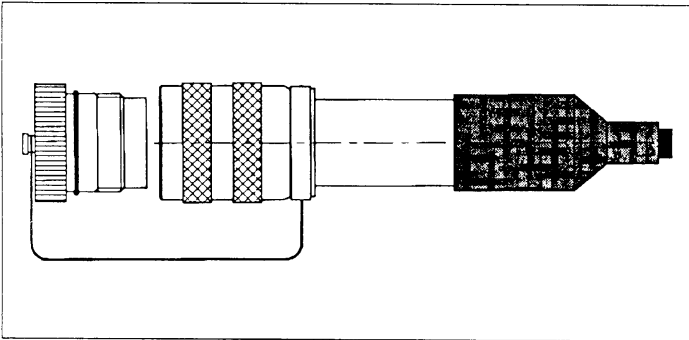


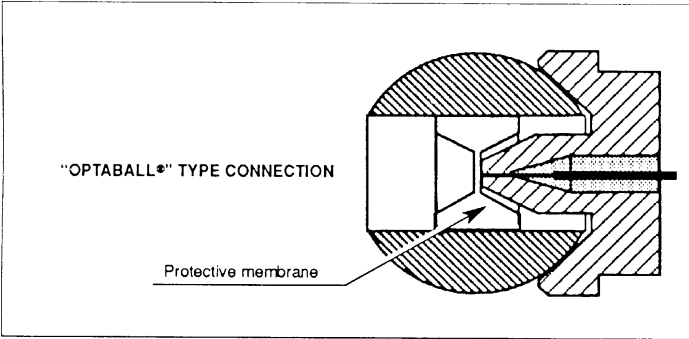
Three types of connector have been developed for a range of applications :

THE PLUG CONNECTOR

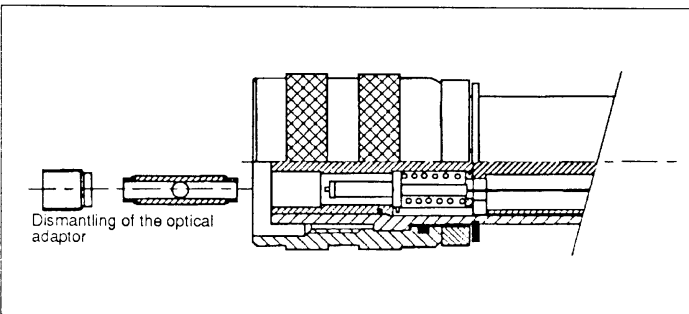
Fitted to the ends of the cable, it provides a reliable cable-to-connector fixation (retention and seal).



Each pathway connection uses an optical contact with a metal precision ferrule and an optical adaptor which incorporates a re-centering sphere and a protective membrane.

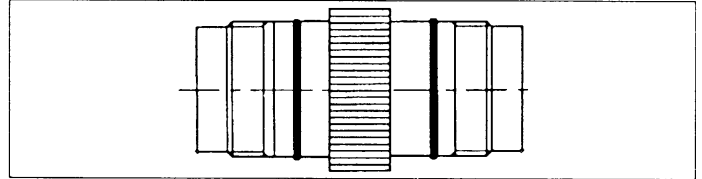


The special feature of this connector is its ease of on-site maintenance : the adaptor part of the optical connection is removable and can be replaced from the front without re-termination fiber.

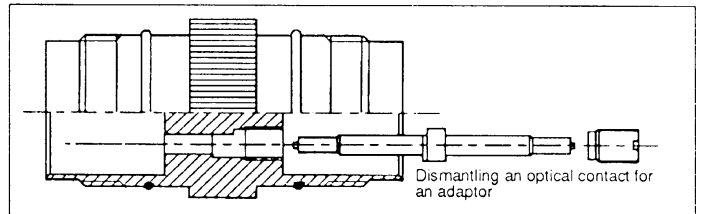


THE ADAPTOR CONNECTOR

This symmetrical connector provides the junction between two plug connectors, permitting the link to be extended over the required distance.

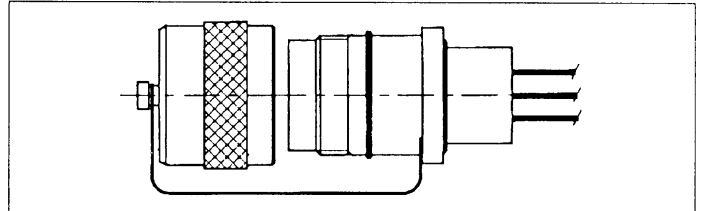


The optical connection is provided by a symmetrical contact fitted with a precision ferrule at each end and wired with a singlemode optical fiber (short optical fiber link). Thus a plug/adaptor/plug connection represents two optical connections.

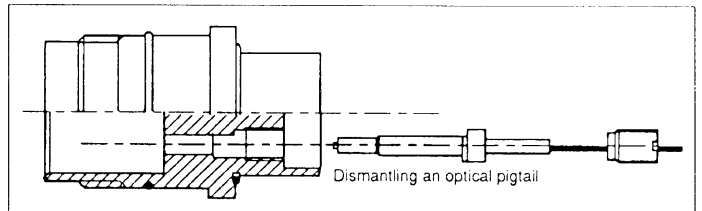


THE RECEPTACLE CONNECTOR

Designed to be mounted on a termination panel, it is directly coupled to the plug connector.

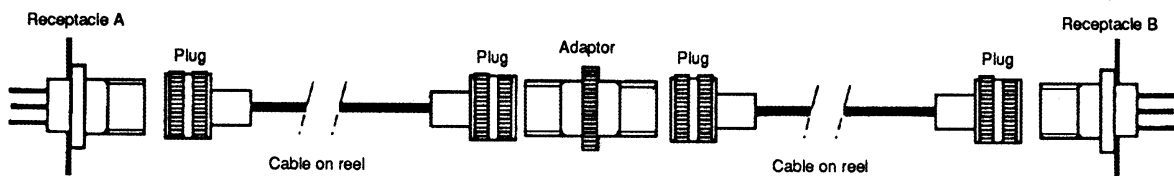


The receptacle connector is fitted with pigtailed optical contacts. These pigtails ensure continuity between the land link and the system's opto-electronic equipment.



Note The above drawings show the BOC 1 external configuration

An example of a link with several sections :





PERFORMANCES

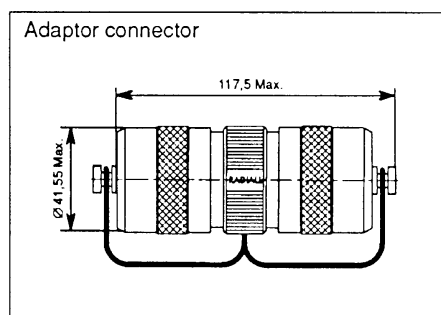
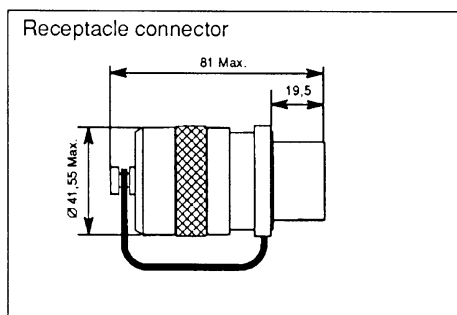
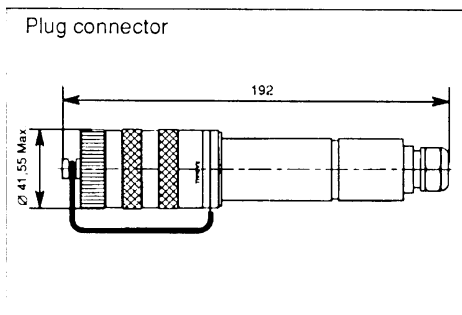
OPTICAL VALUES	ELECTRICAL CHARACTERISTICS													
<ul style="list-style-type: none"> Insertion loss (λ 1300 and 1550 nm) Plug/adaptor/plug connection Typical : 1,2 dB Standard deviation : 0,35 dB Plug receptacle connection Typical : 0,6 dB Standard deviation : 0,2 dB Return loss ≤ -50 dB 	<ul style="list-style-type: none"> - Contact size : - Current rating : - Dielectric withstanding voltage : - Contact resistance : - Shell to shell continuity : (coupled connectors) 	<table border="0"> <tr> <td>BOC 1</td> <td>BOC 2</td> </tr> <tr> <td>AWG 12</td> <td>AWG 16</td> </tr> <tr> <td></td> <td>16 A</td> </tr> <tr> <td></td> <td>1 500 V</td> </tr> <tr> <td></td> <td>< 8 mΩ</td> </tr> <tr> <td></td> <td>RC < 5 mΩ</td> </tr> </table>	BOC 1	BOC 2	AWG 12	AWG 16		16 A		1 500 V		< 8 m Ω		RC < 5 m Ω
BOC 1	BOC 2													
AWG 12	AWG 16													
	16 A													
	1 500 V													
	< 8 m Ω													
	RC < 5 m Ω													

RELIABILITY TEST	ENVIRONMENTAL CHARACTERISTICS	
<ul style="list-style-type: none"> - Mating life : 500 cycles - Shock : 50 g-5 shocks - Vibration : 10 to 2 000 Hz-log - Cable retention : 100 daN 	<ul style="list-style-type: none"> - Category : - Immersion : - Salt spray : 	<ul style="list-style-type: none"> -30°C +70°C 10 metres (coupled) 96 h

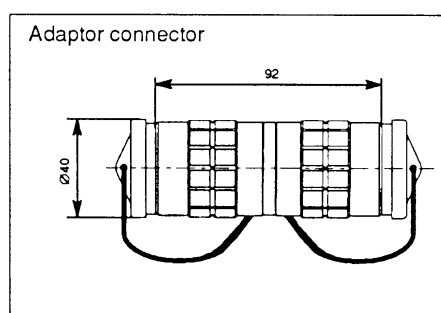
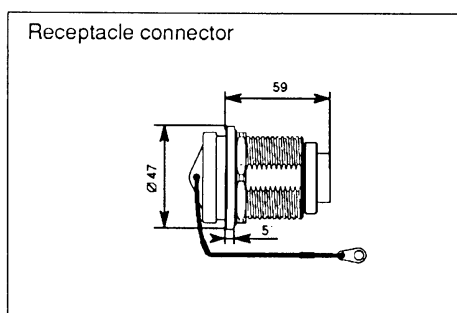
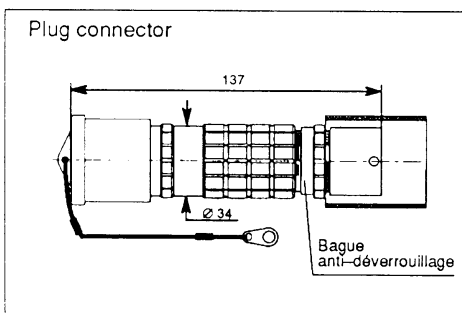
MATERIAL	
- Plug, receptacle, adator body :	Nickel chromium plated brass
- Electrical contact :	UBe2 nickel, gold plated
- Optical contact :	Nickel plated brass

DIMENSIONS (mm)

BOC 1



BOC 2

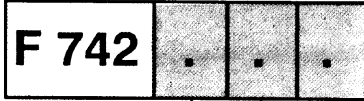


SELECTION GUIDES I, II, III, IV allow the user to specify his own requirements and ask RADIALL for an estimate.

I – Uncabled plugs, receptacles and adaptors for fitting by the user.

Note – Plugs and receptacles are supplied with obturators and electrical contacts. Optical contacts must be ordered separately (see Guide II).

– Adaptors are supplied fitted with optical and electrical interfaces for the arrangement selected.



Series : _____
 1 BOC 1
 2 BOC 2

Connector type : _____
 F (Plug)
 E (Receptacle)
 R (Adaptor)

Arrangement : _____

BOC 1

- 1 (4 opt.)
 - 2 (1 opt. + 3 elect.)
 - 3 (2 opt. + 2 elect.)
 - 4 (3 opt. + 1 elect.)
 - 5 (1 opt. + 1 elect.)
 - 6 (1 opt. + 2 elect.)
 - 7 (2 opt. + 1 elect.)
- Other : consult RADIALL.

BOC 2

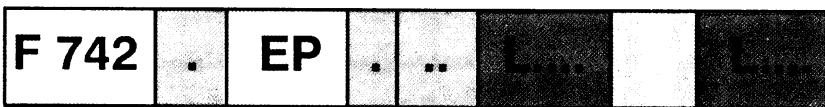
- 1 (2 opt. + 2 elect.)
 - 2 (1 opt. + 2 elect.)
- Other : consult RADIALL.

II – Optical contacts for plug and receptacle

BOC 1	PLUG CONTACTS		RECEPTACLE CONTACTS	
	F 742 001 700	Ø 124	F 742 002 700	Ø 124
F 742 001 701	Ø 125	F 742 002 701	Ø 125	
F 742 001 702	Ø 125+	F 742 002 702	Ø 125+	
F 742 001 703	Ø 126	F 742 002 703	Ø 126	
F 742 001 704	Ø 127	F 742 002 704	Ø 127	
F 742 001 705	Ø 128	F 742 002 705	Ø 128	

BOC 2	PLUG CONTACTS		RECEPTACLE CONTACTS	
	F 742 003 700	Ø 124	F 742 004 700	Ø 124
F 742 003 701	Ø 125	F 742 004 701	Ø 125	
F 742 003 702	Ø 125+	F 742 004 702	Ø 125+	
F 742 003 703	Ø 126	F 742 004 703	Ø 126	
F 742 003 704	Ø 127	F 742 004 704	Ø 127	
F 742 003 705	Ø 128	F 742 004 705	Ø 128	

III – Pigtailed receptacle, singlemode fiber



Series : _____
 1 BOC 1
 2 BOC 2

Arrangement : _____
 See Guide I

Ø fiber coating : _____
 60 = 0.9 mm
 63 = 3 mm (tight structure)
 Other : consult RADIALL

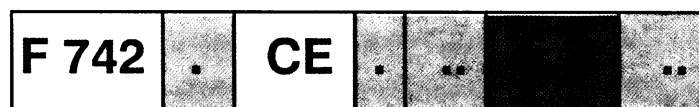
Length of optical pigtails : _____
 (in centimetre)

For mixed links only :
 specify electrical pigtail length (in centimetre)

Optical pigtail end :
 STC (ST® connector with ceramic ferrule)
 EC
 Other : consult RADIALL



IV – Cable assembly equipped with a plug connector at each end



Series :

- 1 – BOC 1
- 2 – BOC 2

Arrangement :

See Guide I

Ø Cable (supplied with "extra light" reel)

Supplied by RADIALL (PIRELLI cable M7/M11) :

- 07 – 7 mm
- 11 – 11 mm

Supplied by customer :

00 – (Cable spec. to be validated by RADIALL)

"Extra light" reel option, supplied by RADIALL :

- DE – Unwinder
- DF – Unwinder + Flight case

Cable length :
(in metre)

OPTICAL MAINTENANCE

Plug connector

– Order optical cartridge **F 742 900 000** if the connection part has deteriorated (pollution, wear and tear etc . . .).

Receptacle connector

In the event of breakage, order :

- either a recabling contact (see Guide II),
- or a fitted pigtail (or patchcord) :



End 1 :

- 1 – BOC 1
- 2 – BOC 2

Fiber / cable :

- 60 = 0.9 mm
- 63 = 3 mm

End 2

STC (ST® connector with ceramic ferrule)

EC
Other : consult RADIALL)

Length :
(in centimetre)

Adaptor connector

In the event of breakage, replace the optical cartridge :

- BOC 1 **F 742 901 000**
- BOC 2 **F 742 905 000**

CLEANING THE CONNECTION

BOC connections are maintained with agents normally used in opto-electronic applications (alcohol, compressed gas, adhesive tape, etc.). **RADIALL recommends the use of the maintenance kit F 780 577 000*** including :

- F 780 526 000 x100 microscope
- F 780 522 000 x10 microscope
- F 780 576 000 Dismantling tool for optical and electrical contacts
- F 780 525 000 Cleaning tips (50)
- F 780 527 000 Cleaning paper

+ adhesive tape and 4 optical replacement cartridges for the plug connector.

* Supplied with instructions.

Example of applications :

