



DSX Series

SAE AS81659

Arinc 404



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Introduction

The Radiall **DSX** rack and panel series are multipin rectangular connectors used to electrically interface avionics equipment to equipment rack. Usually the plug is installed on the avionics rack and the receptacle on the equipment box. The mated locking mechanism is provided for the equipment and cabinet and is not a part of the connector pair.

These connectors are widely used in applications such as:

- Commercial / military aircraft and helicopters
- Radar systems
- Power circuits
- In-flight electronic instrumentation
- Flight simulators, etc...

The following versions are offered:

DSX – SAE AS81659: connectors conforming to SAE AS81659 including connectors listed on the QPL81659

DSX - ARINC 404 shell type B: connectors conforming to ARINC 404 shell type B - polarized shells

DSX - ARINC 404 shell type A: connectors conforming to ARINC 404 shell type A - single shell (without polarization)

DSX - F: connectors for front release front removable contacts (receptacle only)

DSX - DATA BUS: connectors for interconnection of multiplexed digital links

DSX - EMI/RFI: shielded connectors

DSX – SAE AS81659

These connectors fully conform to SAE AS81659 specifications and are listed on the associated Qualified Product List. They are available in four shell sizes (1, 2, 3 and 4) which can respectively accept 1, 2, 3 and 4 inserts. Inserts are offered in various contact arrangements accommodating rear release rear removable signal (size 22), power (sizes 5, 12, 16 and 20HD), coaxial (sizes 1, 3, 5, 7, 9 and 15), concentric twinax (sizes 5 and 9), triax (sizes 5 and 9) contacts in crimp, wire wrap or PC tail termination. Radiall's 29504 fiber optic termini are also available. Both environmental and non environmental connectors are offered.

Mismating is prevented by a polarizing system which provides 216 polarizing positions. For military part numbers, applicable polarizing positions range goes from 00 through 99 only.

DSX - ARINC 404 SHELL TYPE B

Arinc 404 shell type B are the commercial version. Here are the commercial features compared to the military version:

- They use both size 20HD and size 20 contacts.
- They are non environmental. Inserts are fitted with a rubber separator on the back of their wiring which does not provide sealing but provides wire protection.
- Removable size 5 and 9 coaxial contacts are not interchangeable with those of the military type.
- Insert retention plate is yellow anodized instead of blue anodized on the military version.

DSX - ARINC 404 SHELL TYPE A

DSX - ARINC 404 shell type A connectors are only available in shell size 1. They use ARINC 404 shell type B inserts; only one insert can be installed in the connector shell. Shell type A has no polarization system, mismating is prevented by keystone shaped shells. DSX ARINC 404 shell type A connectors cannot be fitted with any backshell.

Introduction

DSX - F

DSX - F receptacle connectors are available in four shell sizes (1, 2, 3 and 4) and are designed to be fitted with front release front removable contacts offered in pc tail and wire wrap termination. Inserts are offered with or without an interfacial seal (in both cases they are not and are fitted with a separator) and are available in the following contact arrangements: 106, 67, 57, 45, 40, 33C4, 26.

DSX - F connectors are fully intermateable with connectors of the ARINC 404 shell type B and SAE AS81659 versions.

DSX - DATA BUS

These connectors have been designed to ensure the interconnection of multiplexed digital links used in military equipment.

DSX - EMI / RFI

In response to the continuing development of electronic systems used in ever harsher environments, these connectors have been designed to improve the shielding effectiveness against electromagnetic and radio frequency interferences (EMI/RFI) as well as electromagnetic pulses (EMP).

Applications

These connectors are used to form the electrical interface between avionics equipment to rack equipment.



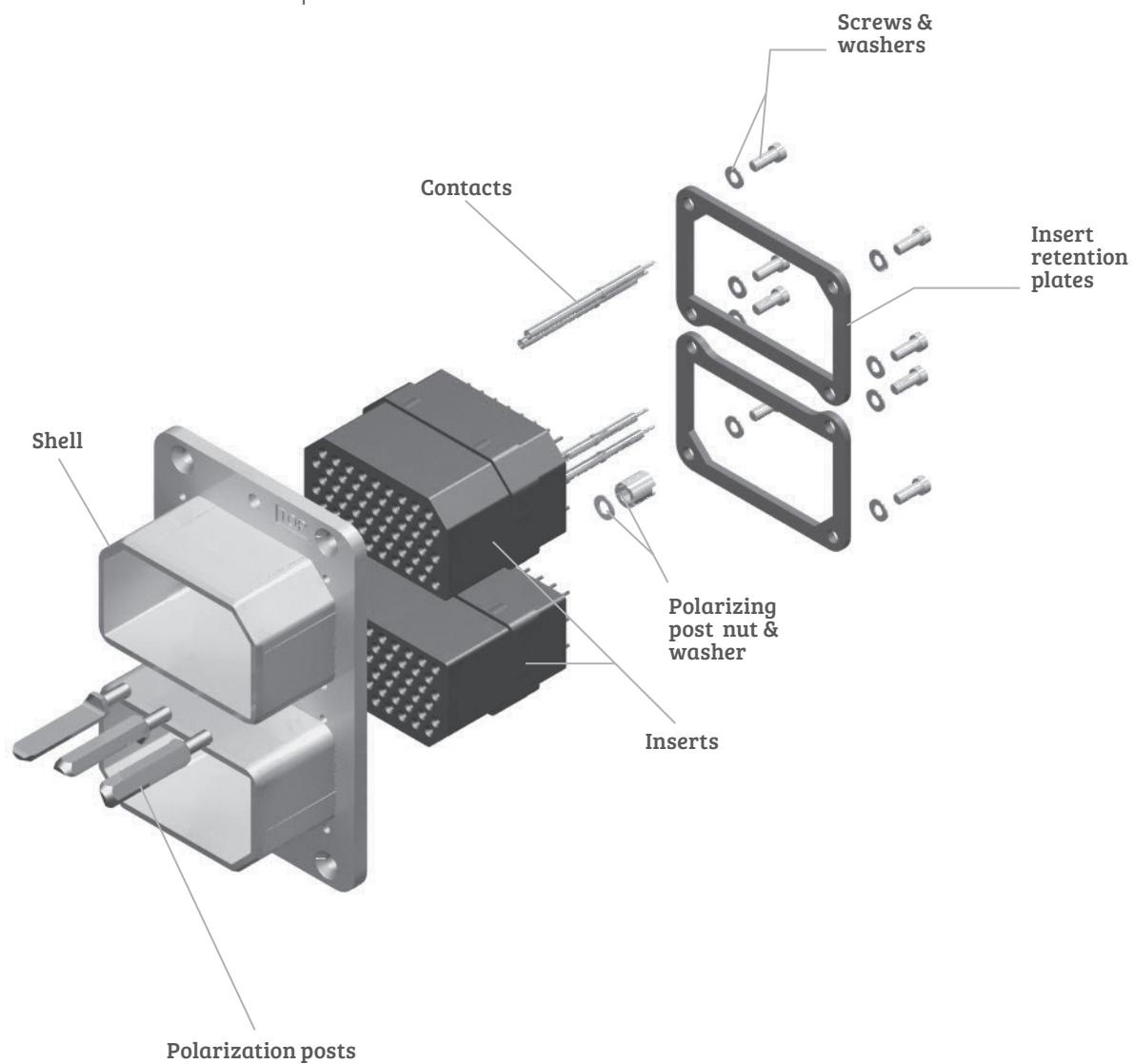
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DSX SERIES

Product Overview

Detailed view of the various parts of this series connector.



Technical Characteristics**ELECTRICAL****Magnetic permeability:** <2 μ **Insulation resistance:** >5000 M Ω **Dielectric withstanding voltage:** see contact arrangement on pages 6-10 to 6-12**Contact resistance:** according to requirements of SAE AS39029**Coax contacts electrical characteristics****Nominal impedance:** 50 Ω **VSWR**

- Sizes 5, 7 and 9: 1.3 from DC to 1500MHz
- Sizes 1 and 3: 1.3 from DC to 5000 MHz

Contact size	AWG	Cross section mm ² (sq.in)	Min. Outside dia. mm (inch)	Max. outside dia. mm (inch)	Max current (A)
22	22	0.38 [0.015]	0.76 [0.030]	1.4 [0.055]	5
	24	0.21 [0.008]			3
	26	0.14 [0.006]			2
20HD	20	0.60 [0.024]	1 [0.039]	1.8 [0.071]	7.5
	22	0.38 [0.015]			5
	24	0.21 [0.008]			3
16	16	1.34 [0.053]	1.70 [0.067]	2.6 [0.102]	13
	18	0.93 [0.037]			10
	20	0.60 [0.024]			7.5
12	12	3.18 [0.125]	2.4 [0.094]	3.4 [0.134]	23
	14	1.91 [0.075]			17
	16	1.34 [0.052]			13
For cavity 5	8	9.00 [0.354]	3.4 [0.134]	6.48 [0.255]	46
	10	5.00 [0.197]			33
	12	3.18 [0.125]			23
	14	1.91 [0.075]			17

MECHANICAL & ENVIRONMENTAL**Temperature range:** -65°C (-85°F) / +125°C (+257°F)**Temperature life:** 1000 hours at +125°C (+257°F)**Salt spray:** EIA 364-26 (MIL-STD-1344A method 1001.1 test condition B (48 hours))**Altitude moisture injection:** Insulation resistance > 100 M Ω altitude 50000 feet**Fluid resistance:** resistance to 20 hours immersion in fluids MIL PRF 5606 & MIL PRF 23699**Durability:** 500 matings & unmating cycles**Vibration:** EIA 364-28 (MIL-STD-1344A method 2005 test condition IV (20g – 10-2000Hz))**Shock:** EIA 364-27 (MIL-STD-1344A method 2004 test condition A (50g -11ms – half sine))**Mating force:** < 200N (45 lbs) per insert**Insert retention force:** > 534N (120 lbs) in each direction**Contact retention force:** max axial displacement = 0.3mm (0.012 inches)

Contact size	22	20HD	16	12
Axial load N (lbs)	66N (15)	89N (20)	111N (25)	133.5N (30)

Technical Characteristics

MATERIALS

Description	Material	Plating
Shell	Aluminium alloy	Cadmium yellow chromate*
Insert	Thermosetting resin	/
Metallic insert	Aluminium alloy	Cadmium clear chromate*
Interfacial seal & grommet	Silicone rubber	/
Retention clip	Copper alloy	/
Contact	Copper alloy	Gold over nickel under plate
Insert retention plate	Aluminium alloy	Blue anodised*
Polarizing posts	Stainless steel	/
Polarizing keys	Zinc alloy	Cadmium yellow chromate
Polarizing keys retention plate	Aluminium alloy	Cadmium yellow chromate*
Screws, washers, clinch-nuts	Corrosion resistant steel	/
Sealing plugs and filler plugs	PTFE	/
Sealing boots and sleeves	Fluorinated silicon rubber	/
Sealing bushing	PEI	/
Junction shells	Aluminium alloy	Yellow anodized or nickel plated

* More platings are available, see descriptions in modification codes

MASSES (estimates)

Description	Weight g (oz)
Plug shell size 1	30 (1.05)
Plug shell size 2	45 (1.60)
Plug shell size 3	60 (2.15)
Plug shell size 4	85 (3)
Receptacle shell 1	30 (1.05)
Receptacle shell 2	50 (1.75)
Receptacle shell 3	85 (3)
Receptacle shell 4	115 (4.05)
Plastic insert	20 (0.70)
Metallic insert	35 (1.25)
Junction shells	25 (0.88)

How to Order Connectors

DSX SERIES

	DSX	N	4	P	G	S	40	S	S8S	S26S	S45P	00	01
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Series _____

Class _____
N: Non environmental (without grommet and interfacial seal)
E: Environmental (with grommet and interfacial seal)
T: Connector with interfacial seal on insert with protruding contacts only

Shell size _____
1: One gang shell
2: Two gang shell
3: Three gang shell
4: Four gang shell

Shell type _____
R: Receptacle
P: Plug

Grounding EMI/RFI _____
G: with grounding spring (only for plug connector)

Termination style _____
X: Without contacts (for crimp contacts only)
S: Crimp⁽¹⁾
V: Wire wrap two levels⁽⁴⁾
W: Wire wrap three levels⁽⁴⁾
Y: PC tail contact⁽⁴⁾

Contact arrangement⁽²⁾ _____ **Gang A**
See available contact arrangements on pages 6-10 to 6-12

Contact type _____
S: Socket
P: Pin

Gang B _____

Gang C _____

Gang D _____

Modification code _____
See pages 6-13 to 6-19 for selection
Modification code will help in choosing the appropriate plating for your application.

Polarization code⁽³⁾ _____
See pages 6-20 to 6-21 for selection

Important note: If you want to get connectors marked with the military part number (i.e. M81659/66A2-0083) you must order by using the military part number. Radiall part numbers qualified to SAE AS81659 versus military part numbers are listed from pages 6-36 to 6-39.

NOTES:

- (1) For reduced crimp barrel, thermocouple or fiber optic contacts, use code X and order contact separately.
- (2) For contact arrangements which include coax or quadrax contacts, use termination code X. Quadrax and coax contacts must be ordered separately.
- (3) Without polarization code the connector is delivered with the polarizing system unassembled. With polarization code 00: the connector is delivered without polarizing system. With polarization code from 01 to 216: the connector is delivered with polarization hardware assembled as defined by code. Polarization codes for connector qualified to SAE AS81659 are ranging from 00 to 99 only.
- (4) PC tail and wire wrap contacts must be used only with non environmental version. PC tail and wire wrap contacts are delivered installed. For 67, 32C4 and 33C4 contact arrangements, size 16 contacts are delivered not installed and in crimp termination.

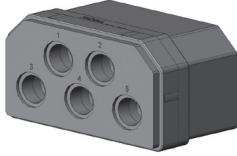
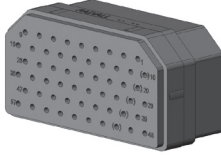
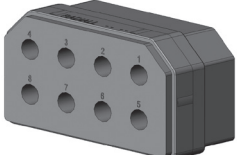
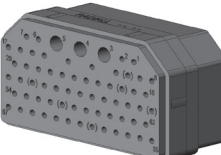
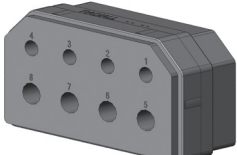
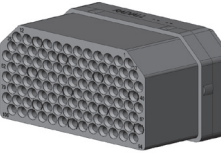
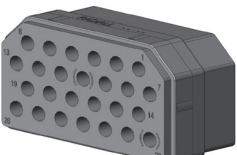
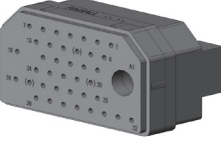
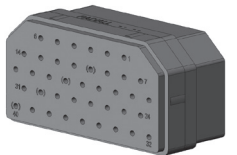
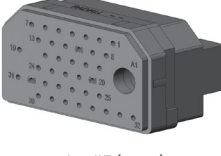
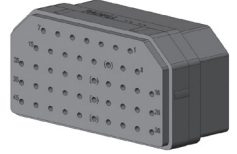
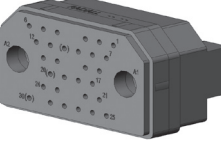
Contact Arrangements

Pin insert mating side shown

Class N for non environmental insert

Class E for environmental insert

Class T for insert with interfacial seal only

Insert name	Number of contacts	Dielectric Withstanding Voltage (DWV)	Class			Insert name	Number of contacts	DWV	Class		
			N	E	T				N	E	T
C5 ⁽¹⁾	 5 x #5 (power)	2500V – 60Hz This insert is available in class N only.	✓			57 ⁽¹⁾	 57 x #20HD	1500V – 60Hz	✓	✓	✓
8	 8 x #12	1500V – 60Hz	✓	✓	✓	67	 64 x #20HD 3 x #16	1000V – 60Hz	✓	✓	✓
D8	 4 x #16 4 x #12	1500V – 60Hz	✓	✓	✓	106	 106 x #22	1000V – 60Hz	✓	✓	✓ (2)
26	 26 x #16	1500V – 60Hz	✓	✓	✓	40C1	 1 x #5 (coax) 39 x #20HD	1500V – 60Hz	✓	✓	
40	 40 x #20HD	1500V – 60Hz	✓	✓	✓	40T1 ⁽¹⁾	 1 x #5 (coax) 39 x #20HD	1500V – 60Hz Size 5 contact cavity grounded to the shell	✓	✓	
45	 45 x #20HD	1500V – 60Hz	✓	✓	✓	32C2	 2 x #5 (coax) 30 x #20HD	1000V – 60Hz	✓	✓	

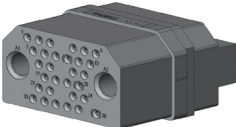
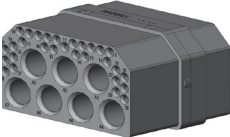
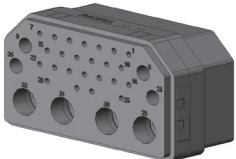
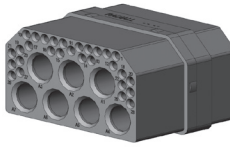
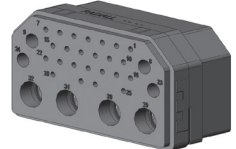
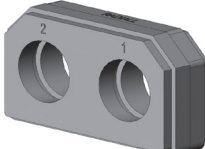
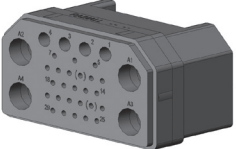
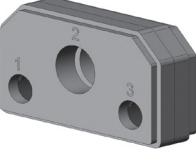
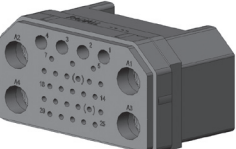
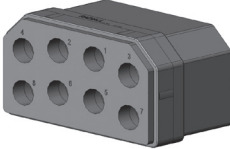
NOTES:

(1) Contact arrangements are not referenced in the MS3157 and SAE AS81659 standards

(2) class T insert are for pin contacts only except insert arrangement 106; 36C7 and 36T7 which are for socket contacts only

Contact Arrangements

Pin insert mating side shown

Insert name	Number of contacts	DWV	Class			Insert name	Number of contacts	DWV	Class		
			N	E	T				N	E	T
32T2 ⁽¹⁾	 2 x #5 (coax) 30 x #20HD	1000V – 60Hz Size 5 contact cavities grounded to the shell	✓	✓		36C7 ⁽¹⁾	 7 x #5 (coax) 29 x #22	1000V – 60Hz	✓	✓	✓ (2)
32C4	 4 x #9 (coax) 4 x #16 24 x #20HD	1500V – 60Hz	✓	✓	✓	36T7 ⁽¹⁾	 7 x #5 (coax) 29 x #22	1000V – 60Hz Size 5 contact cavities grounded to the shell	✓	✓	✓ (2)
32T4 ⁽¹⁾	 4 x #9 (coax) 4 x #16 24 x #20HD	1500V – 60Hz Size 9 contact cavities grounded to the shell	✓	✓		MC2	 2 x #1 (coax)	This insert is metallic	✓		
33C4	 4 x #5 (coax) 4 x #1625 x #20HD	1000V – 60Hz	✓	✓	✓	MC3	 2 x #7 (coax) 1 x #3 (coax)	This insert is metallic	✓		
33T4 ⁽¹⁾	 4 x #5 (coax) 4 x #16 25 x #20HD	1000V – 60Hz Size 5 contact cavities grounded to the shell	✓	✓	✓	C8	 8 x #9 (coax)	1000V – 60Hz	✓	✓	✓

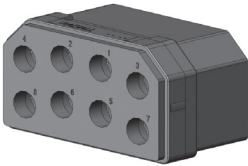
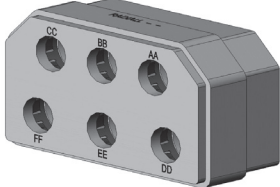
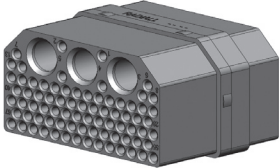
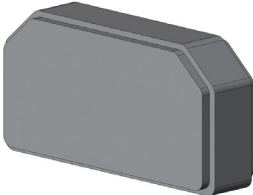
NOTE:

(1) Contact arrangements are not referenced in the MS3157 and SAE AS81659 standards

(2) class T insert are for pin contacts only except insert arrangement 106; 36C7 and 36T7 which are for socket contacts only

Contact Arrangements

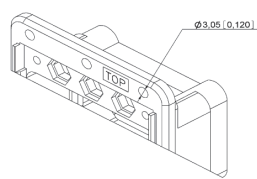
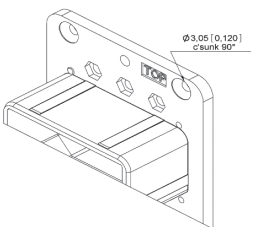
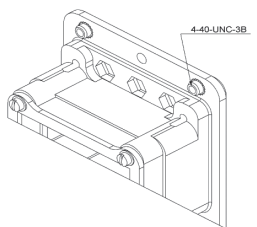
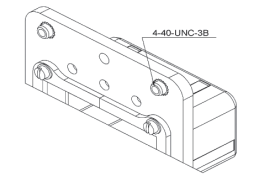
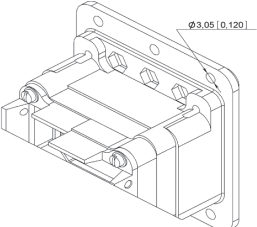
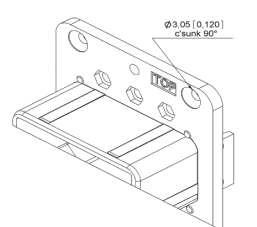
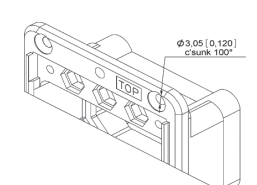
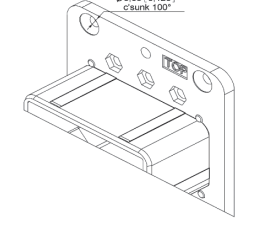
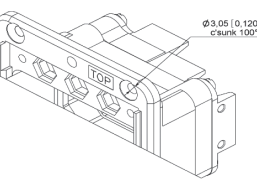
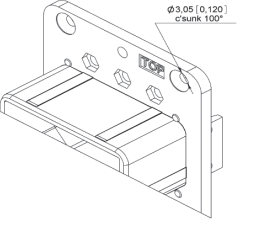
Pin insert mating side shown

Insert name	Number of contacts	DWV	Class		
			N	E	T
T8*	 8 x #9 (coax)	Size 9 contact cavities grounded to the shell. Pin contact available only	✓	✓	✓
6CU	 6 x #8 Quadrax	Size 8 contact cavities grounded to the shell. Non environmental only	✓	✓	
81C3	 78 x #22 3 x #5 (coax)	1000V - 60Hz	✓ for pin contact only		
00*		Dummy insert			

Modification Code

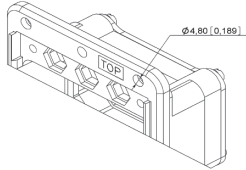
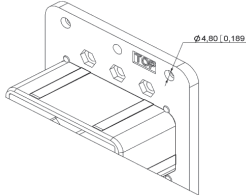
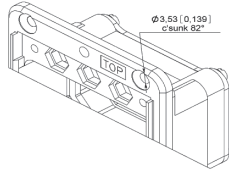
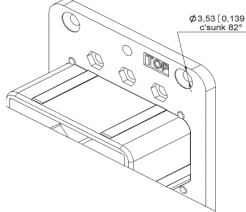
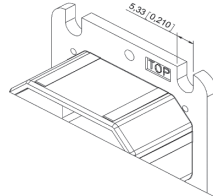
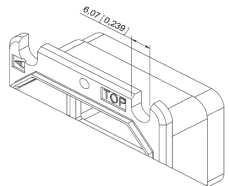
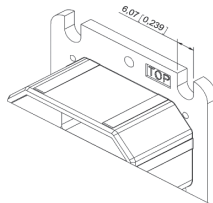
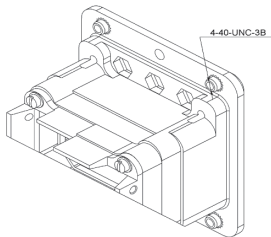
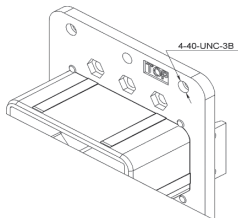
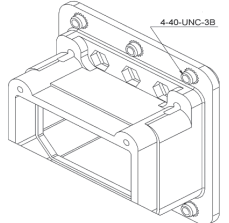
Connectors can be front or rear mount. It should be noted that:

- There is only 4mm between the connector flange when fully mated. Please note that the modification code and screw type should be selected accordingly.
- The modification code with floating eyelets can be mated with the fixed modification.

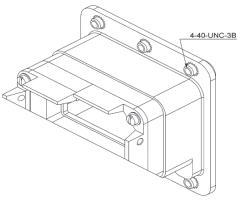
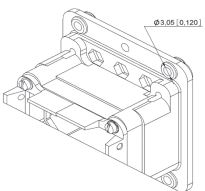
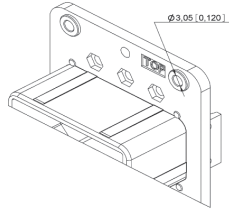
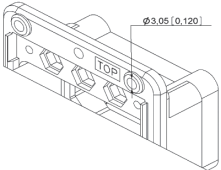
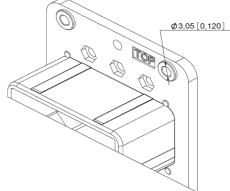
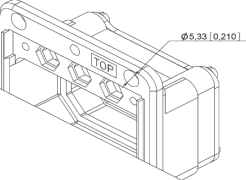
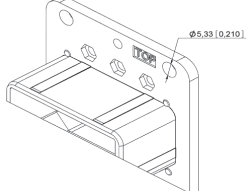
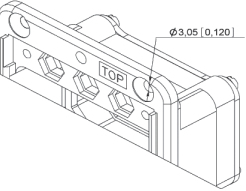
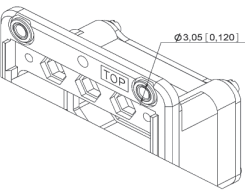
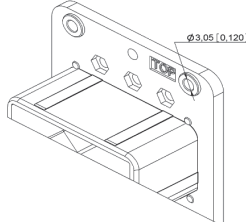
CODE	Receptacle shell	Plug shell
00	 Sizes 1,2 & 3: 6 holes Ø3,05 (0.120) Size 4: 10 holes Ø3,05 (0.120)	 Sizes 1 & 2: 4 holes Ø3,05 (0.120) c'sunk 90° Size 3: 6 holes Ø3,05 (0.120) c'sunk 90° Size 4: 10 holes Ø3,05 (0.120) c'sunk 90°
01	 Sizes 1 & 2: 4 clinch nuts 4.40 UNC 3B Size 3: 6 clinch nuts 4.40 UNC 3B Size 4: 10 clinch nuts 4.40 UNC 3B	 Sizes 1 & 2: 4 clinch nuts 4.40 UNC 3B Size 3: 6 clinch nuts 4.40 UNC 3B Size 4: 10 clinch nuts 4.40 UNC 3B
02	 Sizes 1, 2 & 3: 6 holes Ø3,05 (0.120) with attaching tabs for RADIALL backshell Not Available in Size 4	 Sizes 1 & 2: 4 holes Ø3,05 (0.120) c'sunk 90° with attaching tabs for RADIALL backshell Size 3: 6 holes Ø3,05 (0.120) c'sunk 90° with attaching tabs for RADIALL backshell Not Available in Size 4
03	 Sizes 1 & 2: 4 holes Ø3,05(0.120) c'sunk 100° Size 3: 6 holes Ø3,05(0.120) c'sunk 100° Size 4: 10 holes Ø3,05(0.120) c'sunk 100°	 Sizes 1 & 2: 4 holes Ø3,05(0.120) c'sunk 100° Size 3: 6 holes Ø3,05(0.120) c'sunk 100° Size 4: 10 holes Ø3,05(0.120) c'sunk 100°
04	 Sizes 1 & 2: 4 holes Ø3,05(0.120) c'sunk 100° with attaching tabs for RADIALL backshell Size 3: 6 holes Ø3,05(0.120) c'sunk 100° with attaching tabs for RADIALL backshell Not Available in Size 4	 Sizes 1 & 2: 4 holes Ø3,05(0.120) c'sunk 100° with attaching tabs for RADIALL backshell Size 3: 6 holes Ø3,05(0.120) c'sunk 100° with attaching tabs for RADIALL backshell Not Available in Size 4

DSX SERIES

Modification Code

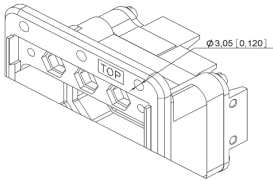
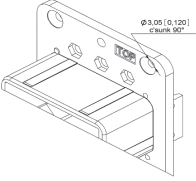
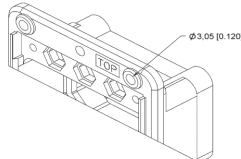
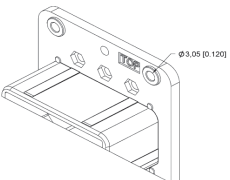
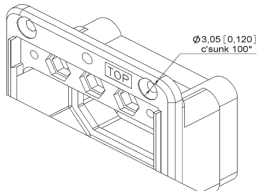
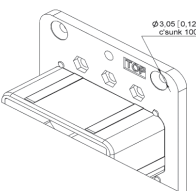
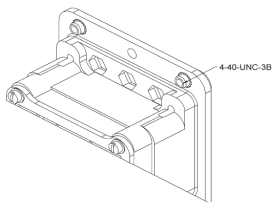
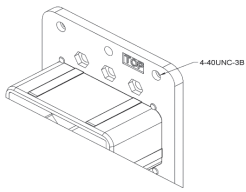
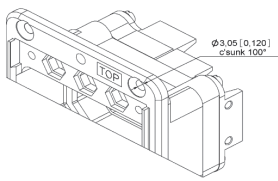
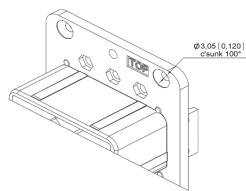
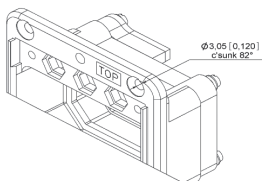
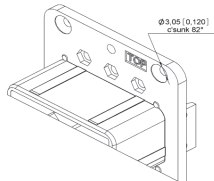
Code	Receptacle shell	Plug shell
05	 Sizes 1,2 & 3: 4 holes Ø4,80 (0.189) Size 4: 10 holes Ø4,80 (0.189)	 Sizes 1,2 & 3: 4 holes Ø4,80 (0.189) Size 4: 10 holes Ø 4,80 (0.189)
08	 Sizes 1 & 2: 4 holes Ø3,53 (0.139) c'sunk 82° Size 3: 6 holes Ø3,53 (0.139) c'sunk 82°	 Sizes 1 & 2: 4 holes Ø3,53 (0.139) c'sunk 82° Size 3: 6 holes Ø3,53 (0.139) c'sunk 82°
12	--	 Sizes 1, 2 & 3: 4 mounting slots 5,33 (0.210) wide
13	 Sizes 1, 2 & 3: 4 mounting slots 6,07 (0.239) wide	 Sizes 1, 2 & 3: 4 mounting slots 6,07 (0.239) wide
17	 Sizes 1 & 2: 4 clinch nuts 4.40 UNC 3B with attaching tabs for RADIALL backshell Size 3: 6 clinch nuts 4.40 UNC 3B with attaching tabs for RADIALL backshell Not Available in Size 4	 Sizes 1 & 2: 4 clinch nuts 4.40 UNC 3B with attaching tabs for RADIALL backshell Size 3: 6 clinch nuts 4.40 UNC 3B with attaching tabs for RADIALL backshell Not available in size 4
18	 Sizes 1, 2 & 3: 6 clinch nuts 4.40 UNC 3B Not Available in Size 4	--

Modification Code

Code	Receptacle shell	Plug shell
19	 Sizes 1, 2 & 3: 6 clinch nuts 4.40 UNC 3B with attaching tabs for RADIALL backshell Not Available in Size 4	--
22	 Sizes 1 & 2: 4 floating eyelets Ø3,05 (0.120) with attaching tabs for RADIALL backshell Size 3: 6 floating eyelets Ø3,05 (0.120) with attaching tabs for RADIALL backshell Not Available in Size 4	 Sizes 1 & 2: 4 floating eyelets Ø3,05 (0.120) with attaching tabs for RADIALL backshell Size 3: 6 floating eyelets Ø3,05 (0.120) with attaching tabs for RADIALL backshell Not Available in Size 4
23	 Sizes 1 & 2: 4 floating eyelets Ø3,05 (0.120) Size 3: 6 floating eyelets Ø3,05 (0.120) Size 4: 10 floating eyelets Ø3,05 (0.120)	 Sizes 1 & 2: 4 floating eyelets Ø3,05 (0.120) Size 3: 6 floating eyelets Ø3,05 (0.120) Size 4: 10 floating eyelets Ø3,05 (0.120)
24	 Sizes 1, 2 & 3: 6 holes Ø5,33 (0.210)	 Sizes 1, 2 & 3: 6 holes Ø5,33 (0.210)
26	 Sizes 1 & 2: 4 holes Ø3,05(0.120) c'sunk 90° Size 3: 6 holes Ø3,05(0.120) c'sunk 90° Size 4: 10 holes Ø 3,05(0.120) c'sunk 90°	--
33	 Sizes 1 & 2: 4 flush front embedded floating eyelets Ø3,05 (0.120) Size 3: 6 flush front embedded floating eyelets Ø3,05 (0.120) Size 4: 10 flush front embedded floating eyelets Ø3,05 (0.120)	 Sizes 1 & 2: 4 flush rear embedded floating eyelets Ø3,05 (0.120) Size 3: 6 flush rear embedded floating eyelets Ø3,05 (0.120) Size 4: 10 flush rear embedded floating eyelets Ø3,05 (0.120)

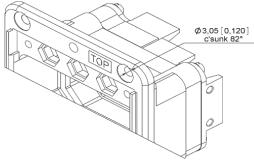
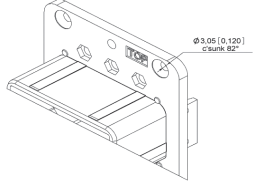
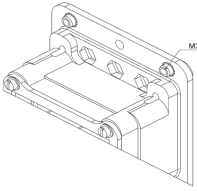
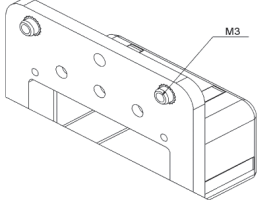
Code	Receptacle shell	Plug shell
34	Diagram of Receptacle shell 34 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.	Diagram of Plug shell 34 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.
35	Diagram of Receptacle shell 35 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.	Diagram of Plug shell 35 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.
36	Diagram of Receptacle shell 36 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.	Diagram of Plug shell 36 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.
55	--	Diagram of Plug shell 55 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.
60	Diagram of Receptacle shell 60 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.	Diagram of Plug shell 60 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.
61	Diagram of Receptacle shell 61 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.	Diagram of Plug shell 61 showing a side view with a top flange. A dimension line indicates a diameter of $\phi 3,05$ [0.120] for the top flange.

Modification Code

Code	Receptacle shell		Plug shell	
62		Similar to modification code 02 except that the shell, keys and keys retention plate are nickel plated. Not available in size 4		Similar to modification code 02 except that the shell, keys and keys retention plate are nickel plated. Not available in size 4
63		Similar to modification code 23 except that the shell, keys and keys retention plate are nickel plated.		Similar to modification code 23 except that the shell, keys and keys retention plate are nickel plated.
64		Similar to modification code 03 except that the shell, keys and keys retention plate are nickel plated.		Similar to modification code 03 except that the shell, keys and keys retention plate are nickel plated.
66		Similar to modification code 01 except that the shell, keys and keys retention plate are nickel plated.		Similar to modification code 01 except that the shell, keys and keys retention plate are nickel plated.
67		Sizes 1 & 2: 4 holes Ø3,05 (0.120) c'sunk 100° with attaching tabs for RADIALL backshell Size 3: 6 holes Ø3,05 (0.120) c'sunk 100° with attaching tabs for RADIALL backshell Shells are nickel plated. Not Available in size 4		Sizes 1 & 2: 4 holes Ø3,05 (0.120) c'sunk 100° with attaching tabs for RADIALL backshell Size 3: 6 holes Ø3,05 (0.120) c'sunk 100° with attaching tabs for RADIALL backshell. Shells are nickel plated Not Available for Size 4
73		Sizes 1 & 2: 4 holes Ø3,05 (0.120) c'sunk 82° Size 3: 6 holes Ø3,05 (0.120) c'sunk 82° Size 4: 10 holes Ø3,05 (0.120) c'sunk 82°		Sizes 1 & 2: 4 holes Ø3,05 (0.120) c'sunk 82° Size 3: 6 holes Ø3,05 (0.120) c'sunk 82° Size 4: 10 holes Ø3,05 (0.120) c'sunk 82°

DSX SERIES

Modification Code

Code	Receptacle shell	Plug shell
77	 Diagram showing the Receptacle shell 77 with dimensions: $\varnothing 3,05$ [0.120] c'sunk 82°.	 Diagram showing the Plug shell 77 with dimensions: $\varnothing 3,05$ [0.120] c'sunk 82°.
79	 Diagram showing the Receptacle shell 79 with dimension: M3.	 Diagram showing the Plug shell 79 with dimension: M3.

Sizes 1 & 2:
4 holes $\varnothing 3,05$ [0.120] c'sunk 82° with attaching tabs for RADIALL backshell

Size 3:
6 holes $\varnothing 3,05$ [0.120] c'sunk 82° with attaching tabs for RADIALL backshell

Not Available for Size 4

Sizes 1 & 2:
4 holes $\varnothing 3,05$ [0.120] c'sunk 82° with attaching tabs for RADIALL backshell

Size 3:
6 holes $\varnothing 3,05$ [0.120] c'sunk 82° with attaching tabs for RADIALL backshell

Not Available for Size 4

Sizes 1 & 2:
4 M3 clinch nuts

Size 3: 6 M3 clinch nuts

Size 4: 10 M3 clinch nuts

Sizes 1 & 2:
4 M3 clinch nuts

Size 3: 6 M3 clinch nuts

Size 4: 10 M3 clinch nuts

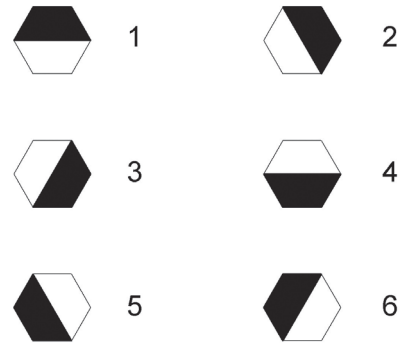
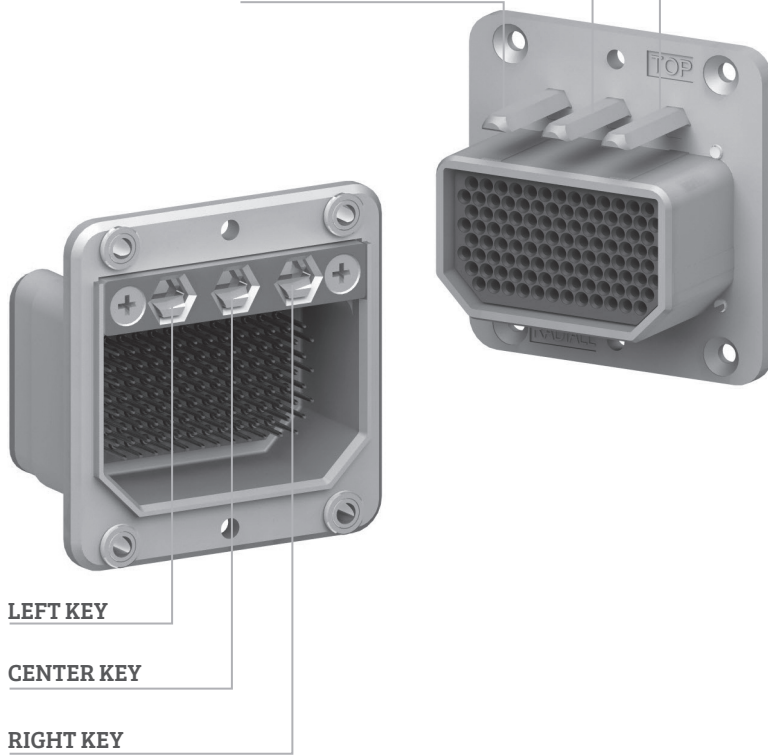
Modification Code

RIGHT POLARIZING POST

CENTER POLARIZING POST

LEFT POLARIZING POST

Position of polarization keys and posts.
Connectors are shown front side, with "TOP" upwards.

**Position coding**

Dark area represents the polarizing post.
Clear position represents the key hole.

Polarization code	Receptacle shell			Plug shell		
	Left key	Center key	Right key	Left post	Center post	Right post
00	/	/	/	/	/	/
01	4	4	4	1	1	1
02	4	4	3	2	1	1
03	4	4	2	3	1	1
04	4	4	1	4	1	1
05	4	4	6	5	1	1
06	4	4	5	6	1	1
07	5	4	4	1	1	6
08	5	4	3	2	1	6
09	5	4	2	3	1	6
10	5	4	1	4	1	6
11	5	4	6	5	1	6
12	5	4	5	6	1	6
13	6	4	4	1	1	5
14	6	4	3	2	1	5
15	6	4	2	3	1	5
16	6	4	1	4	1	5
17	6	4	6	5	1	5
18	6	4	5	6	1	5
19	1	4	4	1	1	4
20	1	4	3	2	1	4
21	1	4	2	3	1	4
22	1	4	1	4	1	4
23	1	4	6	5	1	4
24	1	4	5	6	1	4
25	2	4	4	1	1	3
26	2	4	3	2	1	3
27	2	4	2	3	1	3
28	2	4	1	4	1	3

POLARIZATION CODE TABLE

Polarization code	Receptacle shell			Plug shell		
	Left key	Center key	Right key	Left post	Center post	Right post
29	2	4	6	5	1	3
30	2	4	5	6	1	3
31	3	4	4	1	1	2
32	3	4	3	2	1	2
33	3	4	2	3	1	2
34	3	4	1	4	1	2
35	3	4	6	5	1	2
36	3	4	5	6	1	2
37	4	3	4	1	2	1
38	4	3	3	2	2	1
39	4	3	2	3	2	1
40	4	3	1	4	2	1
41	4	3	6	5	2	1
42	4	3	5	6	2	1
43	5	3	4	1	2	6
44	5	3	3	2	2	6
45	5	3	2	3	2	6
46	5	3	1	4	2	6
47	5	3	6	5	2	6
48	5	3	5	6	2	6
49	6	3	4	1	2	5
50	6	3	3	2	2	5
51	6	3	2	3	2	5
52	6	3	1	4	2	5
53	6	3	6	5	2	5
54	6	3	5	6	2	5
55	1	3	4	1	2	4
56	1	3	3	2	2	4
57	1	3	2	3	2	4

DSX SERIES

Modification Code

Polarization code	Receptacle shell			Plug shell		
	Left key	Center key	Right key	Left post	Center post	Right post
58	1	3	1	4	2	4
59	1	3	6	5	2	4
60	1	3	5	6	2	4
61	2	3	4	1	2	3
62	2	3	3	2	2	3
63	2	3	2	3	2	3
64	2	3	1	4	2	3
65	2	3	6	5	2	3
66	2	3	5	6	2	3
67	3	3	4	1	2	2
68	3	3	3	2	2	2
69	3	3	2	3	2	2
70	3	3	1	4	2	2
71	3	3	6	5	2	2
72	3	3	5	6	2	2
73	4	2	4	1	3	1
74	4	2	3	2	3	1
75	4	2	2	3	3	1
76	4	2	1	4	3	1
77	4	2	6	5	3	1
78	4	2	5	6	3	1
79	5	2	4	1	3	6
80	5	2	3	2	3	6
81	5	2	2	3	3	6
82	5	2	1	4	3	6
83	5	2	6	5	3	6
84	5	2	5	6	3	6
85	6	2	4	1	3	5
86	6	2	3	2	3	5
87	6	2	2	3	3	5
88	6	2	1	4	3	5
89	6	2	6	5	3	5
90	6	2	5	6	3	5
91	1	2	4	1	3	4
92	1	2	3	2	3	4
93	1	2	2	3	3	4
94	1	2	1	4	3	4
95	1	2	6	5	3	4
96	1	2	5	6	3	4
97	2	2	4	1	3	3
98	2	2	3	2	3	3
99	2	2	2	3	3	3
100	2	2	1	4	3	3
101	2	2	6	5	3	3
102	2	2	5	6	3	3
103	3	2	4	1	3	2
104	3	2	3	2	3	2
105	3	2	2	3	3	2
106	3	2	1	4	3	2
107	3	2	6	5	3	2
108	3	2	5	6	3	2
109	4	1	4	1	4	1
110	4	1	3	2	4	1
111	4	1	2	3	4	1
112	4	1	1	4	4	1
113	4	1	6	5	4	1
114	4	1	5	6	4	1
115	5	1	4	1	4	6
116	5	1	3	2	4	6
117	5	1	2	3	4	6
118	5	1	1	4	4	6
119	5	1	6	5	4	6
120	5	1	5	6	4	6
121	6	1	4	1	4	5
122	6	1	3	2	4	5
123	6	1	2	3	4	5
124	6	1	1	4	4	5
125	6	1	6	5	4	5
126	6	1	5	6	4	5
127	1	1	4	1	4	4
128	1	1	3	2	4	4
129	1	1	2	3	4	4
130	1	1	1	4	4	4
131	1	1	6	5	4	4
132	1	1	5	6	4	4
133	2	1	4	1	4	3
134	2	1	3	2	4	3
135	2	1	2	3	4	3
136	2	1	1	4	4	3
137	2	1	6	5	4	3

Polarization code	Receptacle shell			Plug shell		
	Left key	Center key	Right key	Left post	Center post	Right post
138	2	1	5	6	4	3
139	3	1	4	1	4	2
140	3	1	3	2	4	2
141	3	1	2	3	4	2
142	3	1	1	4	4	2
143	3	1	6	5	4	2
144	3	1	5	5	4	2
145	4	6	4	1	5	1
146	4	6	3	2	5	1
147	4	6	2	3	5	1
148	4	6	1	4	5	1
149	4	6	6	5	5	1
150	4	6	5	6	5	1
151	5	6	4	1	5	6
152	5	6	3	2	5	6
153	5	6	2	3	5	6
154	5	6	1	4	5	6
155	5	6	6	5	5	6
156	5	6	5	6	5	6
157	6	6	4	1	5	5
158	6	6	3	2	5	5
159	6	6	2	3	5	5
160	6	6	1	4	5	5
161	6	6	6	5	5	5
162	6	6	5	6	5	5
163	1	6	4	1	5	4
164	1	6	3	2	5	4
165	1	6	2	3	5	4
166	1	6	1	4	5	4
167	1	6	6	5	5	4
168	1	6	5	6	5	4
169	2	6	4	1	5	3
170	2	6	3	2	5	3
171	2	6	2	3	5	3
172	2	6	1	4	5	3
173	2	6	6	5	5	3
174	2	6	5	6	5	3
175	3	6	4	1	5	2
176	3	6	3	2	5	2
177	3	6	2	3	5	2
178	3	6	1	4	5	2
179	3	6	6	5	5	2
180	3	6	5	6	5	2
181	4	5	4	1	6	1
182	4	5	3	2	6	1
183	4	5	2	3	6	1
184	4	5	1	4	6	1
185	4	5	6	5	6	1
186	4	5	5	6	6	1
187	5	5	4	1	6	6
188	5	5	3	2	6	6
189	5	5	2	3	6	6
190	5	5	1	4	6	6
191	5	5	6	5	6	6
192	5	5	5	6	6	6
193	6	5	4	1	6	5
194	6	5	3	2	6	5
195	6	5	2	3	6	5
196	6	5	1	4	6	5
197	6	5	6	5	6	5
198	6	5	5	6	6	5
199	1	5	4	1	6	4
200	1	5	3	2	6	4
201	1	5	2	3	6	4
202	1	5	1	4	6	4
203	1	5	6	5	6	4
204	1	5	5	6	6	4
205	2	5	4	1	6	3
206	2	5	3	2	6	3
207	2	5	2	3	6	3
208	2	5	1	4	6	3
209	2	5	6	5	6	3
210	2	5	5	6	6	3
211	3	5	4	1	6	2
212	3	5	3	2	6	2
213	3	5	2	3	6	2
214	3	5	1	4	6	2
215	3	5	6	5	6	2
216	3	5	5	6	6	2

Contacts

SIGNAL AND POWER CRIMP CONTACTS SIZES 22, 20HD, 16, 12 & 5

Contact size	AWG	Cross section (mm²)	Wire outside dia mm (inch)	Striping length mm (inch)	PIN	SOCKET	Crimping tool	Positionner	SEL.	Ins/Ext tool		
22	22	0.38	1.4 [0.055]	3.5 [0.138]	616200 (M39029/ 11-144)	616300 (M39029/ 12-148)	282281 (M22520/ 2-01)	282970 (M22520/ 2-23)	4	282885 (M81969/ 1-01)		
	24	0.21							3			
	26	0.14							3			
22 reduced crimp barrel	28	0.093	1.2 [0.047]	3.5	616201	616301			5			
	30	0.055							4			
20HD	20	0.60	1.8 [0.071]	4.0 [0.157]	616210 (M39029/ 11-145)	616310 (M39029/ 12-149)			282971 (M22520/ 2-08)	7	282886 (M81969/ 1-02)	
	22	0.38								6		
	24	0.21								5		
20HD reduced crimp barrel	26	0.14	1.25 [0.049]	4.0 [0.157]	616211	616311				6		
	28	0.093								5		
	30	0.055								4		
16	16	1.34	2.6 [0.236]	6.0 [0.236]	616230 (M39029/ 11-146)	616330 (M39029/ 12-150)	282291 (M22520/1-01)	282972 (M22520/ 1-02)	6	282546 (M81969/ 1-03)		
	18	0.93							5			
	20	0.60							4			
16 reduced crimp barrel	20	0.60	1.80 [0.071]	6.0 [0.236]	616231	616331					5	
	22	0.38									4	
	24	0.21										
12	12	3.18	3.4 [0.134]	6.0 [0.236]	616240 (M39029/ 11-147)	616340 (M39029/ 11-151)	282296 (DANIELS M300BT) ⁽¹⁾	282579 (M22520/ 1-11)	8	282547 (M81969/ 28-02)		
	14	1.91							7			
	16	1.34							6			
For cavity 5	12	3.18	3.4 [0.134]	8.0 [0.315]	616261	616361				1	282946 (M81969/ 28-01)	
	14	1.91								1		
	10	5.0	5.7 [0.234]		616266	616366		282557	5			
	8	9.0							8			

THERMOCOUPLE CONTACTS SIZES 22 & 20HD MADE OF CHROMEL

Contact size	AWG	Cross section (mm²)	Wire outside dia mm (inch)	Stripping length mm (inch)	PIN	SOCKET	Crimping tool	Positionner	SEL.	Ins/Ext tool
22	22	0.38	1.4 [0.055]	3.5 [0.138]	620280	620380	282281 (M22520/ 2-01)	282970	4	282885
	24	0.21						(M22520/ 2-23)	3	(M81969/ 1-01)
	26	0.14							3	
20HD	20	0.60	1.8 [0.071]	4.0 [0.157]	620290	620390		282971	7	282886
	22	0.38						(M22520/ 2-08)	6	(M81969/ 1-02)
	24	0.21							5	

THERMOCOUPLE CONTACTS SIZES 22 & 20HD MADE OF ALUMEL

Contact size	AWG	Cross section (mm²)	Wire outside dia mm (inch)	Stripping length mm (inch)	PIN	SOCKET	Crimping tool	Positionner	SEL.	Ins/Ext tool
22	22	0.38	1.4 [0.055]	3.5 [0.138]	620281	620381	282281 (M22520/ 2-01)	282970	4	282885
	24	0.21						(M22520/ 2-23)	3	(M81969/ 1-01)
	26	0.14							3	
20HD	20	0.60	1.8 [0.071]	4.0 [0.157]	620291	620391		282971	7	282886
	22	0.38						(M22520/ 2-08)	6	(M81969/ 1-02)
	24	0.21							5	

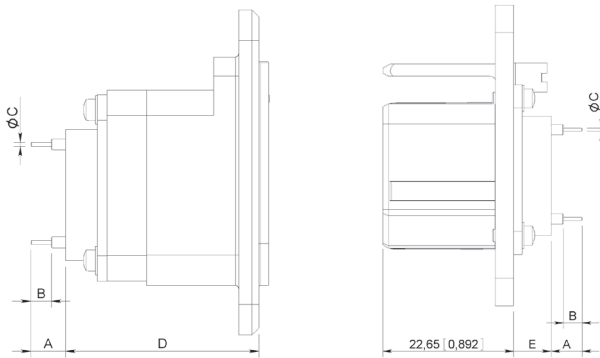
NOTE:

(1) Daniels WA27-309-EP air pressure tool with crimp setting 5 can also be used. Crimp setting 5 is not adjustable and must be set by the factory.

Contacts

SIZES 22 & 20HD PC TAIL CONTACTS

Contact size	Contact arrangement	Pin	Socket	Ext. Tool	Dimensions mm (inch)				
					A	B	C	D	E
22	106	/	616379	282890	6.1/5.3 [0.240/0.209]	6.5 [0.256]	0.6 [0.023]	25.25/25.75 [0.994/1.013]	1.55/1.75 [0.061/0.069]
			616303		14.4/13.6 [0.567/0.535]	9.4 [0.370]			
		616206*	616306*		5.9/6.7 [0.232/0.263]	3.8 [0.149]		/	7.85/7.44 [0.293/0.309]
	36C7 for pin contacts	/	0.82/0.10 [0.032/0.004]						
	36C7 for socket contacts	/	616306		4/3.3 [0.157/0.130]			28.50/28.15 [1.122/1.108]	/
		/	616303		11.72/11 [0.461/0.433]	9.4 [0.370]			
20HD	40-45-57-32C2-32C4-40C1	616216*	/	282891	6.6/7.6 [0.259/0.299]	/	0.8 [0.031]	31.25/31.75 [1.23/1.25]	7.45/7.75 [0.293/0.305]
	67-33C4				6.3/7.3 [0.248/0.287]				
	40-45-57-32C2-32C4-40C1	616223	616323*		3.5/4.3 [0.138/0.169]	3.2 [0.126]	0.6 [0.023]		
	67-33C4				3.2/4 [0.126/0.157]				



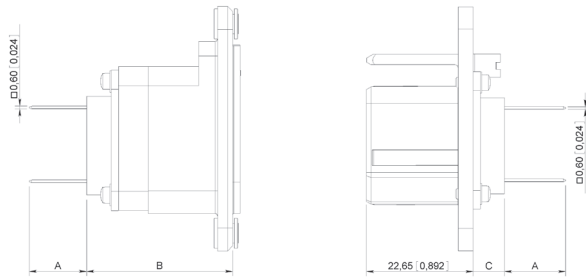
NOTE:

* Connectors delivered in the "Y" termination style will be fitted with contacts marked by "*" (see above table). If another style of pc tail contact is desired, use termination style "x" when ordering the connector and order contacts separately.

Contacts

SIZES 22 & 20HD WIRE WRAP CONTACTS

Contact size	AWG	Contact arrangement	Pin	Socket	Ins. tool	Dimensions		
						A	B	C
22	26 28 30	106	610203 (2 wrap levels)	610303 (2 wrap levels)	282527	10/11 [0.393/0.433]	25.25/25.75 [0.994/1.013]	1.55/1.75 [0.061/0.069]
			610204 (3 wrap levels)	610304 (3 wrap levels)		12.5/13.5 [0.492/0.531]		
20	26 28 30	40-45-57-32C2- 32C4-40C1-67-33C4	610214 (2 wrap levels)	610314 (2 wrap levels)		10.3/11.3 [0.405/0.445]	31.25/31.75 (1.203/1.250)	7.45/7.75 [0.293/0.305]
						9.85/10.95 [0.387/0.431]		



COAXIAL CRIMP CONTACTS SIZE 1 (design as per MS3168-3169 specifications)

Contact size	Contact arrangement	Cable (1)	Pin	Socket	Center contact			Outer body			
					Crimping tool	Positioner	SEL.	Crimping tool	Die	Hex	
1	MC2	UT 141 RG 402	616005	/	Solder contact						
		RG 58 RG 141 KX 15	616006 right angle	/	Solder contact				282293 (M22520/5-01)	282246 (M22520/5-05)	A
		RG 213 KX 4	/	616102001	282291 (M22520/1-01)	282997 (M22520/1-13)	8	282247 (M22520/5-61)		A	
		RG 214 RG 225	/	616103001							
			616003	/							
		RG 142	616007 right angle	/	Solder contact			282246 (M22520/5-05)		A	
		RG 142 RG 223	/	616107001	282291 (22520/1-01)	282997 (M22520/1-13)	7				
		RG 174 KX 22	/	616100	Solder contact						
		RD 316	616004 right angle	/	Solder contact						B
		/	616009	/	SMA Termination						

Part number	616004 – 616006 – 616007	616009 – 616100 – 616103001 616106 – 616102001	616003 – 616005 616107001
Dielectric withstanding voltage at sea level (V rms)	1000	1500	2500

NOTE:

(1) For other cable, please contact Radiall.

Contacts

COAXIAL CRIMP CONTACTS SIZE 3

Contact size	Contact arrangement	Cable (1)	Pin	Socket	Center contact			Outer body		
					Crimping tool	Positioner	SEL	Crimping tool	Die	Hex
3	MC3	RG 142	616013	/	Solder			282293 (M22520/5-01)	282246 (M22520/5-05)	A
		RG 223	/	616113	282291 (M22520/1-01)	282997 (M22520/5-05)	7			
		RG 316	616015 Right angle (1)	/	solder					B
		UT 141 RG 402	616014	/	solder					
		RG 214 RG 225	/	616111	282291 (M22520/1-01)	282997 (M22520/5-05)	8	282293 (M22520/5-01)	282247 (M22520/5-61)	A
		RG 213 KX 4	/	616112						

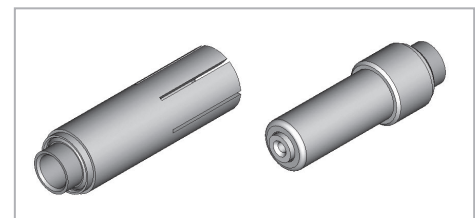
COAXIAL CRIMP CONTACTS SIZE 5 (design as per MS3172 specifications)

The following contacts have to be fitted with a sealing boot when used in DSX E connectors (see page 6-29). Coaxial cavities without any contact can be fitted with sealing plugs when used in DSX E connectors.

Contact size	Contact arrangement	Cable (1)	Pin (See notes 3&4)	Socket (See notes 3&4)	Center contact			Outer body				
					Crimping tool	Positioner	SEL.	Crimping tool	Die	Hex		
5	32C2 32T2 33C4 33T4 36C7 36T7 40C1 40T1	RG 58 KX 15	616120	616020	282281 (M22520/2-01)	282974	6	282293 (M22520/5-01)	282246 (M22520/5-05)	A		
		RG 141	616120	616020			8					
		RG 142 RG 223 KX 23	616121	616021			8					
		RG 179 RG 188 RG 174 RG316 KX 22	616122	616022			7			B		
		RG 179 RG 187	/	616022002		282550 DANIELS K345						
		RG 196 RG 178 KX 21	616123	616023		282974					6	
		RG 195 RG 180	616124	616024								7
		RG 316 DS	616163	616026								
		UT .085	616125	/	solder							
		UT .141	616128	616028								

NOTES:

- (1) For other cable, please contact Radiall
 (2) Dielectric withstanding voltage at sea level: 1500 V rms. Except 1000 V rms for 616015
 (3) Dielectric withstanding voltage at sea level: 750 V rms
 (4) Extraction tool: 282946 (M81969/28-01)



Contacts

COAXIAL CRIMP CONTACTS SIZE 7

Contact size	Contact arrangement	Cable (1)	Pin (See notes 2&3)	Socket (See notes 2&3)	Center contact			Outer body		
					Crimping tool	Positioner	SEL.	Crimping tool	Die	Hex
7	MC3	RG 58 RG 141 KX 15	610120	/	solder			282293 (M22520/5-01)	282246 (M22520/5-05)	A
		RG 174 RG 316 KX 22 RG 188	610126	/						B
		RG 58 KX 15	/	616030	282281 (M22520/2-01)	282550 (DANIELS K345)	6			A
		RG 141	/	616030			8			A
		RG 142 RG 223 KX 23	/	616031			8			A
		RG 174 RG 316 KX 22	/	616032			7			B

COAXIAL CRIMP CONTACTS SIZE 9

Add 001 at the end of each part number pin or socket to order environmental size 9 coax contacts. Coaxial cavities without any contact can be fitted with sealing plugs when used in DSX E connectors.

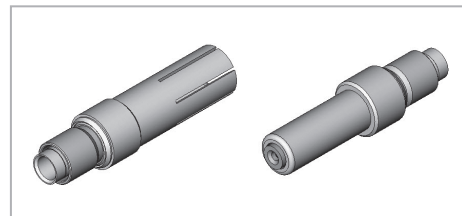
Contact size	Contact arrangement	Cable (1)	Pin (See notes 2&3)	Socket (See notes 2&3)	Center contact			Outer body		
					Crimping tool	Positioner	SEL.	Crimping tool	Die	Hex
9	C8 T8 32C4 32T4	RG 58 KX 15	616140	616040	282281 (M22520/2-01)	282974	6	282293 (M22520/5-01)	282246 (M22520/5-05)	A
		RG 141					8			
		RG 142 RG 223 KX 23	616141	616041			8			
		RG 174 RG 179 RG 188 RG 316 KX 22	616142	616042			7			B
		RG 178 RG196 KX 21	616143	616043			6			
		RG 180 RG 195	616144	616044			6			

COAXIAL CRIMP CONTACTS SIZE 15

Contact size	Contact arrangement	Cable (1)	Pin (See notes 2&3)	Socket (See notes 2&3)	Center contact			Outer body		
					Crimping tool	Positioner	SEL.	Crimping tool	Die	Hex
15	D8 26 67 32C4 32T4 33C4 33T4	RG 316 RG 179	616154	618050	282281 (M22520/2-01)	282555	2	282292 (M22520/4-01)	282556	/
		KX 22 DS	616150							
		KX 21 DS	616151	618053						
		RG 178 KX 21	616153	618054						

NOTES:

- (1) For other cable, please contact Radiall
 (2) Dielectric withstanding voltage at sea level: 750 V rms
 (3) Extraction tool: 282946 (M81969/28-01)
 (4) Dielectric withstanding voltage at sea level: 350 V rms



Contacts

CONCENTRIC TWINAX CRIMP CONTACTS SIZE 5 (design as per 17B9E4005 specifications)

Contact size	Contact arrangement	Cable	Pin	Socket
The following contacts have to be installed in the non environmental inserts				
5	32C3	MIL-C-17/176-00002	616195001	616095001
	32T2			
	40C1			
	40T1	PAN 6421	616195005	616095005
	36C7			
	36T7			
33C4				
33T4				
The following contacts have to be installed in the environmental inserts				
5	32C3	MIL-C-17/176-00002	616195009	616095009
	32T2			
	40C1			
	40T1		616195012	/
	33C4			
	33T4			
36C7				
36T7				

**CONCENTRIC TWINAX CRIMP CONTACTS SIZE 9 (design as per 17B9E4005 specifications)**

Contact size	Contact arrangement	Cable	Pin	Socket
The following contacts have to be installed in the non environmental inserts				
9	C8 T8 32C4 32T4	MIL-C-17/176-00002	616196003	616096003
The following contacts have to be installed in the environmental inserts				
9	C8 T8	MIL-C-17/176-00002	/	616096006
	32C4 32T4		616196004	616096004

TRIAx CRIMP CONTACTS SIZE 5

Contact size	Contact arrangement	Cable	Pin	Socket
The following contacts have to be installed in the non environmental inserts				
5	33C4	RGX 179	616195004	616095004
	33T4			
	32C2	ST5M 1323-1	616195007	616095007
	32T2			
	40C1	HS4863-1 HS4863-2	616195000	616095000
	40T1			
36C7				
36T7				
The following contacts have to be installed in the environmental inserts				
5	36C7 36T7	RGX 179	/	616095010

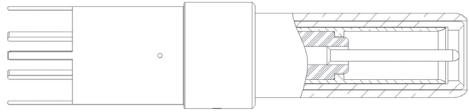
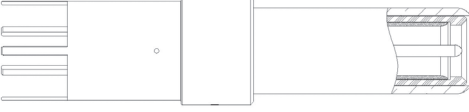
TRIAx CRIMP CONTACTS SIZE 9

Contact size	Contact arrangement	Cable	Pin	Socket
The following contacts have to be installed in the non environmental inserts				
9	C8 T8 32C4 32T4	RGX 179	616196001	616096001
The following contacts have to be installed in the environmental inserts				
9	32C4 32T4	RGX 179	/	616096002

Contacts

TRIAx CONTACTS WITH PC TAIL SIZE 5

The contacts shown in the table below are rear release rear removable contacts

Contact type	Part number	Contact drawing	Rear extension from the insert mm (inch)
Pin	616195003		32C2, 32T2, 33C4, 33T4 40C1, & 40T1 = 3.2/4.0 (0.125/0.158)
	616195008		36C7 & 36T7 = 5.40/6.10 (0.212/0.240)

Contact type	Part number	Contact drawing	Rear extension from the insert mm (inch)
Pin	616196005		C8 & T8 = 1.30/2.15 (0.051/0.085) 32C4 & 32T4 = 6.45/7.30 (0.253/0.288)
	616196007		C8 & T8 = 0 32C4 & 32T4 = 3.70/4.35 (0.145/0.172)

SIZE 8 QUADRAx CONTACTS

Wire	Type	Part number (non environmental)	Part number (environmental)	Ins/Ext Tool
ABS1503KD24 (110 Ω)	Pin	620175010	620175011	282549001 (M81969/28.03 or M81969/14.06)
	Socket	620075010	620075011	
THERMAX 956S-4T200 GORE RCN8422 (110 Ω)	Pin	620179002	620179001	
	Socket	620079002	620079001	
TENSOLITE NF24Q100 (100 Ω)	Pin	620175050	620175051	
	Socket	620075050	620075051	
TENSOLITE NF26Q100 JSFY 18	Pin	620175021	620175020	
	Socket	620075021	620075020	

Fiber Optic Contacts and Accessories

MIL-PRF-29504 fiber optic termini were developed several decades ago and are described into several MIL standard documents. They fit into standard electrical cavities and do not require specific inserts. They can replace MIL-PRF-29504/10 pin and MIL-PRF-29504/11 socket termini.

MIL-PRF-29504 CONTACTS

Pin contact part number	Socket contact part number	Contact size	Fiber diameter (µm)	Cable diameter (mm)	Ferrule material
F724 005 000	F724 104 000	16	125	1.5	Ceramic
F724 011 000	F724 111 000	16	125	1.8	Ceramic
F724 009 000	F724 109 000	16	125	2	Ceramic
F724 002 000	F724 101 000	16	140	1.5	Ceramic
F724 041 000	F724 140 000	16	230	2	Metallic
F724 007 000	F724 107 000	16	280	1.6	Ceramic

Size 12 MIL-T-29504 contacts can be available upon request, please contact your Radiall sales representative. Note that Radiall can support you with your cable and harness assemblies. Please contact your sales representative.

ACCESSORIES

Radiall offers you a unique solution to equip your DSX connectors with EN4531 fiber optic contacts. This solution offers the following characteristics and advantages:

- It turns a ARINC 404 size 5 or size 8 cavity into a fiber optic link
- It accepts any EN4531-101 fiber optic contacts

EN4531-101 (ABS 1379) ADAPTER FOR QUADRAx SIZE 8 CAVITY

	Part number	Description
	620946005	Pin quadrax adapter for EN4531 contact
	620946006	Socket quadrax adapter for EN4531 contact

EN4531-101 (ABS 1379) ADAPTER FOR SIZE 5 CAVITY

EN4531-101 adapter for size 5 cavity is available for DSX F connectors with inserts 33C4 and 81C3 only, see DSX F connectors page 6-41.

	Part number	Description
	616925001	Pin adapter for #5 cavity
	616925002	Socket adapter for #5 cavity

Accessories

SEALING PLUGS AND FILLER PLUGS

Filler plugs are used in non environmental connectors and sealing plugs are used in environmental connectors and conform to MS27488

Contact size	Sealing plugs	Filler plugs
Size 22	616910	620920
Size 20HD	616911	610941
Size 16	616912	620922
Size 12	616913	616923
Size 5	See notes	620924, 616923 ⁽¹⁾ or 616917 ⁽²⁾ for pin contact cavity 620925 for socket contact cavity
Size 9	See notes	616915 ⁽²⁾

SEALING BOOTS

The sealing boots in table 1 are to be used in all inserts with size 5 contact cavities except 36C7 and 36T7 inserts which use the sealing bushing plus one in the sealing sleeves in table 2.

Table 1

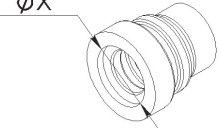
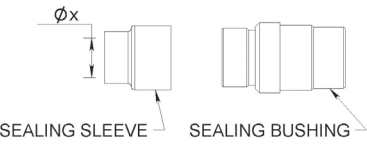
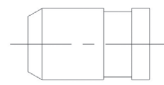
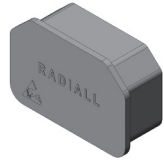
Cable	X dia. mm (inch)	Part number	Drawing
RG58, RG142	4.3 (0.169)	92505490	
RG 174	2 (0.079)	92505470	
RG 178	1.4 (0.055)	92505460	
RG180	3.1 (0.122)	92505480	
/	0	92505450	

Table 2

Cable	X dia. mm (inch)	Sealing bushing	Sealing sleeve	Part number
RG58, RG141, RG142, RG223, KX15, KX23	4.7 (0.185)	92505590	92505591	
RG174, RG179, RG187, RG188, RG316, KX22, UT.085	2.15 (0.085)		92505593	
RG178, RG196	1.5 (0.059)		92505594	
RG180, RG195, UT.141	3.05 (0.120)		92505592	
/	0	616914010 ⁽³⁾		

DUST CAPS

Conductive dust caps are made of thermoplastic and non conductive dust caps are made of polyethylene.

	Conductive (black)	Non Conductive (red)	Drawing
Plug	610804	610803	
Receptacle	610806	610805	

NOTES:

(1) 616923 is made of aluminium and is nickel plated

(2) 616917 and 616915 provide interfacial sealing on class T connectors

(3) 616914010 is made of PTFE

Accessories

BACKSHELLS

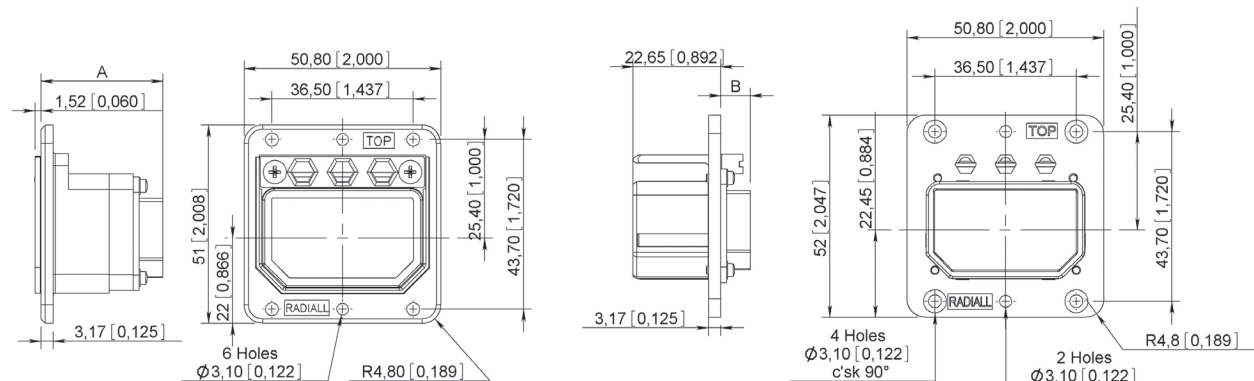
The following backshells are only for use with SAE AS81659 and ARINC 404 shell type B connectors for the following modification codes 02 - 04 - 17 - 19 - 22 - 36 - 61 - 67 and 77.

Backshells do not ensure EMI functions and cannot be installed on size 4 connectors as there is limited access to screws.

Entry type	Plating	Part number	Drawing
Top entry	Yellow anodized	610902	
	Nickel	610906	
Right entry	Yellow anodized	610900	
	Nickel	610910	
Left entry	Yellow anodized	610901	
	Nickel	610911	

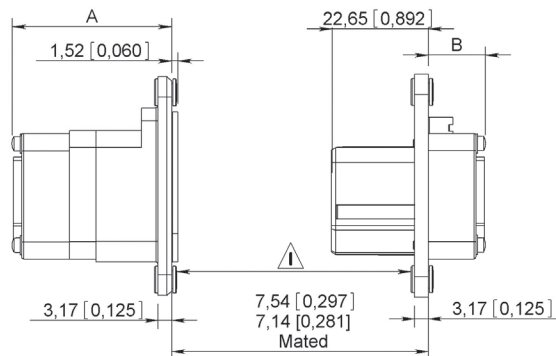
Dimensions

SHELL SIZE 1 NON ENVIRONMENTAL (without grommet seal)



Max dimension mm (inch)	All crimp contact arrangements except 106	Contact arrangement 106	Arrangements with coax contacts size 1 & 3	Contact arrangement 36C7 & 36T7	Arrangements with coax contacts size 5 & 9 except 36C7
A	32 [1.260]	25.8 [1.016]	26.85 [1.057]	28.5 [1.122]	37.42 [1.473]
B	7.9 [0.311]	1.9 [0.075]	3 [0.118]	7.85 [0.309]	13.5 [0.531]

SHELL SIZE 1 ENVIRONMENTAL (with grommet seal)

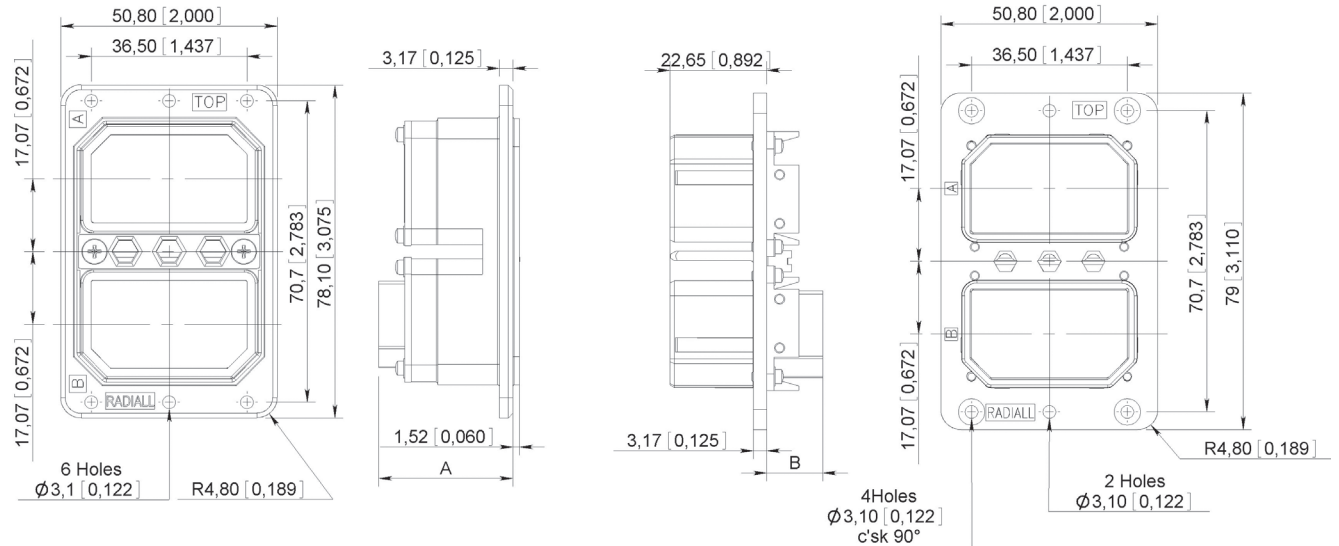


Max dimension mm (inch)	All crimp contact arrangements except MC2 – MC3 - 106	Contact arrangement 106	Contact arrangement 36C7 & 36T7
A	38.5 [1.516]	33.5 [1.319]	39.05 [1.537]
B	14.2 [0.559]	9.5 [0.374]	18.55 [0.730]

⚠ Important Note: Only 4mm of space is available on the modification code selection

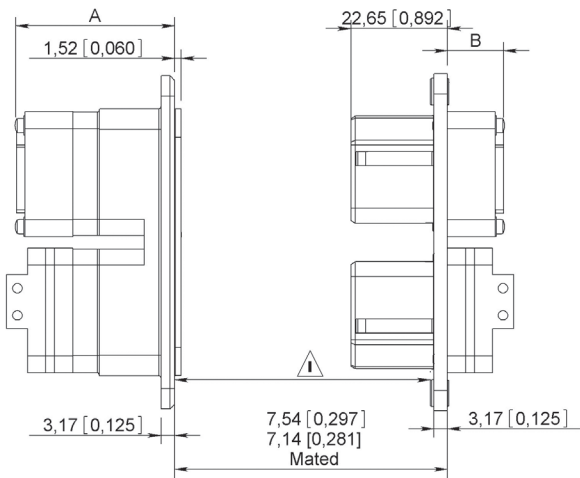
Dimensions

SHELL SIZE 2 NON ENVIRONMENTAL (without grommet seal)



Max dimension mm (inch)	All crimp contact arrangements except 106	Contact arrangement 106	Arrangements with coax contacts size 1 & 3	Contact arrangement 36C7 & 36T7	Arrangements with coax contacts size 5 & 9 except 36C7
A	32 [1.260]	25.8 [1.016]	26.85 [1.057]	28.5 [1.122]	37.42 [1.473]
B	7.9 [0.311]	1.9 [0.075]	3 [0.118]	7.85 [0.309]	13.5 [0.531]

SHELL SIZE 2 ENVIRONMENTAL (with grommet seal)

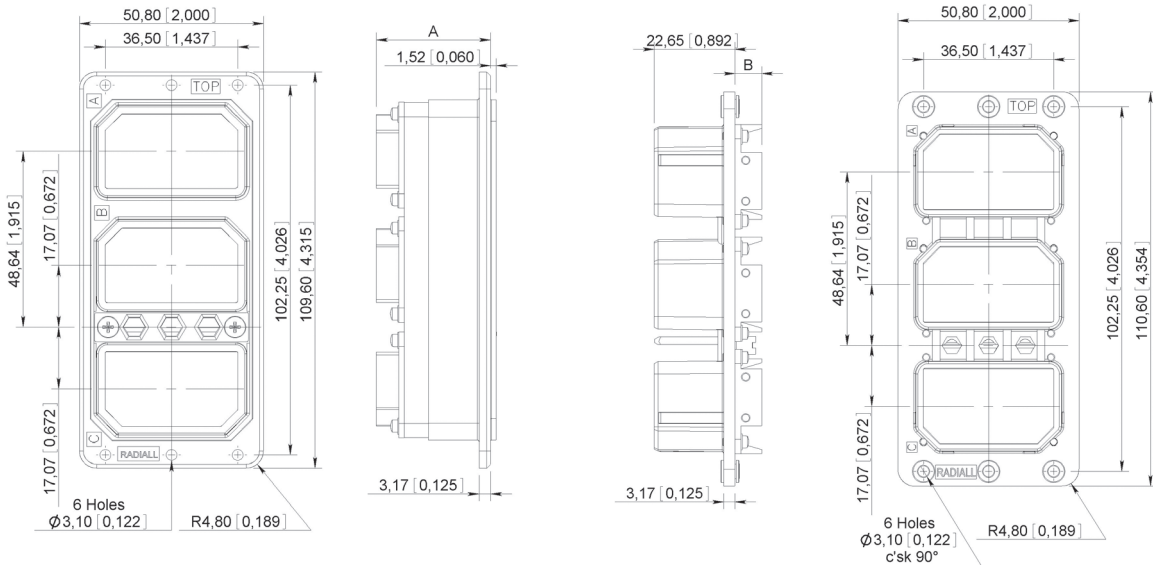


Max dimension mm (inch)	All crimp contact arrangements except MC2 – MC3 - 106	Contact arrangement 106	Contact arrangement 36C7 & 36T7
A	38.5 [1.516]	33.5 [1.319]	39.05 [1.537]
B	14.2 [0.559]	9.5 [0.374]	18.55 [0.730]

⚠ Important Note: Only 4mm of space is available on the modification code selection

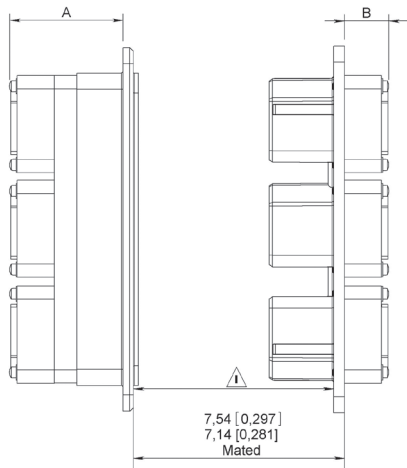
Dimensions

SHELL SIZE 3 NON ENVIRONMENTAL (without grommet seal)



Max dimension mm (inch)	All crimp contact arrangements except 106	Contact arrangement 106	Arrangements with coax contacts size 1 & 3	Contact arrangement 36C7 & 36T7	Arrangements with coax contacts size 5 & 9 except 36C7
A	32 [1.260]	25.8 [1.016]	26.85 [1.057]	28.5 [1.122]	37.42 [1.473]
B	7.9 [0.311]	1.9 [0.075]	3 [0.118]	7.85 [0.309]	13.5 [0.531]

SHELL SIZE 3 ENVIRONMENTAL (with grommet seal)

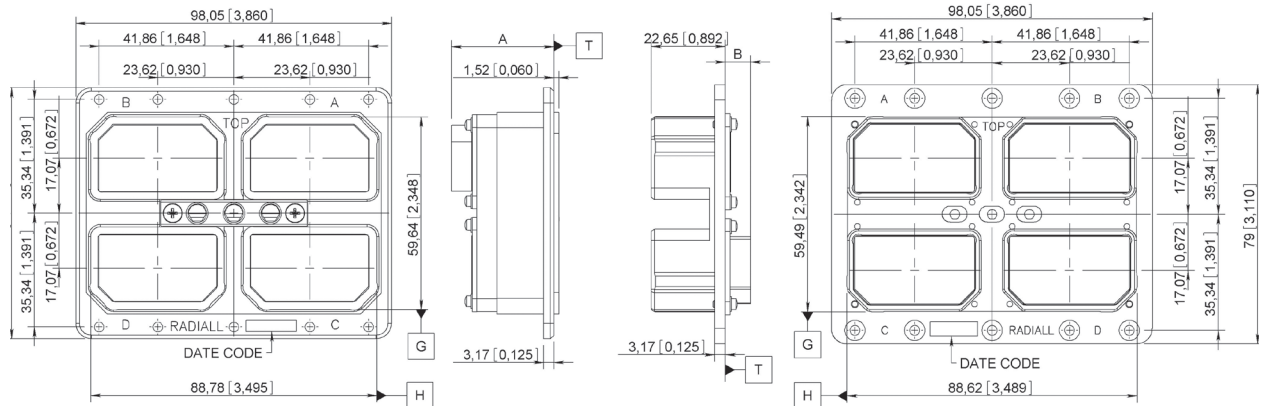


Max dimension mm (inch)	All crimp contact arrangements except MC2 – MC3 - 106	Contact arrangement 106	Contact arrangement 36C7 & 36T7
A	38.5 [1.516]	33.5 [1.319]	39.05 [1.537]
B	14.2 [0.559]	9.5 [0.374]	18.55 [0.730]

⚠ Important Note: Only 4mm of space is available on the modification code selection

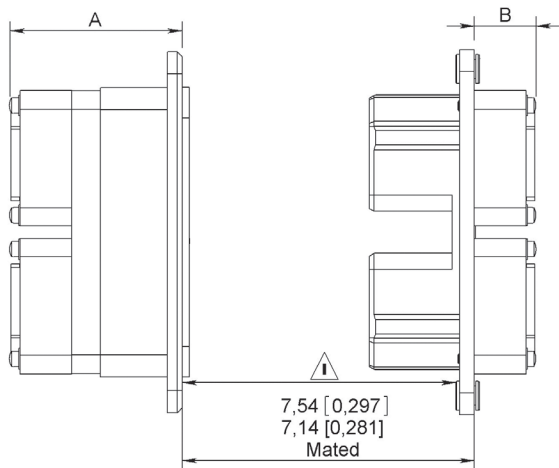
Dimensions

SHELL SIZE 4 NON ENVIRONMENTAL (without grommet seal)



Max dimension mm (inch)	All crimp contact arrangements except 106	Contact arrangement 106	Arrangements with coax contacts size 1 & 3	Contact arrangement 36C7 & 36T7	Arrangements with coax contacts size 5 & 9 except 36C7
A	32 [1.260]	25.8 [1.016]	26.85 [1.057]	28.5 [1.122]	37.42 [1.473]
B	7.9 [0.311]	1.9 [0.075]	3 [0.118]	7.85 [0.309]	13.5 [0.531]

SHELL SIZE 4 ENVIRONMENTAL (with grommet seal)

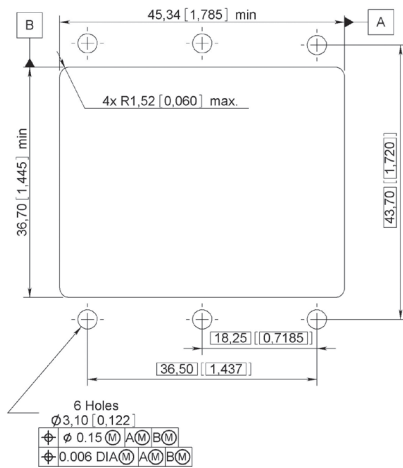


Max dimension mm (inch)	All crimp contact arrangements except MC2 – MC3 - 106	Contact arrangement 106	Contact arrangement 36C7 & 36T7
A	38.5 [1.516]	33.5 [1.319]	39.05 [1.537]
B	14.2 [0.559]	9.5 [0.374]	18.55 [0.730]

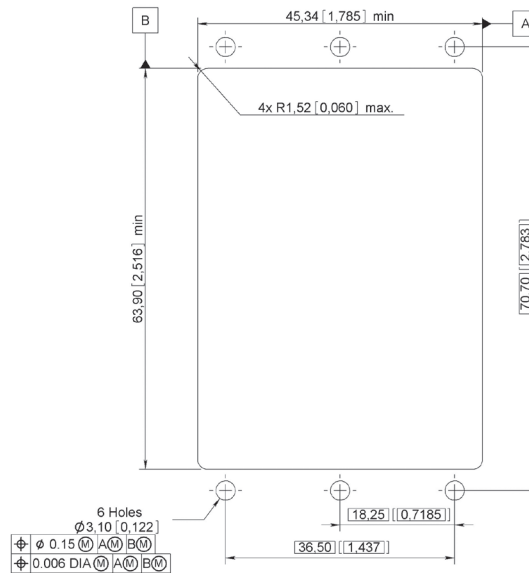
⚠ Important Note: Only 4mm of space is available on the modification code selection

Panel Cut Outs

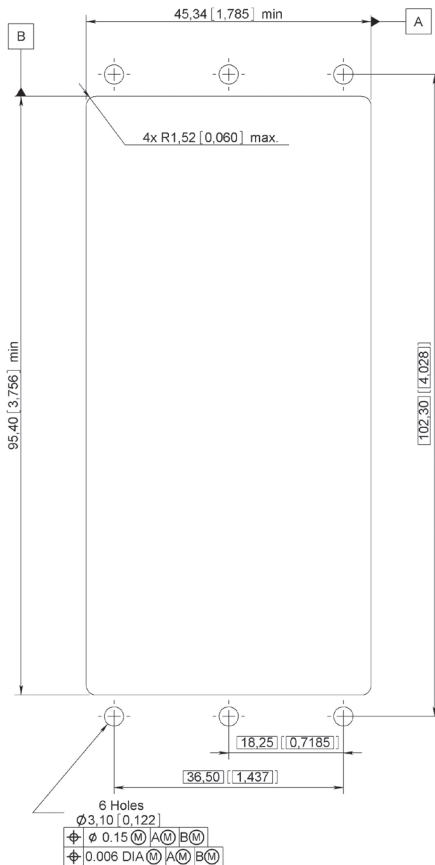
SHELL SIZE 1



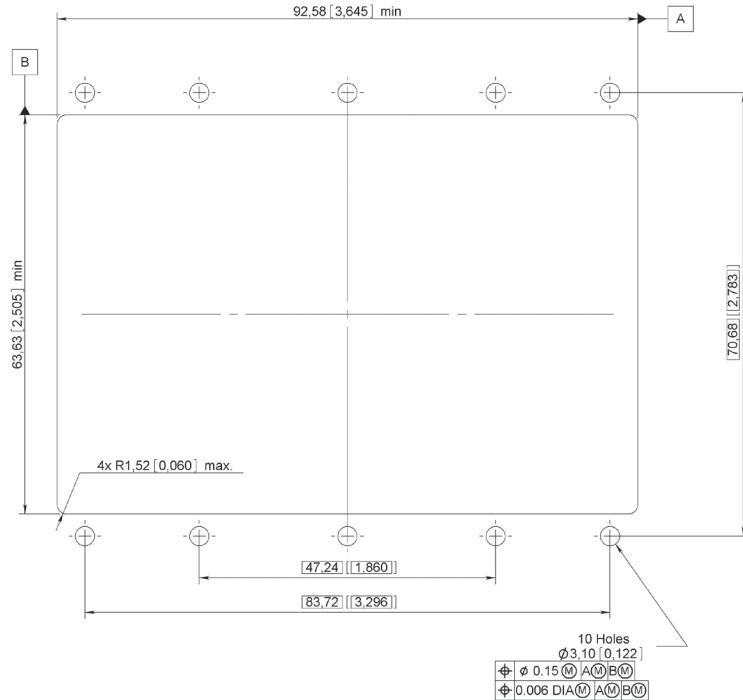
SHELL SIZE 2



SHELL SIZE 3



SHELL SIZE 4



DSX SERIES