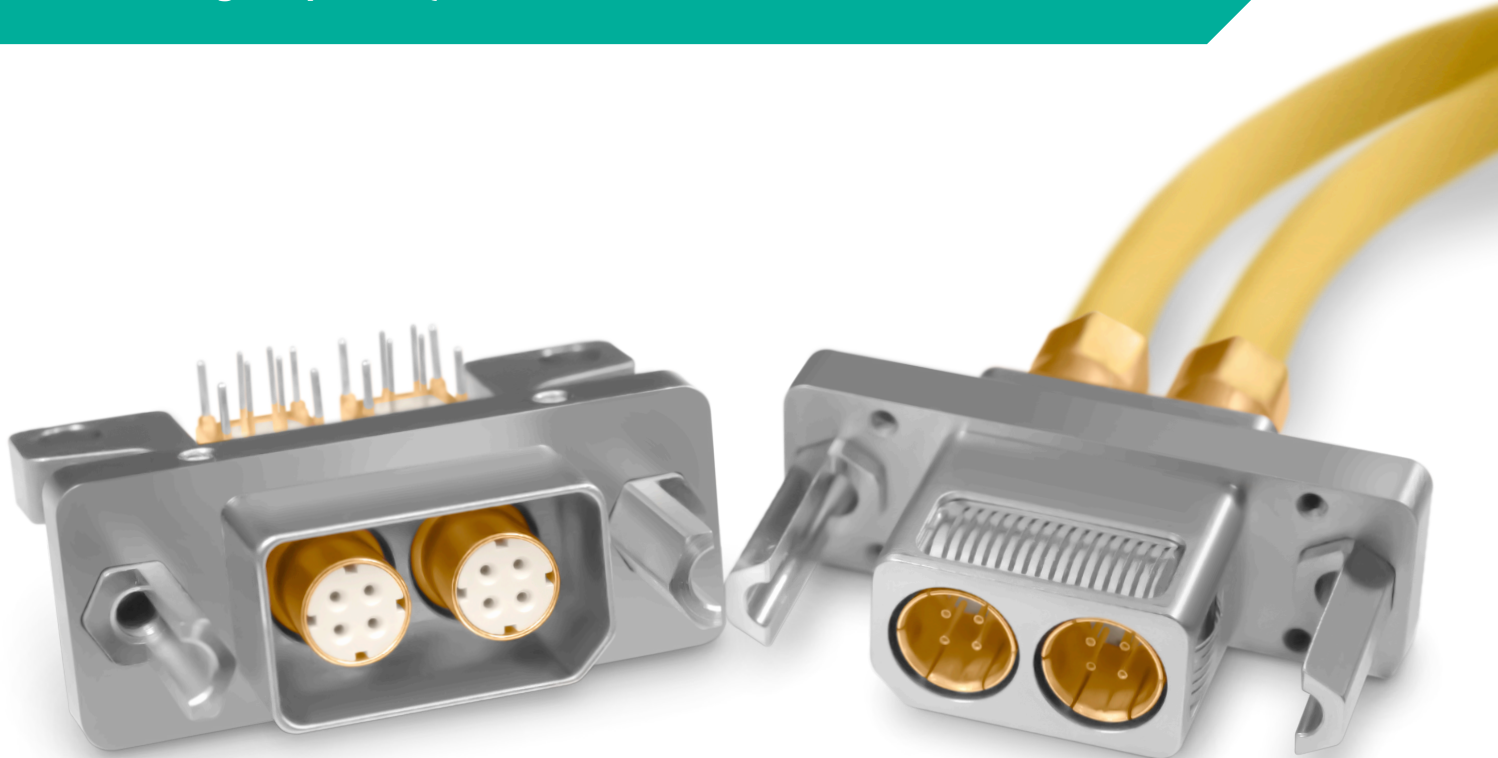
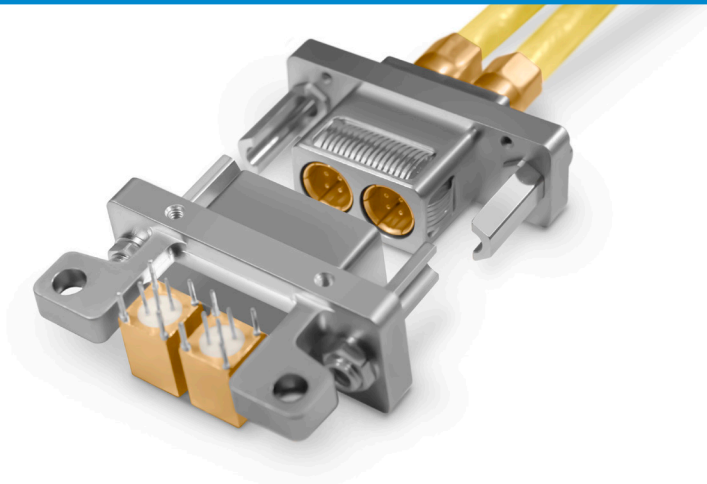


Fibre Channel D-Sub Connector Series

150 Ohm High-Speed Quadrx Connectors



D-Sub Connectors



The main function associated with high impedance D-Sub connectors is to ground the outer shield of a quadrx contact directly to the shell of the connector. With Smiths Interconnect Fibre Channel D-sub connector series, a multi-finger ground spring fixed around the shell provides a multi-point contact engagement that affords superior EMI shielding. The end result is extremely low contact resistance when measured from the contact outer body to the connector flange.

The Fibre Channel D-Sub series also provides superior performance delivering minimal RF noise and high durability up to 1,000 mating cycles while meeting and surpassing all requirements of MIL-STD-202 for shock and vibration. Offered with 150 Ohm quadrx contacts, the connectors are available with 2, 4, 6 or 8 way insert arrangements. Additionally, D-Sub connectors feature ease of assembly and a robust, comprehensive training package.

To ensure the correct high speed connectors are mated to address specific wiring requirements and keying functions, a keyed jack post option has been incorporated into the design. The six-positioned post allows for 36 possible keying combinations ensuring that the correct Fibre Channel D-Sub plug is mated to the correct high speed receptacle. Non-keyed jack post versions are available as well.

Fibre Channel D-Sub connectors feature size 3 quadrx contacts which are 30% larger than the size 9 configuration utilized in the 100 Ohm quadrx, affording a matched impedance signal throughout the contact mated pair at 150 Ohm differential impedance. Smiths Interconnect's Fibre Channel D-Sub connectors deliver the critical edge customers require.

*Consult factory if other impedances are required.

Features

Standard keyed and non-keyed insert arrangements: 2, 4, 6, 8 way; hybrid options available

Offered with 150 ohm impedance

Data rates up to 6.25 Gbps

Six-position keyed and non-keyed jack post versions

Common back shells with a wide assortment of accessories, guide hardware and sealing grommets

Integrated EMI spring fingers offer superior EMI performance with low contact resistance

Benefits

Product versatility/modularity

Unparalleled immunity to shock and vibration

Outstanding space savings on narrowly mounted panels

Superior mating

Specifically designed for extreme durability and performance

Increased contact density and signal speed in a rugged connector shell

Technical Characteristics

Mechanical & Environmental		Standards
Temperature Rating	-65°C to 165°C	—
Durability	500 mate/unmate cycles min.	—
Corrosion	—	MIL-STD-202 Method 101, Test Condition B
Shock	—	MIL-STD-202 Method 213, Test Condition B
Vibration	—	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	—	MIL-STD-202 Method 107, Test Condition B

Materials & Finishes

Contact Body & Inner Contacts	BeCu, UNS C17200, C17300, TD04 Gold plating	ASTM-B196 — ASTM-B488
Other Metal Contact Parts	Brass, UNS C36000, H02 Gold plating	ASTM-B16 — ASTM-B488
Insulators	PTFE, Ultem 1000 or LCP	— —
Plug/Receptacle Shell	Aluminum 6061-T6 Electroless nickel plating	ASTM-B211 SAE AMS-C-26074
Jack Post, Nut, Washer & Screw	Stainless Steel	—

Electrical

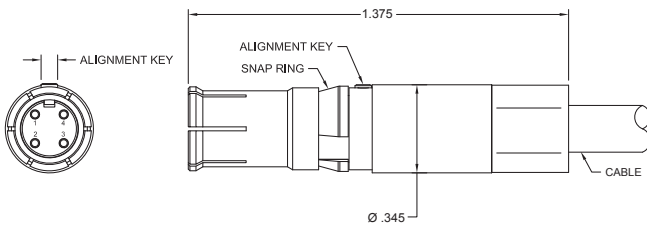
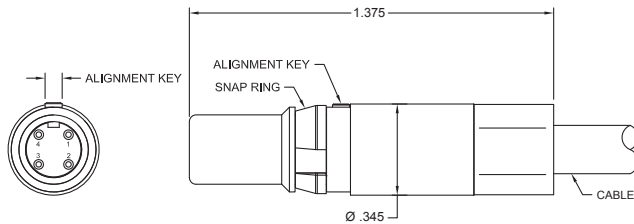
Contact Current Rating	3.0 A max.	—
DWV	500 VDC max.	—
Insulation Resistance	5,000 MΩ min. @ 200 VDC	—
Bandwidth	Up to 3 GHz	—
Data Rates	Exceeding 2 Gbps	—
Differential Pair Cable Impedance	150 Ω + 15 Ω	—
Signal to Shield Cable Impedance	75 Ω + 10 Ω	—

Dimensions

Contacts, Keyed & Non-Keyed Shells

Size 3 Quadrax Contacts

150 Ohm



Quadrax Pin Contact

For use in Size 3 Quadrax D-Sub Receptacle
P/N: 012800-31XX and 052700-30XX

Part Number	Cable Type	Cable
019635-8035	Differential Quadrax	540-1211-000

Quadrax Socket Contact

For use in Size 3 Quadrax D-Sub Plug
P/N: 012700-21XX and 052800-20XX

Part Number	Cable Type	Cable
019535-8035	Differential Quadrax	540-1211-000

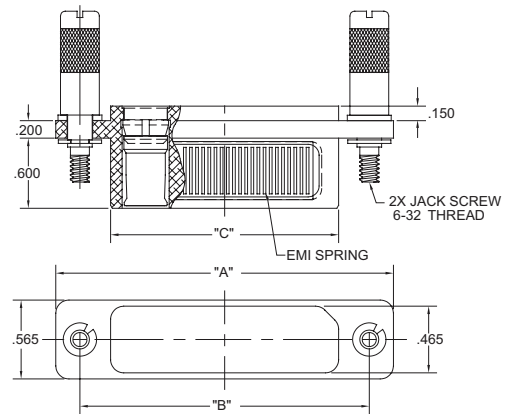
Dimensions are in inches.

Size 3 Quadrax Non-Keyed D-Sub Shells

Contacts Not Included

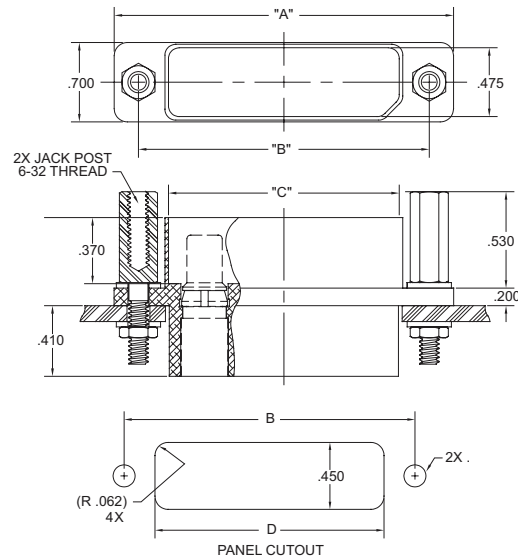
Plug

Part Number	Contacts	A	B	C
012700-2180	2	1.710	1.370	0.840
012700-2181	4	2.480	2.140	1.610
012700-2182	6	3.250	2.910	2.380
012700-2183	8	4.020	3.680	3.150



Cable Mount Receptacle

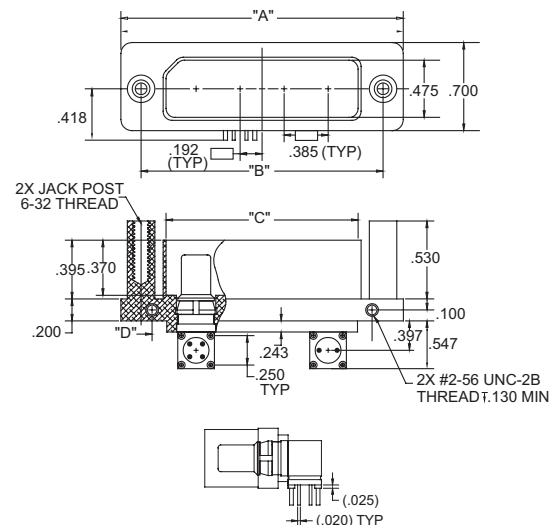
Part Number	Contacts	A	B	C	D
012800-3180	2	1.710	1.370	0.855	0.810
012800-3181	4	2.480	2.140	1.625	1.580
012800-3182	6	3.250	2.910	2.395	2.350
012800-3183	8	4.020	3.680	3.165	3.120



Right Angle PC Tail Mount

Contacts are included

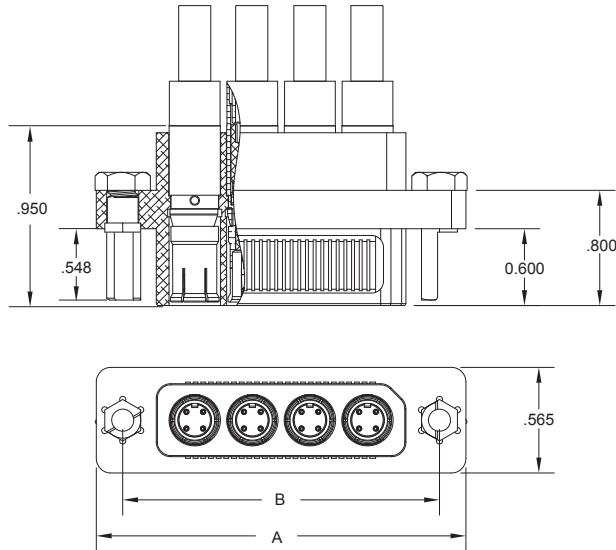
Part Number	Contacts	A	B	C	D
012817-1180	2	1.710	1.370	0.855	0.930
012817-1181	4	2.480	2.140	1.625	1.700
012817-1182	6	3.250	2.910	2.395	2.470
012817-1183	8	4.020	3.680	3.165	3.240



Dimensions are in inches.

Size 3 Quadrax Keyed D-Sub Shells

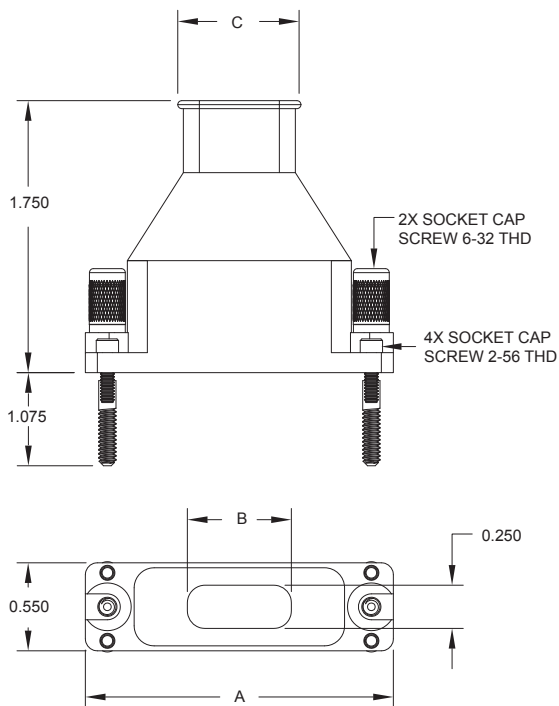
Contacts Not Included



Plug

Requires use of keyed backshell

Part Number	Contacts	A	B
052800-2080	2	1.710	1.370
052800-2081	4	2.480	2.140
052800-2082	6	3.250	2.910
052800-2083	8	4.020	3.680



Backshell

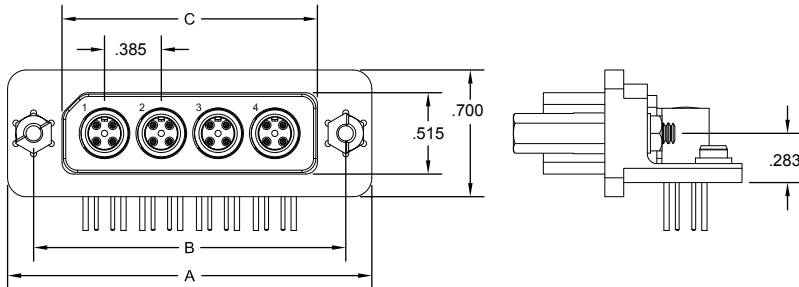
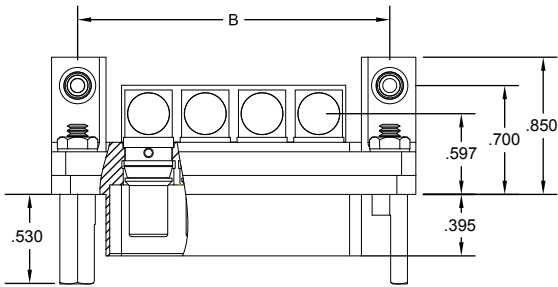
Requires use of keyed plug

Part Number	Contacts	A	B	C
057330-2080	2	1.710	0.460	0.600
057330-2081	4	2.480	1.230	1.370
057330-2082	6	3.250	2.000	2.140
057330-2083	8	4.020	2.770	2.910

Dimensions are in inches.

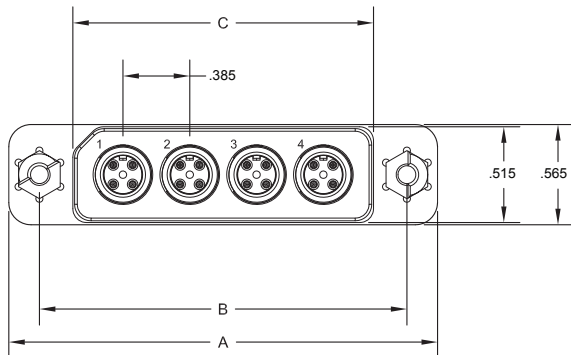
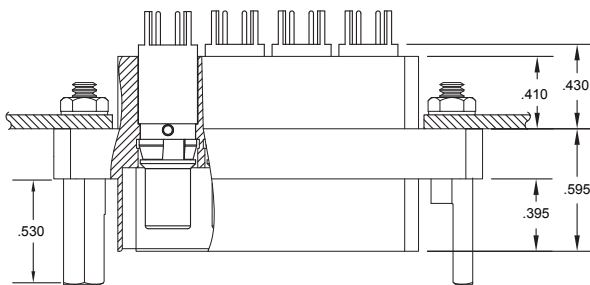
Size 3 Quadrax Keyed PCB Mount D-Sub Shells

Includes Contacts



Right Angle Receptacle

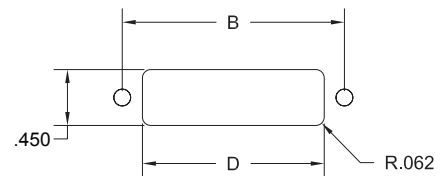
Part Number	Contacts	A	B	C
052717-1180	2	1.710	1.370	0.895
052717-1181	4	2.480	2.140	1.665
052717-1182	6	3.250	2.910	2.435
052717-1183	8	4.020	3.680	3.205



Straight, Front Panel Mount Receptacle

Part Number	Contacts	A	B	C	D
052717-3180	2	1.710	1.370	0.895	0.920
052717-3181	4	2.480	2.140	1.665	1.690
052717-3182	6	3.250	2.910	2.435	2.460
052717-3183	8	4.020	3.680	3.205	3.230

Panel Cutout



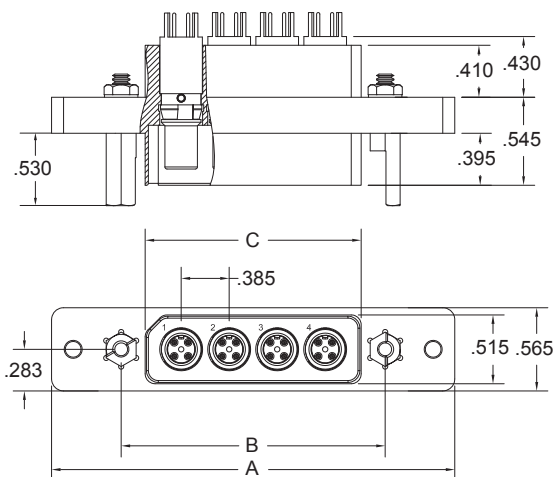
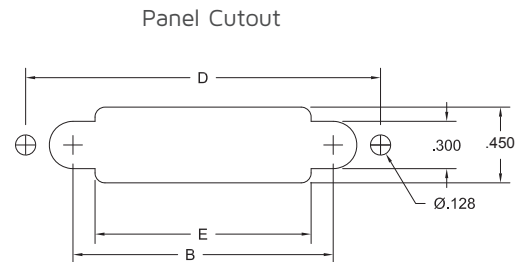
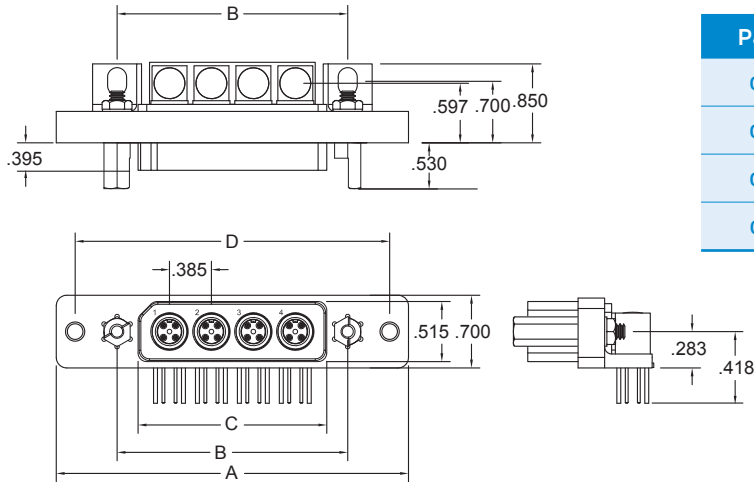
Dimensions are in inches.

Size 3 Quadrax Keyed PCB Mount D-Sub Shells

Includes Contacts

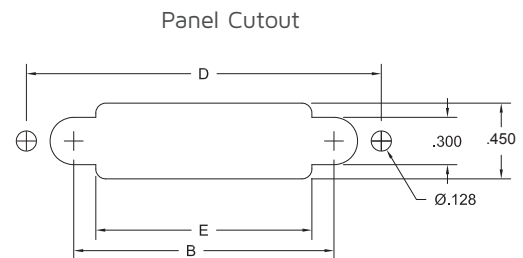
Right Angle, Rear Panel Mount Receptacle

Part Number	Contacts	A	B	C	D	E
052717-1184	2	2.230	1.370	0.895	1.980	0.920
052717-1185	4	3.000	2.140	1.665	2.750	1.690
052717-1186	6	3.770	2.910	2.435	3.520	2.460
052717-1187	8	4.540	3.680	3.205	4.290	3.230



Straight, Rear Panel Mount Receptacle

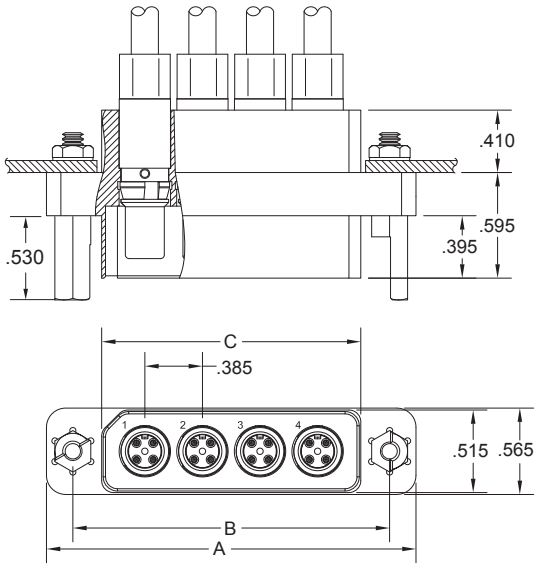
Part Number	Contacts	A	B	C	D	E
052717-3184	2	2.230	1.370	0.895	1.980	0.920
052717-3185	4	3.000	2.140	1.665	2.750	1.690
052717-3186	6	3.770	2.910	2.435	3.520	2.460
052717-3187	8	4.540	3.680	3.205	4.290	3.230



Dimensions are in inches.

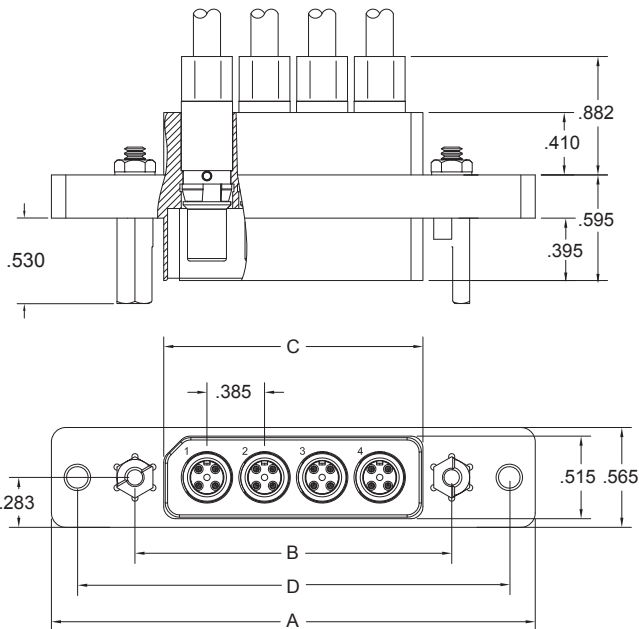
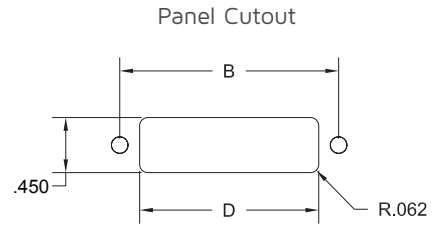
Size 3 Quadrax Keyed Cable Mount D-Sub Shells

Contacts Not Included



Front Panel Mount Receptacle

Part Number	Contacts	A	B	C	D
052700-3080	2	1.710	1.370	0.895	0.920
052700-3081	4	2.480	2.140	1.665	1.690
052700-3082	6	3.250	2.910	2.435	2.460
052700-3083	8	4.020	3.680	3.205	3.230



Rear Panel Mount Receptacle

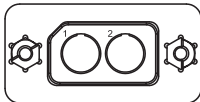
Part Number	Contacts	A	B	C	D
052700-3084	2	2.230	1.370	0.895	1.980
052700-3085	4	3.000	2.140	1.665	2.750
052700-3086	6	3.770	2.910	2.435	3.520
052700-3087	8	4.540	3.680	3.205	4.290

Dimensions are in inches.

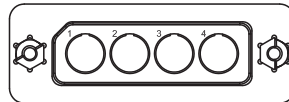
Insert Arrangements

Size 3 Keyed & Non-Keyed Arrangements

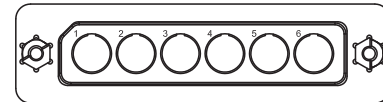
Shell Size 1
Arrangement 1-2
2 #3 Quadrax Contacts



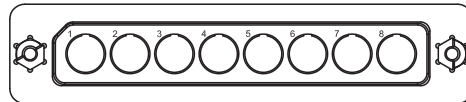
Shell Size 2
Arrangement 2-4
4 #3 Quadrax Contacts



Shell Size 3
Arrangement 3-6²
6 #3 Quadrax Contacts



Shell Size 4
Arrangement 4-8
8 #3 Quadrax Contacts



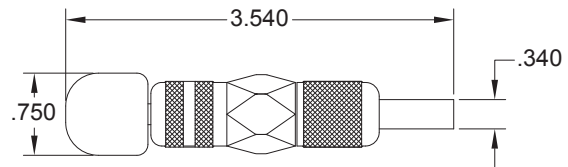
Notes: 1. Please consult factory for environmentally sealed and backshell connectors 2. Six position keyed jackpost allows 36 possible keying combinations

Tools & Accessories

Insert Removal Tool

Use to remove size 3 pin and socket contacts from the plug or receptacle body

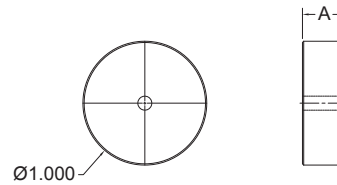
Part Number
SIR-050



Cable Stripping Gauge

Use to trim and strip the quadrx cables to the proper length¹

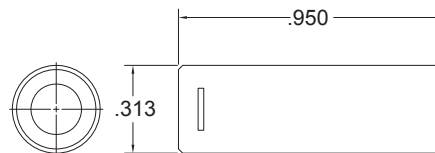
Part Number	Description	A
T-2177-3	Dielectric Cable Stripping Gauge	0.175
T-2177-4	Wire Cable Stripping Gauge	0.340



Assembly Inspection Gauge

Use to verify the proper trim length and consistency during assembly¹

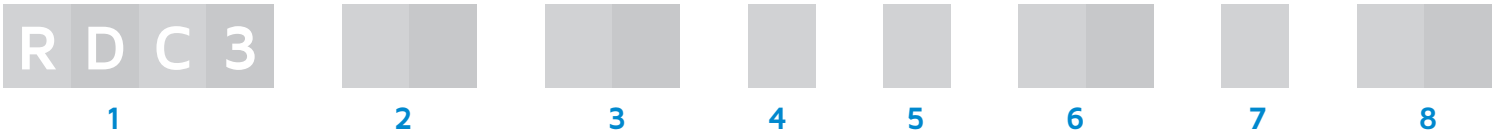
Part Number
T-2150



Notes: 1. Consult factory for Assembly Instructions AI-5020

How To Order

For custom products only. Standard part numbers are listed throughout the brochure.



1 Prefix	R D C 3 Rugged D-Sub Size 3
2 Shell	R N Receptacle, Non-Keyed R K Receptacle, Keyed P N Plug, Non-Keyed P K Plug, Keyed
3 Insert Arrangement	2 , 4 , 6 or 8 Way
4 Plating	C Cadmium (Yellow Chromate) N Electroless Nickel
5 Contact Type	P Pin S Socket
6 Contact Termination	C Crimp S Straight PC Tail R A Right Angle PC Tail
7 Contact	Q Quadrax
8 Cable Group	4 2 540-1211-000 0 No Cable Required

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