



SLOVENSKI STANDARD
oSIST prEN IEC 61754-37:2022

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**Optični spojni elementi in pasivne komponente - Vmesniki za optične konektorje -
37. del: Družina konektorjev vrste MDC**

Fibre optic interconnecting devices and passive components - Fibre optic connector
interfaces - Part 37: Type MDC connector family

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Povezovalne naprave za
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IEC SC 86B : FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS	
SECRETARIAT: Japan	SECRETARY: Mr Shigeru Tomita
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TITLE:

Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces- Part 37: Type MDC connector family

PROPOSED STABILITY DATE: 2032

NOTE FROM TC/SC OFFICERS:

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES
AND PASSIVE COMPONENTS –
FIBRE OPTIC CONNECTOR INTERFACES –****Part 37: Type MDC connector family**

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International Standard IEC 61754-37 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

- 87 Full information on the voting for the approval of this International Standard can be found in the
88 report on voting indicated in the above table.
- 89 This document has been drafted in accordance with the ISO/IEC Directives, Part 2.
- 90 The committee has decided that the contents of this document will remain unchanged until the
91 stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the
92 specific document. At this date, the document will be
- 93 • reconfirmed,
 - 94 • withdrawn,
 - 95 • replaced by a revised edition, or
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INTRODUCTION

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

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103 world. In this respect, the statement of the holder of this patent right is registered with IEC.

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114 the most up to date information concerning patents.

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

Part 37: Type MDC connector family

1 Scope

This document defines the standard mechanical interface dimensions for the type of MDC 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 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, 2006*

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, 2006*

IEC 63267 Series, *Fibre Optic Interconnecting Devices and Passive Components - Connector Optical Interfaces.*

3 Terms and definitions

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

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>.

4 Abbreviated Terms

APC Angle Physical Contact

OD Outside Diameter

PC Physical Contact

5 Description

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

- The connector includes two 1,25 mm [nominal outer diameter (OD)], spring-loaded ferrules.
- The connector has a push-pull coupling latching mechanism along top of connector.
- The optical alignment mechanism of the connectors is a resilient split sleeve.

6 Interfaces

This standard contains the following standard interfaces:

Interface 37-1: duplex plug connector interface – Physical Contact (PC)

Interface 37-2: duplex plug connector interface – Angled Physical Contact – 8° (APC)

Interface 37-3: duplex adaptor interface

Interface 37-4: duplex active device receptacle interface

Interface 37-5: quadruplex adaptor interface

Interface 37-6: quadruplex active device receptacle interface

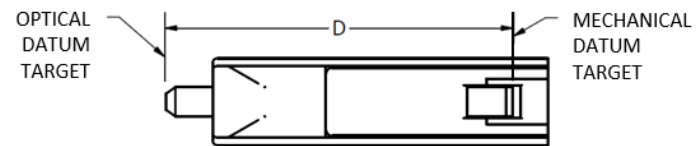
The intermateability between plugs, adaptors, and receptacles are provided in Table 1.

Table 1 – Plug to Adaptor/Receptacle Intermateability

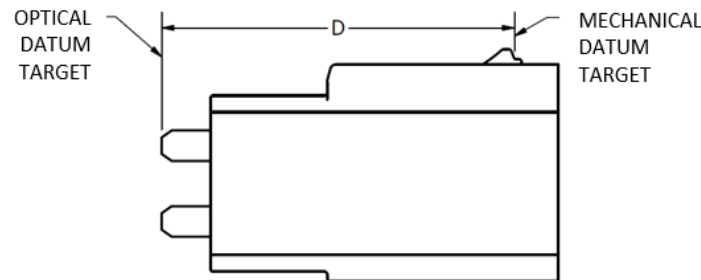
IEC61754-37		ADAPTOR/ACTIVE DEVICE RECEPTACLE INTERFACES		
PLUG INTERFACES		37-3	37-4	37-5
37-1	Mate	Mate ^a	Mate	Mate ^a
37-2	Mate	Mate ^a	Mate	Mate ^a
^a Receptacle and plug must have similar polished endfaces. APC receptacle will mate with APC plug and PC receptacle will mate with PC plug.				

Duplex plug connector reference planes are shown in Figure 1.

NOTE For PC ferrules, please refer to IEC 61755-3-1 Figure 3 for ferrule dimensions and Tables 2 and 3 for ferrule optical interface parameter values. For APC ferrules, please refer to IEC 61755-3-2 Figure 3 for ferrule dimensions and Tables 2 and 3 for ferrule optical interface parameter values. For MM ferrules, please refer to IEC 63267 series.



a) Connector top view



b) Connector side view

Figure 1 – Duplex plug connector reference planes

Duplex plug optical interface dimensions are detailed in Figure 2 and Table 2. Additional details for duplex plug optical interface – APC are shown in Figure 4 and Table 2. Multiple duplex plug optical connectors can be attached as one unit. Each duplex plug optical interface is spaced at intervals of 'M' pitch to create multiple duplex plug optical interfaces. As an example, the quadruplex plug optical interface is shown in Figure 3.

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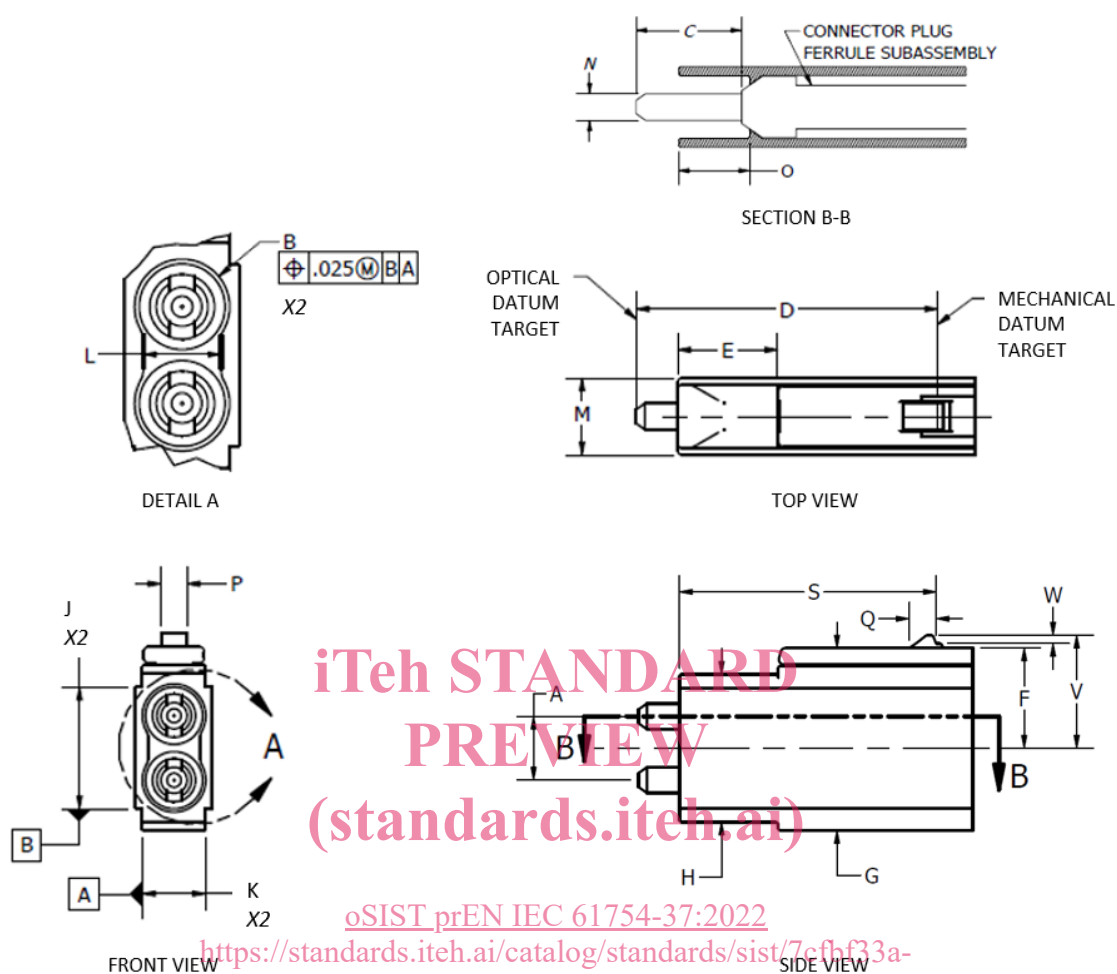


Figure 2 – Duplex plug connector interface

Refer to Annex B for oriented fibre core locations.

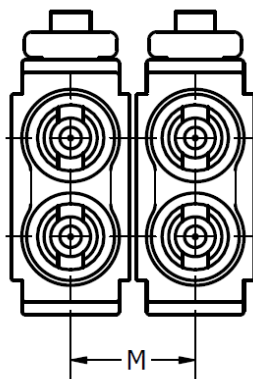


Figure 3 – Quadruplex plug connector interface