

Fibre optic connector interfaces —

Part 4: Type SC connector family

The European Standard EN 61754-4:1997, with the incorporation of amendments A1:1999 and A2:2001, has the status of a British Standard

ICS 33.180.20

National foreword

This British Standard is the English language version of EN 61754-4:1997, including amendments A1:1999 and A2:2001. It is identical with IEC 61754-4:1997, including amendments 1:1999 and 2:2001.

The UK participation in its preparation was entrusted by Technical Committee EPL/86, Fibre optics, to Subcommittee EPL/86/2, Interconnecting devices and passive components, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 23 and a back cover.

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Amendments issued since publication

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10772	March 2000	Addition of clauses 4, 5 and 6
13391	20 March 2002	See National foreword

English version

Fibre optic connector interfaces — Part 4: Type SC connector family

(includes amendments A1:1999 and A2:2001)

(IEC 61754-4:1997 + A1:1999 + A2:2001)

Interface de connecteurs pour fibres optiques —
Partie 4: Famille de connecteurs type SC
(inclut les amendements A1:1999 et A2:2001)
(CEI 61754-4:1997 + A1:1999 + A2:2001)

Steckgesichter von
Lichtwellenleiter-Steckverbindern —
Teil 4: Bauart SC Steckverbinderfamilie
(enthält Änderungen A1:1999 und A2:2001)
(IEC 61754-4:1997 + A1:1999 + A2:2001)

This European Standard was approved by CENELEC on 1997-03-11; amendment A1 was approved by CENELEC on 1999-08-01 and amendment A2 was approved by CENELEC on 2001-06-01. 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.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B-1050 Brussels

Foreword

The text of document 86B/882/FDIS, future edition 1 of IEC 61754-4, prepared by SC 86B, Fibre optic interconnecting devices and passive components, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61754-4 on 1997-03-11.

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Endorsement notice

The text of the International Standard IEC 61754-4:1997 was approved by CENELEC as a European Standard without any modification.

Foreword to amendment A1

The text of document 86B/1200/FDIS, future amendment 1 to IEC 61754-4, prepared by SC 86B, Fibre optic interconnecting devices and passive components, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 61754-4:1997 on 1999-08-01.

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Endorsement notice

The text of amendment 1:1999 to the International Standard IEC 61754-4:1997 was approved by CENELEC as an amendment to the European Standard without any modification.

Foreword to amendment A2

The text of document 86B/1447/FDIS, future amendment 2 to IEC 61754-4:1997, prepared by SC 86B, Fibre optic interconnecting devices and passive components, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A2 to EN 61754-4:1997 on 2001-06-01.

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Endorsement notice

The text of amendment 2:2001 to the International Standard IEC 61754-4:1997 was approved by CENELEC as an amendment to the European Standard without any modification.

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1 Scope

This part of IEC 1754 defines the standard interface dimensions for type SC family of connectors.

2 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.

A1 This part of IEC 61754 defines the standard interface dimensions of active device receptables for the type SC connectors. The receptables are used to retain the connector plug and mechanically maintain the optical datum target of the plugs at a defined position within the receptable housings. **A1**

3 Interfaces

This standard contains the following standard interfaces:

Interface 4-1: simplex plug connector interface — push/pull, PC;

Interface 4-2: simplex adaptor connector interface — push/pull;

A1 Interface 4-X1: simplex active device receptable interface — for angle PC connector plug;

Interface 4-X2: simplex active device receptable interface — for PC connector plug;

Interface 4-X3: duplex active device receptable interface — for angle PC connector plug;

Interface 4-X4: duplex active device receptable interface — for PC connector plug; **A1**

The simplex plug has a ferrule with a spherical polished ferrule endface, and realizes physical contact (PC).

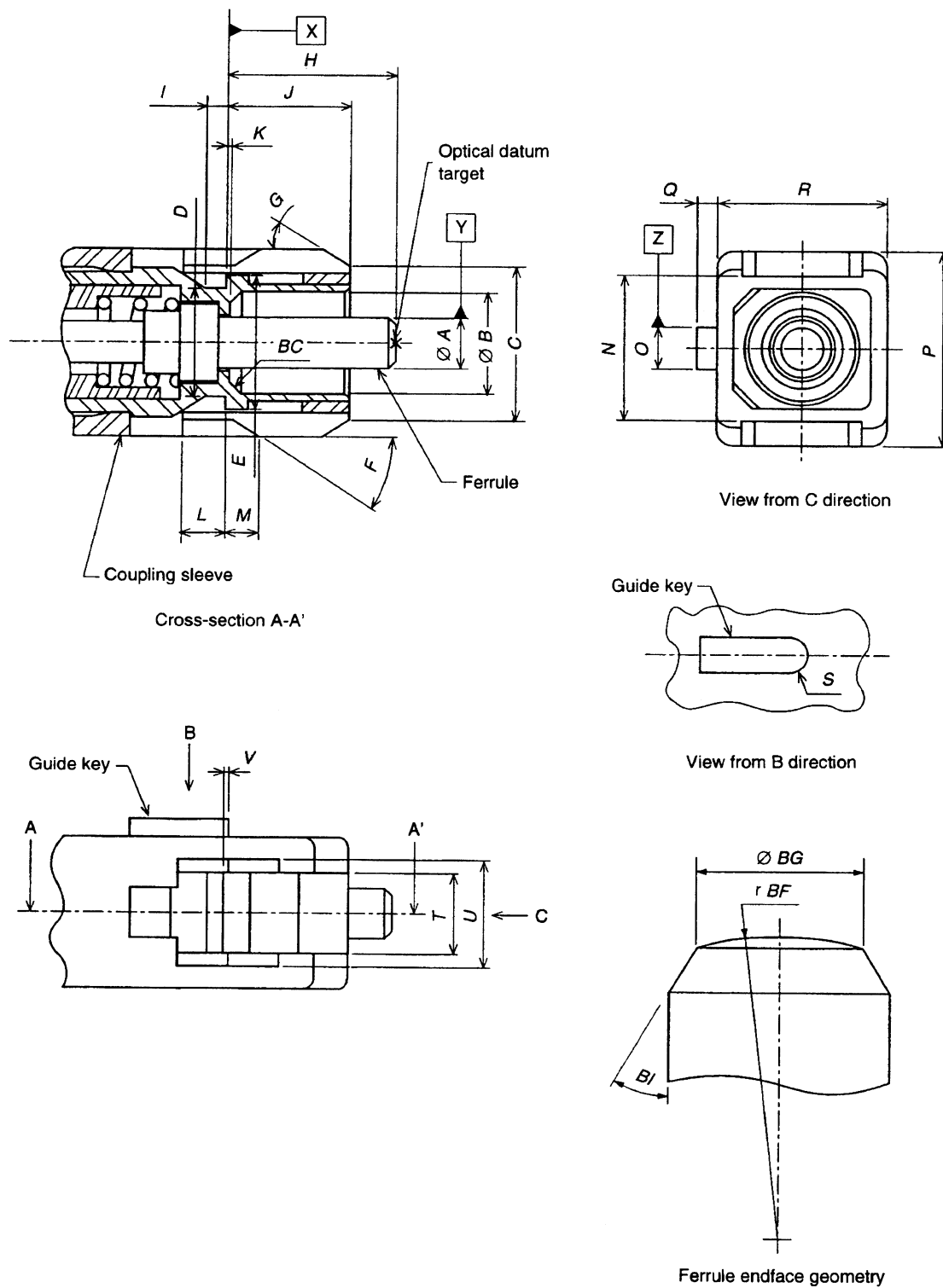
The following interfaces are intermateable:

Interface 4-1 mates with Interface 4-2.

A1

Interface	Interface 4-X1 (simplex, APC)	Interface 4-X2 (simplex, PC)	Interface 4-X3 (duplex, APC)	Interface 4-X4 (duplex, PC)
Interface 4-1 (simplex plug, PC)	Not mate	Mate	Not mate	Mate
Interface 4-5 (simplex plug, APC)	Mate	Not mate	Mate	Not mate
Interface 4-3 (duplex plug, PC)	Not mate	Not mate	Not mate	Mate
Interface 4-8 (duplex plug, APC)	Not mate	Not mate	Mate	Not mate

A1



IEC 015/97

Figure 1 — Simplex plug connector interface

Table 1a — Dimensions of the simplex plug connector interface

Reference	Dimensions mm		Notes
	Minimum	Maximum	
<i>A</i>			1, see Table 1b
<i>B</i>	4,80	4,90	
<i>C</i>	6,80	7,40	
<i>D</i>	4,90	5,30	
<i>E</i>	6,70	6,80	
<i>F</i>	19°	23°	
<i>G</i>	25°	35°	
<i>H</i>	7,15	7,50	2
<i>I</i>	0,80	1,20	
<i>J</i>	5,30	5,50	
<i>K</i>	−0,1	0,05	3
<i>L</i>	2,11	2,50	4
<i>M</i>	2,0	2,80	4 and 5
<i>N</i>	6,60	6,80	
<i>O</i>	1,60	1,80	
<i>P</i>	8,89	8,99	
<i>Q</i>	0,80	1,0	
<i>R</i>	7,29	7,39	
<i>S</i>	0,80	0,90	Radius
<i>T</i>	4,05	4,15	
<i>U</i>	5,40	5,60	
<i>V</i>	0	0,50	4
<i>BC</i>	0°	0,5°	45 degree chamfer
<i>BF</i>	10	25	Radius, 6
<i>BG</i>			Diameter, see Table 1b
<i>BI</i>	25°	35°	

NOTE 1 A chamfer or radius is allowed to a maximum depth of 1,2 mm from the ferrule endface.

NOTE 2 Dimension *H* is given for plug endface when not mated. It is movable by a certain axial compression force, with direct contacting endfaces, and therefore dimension *H* is variable. Ferrule compression force shall be 7,8 N to 11,8 N when the dimension *H* is 7 mm ± 0,1 mm.

NOTE 3 The negative dimension refers that the position of the inside bottom plane is left-direction relative to the plane defined as X.

NOTE 4 Coupling sleeve shall be movable toward right and left direction. These dimensions are given when the coupling sleeve is moved in its most right-direction position.

NOTE 5 Dimension *M* should be below 0 mm, when a coupling sleeve is moved to its most left-direction position.

NOTE 6 Dome eccentricity of the spherical polished endface shall be less than 50 µm.