



BSI Standards Publication

Fibre optic interconnecting devices and passive components — Fibre optic connector interfaces

Part 36: Type SAC connector family

National foreword

This British Standard is the UK implementation of EN IEC 61754-36:2025. It is identical to IEC 61754-36:2025.

The UK participation in its preparation was entrusted to Technical Committee GEL/86/2, Fibre optic interconnecting devices and passive components.

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English Version

Fibre optic interconnecting devices and passive components -
Fibre optic connector interfaces - Part 36: Type SAC connector
family
(IEC 61754-36:2025)

Dispositifs d'interconnexion et composants passifs
fibroniques - Interfaces de connecteurs fibroniques - Partie
36: Famille de connecteurs de type SAC
(IEC 61754-36:2025)

Lichtwellenleiter - Verbindungselemente und passive
Bauteile - Steckgesichter von Lichtwellenleiter-
Steckverbindern - Teil 36: Steckverbinderfamilie Typ SAC
(IEC 61754-36:2025)

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European foreword

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The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2026-07-31 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2028-07-31 document have to be withdrawn

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In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60794-2-50 NOTE Approved as EN IEC 60794-2-50

IEC 61754-4 series NOTE Approved as EN 61754-4 series

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61754-1	-	Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 1: General and guidance	EN 61754-1	-
IEC 61755-3-1	-	Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 3-1: Connector parameters of dispersion unshifted single-mode physically contacting fibres - Non-angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules	EN IEC 61755-3-1	-
IEC 61755-3-2	-	Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 3-2: Connector parameters of dispersion unshifted single-mode physically contacting fibres - Angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules	EN IEC 61755-3-2	-

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions and abbreviated terms.....	6
3.1 Terms and definitions.....	6
3.2 Abbreviated terms.....	6
4 Description	7
5 Interfaces	7
Annex A (normative) Fibre core locations.....	19
Annex B (informative) Additional adaptor dimensional information	20
Annex C (informative) Latching mechanism.....	28
Bibliography.....	31
Figure 1 – Duplex plug connector datum target.....	8
Figure 2 – Plug connector interface.....	9
Figure 3 – Angled PC plug connector interface.....	11
Figure 4 – Duplex adaptor interface.....	13
Figure 5 – Quadruplex adaptor interface.....	15
Figure 6 – Duplex active device receptacle interface.....	16
Figure 7 – Quadruplex active device receptacle interface	17
Figure 8 – Pin gauge for adaptors and active device receptacle	18
Figure A.1 – Fibre core locations.....	19
Figure B.1 – Duplex rectangular flange adaptor with mounting hole and panel cut-out	20
Figure B.2 – Duplex rectangular no flange adaptor.....	21
Figure B.3 – Quadruplex rectangular flange adaptor with mounting hole and panel cut-out, simplex SC footprint.....	22
Figure B.4 – Quadruplex rectangular no flange adaptor, simplex SC footprint	23
Figure B.5 – Octuplex rectangular flange adaptor with mounting hole and panel cut-out, duplex SC footprint.....	24
Figure B.6 – Octuplex no flange adaptor, duplex SC footprint.....	25
Figure B.7 – Octuplex rectangular flange adaptor with mounting hole and panel cut-out.....	26
Figure B.8 – Octuplex no flange adaptor	27
Figure C.1 – Latched configuration of a plug connector to adaptor-to-receptacle interface.....	28
Figure C.2 – Unlatched configuration of a plug connector from adaptor-to-receptacle interface.....	29
Table 1 – Plug-to-adaptor and plug-to-receptacle intermateability.....	7
Table 2 – Dimensions of the plug connector interface.....	10
Table 3 – Dimensions of angled PC plug interface	11
Table 4 – Dimensions of duplex adaptor interface.....	14
Table 5 – Quadruplex adaptor interface basic dimensions.....	16
Table 6 – Dimensions of duplex active device receptacle interface	16

Table 7 – Dimensions of quadruplex active device receptacle interface.....	18
Table 8 – Pin gauge dimensions	18
Table B.1 – Dimensions of duplex adaptor	21
Table B.2 – Dimensions of quadruplex flange adaptor, simplex SC footprint	23
Table B.3 – Dimensions of octuplex adaptor, duplex SC footprint	25
Table B.4 – Dimensions of octuplex flange adaptor	27
Table C.1 – Dimensions of a plug connector with adaptor-to-receptacle interface for latched and unlatched configurations.....	30

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE
COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –****Part 36: Type SAC connector family****FOREWORD**

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IEC 61754-36 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86B/5028/FDIS	86B/5065/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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

Part 36: Type SAC connector family

1 Scope

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61754-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 1: General and guidance*

IEC 61755-3-1, *Fibre optic interconnecting devices and passive components – Connector optical interfaces – Part 3-1: Connector parameters of dispersion unshifted single-mode physically contacting fibres – Non-angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules*

IEC 61755-3-2, *Fibre optic interconnecting devices and passive components – Connector optical interfaces – Part 3-2: Connector parameters of dispersion unshifted single-mode physically contacting fibres – Angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61754-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.2 Abbreviated terms

APC angled physical contact

PC physical contact

4 Description

The parent connector for type SAC connector family is a miniature duplex connector set of plug/adaptor/plug configuration which is characterized as follows.

- The ferrule nominal diameter is 1,25 mm.
- The connector plug includes two cylindrical, spring-loaded ferrules.
- The connector has a push-pull coupling mechanism at both small sides.
- The optical alignment mechanism of the connectors is a rigid bore sleeve or a resilient sleeve.

5 Interfaces

This document contains the following standard interfaces:

- interface 36-1: duplex plug connector interface – physical contact (PC);
- interface 36-2: duplex adaptor interface;
- interface 36-3: duplex plug connector interface – angled physical contact (APC), 8°;
- interface 36-4: duplex active device receptacle interface;
- interface 36-5: quadruplex adaptor interface;

NOTE 1 This interface is designed to fit the SC simplex connector adaptor footprint as specified in the IEC 61754-4 series.

- interface 36-6: quadruplex active device receptacle interface.

NOTE 2 All future variants connecting more than two duplex plug connectors on each side will use the minimum specified pitch.

NOTE 3 The adaptor interfaces specified in this document define only half of the adaptor. The other half can be configured to have either key aligned or opposed to each half.

The intermateability between plugs, adaptors, and receptacles is given in Table 1.

Duplex plug connector reference planes are shown in Figure 1.

End-face geometry on PC and APC interfaces shall be in accordance with IEC 61755-3-1 and IEC 61755-3-2, respectively.

Table 1 – Plug-to-adaptor and plug-to-receptacle intermateability

Plug interfaces	Adaptor interfaces		Active device receptacle interfaces	
	36-2	36-5	36-4	36-6
36-1	Mate	Mate	Mate	Mate
36-3	Mate	Mate	Mate ^a	Mate ^a
^a Receptacle and plug shall have similar polished end-faces. APC receptacle will mate with APC plug and PC receptacle will mate with PC plug.				