



**NSAI**  
Standards

Irish Standard  
I.S. EN 61754-4:2013

# Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 4: Type SC connector family

**I.S. EN 61754-4:2013**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 61754-4:2013

*Published:*

2013-11-29

*This document was published under the authority of the NSAI and comes into effect on:*

2013-12-10

ICS number:

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN 61754-4:2013 is the adopted Irish version of the European Document EN 61754-4:2013, Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 4: Type SC connector family

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

EUROPEAN STANDARD

**EN 61754-4**

NORME EUROPÉENNE

November 2013

EUROPÄISCHE NORM

ICS 33.180.20

Supersedes EN 61754-4:1997 + A1:1999 + A2:2001

English version

**Fibre optic interconnecting devices and passive components -  
Fibre optic connector interfaces -  
Part 4: Type SC connector family  
(IEC 61754-4:2013)**

Dispositifs d'interconnexion et composants  
passifs à fibres optiques -  
Interfaces de connecteurs à fibres  
optiques  
(CEI 61754-4:2013)

Lichtwellenleiter -  
Verbindungselemente und passive  
Bauteile - Steckgesichter von  
Lichtwellenleiter-Steckverbindern -  
Teil 4: Steckverbinderfamilie der Bauart  
SC (IEC 61754-4:2013)

This European Standard was approved by CENELEC on 2013-08-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 86B/3620/FDIS, future edition 2 of IEC 61754-4, prepared by subcommittee 86B "Fibre optic interconnecting devices and passive components" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61754-4:2013.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-05-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-08-26

This document supersedes EN 61754-4:1997 + A1:1999 + A2:2001.

EN 61754-4:2013 includes the following significant technical changes with respect to EN 61754-4:1997 + A1:1999 + A2:2001:

- a) addition of the duplex plug and adaptor connector interface;
- b) reconsideration of the overall content of the standard.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## Endorsement notice

The text of the International Standard IEC 61754-4:2013 was approved by CENELEC as a European Standard without any modification.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61755-3-1	-	Fibre optic interconnecting devices and passive components -Fibre optic connector optical interfaces - Part 3-1:Connectors with 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrule, non-angled single mode non-dispersion shifted fibres	prEN 61755-3-1 <sup>1)</sup>	-
IEC 61755-3-2	-	Fibre optic interconnecting devices and passive components -Fibre optic connector optical interfaces - Part 3-2: Connectors with 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrule, angled single mode non-dispersion shifted fibres	prEN 61755-3-2 <sup>1)</sup>	-

---

<sup>1)</sup> At draft stage

This page is intentionally left blank

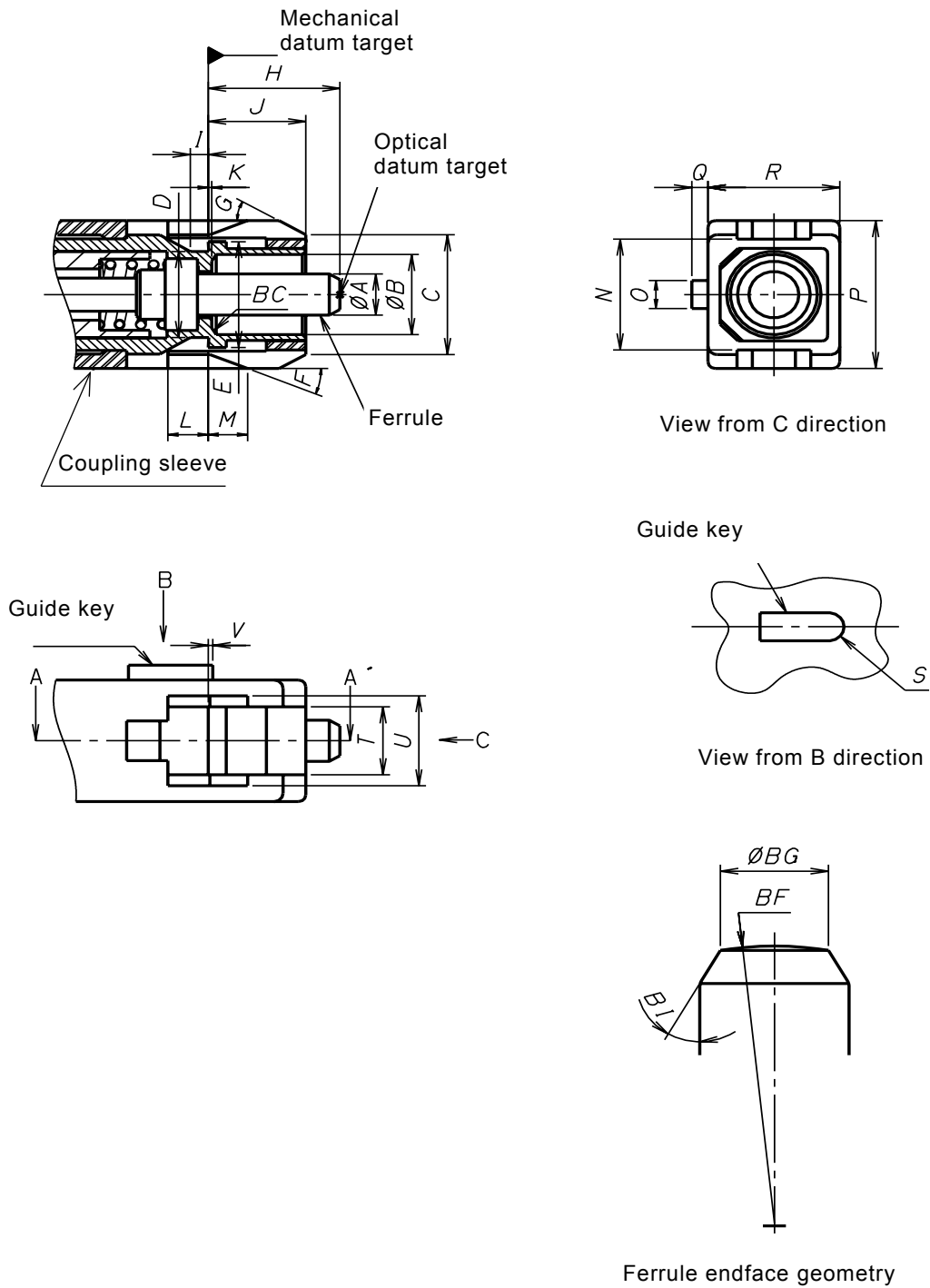


**IEC 61754-4**  
**(Second edition – 2013)**

**Fibre optic interconnecting devices and passive components –**  
**Fibre optic connector interfaces –**  
**Part 4: Type SC connector family**

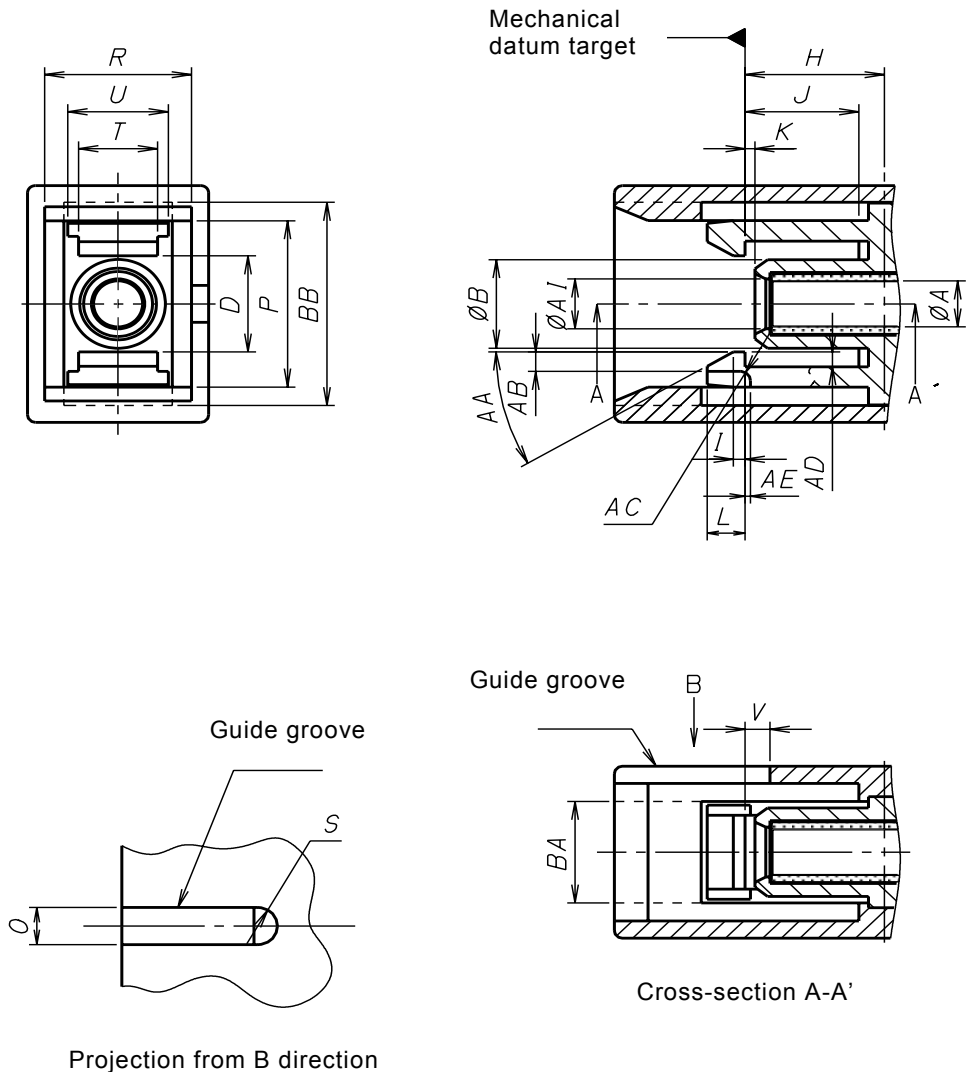
**CORRIGENDUM 1**

*Replace the existing Figures 1 and 2 by the following new figures:*



IEC 1646/13

Figure 1 – Simplex PC plug connector interface



IEC 1647/13

**Figure 2 – Simplex adaptor connector interface**



**IEC 61754-4**

Edition 2.0 2013-07

# **INTERNATIONAL STANDARD**

---

**Fibre optic interconnecting devices and passive components – Fibre optic  
connector interfaces –  
Part 4: Type SC connector family**





**THIS PUBLICATION IS COPYRIGHT PROTECTED**  
**Copyright © 2013 IEC, Geneva, Switzerland**

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

### **About the IEC**

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

### **About IEC publications**

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

#### **Useful links:**

IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

The advanced search enables you to find IEC publications by a variety of criteria (reference number, text, technical committee,...).

It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Stay up to date on all new IEC publications. Just Published details all new publications released. Available on-line and also once a month by email.

Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).



**IEC 61754-4**

Edition 2.0 2013-07

# **INTERNATIONAL STANDARD**

---

**Fibre optic interconnecting devices and passive components – Fibre optic  
connector interfaces –  
Part 4: Type SC connector family**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

PRICE CODE

**W**

---

ICS 33.180.20

ISBN 978-2-8322-0924-0

**Warning! Make sure that you obtained this publication from an authorized distributor.**

## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Description .....	6
4 Interfaces .....	6
Bibliography .....	38
Figure 1 – Simplex PC plug connector interface.....	8
Figure 2 – Simplex adaptor connector interface .....	11
Figure 3 – Pin gauge for adaptor .....	13
Figure 4 – Duplex PC plug connector interface .....	14
Figure 5 – Duplex adaptor connector interface.....	17
Figure 6 ( <i>continued overleaf</i> ).....	20
Figure 6 – Simplex APC plug connector interface .....	21
Figure 7 ( <i>continued overleaf</i> ).....	23
Figure 7 – Duplex APC plug connector interface .....	24
Figure 8 – Simplex active device receptacle interface for APC connector plug.....	26
Figure 9 – Simplex active device receptacle interface for PC connector plug.....	29
Figure 10 – Duplex active device receptacle interface for APC connector plug .....	32
Figure 11 – Duplex active device receptacle interface for PC connector plug .....	35
Table 1 – Intermateability of interface .....	7
Table 2 – Dimensions of the simplex PC plug connector interface.....	9
Table 3 – Grade .....	10
Table 4 – Dimensions of the simplex adaptor connector interface .....	12
Table 5 – Grade .....	13
Table 6 – Pin gauge dimensions.....	13
Table 7 – Dimensions of the duplex PC plug connector interface .....	15
Table 8 – Grade .....	16
Table 9 – Dimensions of the duplex adaptor connector interface.....	18
Table 10 – Grade .....	19
Table 11 – Dimensions of the simplex APC plug connector interfaces.....	22
Table 12 – Dimensions of the duplex APC plug connector interfaces .....	25
Table 13 – Dimensions of the simplex active device receptacle interface for APC connector plug .....	27
Table 14 – Alignment feature grade .....	28
Table 15 – Mechanical stop feature grade .....	28
Table 16 – Dimensions of the simplex active device receptacle interface for PC connector plug .....	30
Table 17 – Alignment feature grade .....	31
Table 18 – Mechanical stop feature grade .....	31

Table 19 – Dimensions of the duplex active device receptacle interface for APC connector plug .....	33
Table 20 – Alignment feature grade .....	34
Table 21 – Mechanical stop feature grade .....	34
Table 22 – Dimensions of the duplex active device receptacle interface for PC connector plug .....	36
Table 23 – Alignment feature grade .....	37
Table 24 – Mechanical stop feature grade .....	37



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

### **FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –**

#### **Part 4: Type SC connector family**

#### FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61754-4 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 1997 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) addition of the duplex plug and adaptor connector interface;
- b) reconsideration of the overall content of the standard.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/3620/FDIS	86B/3652/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61754 series, under the general title *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –

## Part 4: Type SC connector family

### 1 Scope

This part of IEC 61754 defines the standard interface dimensions for type SC family of connectors.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61755-3-1, *Fibre optic connector optical interfaces – Part 3-1: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia PC ferrule, single mode fibre*

IEC 61755-3-2, *Fibre optic connector optical interfaces – Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres*

### 3 Description

The parent connector for the type SC connector family is a single position plug connector which is characterized by a 2,5 mm nominal ferrule diameter. It includes a push-pull coupling mechanism which is spring loaded relative to the ferrule in the direction of the optical axis. The plug has a single male key which may be used to orient and limit the relative position between the connector and the component to which it is mated. The optical alignment mechanism of the connector is of a resilient sleeve style.

This part of IEC 61754 defines the standard interface dimensions of active device receptacles for the type SC connectors. The receptacles are used to retain the connector plug and mechanically maintain the optical datum target of the plugs at a defined position within the receptacle housings.

### 4 Interfaces

This standard contains the following standard interfaces:

Interface IEC 61754-4-1: simplex plug connector interface – push/pull, PC

Interface IEC 61754-4-2: simplex adaptor connector interface – push/pull

Interface IEC 61754-4-3: duplex plug connector interface – push/pull, PC

Interface IEC 61754-4-4: duplex adaptor connector interface – push/pull

Interface IEC 61754-4-5: simplex plug connector interface – push/pull, APC 8°

Interface IEC 61754-4-6: duplex plug connector interface – push/pull, APC 8°

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-