

SECTION 5



RXF Series

RXF



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## Contents

<b>Introduction</b>	
RXF: Radiall Outdoor Fiber Optic Connector .....	5-2
Applications .....	5-2
International Standard Documents Compliance .....	5-2
Features and Benefits .....	5-2
<b>Characteristics</b>	
Optical Characteristics .....	5-3
Mechanical Characteristics .....	5-3
Environmental Characteristics .....	5-3
Materials .....	5-3
<b>RXF Product Range</b>	
R2F: Two Fiber Optic Channels .....	5-4
R4F: Four Fiber Optic Channels .....	5-5
R6F: Six Fiber Optic Channels .....	5-6
<b>Dimensions</b>	
RXF Plugs .....	5-7
RXF Sockets .....	5-7
<b>Captive Protection Caps</b> .....	5-8
<b>Cleaning Tool</b> .....	5-8
<b>RXF Cable Assemblies</b> .....	5-9
<b>RXF Connector Kits</b> .....	5-10

## Introduction

### RXF: RADIALL OUTDOOR FIBER OPTIC CONNECTOR



Dedicated to outdoor optical connections, RXF has been designed and is manufactured by Radiall.

RXF connectors are available within 2, 4 and 6 channels, in MultiMode or SingleMode UPC versions.

RXF can be provided as complete cable assemblies or connector kits depending on the customer need.

A quick-locking device with IP68 sealing and low loss insertion allows this connector to be used in severe outdoor conditions and harsh environments.

### APPLICATIONS

Wireless communications

Energy

Transportation

Monitoring display

### INTERNATIONAL STANDARD DOCUMENTS COMPLIANCE

- IEC 61300 Fiber optic interconnecting devices and passive components
- Telcordia GR-326-CORE Optical connectors and Jumpers assemblies
- IEC 60529 Degrees of protection provided by enclosures (IP code)
- EN 50125 Railway applications – environmental conditions for equipment
- MIL-PRF-39012 Standard N type mechanical interface
- RoHS compliant



### FEATURES AND BENEFITS

#### Robust connection

- Fully protected ceramic ferrules and alignment sleeves: no risk to damage the optical faces during mounting/dismounting operations
- Standard mechanical interface: N type screwing according to MIL-PRF-39012
- Use of standard optical ferrules 1.25 mm

#### Easy Installation

- Qualified with other compatible outdoor fiber optic N type connectors
- Screwed locking mechanism: easy to install (U-19 mm wrench/1 N.m torque)
- Fast and easy connection: one-hand blind mate coupling

#### Resistant in harsh environments adapted for outdoor use

- Waterproof connection
- Dust proof
- Corrosion resistant

#### High level of performances

- Full compliance to IEC 61300 standard
- High tensile strength
- EMI immunity



**Characteristics**

**OPTICAL CHARACTERISTICS**

Insertion Loss (IEC 61300-3-4)	typical<0.2 dB (max<0.5 dB)
Return Loss	>50 dB

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

Return Loss: IEC 61300-3-6

Note: The optical performances also depend on the fiber or cable intrinsic qualities.

**MECHANICAL CHARACTERISTICS**

Mating endurance	IEC 61300-2-2	500 mating cycles minimum
Tensile resistance	RXF Plug	800 N (with field cable)*
	RXF Socket	30 N (with field cable)*
Vibrations	IEC 61300-2-1	passed
Shocks	IEC 61300-2-9	passed

\*Depending on cable type

**ENVIRONMENTAL CHARACTERISTICS**

Operating temperature range	IEC 61300-2-22	-40°C/+85°C
Salt spray	IEC 61300-2-26	passed
Ingress protection class	IEC 60529	IP 68 (with screwed cap or when mated)






**MATERIALS**

Housing	Brass
Plating	Nickel








**RXF Product Range**

**R2F: TWO FIBER OPTIC CHANNELS**

Connector	Mode	Type and Cable	
R2F Plug	MM/SM	Standard Type (outdoor field cable)	
R2F Socket Extender	MM/SM	Standard Type (outdoor field cable)	
R2F Socket	MM/SM	Square flange SMALL Size 25.4x25.4 mm (indoor cable)	
		Square flange LARGE size 32x32 mm (indoor cable)	
		Hexagonal flange (30 mm on flats) D-hole thread M22x1 (indoor cable)	

**RXF Product Range**



**R4F: FOUR FIBER OPTIC CHANNELS**

Connector	Mode	Type and Cable	
R4F Plug	MM/SM	Standard type (outdoor field cable)	
R4F Socket Extender	MM/SM	Standard type (outdoor field cable)	
R4F Socket	MM/SM	Square flange SMALL size 25.4x25.4 mm (indoor cable)	
		Square flange LARGE size 32x32 mm (indoor cable)	
		Hexagonal flange (30 mm on flats) D-hole thread M22x1 (indoor cable)	

RXF SERIES

**RXF Product Range**

**R6F: SIX FIBER OPTIC CHANNELS**

Connector	Mode	Type and Cable	
R6F Plug	MM/SM	Standard type (outdoor field cable)	
R6F Socket	MM/SM	Standard type (outdoor field cable)	



Dimensions

RXF PLUGS





R2F Plug		<p>3D view</p>
R4F Plug		<p>3D view</p>

RXF SOCKETS

R2F Socket Square Flange Small Size			<p>panel pattern</p>	
R2F Socket Square Flange Large Size			<p>panel pattern</p>	
R2F Socket Hexagonal Flange			<p>Panel Pattern</p>	<p>3D view</p>
R2F Socket Extender			<p>3D view</p>	
R4F Socket Hexagonal Flange		<p>from 2.8mm to 4mm (panel thickness)</p>	<p>3D view</p>	



### Captive Protection Caps

Description	IP Class	
Vinyl Dust Cap	IP65	
Metallic Protection Cap with Chain	IP67	
Plastic Protection Cap	IP67	
Plastic Protection Cap with Chain	IP67	

### Cleaning Tool



Mechanical cleaning tool to clean RXF optical end-faces.  
The tool uses a dry cleaning strand to gently sweep and lift away dust and residue from the connector end-face.

Part Number	Description	Packaging
F780 073 000	RXF Cleaning Tool	Unitary

## RXF Cable Assemblies

Radiall can accommodate different types of cables (simplex or field cables) and various diameters. The cable assemblies will be customized to fit with particular application requirements (specific labeling, length, etc.) and will be tested before shipment. Radiall's assembly shops have mass production capacity and can adapt to low and high volume requirements.

### Standard Configuration:

Please refer to Section 9, Cable Assemblies & Optical Systems, for more information.

## RXF CABLE ASSEMBLY SERVICE OFFER

### Existing Customer Specification:

Radiall will provide a compliance matrix for validation.

### Define your Cable Assemblies:

- 1-series (R2F, R4F or R6F)
  - 2-connector 1 + protection cap
  - 3-connector 2 + protection cap
  - 4-fiber type/cable
  - 5-length (in meters and in millimeters)
- Radiall will provide a TDS for validation.



### **RXF Connector Kits**

Radiall also proposes the RXF connectors in standalone kits: plugs and sockets can be ordered (without cable).

This product offer is dedicated to customers, such as cable assemblies makers, with very good know-how and experience in fiber optics cabling. Due to specific toolings and training needed to cable the RXF, a minimum potential volume of pieces is required to be able to have access to this offer.

For any additional information, please contact your local Radiall representative.

