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Part 38:Type SEN connector family

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



86B/5015/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER: IEC 61754-38 ED1	
DATE OF CIRCULATION: 2025-02-07	CLOSING DATE FOR COMMENTS: 2025-04-04
SUPERSEDES DOCUMENTS: 86B/4897/NP, 86B/4936A/RVN	

IEC SC 86B : FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS	
SECRETARIAT: Japan	SECRETARY: Mr Ryo Koyama
OF INTEREST TO THE FOLLOWING COMMITTEES:	HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED:	

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE: Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 38:Type SEN connector family
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NOTE FROM TC/SC OFFICERS:

CONTENTS

1		
2		
3	FOREWORD	4
4	INTRODUCTION	6
5	1 Scope	7
6	2 Normative references	7
7	3 Terms, definitions and abbreviated terms	7
8	3.1 Terms and definitions	7
9	3.2 Abbreviated terms	7
10	4 Description	7
11	5 Interfaces	8
12	Annex A (normative) Fibre core locations	28
13	Annex B (informative) Additional adaptor dimensional information	29
14	Annex C (informative) Latching Mechanism	33
15	Bibliography	35
16		
17	Figure 1 – Duplex plug connector datum target	8
18	Figure 2 – Plug connector interface	10
19	Figure 3 – Angled PC plug connector interface	12
20	Figure 4 – Duplex adaptor interface with linkage structure interface	16
21	Figure 5 – Duplex adaptor interface without linkage structure interface	19
22	Figure 6 – Quadruplex adaptor interface	20
23	Figure 7 – Duplex active device receptacle interface with linkage structure, $h = 1$	23
24	Figure 8 – Duplex active device receptacle interface without linkage structure, $h = 2$	25
25	Figure 9 – Quadruplex active device receptacle interface	26
26	Figure 10 – Pin gauge for adaptors and active device receptacle	26
27	Figure A.1 – Fibre core locations	28
28	Figure B.1 – Duplex rectangular flange adaptor	29
29	Figure B.2 – Duplex rectangular no flange adaptor	30
30	Figure B.3 – Quadruplex rectangular flange adaptor	31
31	Figure B.4 – Quadruplex rectangular no flange adaptor	32
32	Figure C.1 – Latched configuration of a plug connector to adaptor/receptacle	33
33	Figure C.2 – Unlatched configuration of a plug connector from adaptor/receptacle	34
34		
35	Table 1 – Plug to adaptor/receptacle intermateability	8
36	Table 2 – Dimensions of the plug connector interface	11
37	Table 3 – Dimensions of angled PC plug interface	13
38	Table 4 – Dimensions of duplex adaptor interface	16
39	Table 5 – Quadruplex adaptor basic dimensions	20
40	Table 6 – Dimensions of duplex active device receptacle interface	23
41	Table 7 – Dimensions of quadruplex active device receptacle	26
42	Table 8 – Pin gauge dimensions	27

43	Table B.1 – Dimensions of duplex adaptor	30
44	Table B.2 – Dimensions of quadruplex flange adaptor.....	32
45	Table C.1 – Dimensions of a plug connector with adaptor/receptacle for latched and	
46	unlatched configurations	34
47		

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE
COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –****PART XX: TYPE SEN CONNECTOR FAMILY****FOREWORD**

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IEC 61754-38 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
XX/XX/FDIS	XX/XX/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 [change language if necessary]**.

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

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

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

- 108 • reconfirmed,
- 109 • withdrawn,
- 110 • replaced by a revised edition, or
- 111 • amended.

112

INTRODUCTION

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

Part XX: Type SEN connector family

1 Scope

This part of IEC 61754 defines the standard mechanical interface dimensions for the type SEN 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 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 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

PC	physical contact
APC	angled physical contact

4 Description

The parent connector for type SEN connector family is a miniature duplex connector set of plug/adaptor/plug configuration which is characterized by:

- A 1,25 mm nominal diameter ferrule;
- The connector plug includes two cylindrical, spring-loaded ferrules;
- The connector has a push-pull coupling mechanism along top of the connector;
- 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 XX-1: duplex plug connector interface - physical contact (PC);
- interface XX-2: duplex adaptor interface;
- interface XX-3: duplex plug connector interface - angled PC (APC), 8°;
- interface XX-4: duplex active device receptacle interface;
- interface XX-5: quadruplex adaptor interface;
- interface XX-6: quadruplex active device receptacle interface.

NOTE 1 All future adapter variants connecting more than two duplex plug connectors on each side should use the nominal specified pitch.

NOTE 2 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.

Refer to the IEC 61755-3-1 and IEC 61755-3-2 for information on end-face geometry requirements on PC and APC interfaces, respectively.

Table 1 – Plug to adaptor/receptacle intermateability

Plug interfaces	Adaptor interfaces		Active device receptacle interfaces	
	XX-2	XX-5	XX-4	XX-6
XX-1	Mate	Mate	Mate	Mate
XX-3	Mate	Mate	Mate	Mate

Note Receptacle and plug shall have similar polished endfaces. APC receptacle can mate with APC plug and PC receptacle will mate with PC plug.

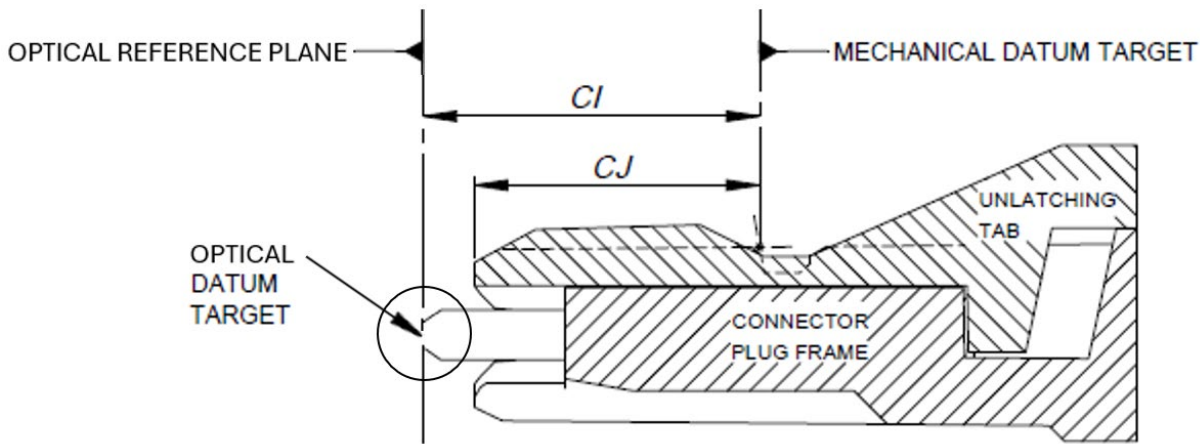


Figure 1 – Duplex plug connector datum target

Refer to Annex A for oriented fibre core locations.

Refer to Annex B for additional adaptor dimensional information.

184 Refer to Annex C for latching mechanism.

185 The plug optical interface dimensions are shown in Figure 2 as well as in Table 2. The
186 dimensions of angled PC plug optical interface are shown in Figure 3 and Table 3.

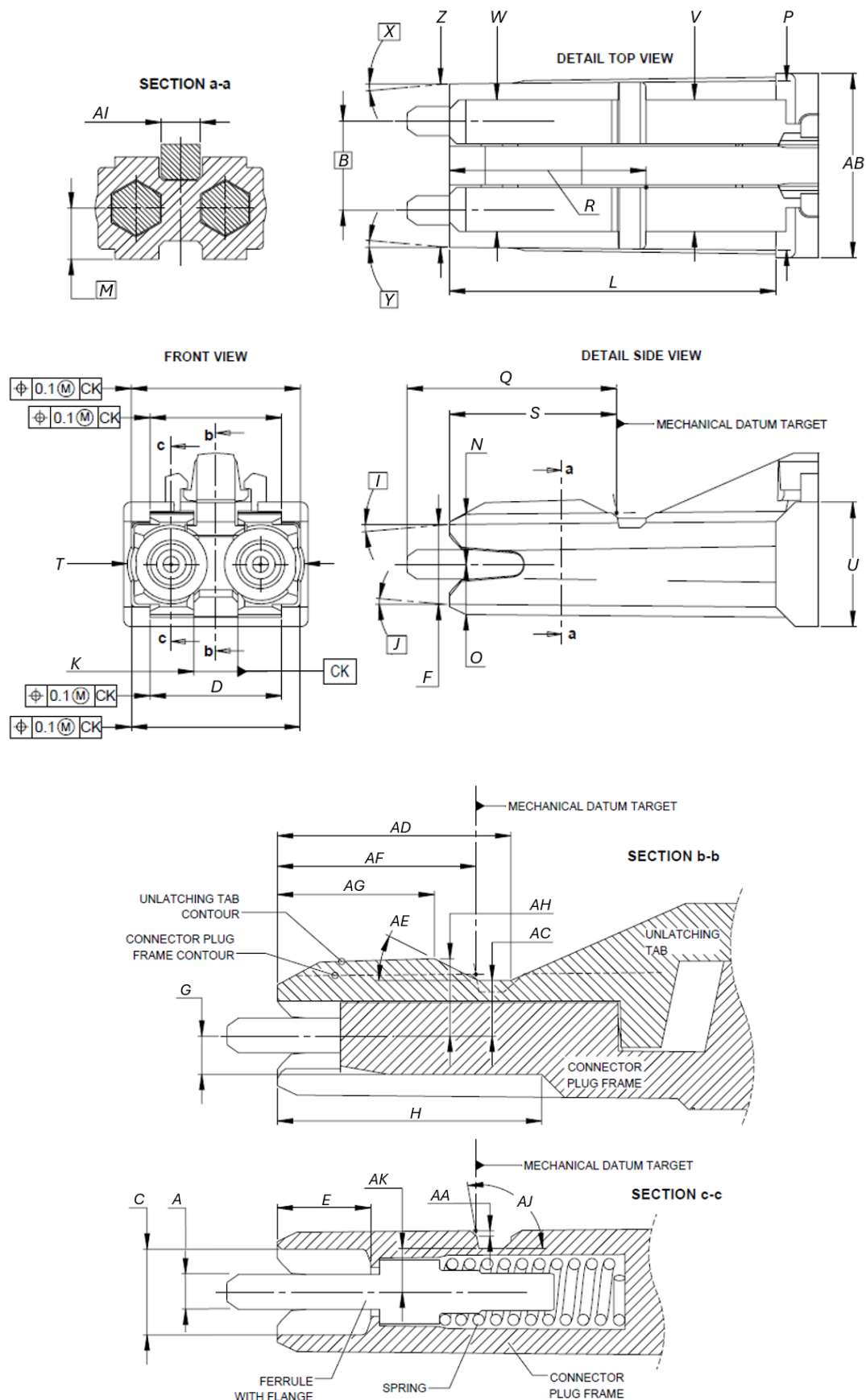


Figure 2 – Plug connector interface