

# SECTION 7



## OSIS® Series



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## Introduction

### OSIS®: ONE STEP INTERCONNECT SOLUTION



#### The Quickest Outdoor Interconnect Solution

The OSIS® connector is a fast connection system dedicated to outdoor telecom FTTH applications in a new generation of flexible base stations.

Designed for insuring a robust, safe and waterproof connection for optical links in field conditions, this very flexible push-pull connector allows a quick connection by the operator in only one click, for use in any type of outdoor application.

### APPLICATIONS

Telecom: Fiber To The Antenna

Industrial Connections

Broadcasting

### INTERNATIONAL STANDARD DOCUMENTS COMPLIANCE

- IEC 61300 Fiber optic interconnecting devices and passive components
- IEC 60068 Environmental testing
- IEC 60529 Degrees of protection provided by enclosures (IP code)
- RoHS compliant



### FEATURES AND BENEFITS

#### Easy to Install

- Quick lock Push-Pull connection system in one step
- Direct plug into SFP module
- Compensation of the transceiver position tolerances in X, Y and Z axis

#### Robust and Safe

- LC connectors always protected
- Waterproof and dustproof
- High tensile strength



#### Flexible and Modular

- Kit assembled in the field without tools over existing optical patchcords
- Compatible with a large range of standard LC connectors and standard SFP transceivers

#### High Density

- Stackable



## Characteristics

The OSIS® connector has been designed to fulfill the qualification requirements of the IEC 61300 standard (for fiber optic interconnection devices)

### MECHANICAL CHARACTERISTICS

Cable retention	200 N
Mating endurance	100 mating cycles minimum

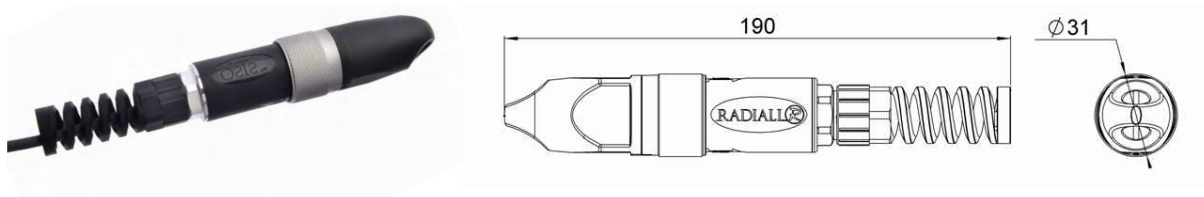
### ENVIRONMENTAL CHARACTERISTICS

Ingress protection class	IP65 or IP67
Operating temperature	-40°C/+85°C
Storage temperature	-40°C/+85°C
Salt spray	IEC 61300-2-26 passed
Vibrations	IEC 61300-2-1 passed



## Product Range

### OSIS® PLUG KIT

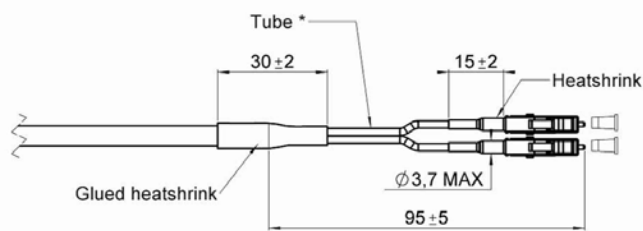


Part Number	Note	Packaging
OSIS 115 000	Plug connector only; no patchcord	Unitary in plastic bag with assembly note

The OSIS® Plug Kit is adapted to all types of optical cable assemblies with simplex or duplex standard LC connectors and 5 to 7 mm diameter MultiMode or SingleMode field cables.

To guarantee proper operation when the OSIS® Plug Kit is assembled over existing optical patchcords, the following fan-out dimensions should be observed:

#### Fiber stripping tubing recommendations



\*Tube must be flexible enough to guarantee the bending radius of the fiber.

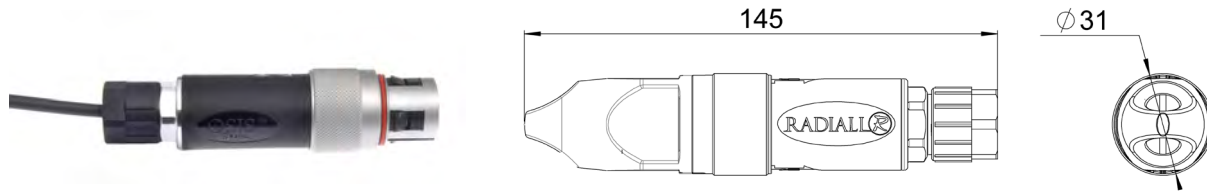
Radiall recommends the use of OSIS® 990 000 retubing kit.



Radiall recommends using a torque wrench (Radiall PN: R282 303 230) set at 3.5 to 4 Nm to guarantee 200 N tensile strength.

## Product Range

### OSIS® SHORT PLUG KIT



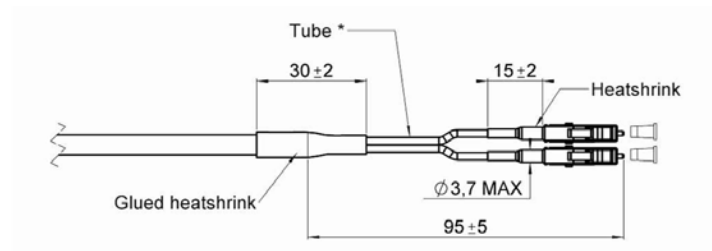
Part Number	Note	Packaging
OSIS 115 001	Plug connector only; no patchcord	Unitary in plastic bag with assembly note

The OSIS® Short Plug Kit addresses customers' needs for reducing the overall dimensions of outdoor optical connections.

The OSIS® Short Plug Kit is adapted to all types of optical cable assemblies with simplex or duplex standard LC connectors and 5 to 7 mm diameter MultiMode or SingleMode field cables.

To guarantee proper operation when the OSIS® Short Plug Kit is assembled over existing optical patchcords, the following fan-out dimensions should be observed:

#### Fiber stripping and tubing recommendations



\*Tube must be flexible enough to guarantee the bending radius of the fiber.



We recommend to use a torque wrench (Radiall PN: R282 303 230) set at 3.5 to 4 Nm to guarantee 200 N tensile strength.

## Product Range

### OSIS® STANDARD RECEPTACLES



The standard OSIS® receptacle is IP67 waterproof.

The receptacle is delivered with the protection cap mounted on the body. It includes a center pin which has to be inserted into the transceiver cage to center the receptacle in the X and Y axis before fixing it on the panel with screws.

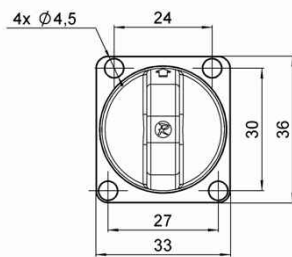


Figure 1

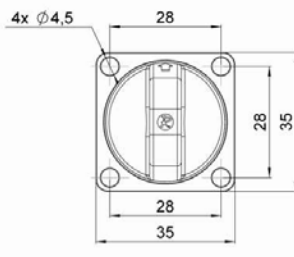


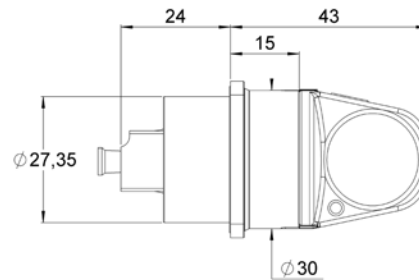
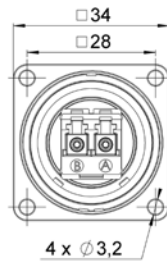
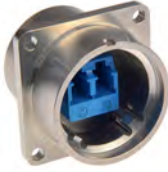
Figure 2

Part Number	Figure	Description
OSIS 107 000	1	Receptacle with trapezoidal fixture holes (foot print 24/27 x 30 mm), centering plastic cap
OSIS 107 001		Receptacle with trapezoidal fixture holes (foot print 24/27 x 30 mm), centering plastic cap with cord
OSIS 107 002	2	Receptacle with square fixture holes (foot print 28 x 28 mm), centering plastic cap
OSIS 107 003		Receptacle with square fixture holes (foot print 28 x 28 mm), centering plastic cap with cord

Packaging: per 60 pieces

## Product Range

### OSIS® RECEPTACLE WITH LC ADAPTER



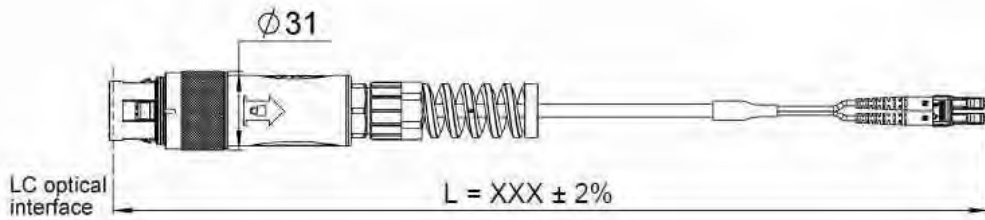
Part Number	Description
OSIS 107 100	OSIS® receptacle with LC duplex adapter, MultiMode, plastic cap – IP67
OSIS 107 101	OSIS® receptacle with LC duplex adapter, SingleMode, plastic cap – IP67
OSIS 107 102	OSIS® receptacle with LC duplex adapter, MultiMode, plastic cap with cord – IP67
OSIS 107 103	OSIS® receptacle with LC duplex adapter, SingleMode, plastic cap with cord – IP67
OSIS 107 104	OSIS® receptacle with LC duplex adapter, SingleMode APC, plastic cap – IP67
OSIS 107 105	OSIS® receptacle with LC duplex adapter, SingleMode APC, plastic cap with cord – IP67

Packaging: per 50 pieces



## Product Range

### OSIS® PRE-MOUNTED OPTICAL CABLE ASSEMBLIES



Any configuration of pre-mounted optical cable assembly with OSIS® is available on upon request:

- Standard field cables with diameters of 5 to 7 mm
- Standard LC connectors (OSIS® side)
- A variety of optical connectors are available on the other end (LC, SC, FC, ST, etc.)
- Simplex or duplex connectors
- MultiMode (50/125  $\mu\text{m}$  or 62.5/125  $\mu\text{m}$  on request) or SingleMode (9/125  $\mu\text{m}$ )
- Polishing/finishing: PC or APC

### OPTICAL CHARACTERISTICS

According to IEC 61300-3-4 and IEC 61300-3-6

	SingleMode Field Cable	MultiMode Field Cable
Wave Length	1310-1550 nm	850 nm
Insertion Loss (mated with reference plug)	0.5 dB (method 6)	0.5 dB (method 6)
Return Loss	>45 dB (method 7)	-

## Product Range

### LC PATCHCORDS

Radiall can also provide any configuration of LC optical patchcords for use with the OSIS® Plug Kit



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

OSIS®