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Date: 06 November 2020

Origin: International

**Latest date for receipt of comments: 30 December 2020**

Project No. 2020/00417

Responsible committee: GEL/86/2 Fibre optic interconnecting devices and passive components

Interested committees:

Title: Draft BS IEC 61754-36 Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces. Part 36: Type SAC 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.

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## UK Vote

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## Submission of Comments

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## Template for comments and secretariat observations

|                  |                        |
|------------------|------------------------|
| Date: xx/xx/20xx | Document: ISO/DIS xxxx |
|------------------|------------------------|

| 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/4374/CD

COMMITTEE DRAFT (CD)

|                                                            |                                                 |
|------------------------------------------------------------|-------------------------------------------------|
| PROJECT NUMBER:<br><b>IEC 61754-36 ED1</b>                 |                                                 |
| DATE OF CIRCULATION:<br><b>2020-11-06</b>                  | CLOSING DATE FOR COMMENTS:<br><b>2021-01-29</b> |
| SUPERSEDES DOCUMENTS:<br><b>86B/4252/NP, 86B/4272A/RVN</b> |                                                 |

|                                                                                                                                                                      |                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC SC 86B : FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS                                                                                              |                                                                                                                                                          |
| SECRETARIAT:<br>Japan                                                                                                                                                | SECRETARY:<br>Mr Shigeru Tomita                                                                                                                          |
| OF INTEREST TO THE FOLLOWING COMMITTEES:                                                                                                                             | PROPOSED HORIZONTAL STANDARD:<br><input type="checkbox"/><br>Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary. |
| FUNCTIONS CONCERNED:<br><input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY |                                                                                                                                                          |

This document is still under study and subject to change. It should not be used for reference purposes.

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.

TITLE:

**Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 36: Type SAC connector family**

NOTE FROM TC/SC OFFICERS:

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

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

| FDIS        | Report on voting |
|-------------|------------------|
| 86B/XX/FDIS | 86B/XX/RVD       |

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

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

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

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

111

112 The National Committees are requested to note that for this document the stability date  
113 is 20XX.

114 THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED  
115 AT THE PUBLICATION STAGE.

116

117

## INTRODUCTION

118 The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed  
119 that compliance with this document may involve the use of patent concerning IEC 61754-36.

120 IEC takes no position concerning the evidence, validity and scope of this patent right.

121 The holder of this patent right has assured the IEC that he/she is willing to negotiate licenses  
122 under reasonable and non-discriminatory terms and conditions with applicants throughout the  
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132 bases of patents relevant to their standards. Users are encouraged to consult the data bases  
133 for the most up to date information concerning patents.

134

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

### **Part 36: Type SAC connector family**

#### **Scope**

This document defines the standard interface dimensions for the type of SAC family of connectors.

#### **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 60794-2-50, *Optical fibre cables- Part 2-50: Indoor cables- Family specification for simplex and duplex cables for use in terminated cable assemblies*

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*

IEC 61755-6-1, *Fibre optic interconnecting devices and passive components- Fibre optic connector optical interfaces-Part 6-1: Optical interfaces for 50 um multimode fibres-General and guidance*

#### **Terms, acronyms, and definitions**

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

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

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

QSFP-DD is Quad Small Form Factor Pluggable Double Density form factor.

#### **Description**

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

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

## 175 Interfaces

176 This standard contains the following standard interfaces:

177 Interface 36-1: duplex plug connector interface-Physical contact (PC)

178 Interface 36-2: duplex adaptor interface

179 Interface 36-3: duplex plug connector interface- Angled PC, 8°

180 Interface 36-4: duplex active device receptacle interface

181 Interface 36-5: quadruplex adaptor interface.

182 NOTE: This interface to fit SC simplex connector adaptor footprint according to IEC 61754-4  
183 series.

184 Interface 36-6: quadruplex active device receptacle interface

185 Interface 36-7: octuplex adaptor interface to fit 4 SAC connectors

186 Interface 36-8: octuplex connector adaptor interface.

187 NOTE: This interface to fit SC duplex connector footprint according to IEC 61754-4 series.

188 Interface 36-9: octuplex active device receptacle interface

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

190 Duplex plug connector reference planes are shown in Figure 1.

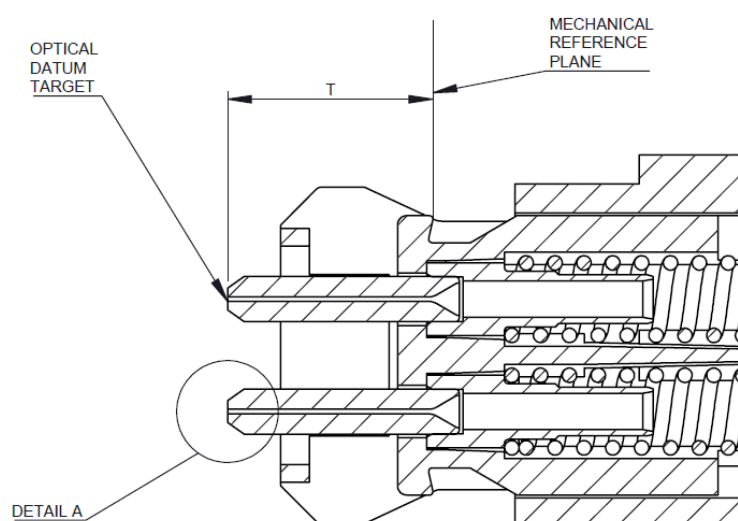
191 Refer to IEC 61755-3 series for information on end-face geometry requirements on PC and  
192 Angled PC interfaces, respectively.

193

194

**Table 1 – Plug to Adaptor/Receptacle Intermateability**

| Plug Interfaces                                                                      | Adaptor Interfaces |      |      |      | Active Device Receptacle Interfaces |                       |                       |
|--------------------------------------------------------------------------------------|--------------------|------|------|------|-------------------------------------|-----------------------|-----------------------|
|                                                                                      | 36-2               | 36-5 | 36-7 | 36-8 | 36-4                                | 36-6                  | 36-9                  |
| 36-1                                                                                 | Mate               | Mate | Mate | Mate | Mate                                | Mate                  | Mate                  |
| 36-3                                                                                 | Mate               | Mate | Mate | Mate | Not mate <sup>a</sup>               | Not mate <sup>a</sup> | Not mate <sup>a</sup> |
| a) If the active device is designed to accommodate Angled PC, this will be mateable. |                    |      |      |      |                                     |                       |                       |



195

196

**Figure 1 – Duplex plug connector reference planes**

197 Refer to Annex A for oriented fibre core locations.

198

199 The plug optical interface dimensions are shown in Figure 2 as well as in Table 2. The  
 200 dimensions of Angled PC plug optical interface are shown in Figure 3 and Table 3.

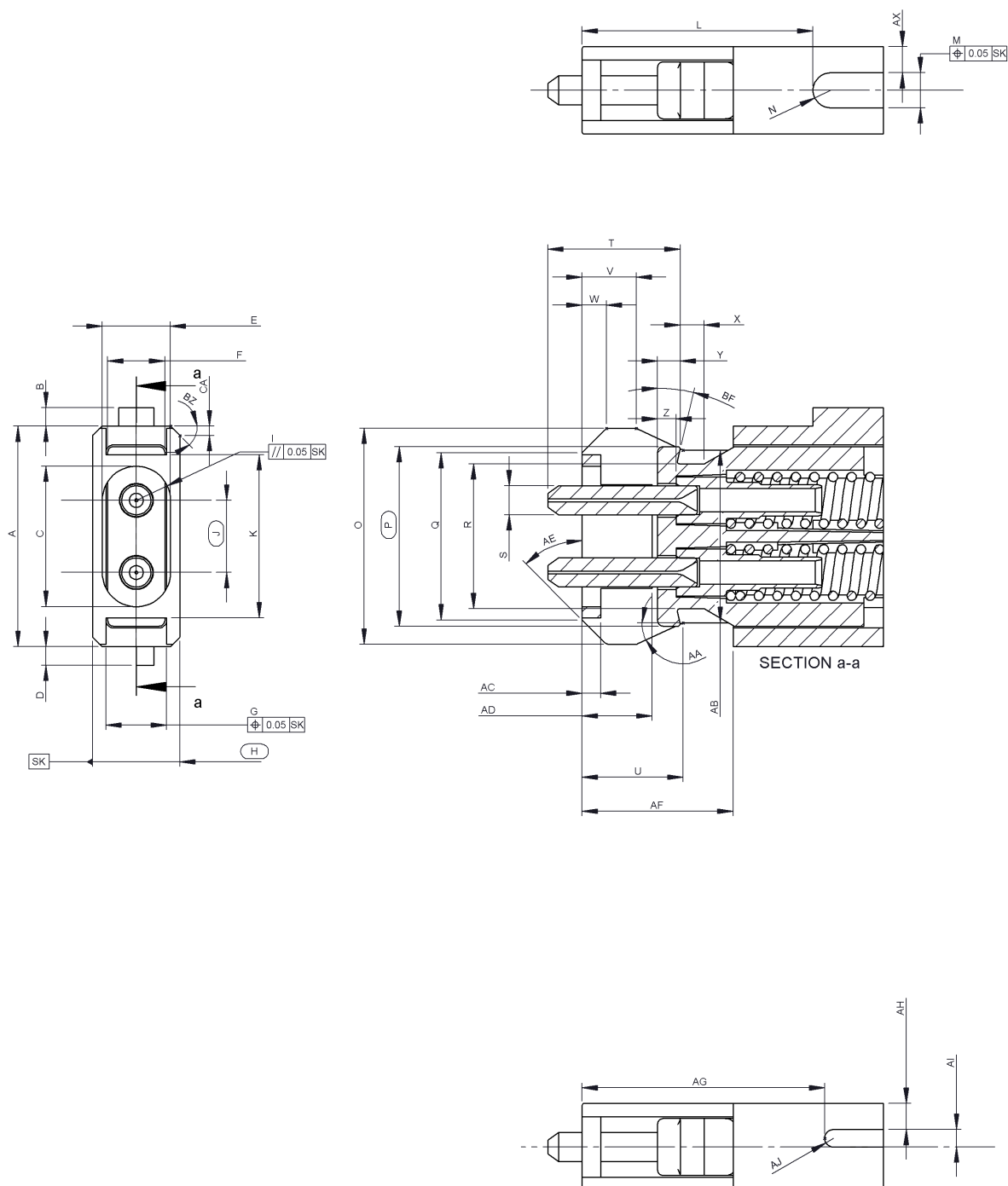


Figure 2 – Plug connector interface