LuxCis® fiber optic interconnect solutions

ARINC 801, EN4639-4640-4645

F725 Series

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INTRODUCTION

The LuxCis® product range is a proven flexible and always expanding fiber optic interconnect solution for MultiMode and SingleMode applications in aerospace and other harsh environments.

Radiall is recognized in the aerospace industry for its high quality and extensive product lines as well as its expertise in fiber optic interconnect for the telecommunication market. The new LuxCis® interconnect solution combines Radiall know how in multipin and fiber optics.

LuxCis® product range is manufactured according to EN/AS/JISQ 9100.

LUXCIS® KEY FEATURES AND ADVANTAGES

- Design based on the LC mating solution (physical contact), proven high optical performance interconnect in the telecommunication market, within a ruggedized contact to meet harsh environment requirements
- Industry standard 1.25 mm ferrule for a high density solution
- Includes industry standard parts from the LC connectors for cost efficiency
- One contact fits in all connectors of the LuxCis® product range, whether a plug or a receptacle. There is no pin and socket configuration
- Specific inserts to secure the superior optical performance of the LC in multipin connectors for harsh environment requirements
- Removable sleeve holder for a better ferrule cleaning or inspection process
- Use of a standard size 16 tool for insertion and extraction
- Main connectors: EN4644 (EPX) connector range, ARINC 600, MIL-DTL-38999 type connectors, board connectors, LxC-R® single-channel ruggedized connectors
- LuxCis® contacts can be used for MultiMode as well as SingleMode APC applications, thanks to its orientation key
- LuxCis® can be used on most of the existing cables
- Full pull proof when used with a loose structure cable

APPLICATIONS

- **RF over fiber** (remote antennas, phase array radars, military radio networking and all radio signal conversion over fiber in severe environments)
- **Sensors** (performance or structural)
- **In-Flight Entertainment**
- **Avionics data transmission**
- **High speed data networking, including wavelength multiplexing**

LuxCis® has been qualified for military and commercial aerospace programs and is being or may be used on many applications in the naval, oil research, transportation, or any industry with harsh environmental requirements.

STANDARDIZATION

- **ARINC 801:** LuxCis® is the design voted to be the ARINC 801 FO interconnect solutions for aerospace applications per the AEEC. ARINC 801 describes the contacts and the specific inserts used in MIL-DTL-38999 shells and EPX based connectors ARINC 600 inserts are described in the ARINC 600 document.

- **EN standard:**
    - EN4639-0xx: describing the LuxCis® inserts for the EN4644 (EPX) connectors
    - EN4639-101: describing the LuxCis® contact
        - EN4640: describing the LuxCis® configurations for ARINC 600 connectors
            - EN4645: describing the LuxCis® configurations for MIL-DTL-38999 based connectors

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The LuxCis® interconnect solution has been qualified per ARINC 801 and EN standards. Please refer to these documents for detailed information. Main results and performance information are shown in the following tables.

OPTICAL CHARACTERISTICS

	MultiMode (PC) 850 / 1300 nm	SingleMode (UPC) 1310 / 1550 nm	SingleMode (APC) 1310 / 1550 nm
Insertion Loss (IL) Mean	0.1 dB	0.15 dB	0.2 dB
Return Loss (RL)	> 20 dB	> 50 dB	> 60 dB

Insertion Loss against a reference patchcord: IEC 61300-3-4 Method B

Return Loss: IEC 61300-3-6

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Test	Standard	LuxCis® in EN4644 (EPX) connectors	LuxCis® in Mil-DTL-38999 connectors	LuxCis® in ARINC 600 connectors	LuxCis® in LxC-R® connectors
Thermal cycling	SAE AS 13441 method 1003.1	-55°C/+125°C (cable dependant)			
Temperature endurance	TIA/EIA 455-20	1000 h @ 125°C (cable dependant)			
Vibration	TIA/EIA 455-11	27 Grms	43 Grms	16.4 Grms	50 Grms
Shocks	TIA/EIA 455-14	50 G, 11 ms	300 G, 3 ms	50G, 11 ms	300 G, 3 ms
Durability	TIA / EIA 364-09	100 cycles	500 cycles	500 cycles	500 cycles
Maintenance aging	SAE AS 13441 method 2002.1	10 cycles			
Cable retention 1.8 mm diameter 900 µm diameter	SAE AS 13441 method 2009.1	68 N 7 N			
Humidity	TIA EIA 455-5	10 cycles / 24 h - 90% RH - -25°C / +65°C			

Note: The LuxCis® product range has passed many qualifications, including customer driven qualifications. Not all the tests performed on LuxCis® products are described in the table above. The values mentioned in the table do not also represent maximum achievable values, they represent tested values. Request for information on a test not mentioned in the table or harsher conditions shall be addressed to your local Radiall representative.

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PRODUCT RANGE

LUXCIS® CONTACTS

Part numbering system

F725 0 03 419

F725: LuxCis® series

Ferrule type:

00: PC ferrule for SingleMode fiber
03: PC ferrule for 50/125 or 62.5/125 µm MultiMode fiber
04: PC ferrule for 100/140 µm MultiMode fiber
05: PC ferrule for 200/230 µm MultiMode fiber
50: APC ferrule for SingleMode fiber

Cable type and diameter:

118: 900 µm cable
318: 1.2 mm cable with strengthening members, tight structure
419: 1.6 to 2.2 mm cable, loose structure
519: 1.6 to 2.2 mm cable, tight structure

As shown in the part numbering system, the choice of a LuxCis® contact is a function of the cable structure. While the outside dimension of the contact does not change (see the drawings on the following page), the inside of the contact is adapted to the structure of the cable.
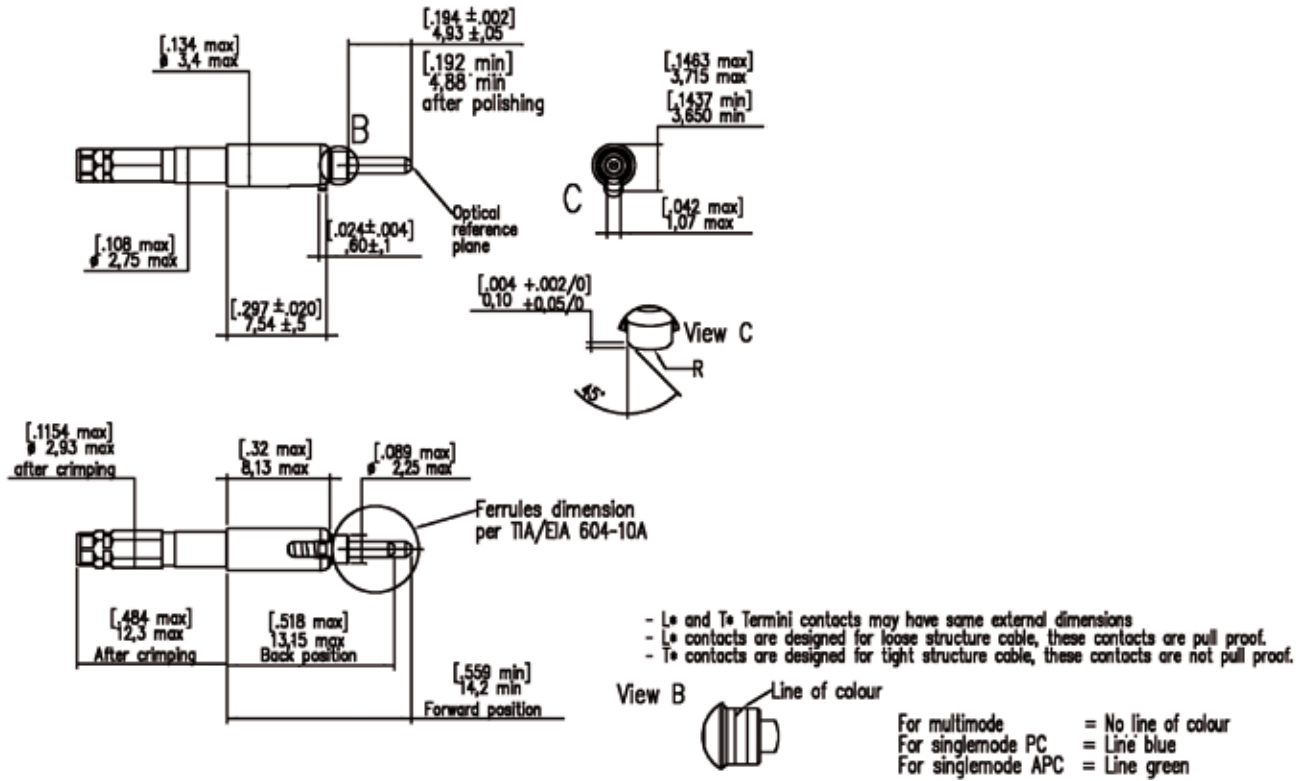
The structure of a cable is defined per ARINC 802:

• Loose structure: a fiber optic cable structure that allows limited movement of the buffered fiber (usually the 900 µm) with respect to the outer jacket and strength member

• Tight structure: a fiber optic cable structure that allows no movement of the buffered fiber with respect to the outer jacket and strength member

The LuxCis® contact range can accommodate virtually all the cables used for aerospace and military application (ARINC, SAE, EN, FONDA, MIL). Please contact your sales representative for other configurations or for specific requirements.
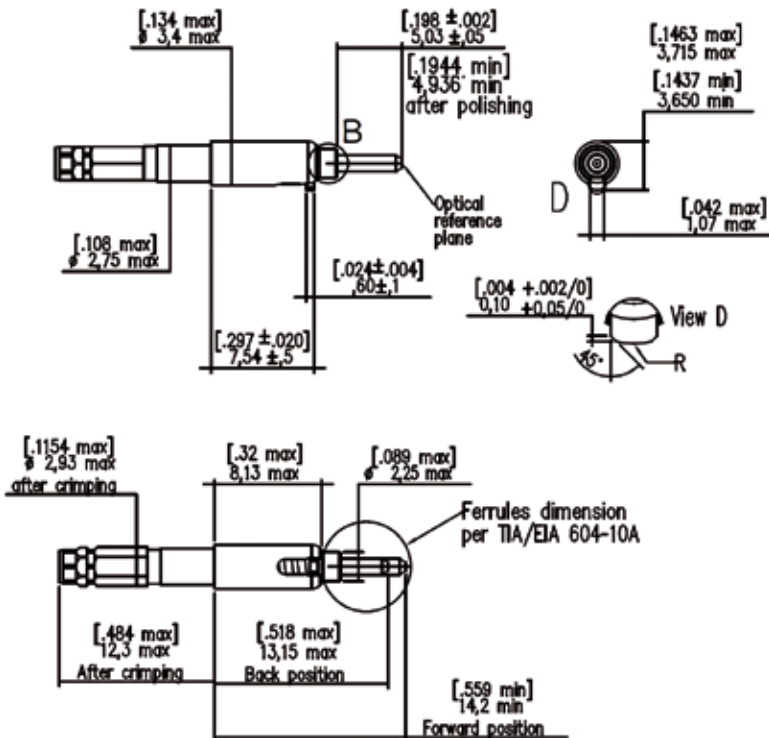
ARINC 801 equivalent

Part number	ARINC 801 equivalent
F725 003 419	LM
F725 000 419	LS
F725 050 419	LSA
F725 003 519	TM
F725 000 519	TS
F725 050 519	TSA

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PC CONTACTS

[.134 max]
3,4 max

[.194 ±.002]
4,93 ±,05

[.192 min]
4,88 min
after polishing

[.1463 max]
3,715 max

[.1437 min]
3,650 min

B

[.108 max]
2,75 max

Optical reference plane

[.024±.004]
,60±,1

[.042 max]
1,07 max

C

[.297 ±.020]
7,54 ±,5

[.004 +.002/0]
0,10 +0,05/0

View C

R

45°

[.1154 max]
2,93 max
after crimping

[.32 max]
8,13 max

[.089 max]
2,25 max

Ferrules dimension
per TIA/EIA 604-10A

[.484 max]
12,3 max
After crimping

[.518 max]
13,15 max
Back position

[.559 min]
14,2 min
Forward position

- L• and T• Termini contacts may have same external dimensions
- L• contacts are designed for loose structure cable, these contacts are pull proof.
- T• contacts are designed for tight structure cable, these contacts are not pull proof.

View B   Line of colour

For multimode   = No line of colour
For singlemode PC   = Line blue
For singlemode APC   = Line green

APC CONTACTS

[.134 max]
3,4 max

[.198 ±.002]
5,03 ±,05

[.1944 min]
4,936 min
after polishing

[.1463 max]
3,715 max

[.1437 min]
3,650 min

B

[.108 max]
2,75 max

Optical reference plane

[.024±.004]
,60±,1

[.042 max]
1,07 max

D

[.297 ±.020]
7,54 ±,5

[.004 +.002/0]
0,10 +0,05/0

View D

R

45°

[.1154 max]
2,93 max
after crimping

[.32 max]
8,13 max

[.089 max]
2,25 max

Ferrules dimension
per TIA/EIA 604-10A

[.484 max]
12,3 max
After crimping

[.518 max]
13,15 max
Back position

[.559 min]
14,2 min
Forward position

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PRODUCT RANGE

EN4644 (EPX) INSERTS FOR LUXCIS® CONTACTS

The Radiall EPX® product range includes rectangular modular connectors that provide more flexibility, improved performance and higher density compared to standard circular MIL-spec connectors.

The EPX® series offer a wide range of solutions based on two insert sizes with a large variety of shells sizes and contacts. It provides an excellent trade-off between the number of available contacts and the space actually used. EPXA inserts are a good option for small wire bundles while EPXB inserts offer twice the capacity. Moreover, the solution is completely modular and expandable.

The EPX® inserts can also be used in the Radiall QM connectors that have been designed for use with in-line disconnect applications on commercial airplanes.

For detailed information on the EPX® series, please refer to our latest catalog available on the Radiall website or from your local Radiall representative.

Part numbers for LuxCis® inserts in EN4644 (EPX) connectors

LuxCis® in EPX® requires standard EPX® shells and dedicated LuxCis® inserts. The following table lists the part numbers for the LuxCis® inserts for the EPX connectors.

Description	p/n for cavity A	p/n for cavity B
Pin insert (no sleeve holder), 12 LuxCis® contacts for EPXB	EPXBEF12CPA	EPXBEF12CPB
Socket insert (with sleeve holder), 12 LuxCis® contacts for EPXB	EPXBEF12CSA	EPXBEF12CSB
Pin insert (no sleeve holder), hybrid, 6 LuxCis® contacts and 6 electrical contacts, for EPXB	EPXBE12F6PA	EPXBE12F6PB
Socket insert (with sleeve holder), hybrid, 6 LuxCis® contacts and 6 electrical contacts, for EPXB	EPXBE12F6SA	EPXBE12F6SB
Pin insert (no sleeve holder), 6 LuxCis® contacts for EPXA	EPXAEF6PA	
Socket insert (with sleeve holder), 6 LuxCis® contacts for EPXA	EPXAEF6SA	

Socket inserts are always supplied with a sleeve holder.
Pin and socket inserts can be installed in plug or receptacle shells.
Please refer to the EPX® series catalog for more details on the receptacles and plug shells.
100% fiber optic inserts are also described in the ARINC 801 or EN4639 documents.
Please contact your sales representative for other configurations or for specific requirements
Note: that Radiall can support you with your cable and harness assemblies.
   Please refer to pages 7-19 to 7-21 or contact your Radiall representative.

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ARINC 600 (NSX) INSERTS FOR LUXCIS® CONTACT
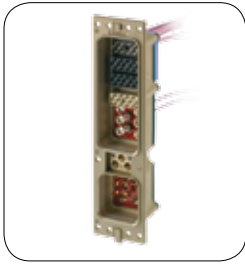
The ARINC 600 (NSX) series includes multipin rack and panel connectors used on high performance aerospace equipment. Radiall NSX series conforms to the ARINC 600 avionics standard.

Dedicated inserts allow the installation of up to 36 LuxCis® contacts in a cavity A or B. A wide range of inserts allows mixing of electrical and fiber optic channels in the same connector. Quadrax cavities can also accommodate LuxCis® contacts with a dedicated adapter.

Part numbers for LuxCis® inserts in Arinc 600/NSX connectors

Insert type	Shell size	Cavity	Number of LuxCis® contacts	Number of quadrax contacts	Other contacts	Picture
12F5C2	2 or 3	C	5	-	1 contact # 16 4 contacts # 12 2 contacts #5	
12F12	1	C	12	-	-	
17F12Q2	2 or 3	C	12	2	3 contacts #16	
20F12Q8	2 or 3	A or B	12	8	-	
20Q8F12	2 or 3	A or B	12	8		
62F12	2 or 3	C	12	-	50 contacts #22	
24F24	2 or 3	C	14	-	-	
36F36	2 or 3	A or B	36	-	-	

The sleeve holder is delivered already installed on the LuxCis® inserts 12F5C2, 17F12Q2, 20F12Q8, 20Q8F12, 62F12 and 36F36 on the receptacle side.

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PRODUCT RANGE

Quadrax – LuxCis® Adapters

Adaptors for Quadrax cavitites are available and can be ordered using the following part numbers. You can now get high speed connection with a connector that used to be equipped with Quadrax contacts by using Quadrax–LuxCis® adapter and turning a size 8 Quadrax cavity into a LuxCis® cavity.

Description	Part number	Picture
Pin quadrax adapter for LuxCis® contact in quadrax FR type cavity with sleeveholder	620 946 001	
Pin quadrax adapter for LuxCis® contact in quadrax RR type cavity with sleeveholder	620 946 002	
Socket quadrax adapter for LuxCis® contact in quadrax RR type cavity	620 946 003	
Sleeve holder for pin quadrax adapter	620 946 004	

Please refer to the ARINC 600 (NSX) series catalog for more details on the receptacles and plug shells.
Please contact your Radiall representative for other configurations or for specific requirements.
Technical datasheets are available upon request at your Radiall representative or on the Radiall website.
Note: Radiall can support you with your cable and harness assemblies. Please refer to pages 7-19 to 7-21 or contact your Radiall representative.

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MIL-DTL-38999 TYPE CONNECTORS FOR LUXCIS® CONTACT

The LuxCis® product range also includes MIL-DTL-38999 type connectors

Size 11 MIL-DTL-38999
type connectors

Size 25 MIL-DTL-38999
type connectors

Removable sleeveholder

Shells arrangement

| Size 11, 2 LuxCis® | Size 13, 4 LuxCis® | Size 15, 6 LuxCis® | Size 17, 8 LuxCis® | Size 19, 12 LuxCis® |

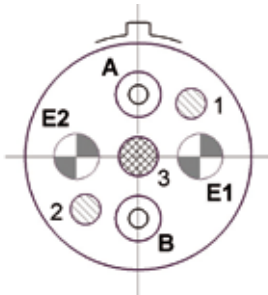| Size 21, 16 LuxCis® | Size 23, 24 LuxCis® | Size 25, 32 LuxCis® |

1 & 2: Alignment pins   3: Sleeve-holder screw   A, B, ...: Optical cavities
All views show the front face of a plug.

The LuxCis® product range also includes hybrid connectors, mixing electrical and LuxCis® cavities.

Size 13 connector with 2 electrical and 2 LuxCis® cavities

Hybrid connectors are available in all sizes; please see your local Radiall representative for more details.

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Part numbers for LuxCis® MIL-DTL-38999 type connectors

R8 W 15 O 6FO S A N

R8: LuxCis® MIL-DTL-38999 series

Shell type:

W: Plug
R: Square flange receptacle
N: Jam nut receptacle

Shell size:

11-13-15-17-19-21-23-25

Shell material and finish:

O: Aluminium olive drab cadmium
N: Nickel plated Aluminium
M: Nickel plated composite
G: Nickel aluminium bronze

Contact layout:

2FO: 2 LuxCis® contacts (shell size 11)
2FO2E: 2 LuxCis® + 2 electrical contacts (shell size 13)
4FO: 4 LuxCis® contacts (shell size 13)
6FO: 6 LuxCis® contacts (shell size 15)
8FO: 8 LuxCis® contacts (shell size 17)
12FO: 12 LuxCis® contacts (shell size 19)
16FO: 16 LuxCis® contacts (shell size 21)
24FO: 24 LuxCis® contacts (shell size 23)
32FO: 32 LuxCis® contacts (shell size 25)

Insert type:

S: sealed insert for plug (R8W)
P: sealed insert for receptacle
(R8R or R8N)

Insert material:

A: Anodized aluminium
C: Non metalized composite

Polarization:

N-A-B-C-D-E

Electrical contacts shall be ordered separately.
Anodized aluminum inserts are recommended when specific EMI protection requirement
All connectors are supplied with a plastic cap
Accessories such as backshell or metalized caps are available only through Radiall manufactured harness assemblies.
Please refer to the cable assembly section for more information (pages 7-19 to 7-21).
Please contact your sales representative for other plating configurations or for specific requirements
Technical datasheets are available upon request at your sales representative or on the Radiall website.
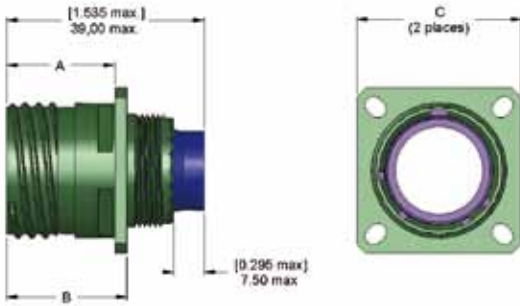
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SQUARE FLANGE AND JAM NUT RECEPTACLES

Fig. 1 Square flange receptacles
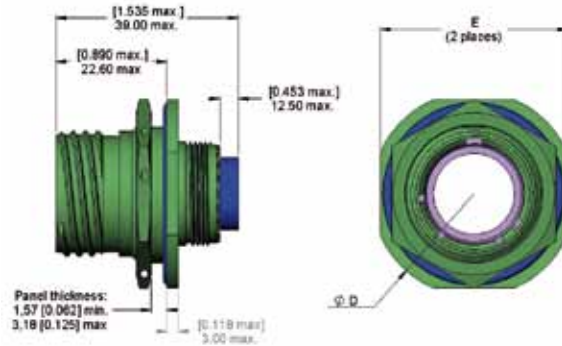
Fig. 2 Jam nut receptacles

Shell size	Figure 1					Figure 2	
	A max. mm (inch)		B max. mm (inch)		C max. mm (inch)	Dia. D max.	E max.
	Metallic shell	Composite shell	Metallic shell	Composite shell		mm (inch)	mm (inch)
11	20.83 (0.820)	19.69 (0.775)	23.15 (0.911)	23.19 (0.913)	26.50 (1.043)	35.20 (1.386)	32.20 (1.268)
13					28.90 (1.137)	38.40 (1.512)	35.30 (1.390)
15					31.30 (1.232)	41.60 (1.638)	38.50 (1.516)
17					33.70 (1.323)	44.80 (1.764)	41.70 (1.642)
19					36.90 (1.449)	49.50 (1.949)	46.40 (1.827)
21	20.07 (0.790)	18.92 (0.745)		23.14 (0.911)	40.10 (1.575)	52.70 (2.075)	49.60 (1.953)
23					43.30 (1.701)	55.90 (2.200)	52.80 (2.079)
25					46.40 (1.823)	59.00 (2.323)	56.00 (2.205)

PLUGS

Shell size	Dia. A max. mm (inch)
11	25.00 (0.984)
13	29.40 (1.157)
15	32.50 (1.280)
17	35.70 (1.405)
19	38.50 (1.516)
21	41.70 (1.642)
23	44.90 (1.768)
25	48.00 (1.890)

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LXC-R® CONNECTORS FOR LUXCIS® CONTACTS
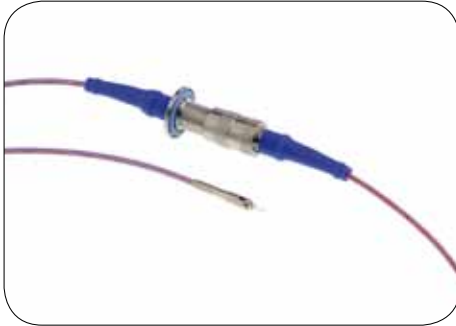
The LuxCis® product range also includes the LxC-R®, a multi purpose single channel fiber optic connector for harsh environments.

Miniature and robust, this single channel connector is ideally suited for applications requiring single channel transmission in extreme environmental conditions, such as aerospace and military equipment or anywhere a robust fiber optic link is required.

The LxC-R® is qualified to withstand a high level of vibration and shock. Specifically designed to be compatible with the industry standard LuxCis® Arinc 801 fiber optic contact, the LxC-R® is exceptionally reliable in terms of mechanical, environmental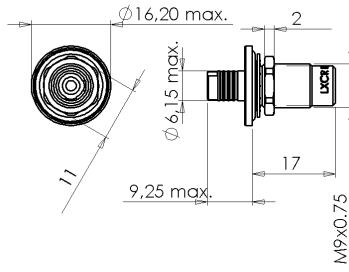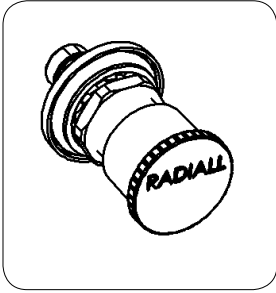 and optical performances. The flexibility of the LuxCis® termini allows the use of either MultiMode or SingleMode fiber for both PC and APC terminations.

The range includes plugs, square flange and jam nut receptacles, as well as hermetic connectors.
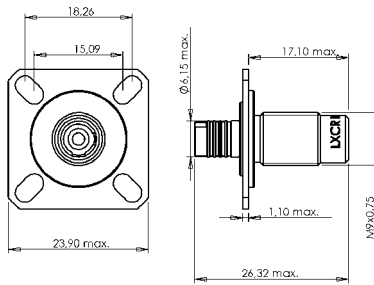
BENEFITS & FEATURES:

• Easy to install: simple jam nut coupling
• No specific tool required
• Excellent optical performance
• Compatible with Arinc 801 LuxCis® APC termini
• Protection even when unmated
• Interfacial gasket: shell to shell sealing (IP67)
• Sealing boot: environmental grommet, also guiding the fiber at the rear of the connector
• D-Hole receptacle with o-ring: for panel sealing
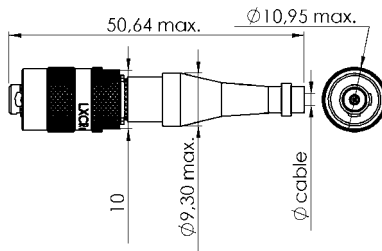• Two polarization keys: 90° or 120°

JAM NUT RECEPTACLE

Ø16,20 max.
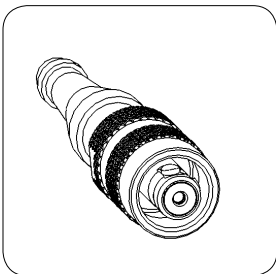2
Ø 6,15 max.
11
17
9,25 max.
M9x0.75

SQUARE FLANGE RECEPTACLE

18,26
15,09
Ø 6,15 max.
17,10 max.
23,90 max.
1,10 max.
M9x0.75
26,32 max.

PLUG

50,64 max.
Ø10,95 max.
10
Ø 9,30 max.
Ø cable

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Part numbers for LXCR

LXCR P1 C1 B L 1 N

LXCR LxC-R® series

Shell type:

P1: Plug with knurled nut
R2: Square flange receptacle
N1: Jam nut receptacle, rear mounting, D-hole

Cable diameter:

C1: 1.6 to 2.2 mm

Sealing specification:

B: Plug with sealing boot
C: Receptacle with sealing boot
D: Receptacle without sealing boot

Service class material:

A: Salt spray 500 h
L: Salt spray 96 h

Temperature range:

1: -65°C / +155°C

Polarization:

N: 90° indexed
A: 120° indexed

Please contact your sales representative for accessories, other configurations or for specific requirements.
Technical datasheets are available upon request at your sales representative or on the Radiall website.
Note: Radiall can support you with your cable and harness assemblies. Please refer to the "Cable assemblies"
section (pages 7-19 to 7-21) or contact your sales representative

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CUSTOM DESIGN CONNECTORS FOR LUXCIS® CONTACT
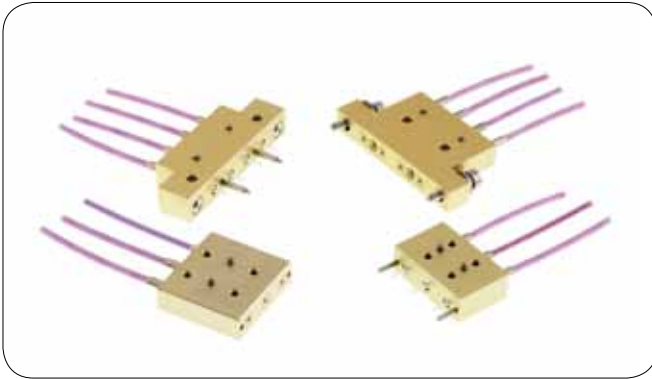
Radiall has been also designing LuxCis® connectors to meet the customer's footprint and space on the board, in the box or at the box interface.
Each connector integrates a number of LuxCis® cavities and the locking mechanism depends on the application and the environment required by the customer.

Please contact your sales representative for a LuxCis® connector built to your print.
Note that Radiall can support you with your cable and harness assemblies. Please refer to pages 7-19 to 7-21 or contact your Radiall representative.

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ACCESSORIES AND TOOLS

ACCESSORIES

• Dust caps: **F718 176 104** (packaging 10 pieces) and **F718 176 204** (packaging 100 pieces)
• Filler plug for unused cavity: **616 912**
• Assembling kit

TOOLS

F725 700 100

F719 060 000

F719 058 010

Description	Part number
LuxCis® to LuxCis®adapter, simplex bulkhead feedthrough	**F725 701 100**
LuxCis® to LuxCis®adapter, simplex straight	**F725 700 100**
LuxCis® to LC adapter, simplex LC panel cutout	**F719 060 000**
LuxCis® to LC adapter, duplex LC panel cutout	**F719 058 010**
LuxCis® to LC adapter, duplex MIL-DTL-38999 panel cutout	**F719 058 000**
LuxCis® to LuxCis® adapter, quick release	**F780 799 001**
LuxCis® to LC adapter, quick release	**F780 799 000**
Plastic extraction tool, size 16, *(MIL-PRF-81969/14-03)*	**282 515**
Dynamometric key for sleeve holder removal and installation	**F780 638 000**
Hexagonal key 5/64 inch (2 mm) flats for sleeve holder removal and installation	**F780 855 000**
Key for quadrax sleeve holder removal	**F780 858 000**
Extraction tool for quadrax adapter RR type (MIL-PRF-81969/28-03)	**282 549 001**
Extraction tool for quadrax adapter FR type	**282 549 009**

All LuxCis® adapters have zirconia ceramic alignment sleeves.
Radiall also proposes termination or maintenance kits. For insertion loss measurements, Radiall offers aerospace quality measurement jumpers compliant to ARINC 805.

Please contact your sales representative for technical datasheets or visit Radiall website.

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Radiall can support his customers with high quality and high performance cables and harness assemblies, either designed by Radiall to meet the customer's requirement or built to customer print. Each assembly is visually inspected and tested per the criteria from industry standards (ARINC, EN, SAE, IEC). All products for aerospace applications are manufactured in AS9100 certified assembly lines.

CABLE ASSEMBLIES FOR AEROSPACE AND HARSH ENVIRONMENT APPLICATIONS

Radiall can assemble many aerospace grade cables and connectors including:

• **Cables**
- Aerospace grade cable, loose structure, type ARINC 802, BMS 13-71 or tight structure, type ARINC 802, ABS0963, (temperature range –55°C/+125°C)
- Commercial grade cable, "Not for flight" for ground test application
- MIL cables
- Ruggedized telecom cables for outdoor applications

Cables are using either MultiMode fibers (50/125 µm, 62.5/125 µm or larger core fiber) or SingleMode fiber.

Radiall will work with any cable as required by the customer. The structure of the cable is a key parameter in the choice of the connector or the contact. A termination test as well as basic environmental tests may have to be done to validate the combination connector / cable.

• **Connectors / contacts**
- LuxCis® ARINC 801, including the single channel LxCR
- Size 12 and 16 optical contacts (MIL-PRF-29504 compatible)
- Ruggedized LC, SC, ST, FC
- MT based connectors
- EN 4531 contacts

Some connectors or contacts can be polished with an APC process. Please refer to the connector section.
Radiall can terminate many other connectors or contacts. Please contact your local Radiall representative for more information.

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Part numbers for standard aerospace cable assemblies

LuxCis MM 52 LC L100

End 1:

LuxCisMM: LuxCis® MultiMode
LuxCisSM50: LuxCis® SingleMode UPC
LuxCisSM8: LuxCis® SingleMode APC
LC: LC MultiMode
LC50: LC SingleMode UPC
LC8: LC SingleMode APC
SC: SC MultiMode
FC: FC MultiMode
FC8: FC SingleMode APC
ST: ST MultiMode

Cable:

11: 900 μm, 62.5/125 μm fiber, commercial grade
14: 900 μm, 62.5/125 μm fiber, aerospace grade
10: 900 μm, 50/125 μm fiber, commercial grade
16: 900 μm, 50/125 μm fiber, aerospace grade
60: 900 μm, 9/125 μm, commercial grade
23: 1.8-2 mm, loose structure, 62.5/125 μm fiber, commercial grade
52: 1.8-2 mm, loose structure, 62.5/125 μm fiber, aerospace grade
53: 1.8-2 mm, tight structure, 62.5/125 μm fiber, aerospace grade
27: 1.8-2 mm, loose structure, 50/125 μm fiber, commercial grade
55: 1.8-2 mm, loose structure, 50/125 μm fiber, aerospace grade
78: 1.8-2 mm, tight structure, 50/125 μm fiber, aerospace grade
73: 1.8-2 mm, loose structure, 9/125 μm fiber, commercial grade
92: 1.8-2 mm, loose structure, 9/125 μm fiber, aerospace grade

Add D for a duplex configuration

End 2: see end 1

Length of the cable in centimeter

Technical datasheets with standard length tolerance and labelling information are available. Specific requirement (additional test, specific labeling, and additional protection of the cable) or any other cable assembly configuration can be accommodated. Please contact your local Radiall representative.

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Radiall manufactures high quality high performance optical harness assemblies for military and aerospace applications, based on customer print or as designed by Radiall based on the customer's requirement or environment.

Some examples of the configurations that Radiall can provide:

• Cable assemblies as described in the previous section or using multifiber cables for harsh environment applications or outdoor applications

• Connectors
  – Rectangular connectors EPX, ARINC 600 and 404
  – Circular connectors – MIL-DTL-38999 based
  – Board connectors
  – Custom designed connectors

Radiall will provide backshell and cable protection as required by the customer or as required by the cable and connector choice and / or the harness assembly application environment. Radiall will develop custom solution if no commercially available solution meets the requirement. As an example, Radiall has been developing a range of backshells for the Radiall rectangular connector product ranges or for circular connectors with higher strain relief performance.

For more information about your harness assembly configuration and how Radiall can support you, please contact your local Radiall representative.

Some examples of fiber optic backshells developed for Radiall built harnesses

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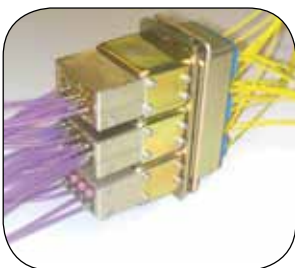
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