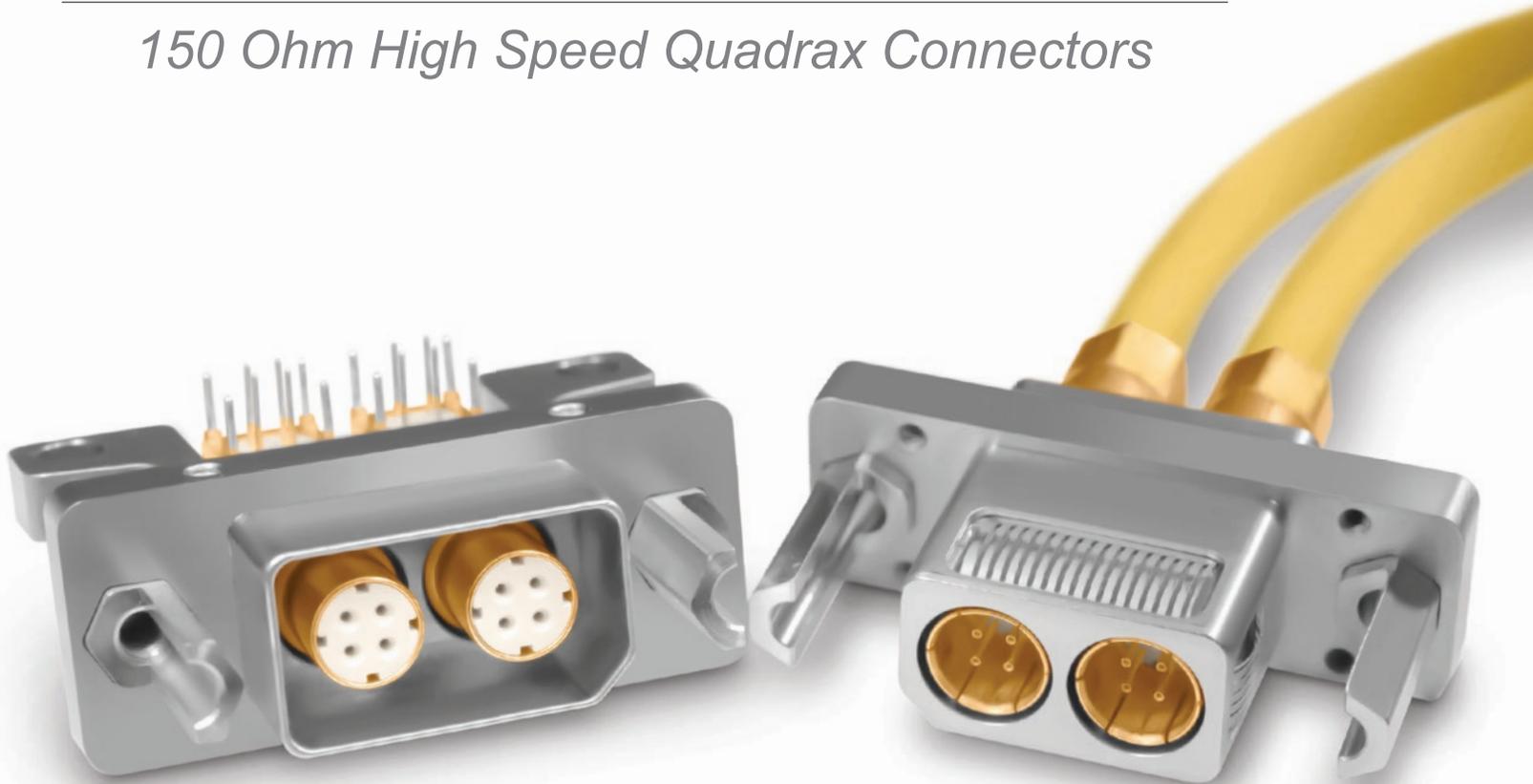


FIBRE CHANNEL D-SUB CONNECTOR SERIES

150 Ohm High Speed Quadrax Connectors



FEATURES

- ▶ **Standard keyed and non-keyed insert arrangements: 2, 4, 6, 8 way; hybrid options available**
- ▶ **Offered with 150 Ω 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

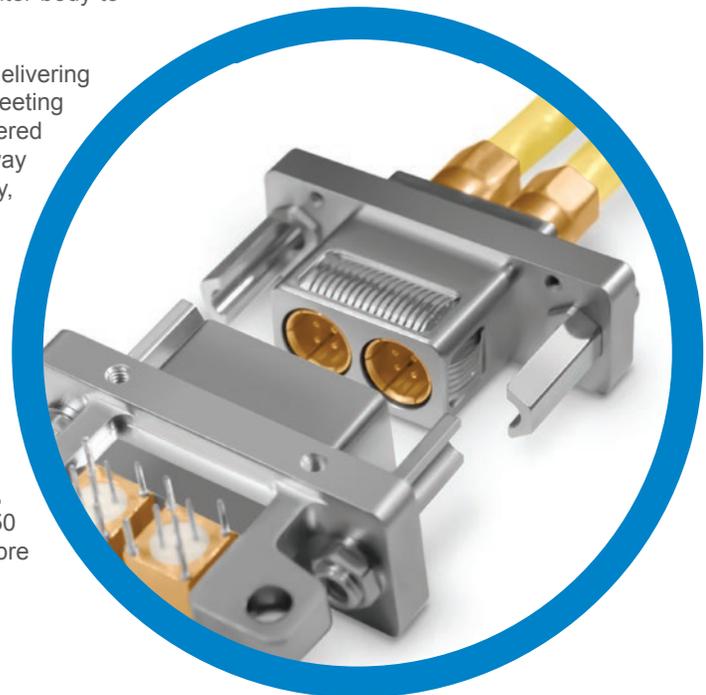
D-SUB CONNECTORS

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 Connectors' 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 delivers 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 and comprehensive training package.

To ensure that 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, ensuring a matched impedance signal throughout the contact mated pair at 150 Ohm differential impedance. These features ensure that Smiths Connectors' Fibre Channel D-Sub connectors deliver the critical edge customers require.



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, Utem 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

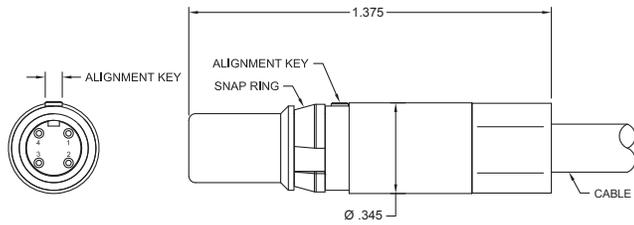
Contacts, Keyed & Non-Keyed Shells

► SIZE 3 QUADRAX CONTACTS

150 Ohm

QUADRAX PIN CONTACT

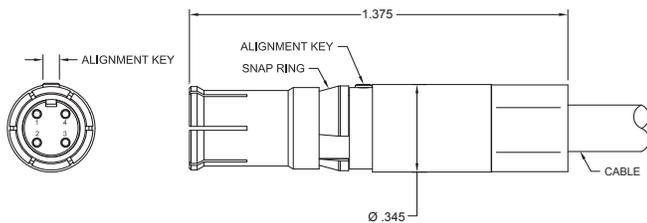
For use in Size 3 Quadrax D-Sub Receptacle
P/N: 012800-31XX and 052700-30XX



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

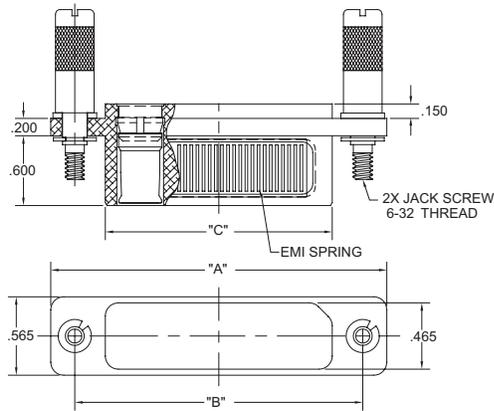


PART NUMBER	CABLE TYPE	CABLE
019535-8035	Differential Quadrax	540-1211-000

► SIZE 3 QUADRAX NON-KEYED D-SUB SHELLS

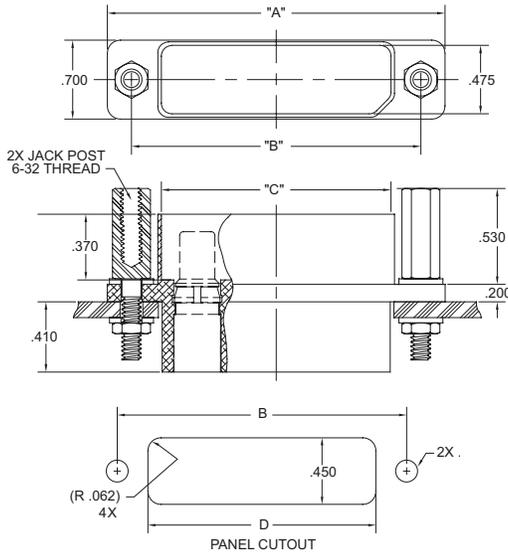
Contacts Not Included

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

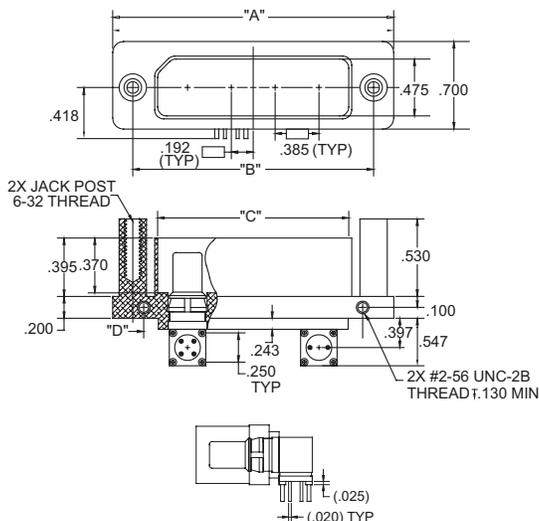
CABLE MOUNT RECEPTACLE



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



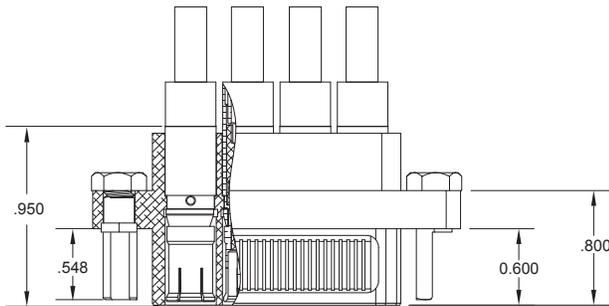
PART NUMBER	CONTACTS	A	B	C	D
012817-1180	2	1.710	1.370	0.855	0.930
012817-1181	4	2.480	2.140	1.625	1.700
012817-1182	6	3.250	2.910	2.395	2.470
012817-1183	8	4.020	3.680	3.165	3.240

► **SIZE 3 QUADRAX KEYED D-SUB SHELLS**

Contacts Not Included

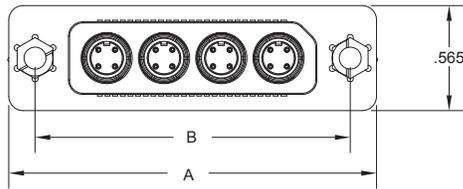
PLUG

Requires use of keyed backshell



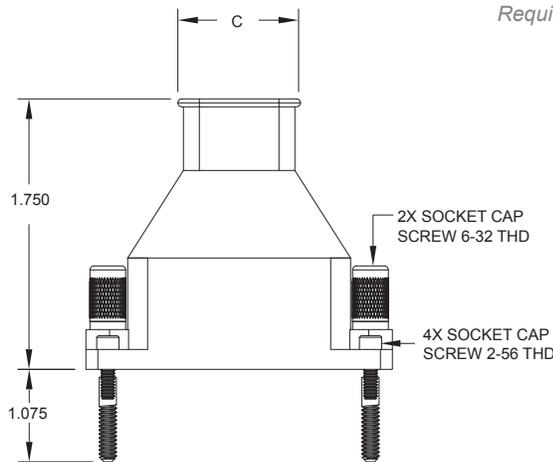
PART NUMBER CONTACTS A B

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



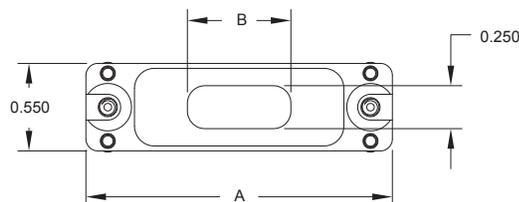
BACKSHELL

Requires use of keyed plug



PART NUMBER CONTACTS A B C

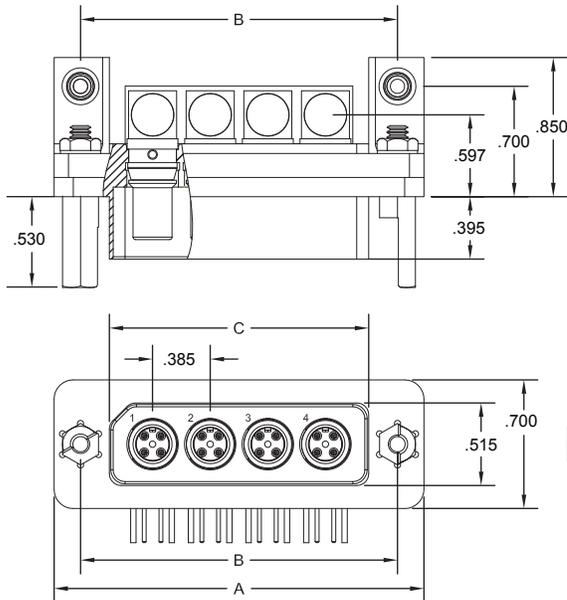
PART NUMBER	CONTACTS	A	B	C
057330-2080	2	1.710	0.460	0.600
057330-2081	4	2.480	1.230	1.370
057330-2082	6	3.250	2.000	2.140
057330-2083	8	4.020	2.770	2.910



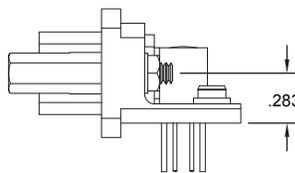
► SIZE 3 QUADRAX KEYED PCB MOUNT D-SUB SHELLS

Includes Contacts

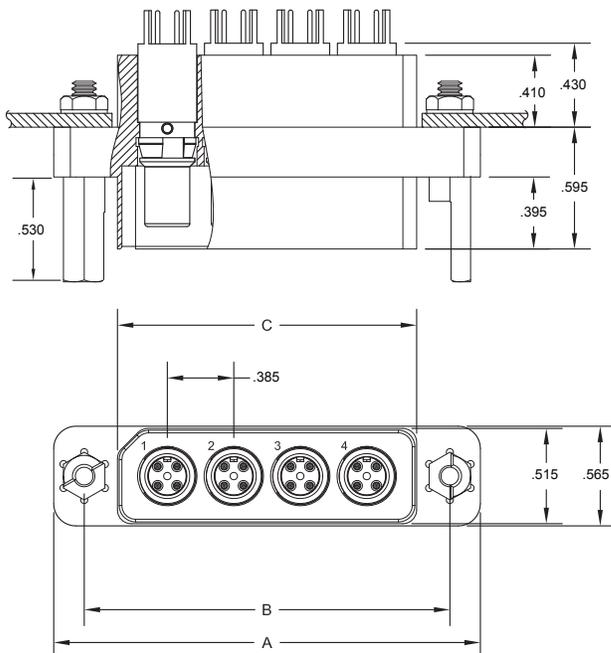
RIGHT ANGLE RECEPTACLE



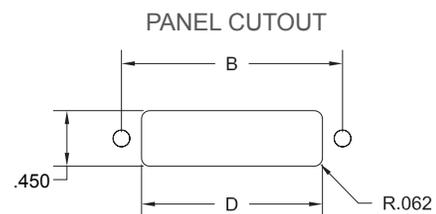
PART NUMBER	CONTACTS	A	B	C
052717-1180	2	1.710	1.370	.895
052717-1181	4	2.480	2.140	1.665
052717-1182	6	3.250	2.910	2.435
052717-1183	8	4.020	3.680	3.205



STRAIGHT, FRONT PANEL MOUNT RECEPTACLE



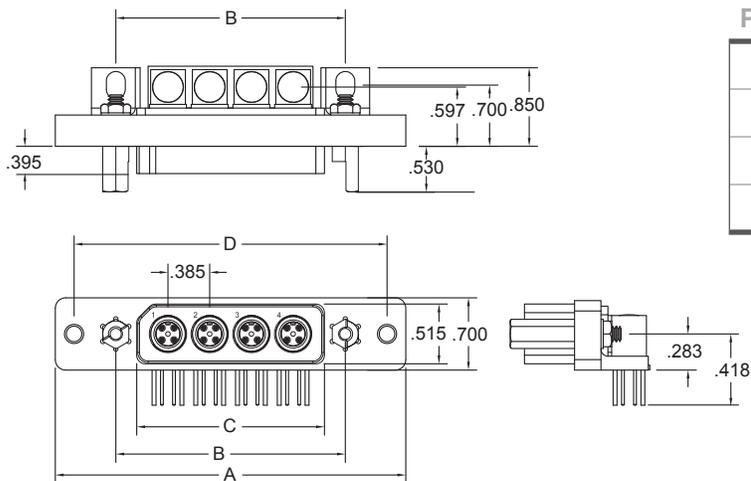
PART NUMBER	CONTACTS	A	B	C	D
052717-3180	2	1.710	1.370	0.895	0.920
052717-3181	4	2.480	2.140	1.665	1.690
052717-3182	6	3.250	2.910	2.435	2.460
052717-3183	8	4.020	3.680	3.205	3.230



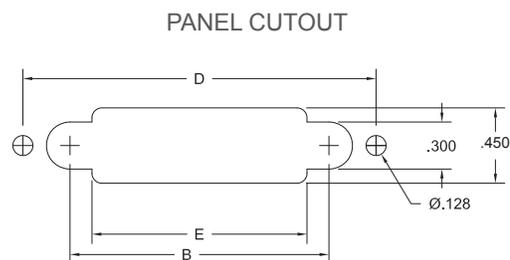
► **SIZE 3 QUADRAX KEYED PCB MOUNT D-SUB SHELLS**

Includes Contacts

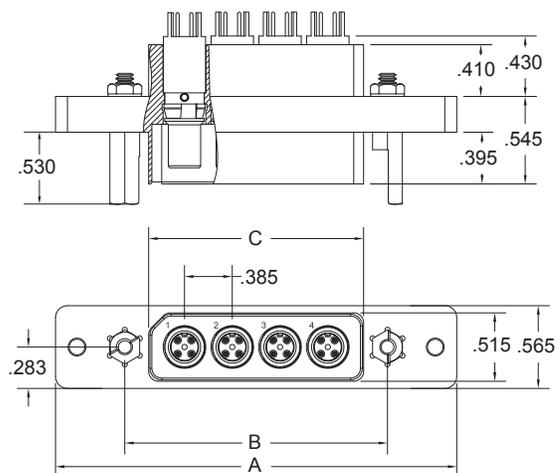
RIGHT ANGLE, REAR PANEL MOUNT RECEPTACLE



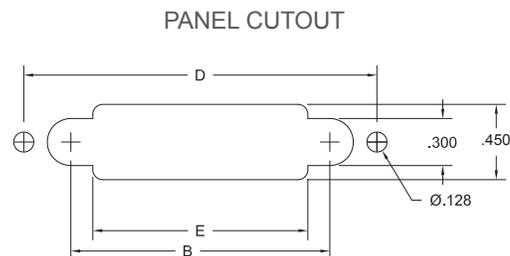
PART NUMBER	CONTACTS	A	B	C	D	E
052717-1184	2	2.230	1.370	0.895	1.980	0.920
052717-1185	4	3.000	2.140	1.665	2.750	1.690
052717-1186	6	3.770	2.910	2.435	3.520	2.460
052717-1187	8	4.540	3.680	3.205	4.290	3.230



STRAIGHT, REAR PANEL MOUNT RECEPTACLE



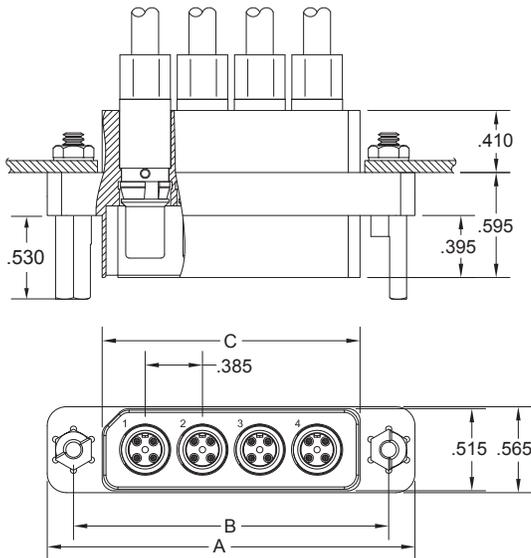
PART NUMBER	CONTACTS	A	B	C	D	E
052717-3184	2	2.230	1.370	0.895	1.980	0.920
052717-3185	4	3.000	2.140	1.665	2.750	1.690
052717-3186	6	3.770	2.910	2.435	3.520	2.460
052717-3187	8	4.540	3.680	3.205	4.290	3.230



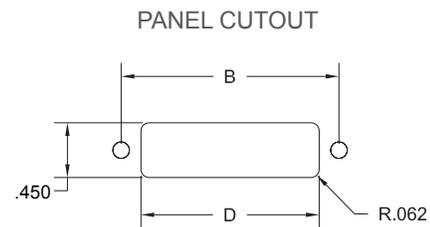
► SIZE 3 QUADRAx KEyED CABLE MOUNT D-SUB SHELLS

Contacts Not Included

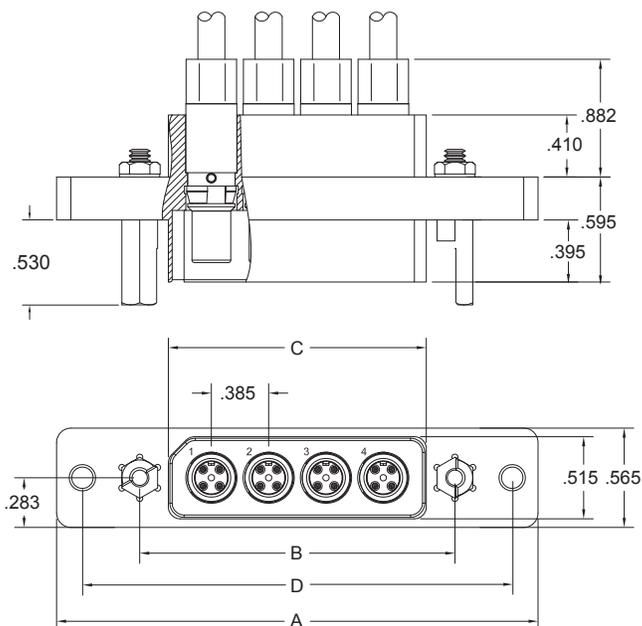
FRONT PANEL MOUNT RECEPTACLE



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



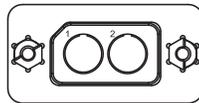
PART NUMBER	CONTACTS	A	B	C	D
052700-3084	2	2.230	1.370	0.895	1.980
052700-3085	4	3.000	2.140	1.665	2.750
052700-3086	6	3.770	2.910	2.435	3.520
052700-3087	8	4.540	3.680	3.205	4.290

INSERT ARRANGEMENTS

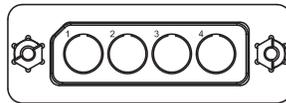
For Keyed & Non-Keyed Shells

► SIZE 3 KEYED & NON-KEYED ARRANGEMENTS

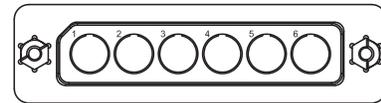
**SHELL SIZE 1
ARRANGEMENT 1-2**
2 #3 Quadrax Contacts



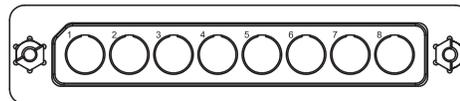
**SHELL SIZE 2
ARRANGEMENT 2-4**
4 #3 Quadrax Contacts



**SHELL SIZE 3
ARRANGEMENT 3-6⁽²⁾**
6 #3 Quadrax Contacts



**SHELL SIZE 4
ARRANGEMENT 4-8**
8 #3 Quadrax Contacts



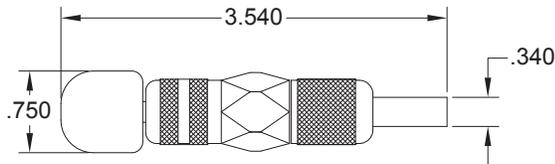
Notes:

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

TOOLS & ACCESSORIES

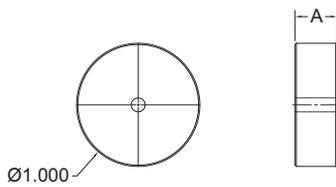
▶ INSERT REMOVAL TOOL

Part Number: SIR-050 | Use to remove size 3 pin and socket contacts from the plug or receptacle body



▶ CABLE STRIPPING GAGE

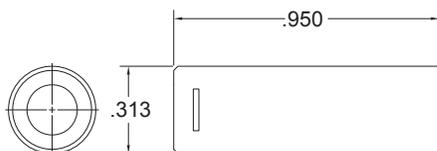
Use to trim and strip the quadrax cables to the proper length⁽¹⁾



PART NUMBER	DESCRIPTION	A
T-2177-3	Dielectric Cable Stripping Gage	0.175
T-2177-4	Wire Cable Stripping Gage	0.340

▶ ASSEMBLY INSPECTION GAUGE

Part Number: T-2150 | Use to verify the proper trim length and consistency during assembly⁽¹⁾



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

RDC3 RUGGED D-SUB SIZE 3

2 ▶ SHELL

RN RECEPTACLE, NON-KEYED

RK RECEPTACLE, KEYED

PN PLUG, NON-KEYED

PK 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

RA RIGHT ANGLE PC TAIL

7 ▶ CONTACT

Q QUADRAX

8 ▶ CABLE GROUP

42 540-1211-000

0 NO CABLE REQUIRED