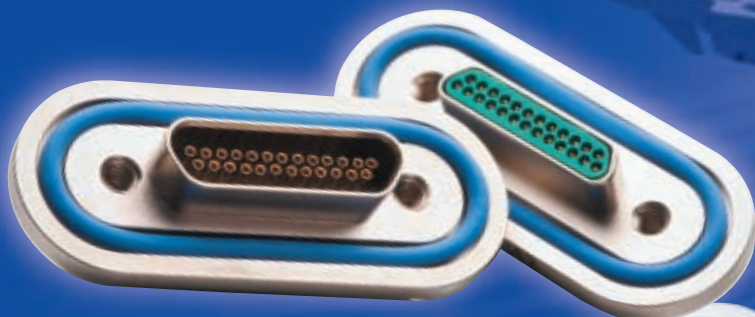


Dura-Con™ Hermetic

HERMETIC CONNECTORS

STANDARD DURA-CON™ CONNECTORS WITH HIGH PERFORMANCE HERMETIC SEALS



Hermetic Connectors

Cinch Dura-Con™ Hermetic Connectors offer a high performance hermetic seal designed into the standard Cinch Dura-Con™ Connector.

Features

Both plug and socket available in 9, 15, 21, 25, 31, 37 and 51 positions
 Aluminium shell provides extra strength and EMI/RFI shielding capability
 Rugged twist-pin contacts resistant to shock and vibration make metal shell Dura-Con™ an excellent choice for harsh environments
 Hermetic seal achieved through Cinch Hermetic compound
 Tested to Mil-DTL-83513
 Pigtail and Solder Cup variations only



Materials

Insulator:	UL94V-0 rated glass-filled polyester or diallyl phthalate
Contacts:	Pins - Copper alloy, sockets - Copper alloy (machined)
Contact Plating:	1.27 micron gold as per Mil-G-4204
Shell:	Aluminium alloy
Shell Plating:	Electroless nickel and cadmium
Hermetic Seal:	Cinch Hermetic compound
Sealing:	Fluoro Silicone 'O' ring seal



Environmental

Operating Temperature:	-55°C to +125°C
Hermetic Seal:	1 x 10 ⁻⁸ cc/sec @ 1 Atmosphere Helium



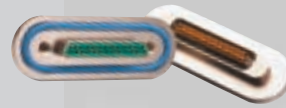
Electrical

Current Rating:	3 Amps maximum
Withstanding Voltage:	600 VAC RMS @ sea level
Contact Resistance:	8 milliohms maximum



Mechanical

Individual Contact:	6 oz. (170.40g) maximum insertion force 0.5 oz. (14.20g) minimum withdrawal
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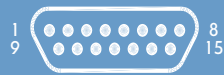


Contact Arrangements

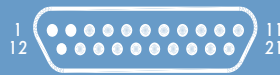
Mating view of pin insert. (Use reverse order for socket side)



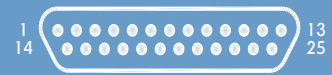
9 Contacts



15 Contacts



21 Contacts



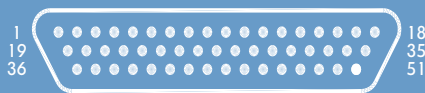
25 Contacts



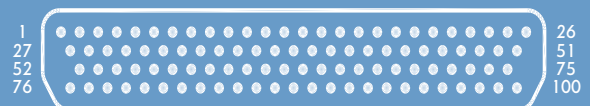
31 Contacts



37 Contacts

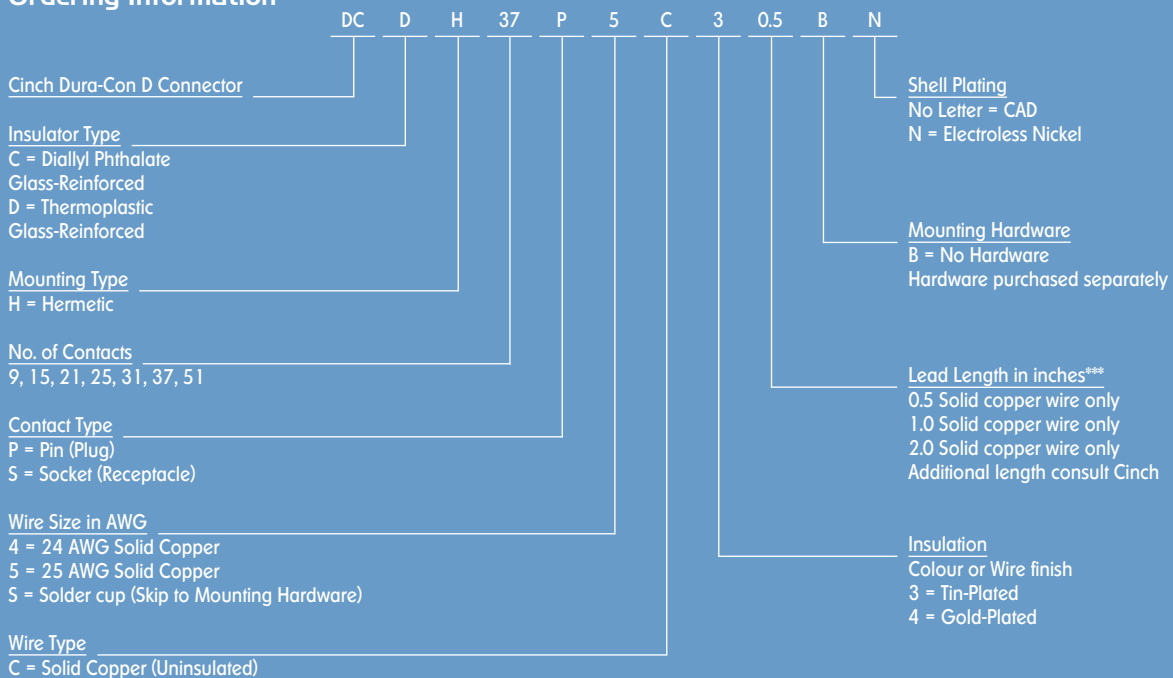


51 Contacts



100 Contacts

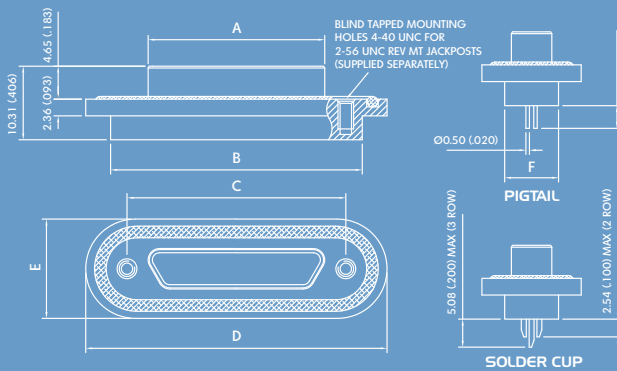
Ordering Information



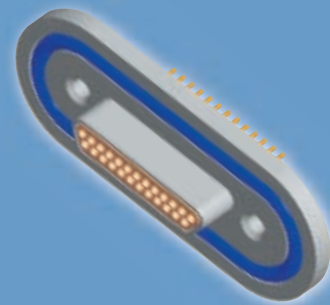
(Consult factory for non-standard wire types)

*** - Length Tolerance: solid wire = ± 3/32"

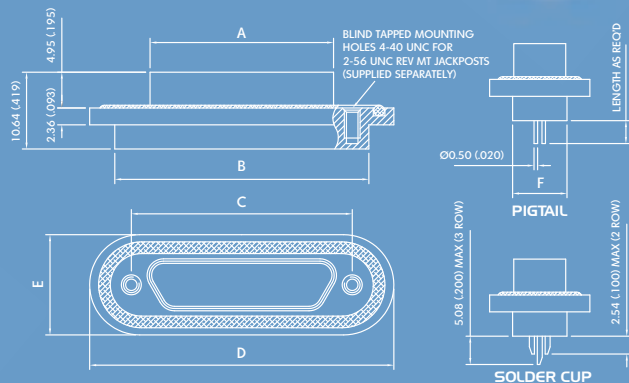
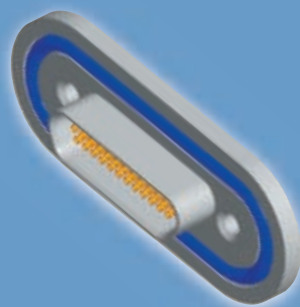
Connector Dimensions - Metal Shell



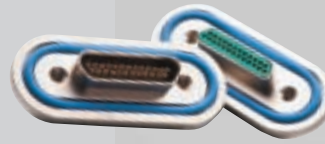
Plug Arrangement



Socket Arrangement

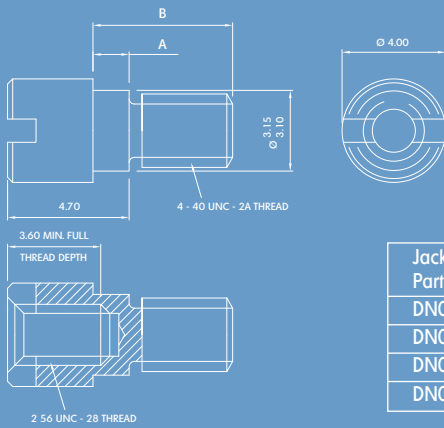


No. of Contacts	A Max		B ± 0.25 (0.010")		C ± 0.127 (0.005")		D ± 0.20 (0.008")		E ± 0.20 (0.008")		F ± 0.20 (0.008")	
	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
9 Plug	8.46	0.333	19.65	0.774	14.35	0.565	31.68	1.247	17.00	0.670	7.50	0.295
9 Socket	10.06	0.396	19.65	0.774	14.35	0.565	31.68	1.247	17.00	0.670	7.50	0.295
15 Plug	12.27	0.483	23.45	0.923	18.16	0.715	34.16	1.345	17.00	0.670	7.50	0.295
15 Socket	13.87	0.546	23.45	0.923	18.16	0.715	34.16	1.345	17.00	0.670	7.50	0.295
21 Plug	16.08	0.633	27.25	1.073	21.97	0.865	39.15	1.541	17.00	0.670	7.50	0.295
21 Socket	17.68	0.696	27.25	1.073	21.97	0.865	39.15	1.541	17.00	0.670	7.50	0.295
25 Plug	18.62	0.733	29.85	1.175	24.51	0.965	41.66	1.640	17.00	0.670	7.50	0.295
25 Socket	20.22	0.796	29.85	1.175	24.51	0.965	41.66	1.640	17.00	0.670	7.50	0.295
31 Plug	21.16	0.883	33.65	1.325	28.32	1.115	44.13	1.737	17.00	0.670	7.50	0.295
31 Socket	24.03	0.946	33.65	1.325	28.32	1.115	44.13	1.737	17.00	0.670	7.50	0.295
37 Plug	26.24	1.033	37.45	1.474	32.13	1.265	49.12	1.934	17.00	0.670	7.50	0.295
37 Socket	27.84	1.096	37.45	1.474	32.13	1.265	49.12	1.934	17.00	0.670	7.50	0.295
51 Plug	24.97	0.983	36.15	1.423	30.86	1.215	48.50	1.909	18.10	0.713	8.60	0.339
51 Socket	26.57	1.046	36.15	1.423	30.86	1.215	48.50	1.909	18.10	0.713	8.60	0.339
100 Plug	Consult Cinch Connectors Ltd											
100 Socket	Consult Cinch Connectors Ltd											



Mounting Hardware – 9 to 51 Way only

Consult Cinch for 100 Way options



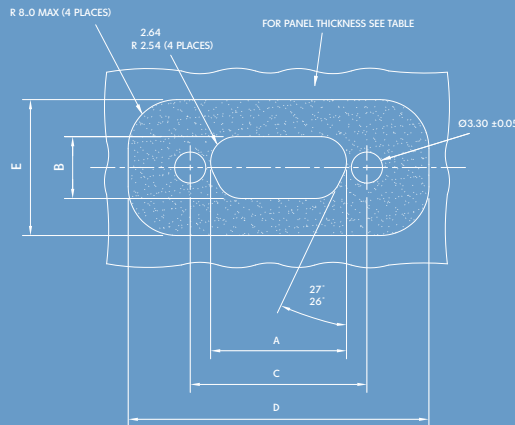
Recommended Torque Tightening

Recommended torque for tightening jackpost (4-40 UNC) into connector, 0.45 Nm / 0.55 Nm (4/5 in. lb)

Recommended torque for tightening jackscrew of mating connector (2-56 UNC) into jackpost, 0.23 Nm / 0.28 Nm (2/2.5 in. lb)

Jackpost Part Number	Panel Thickness		A		B	
	mm	inches	mm	inches	mm	inches
DN00008 08	0.8	0.031	0.65/0.60	0.026/0.024	4.6	0.181
DN00008 12	1.2	0.047	1.05/1.00	0.041/0.039	5.0	0.197
DN00008 16	1.6	0.063	1.45/1.40	0.057/0.055	5.4	0.213
DN00008 24	2.4	0.094	2.25/2.20	0.089/0.087	6.2	0.244

Panel Mounting Details



Jackpost Part Number	Panel Thickness ±0.05 (.002)	
	mm	inches
DN00008 08	0.7	0.028
DN00008 12	1.1	0.043
DN00008 16	1.5	0.059
DN00008 24	2.3	0.091



Area to be flat, smooth and free from tool marks, blemishes etc. (Sealing face for 'O' ring)

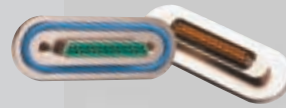
No. Ways	A ±.10 (.004)		B ±.10 (.004)		C ±0.05 (.002)		D (MIN)		E (MIN)	
	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
9	10.11	0.398	6.32	0.249	14.35	0.565	35.0	1.378	20.0	0.787
15	13.92	0.548	6.32	0.249	18.16	0.715	37.0	1.457	20.0	0.787
21	17.73	0.698	6.32	0.249	21.97	0.865	42.0	1.654	20.0	0.787
25	20.27	0.798	6.32	0.249	24.51	0.965	45.0	1.772	20.0	0.787
31	24.08	0.948	6.32	0.249	28.34	1.116	47.0	1.850	20.0	0.787
37	27.89	1.098	6.32	0.249	32.13	1.265	52.0	2.047	20.0	0.787
51	26.62	1.048	7.42	0.292	30.86	1.215	52.0	2.047	22.0	0.866
100	Consult Cinch Connectors Ltd									



Connector Performance Specifications

Property	Requirement	Test Method
Current Rating	3 Amp maximum	
Dielectric Withstanding Voltage Sea level	900 VAC	Mil-STD-1344, Method 3001
Contact Resistance	8 milliohms maximum	Mil-STD-202, Method 307
Low Level Contact resistance	32 milliohms maximum	Mil-STD-1344, Method 3002
Insulation Resistance	5000 megohms minimum	Mil-STD-1344, Method 3003
Magnetic Permeability	2.0 μ maximum	ASTM A342
Mating Force	(10 ounces max.) x (# of contacts)	Mil-DTL-83513
Unmating Force	(0.5 ounces min.) x (# of contacts)	Mil-DTL-83513
Contact Retention	5 pounds minimum	Mil-STD-1344, Method 2007
Operating Temperature	-55°C. to 125°C.	
Durability	500 mating cycles minimum	Mil-DTL-83515, Para 4.5.16
Salt Spray (corrosion)	48 hours	Mil-DTL-1344, Method 2004, Condition E
Crimp Tensile Strength Wire Type M22759/11 Wire Type M22759/33	5 pounds minimum 10 pounds minimum	Mil-DTL-83513, Para 4.5.20
Shock	50 G's	Mil-STD-1344, Method 2004, Condition E
Vibration	20 G's	Mil-STD-1344, Method 2005, Condition IV
Minimum Hermetic Leakage Rate	1 x 10 ⁻⁸ mbar l/s	
Moisture Permeation	0.5% in 168 hrs	

	No. of Contacts	Maximum Mating Force		Minimum Unmating Force	
		lb	kg	lb	kg
Mating Unmating Force	9	5.63	2.56	0.28	0.13
	15	9.38	4.26	0.47	0.21
	21	13.13	5.96	0.66	0.30
	25	15.63	7.10	0.78	0.35
	31	19.38	8.80	0.97	0.44
	37	23.13	10.50	1.16	0.53
	51	31.88	14.47	1.59	0.72
	100	62.50	28.38	3.13	1.42



Engineer's Check List

SECTOR

- Sea
- Aerospace
- Sub-Terrain
- Ground Support
- Armoured Vehicle
- Rail
- Space
- Radar
- Avionics
- Munitions / Missile

CONNECTOR STYLE

- Rectangular
- Circular
- Z Axis Compression
- Power & Signal
- Hermetic
- IPC Rated
- Filtered
- Edge Connector
- Multipole
- High Speed
- Rugged Enclosure

WIRE TYPE

- Stranded
- Solid
- Twisted pairs
- Co-Axial
- Colour Code Single / Multi
- Multi Core
- Shielded
- Wire AWG
- Custom Cable

ENVIRONMENT

- Dust
- Moisture Resistant
- Full Water Immersion
- Chemical Compatibility
- RoHS
- Low Smoke / Zero Halogen
- Extreme Temperature Tolerance
- Flame Retardant

MARKET SEGMENT

- Oil Petroleum Gas (OPG).
- Renewable Energy
- Military & Defence
- Commercial
- Computer
- Industrial
- Telecommunications
- Medical

CONSTRUCTION

- Male Female
- Crimp
- Solder
- PC Tail 90° 180°
- RF Signals
- Number Contact Points
- Contact Pitch
- Housing Material
- Plastic Metal

CUSTOM INTERCONNECT

- Single Ended
- Double Ended
- Multi Limb Cable Assembly
- Strain Relief Backshell
- Environmental Backshell / Boot
- 3600 Screened Backshell
- Moulded Strain Relief
- Woven
- Flexible Circuit

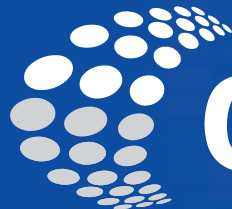
SPECIFICATION

- Operating Temperature Range
- Mating Cycles
- Electrical
- Voltage Rating
- Current Rating
- Filtration Rating
- Materials / Finish
- Contact Plating
- Housing Plating

At Cinch our philosophy is that anything is possible.

With over 70 years' experience as a global supplier we offer simple, effective solutions to our customers' interconnect and integration needs. From basic interconnect to complex integration requiring bespoke design, we focus primarily on quality, ingenuity and reliability, meeting the high performance demands of industries such as Defence, Aerospace, Space, Telecom, High Speed Data Servers and Industrial Transportation.

**TOGETHER
WE STIMULATE,
WE INNOVATE,
WE CREATE.**



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Cinch has manufacturing and sales sites located globally approved to AS9100.

