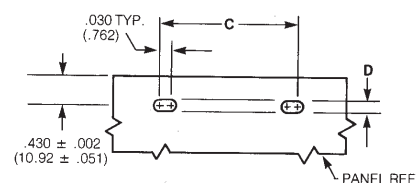
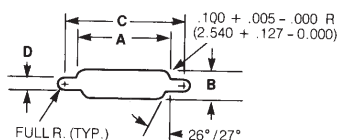
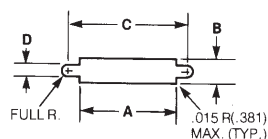
Pin and socket,
front mounted



Pin, front mounted
Socket, rear mounted



Panel Cutout Dimensions



No. of Contacts	Figure Number	A		B		C		D	
		+0.004 -0.000 in	(.101) (.000) mm	+0.004 -0.000 in	(.101) (.000) mm	+0.005 -0.000 in	(.127) (.000) mm	+0.005 -0.000 in	(1.27) (.000) mm
9	1	.408	10.36	.270	6.86	.570	14.48	-	-
	2	.408	10.36	.256	6.50	.570	14.48	.089	2.26
	3	-	-	-	-	.570	14.48	-	-
15	1	.558	14.17	.270	6.86	.720	18.29	-	-
	2	.558	14.17	.256	6.50	.720	18.29	.089	2.26
	3	-	-	-	-	.720	18.29	-	-
21	1	.708	17.98	.270	6.86	.870	22.10	-	-
	2	.708	17.98	.256	6.50	.870	22.10	.089	2.26
	3	-	-	-	-	.870	22.10	-	-
25	1	.808	20.52	.270	6.86	.970	24.64	-	-
	2	.808	20.52	.256	6.50	.970	24.64	.089	2.26
	3	-	-	-	-	.970	24.64	-	-
31	1	.958	24.33	.270	6.86	1.120	28.45	-	-
	2	.958	24.33	.256	6.50	1.120	28.45	.089	2.26
	3	-	-	-	-	1.120	28.45	-	-
37	1	1.108	28.14	.270	6.86	1.270	32.26	-	-
	2	1.108	28.14	.256	6.50	1.270	32.26	.089	2.26
	3	-	-	-	-	1.270	32.26	-	-
51	1	1.058	26.87	.315	8.00	1.220	30.99	-	-
	2	1.058	26.87	.300	7.62	1.220	30.99	.089	2.26
	3	-	-	-	-	1.220	30.99	-	-
100	1	1.450	36.84	.361	9.17	1.805	45.86	.117	2.97
	2	1.562	39.68	.338	8.58	1.805	45.86	.117	2.97
	3	-	-	-	-	1.805	45.86	.117	2.97