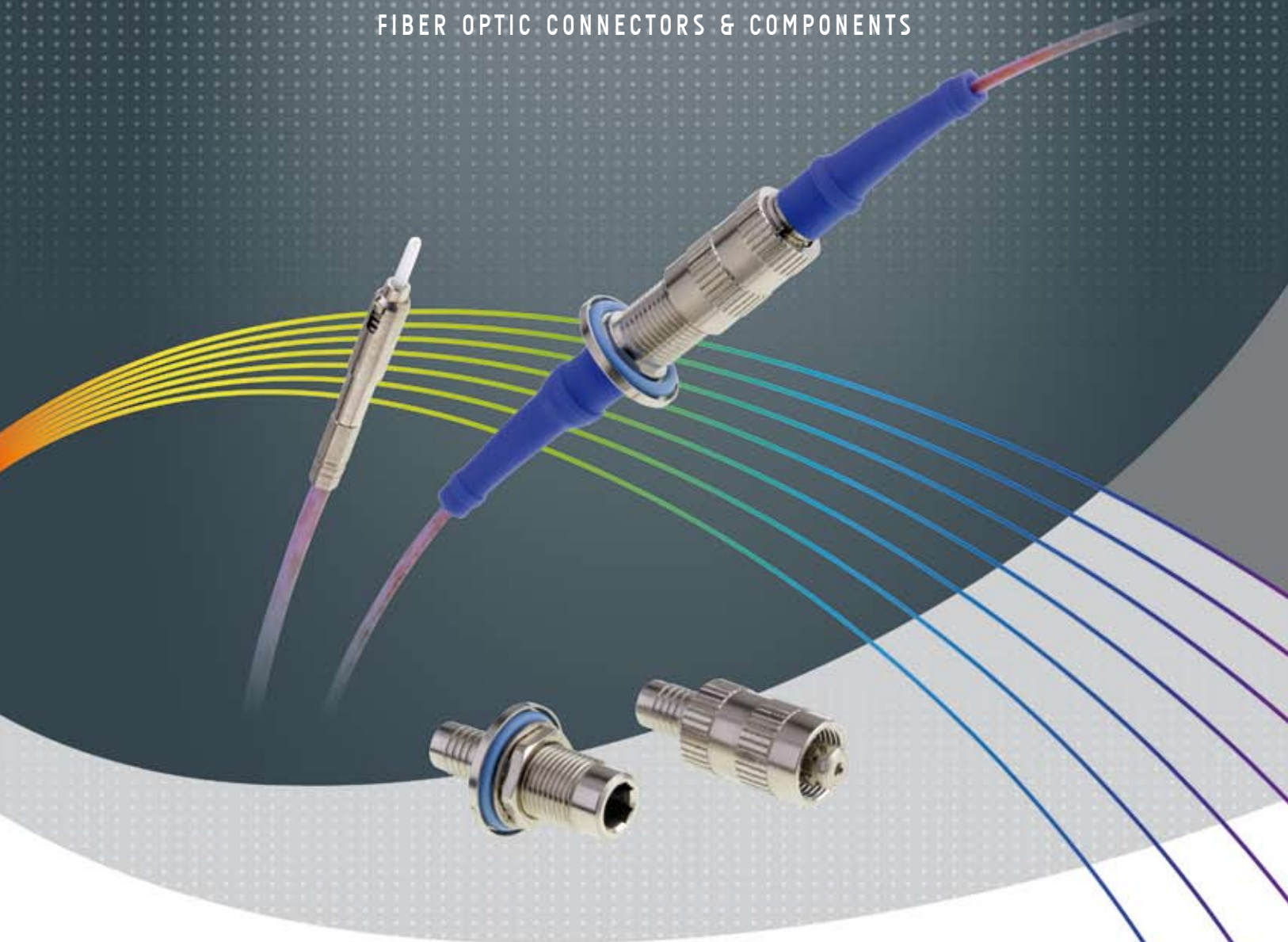


FIBER OPTIC CONNECTORS & COMPONENTS



## LxC-R<sup>®</sup> - Single Channel Connector

*Arinc 801 LuxCis<sup>®</sup> fiber optic termini compatible*

RADIALL   
The next conneXion

# Radiall introduces the LxC-R<sup>®</sup>,

*a multi purpose single channel fiber Optic connector for harsh environments.*

Miniature and robust, this new 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<sup>®</sup> is qualified to withstand a high level of vibration and shock. Specifically designed to be compatible with the industry standard LuxCis<sup>®</sup> Arinc 801 fiber optic contact, the LxC-R<sup>®</sup> is exceptionally reliable in terms of mechanical, environmental and optical performances. The flexibility of the LuxCis<sup>®</sup> 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 feedthroughs.

## MAIN FEATURES AND BENEFITS:

- **Easy to install:** simple jam nut coupling, no specific tool required
- **Excellent optical performance**
- **Compatible with Arinc 801 LuxCis<sup>®</sup> APC termini**
- **Hermetic feedthrough adaptor:** for complete sealing protection, even when unmated
- **Interfacial gasket:** shell to shell sealing
- **Sealing boot:** environmental grommet, also guiding the fiber at the rear of the connector
- **D-Hole receptacle with o'ring:** for panel sealing
- **Salt spray specifications:** 96H and 500H
- **Two polarization keys:** 90° or 120°

Plug



Receptacle



## APPLICATIONS:



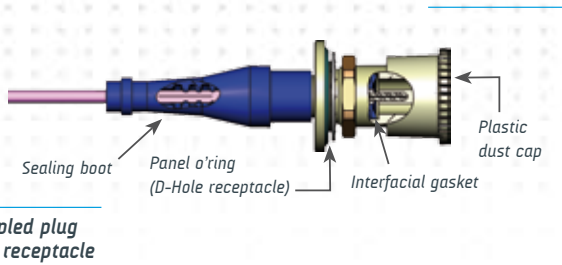
## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Salt spray	96H or 500H depending on the service class
Durability	500 mating cycles
Sealing	IP 67
Altitude immersion	75,000 feet (3.39 kPa) TIA/EIA-455-15A
Vibration (random)	50G-TIA/EIA-455-11C
Shock	300G-TIA/EIA-455-14A
Temperature range	- 65°C / + 155°C (cable dependent)
Hermetic sealing	10 <sup>-6</sup> atm x cm <sup>3</sup> /s (see note)

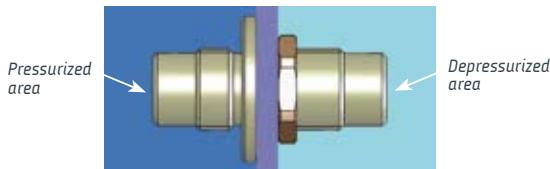
**Note:** Consult with Radiall for any other specific requirement.

## LUXCIS® OPTICAL PERFORMANCE

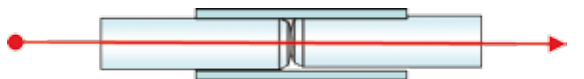
	Singlemode (UPC) 1310/1550nm	Singlemode (APC) 1310/1550nm	Multimode (PC) 850nm/1310nm
<b>Attenuation</b> > Mean > Standard deviation (against a reference plug, IEC 61300-3-4 Method B)	0,15 dB 0,10 dB	0,20 dB 0,12 dB	0,10 dB 0,07 dB
<b>Return loss</b> (maximum low variation: IEC 61300-3-6))	> 50 dB	> 60 dB	> 20 dB



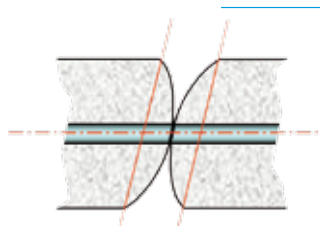
Coupled plug and receptacle



Hermetic Sealing



Physical contact alignment = low attenuation



APC technology = low reflectivity > 60 dB

- RF over Fiber (Remote Antennas, Phase Array Radar, Military Radio Networking, and all radio signal conversion over a fiber in severe environments)
- Sensors (temperature, shock, pressure, vibration...) for aeronautic, military, medical applications and others.

The LuxCis® concept is based on the use of identical fiber optic termini that can be inserted in either plug or receptacle. A ceramic sleeve ensures fine alignment. The LuxCis® is recommended for all applications where:

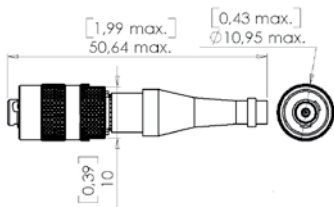
- High data rates are required
- EMI is an issue
- Weight reduction is important
- Fiber optic connections are used in harsh environments

LuxCis® standardization: ARINC 801 / EN 4639 / EN 4640 / EN 4645

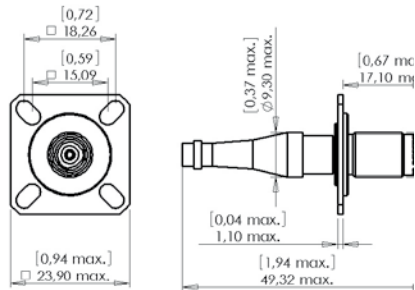
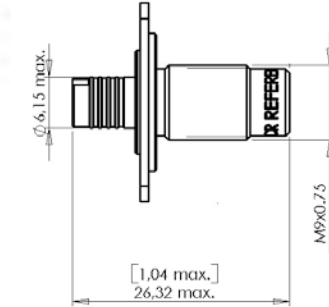
**DIMENSIONS (inch/mm)**

Technical Data Sheet available upon request

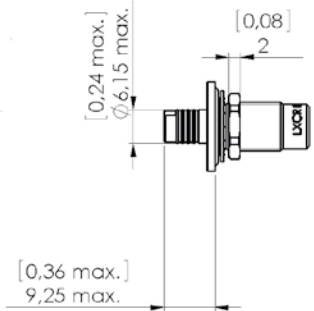
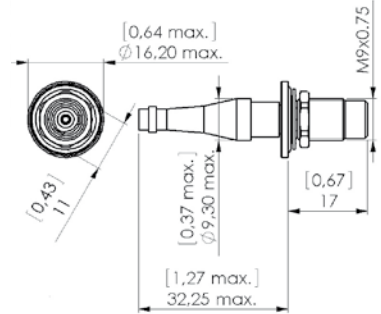
**Plug**



**Square flange receptacle (38999 size 9 panel cutout)**



**Jam nut receptacle**



■ **In Flight Entertainment** (seat box connections, on-board fiber optic equipment, etc...)

■ **Pressurized environments**



## ORDERING INFORMATION

### PLUGS and RECEPTACLES

LXCR P1 C1 B L 1 N

#### I – Shell type

- P1** Plug with knurled nut
- R2** Wall mount receptacle / square flange (38999 T9 panel cutout)
- N1** Jam nut receptacle / rear mounting / D-hole
- N2** Jam nut receptacle / front mounting / D-hole
- A1** Hermetic feedthrough adaptor, LxC-R® to LxC-R®
- A2** Hermetic feedthrough adaptor, LxC-R® to LuxCis®

#### VI – Polarization

- N** 90° indexed
- A** 120° indexed

#### V – Temperature range

- 1** 155° (cable dependent)

#### II – Cable diameter

- C1** 2.2mm max (LuxCis® termini dependent)

#### IV – Service class material

- A** Salt spray 500H
- L** Salt spray 96H

#### III – Sealing specification

- B** Plug with sealing boot (for P1 shell type)
- C** Receptacle with sealing boot (for R2 / N1 / N2 shell type)
- D** Receptacle without sealing boot (for R2 / N1 / N2 shell type)
- H** Hermetic feedthrough adaptor (for A1 / A2 shell type)

*Note: Consult with Radiall for other shell types, cable diameters, service class and reinforced sealing specifications.*

### PROTECTIVE CAPS

LXCR M R CH A

#### I – Material

- M** Metal

#### III- Cord type

- CH** Metal cord

#### II – Cap type

- P** Plug
- R** Square flange receptacle
- N** Jam nut receptacle

#### IV – Service class material

- A** Salt spray 500H
- L** Salt spray 96H



AEROSPACE



AUTOMOTIVE



DEFENSE



INDUSTRIAL



INSTRUMENTATION



MEDICAL



SPACE



TELECOM

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Estonia	Malaysia	Thailand
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