SLOVENSKI STANDARD
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Optični spojni elementi in pasivne komponente - Vmesniki optičnih konektorjev - 6. del: Konektorska družina vrste MU (IEC 61754-6:2013)

Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 6: Type MU connector family

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Steckgesichter von Lichtwellenleiter-Steckverbindern - Teil 6: Bauart MU-Steckverbinderfamilie

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English version

Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 6: Type MU connector family

(IEC 61754-6:2013)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Interfaces de connecteurs à fibres optiques
(CEI 61754-6:2013)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Steckgesichter von Lichtwellenleiter-Steckverbindern - Teil 6: Bauart MU-Steckverbinderfamilie
(IEC 61754-6:2013)

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CENELEC

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

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Foreword

The text of document 86B/3627/FDIS, future edition 2 of IEC 61754-6, prepared by subcommittee 86B “Fibre optic interconnecting devices and passive components” of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61754-6:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-05-26
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2014-08-26

This document supersedes EN 61754-6:1997 + A1:2001 + A2:2005.

EN 61754-6:2013 includes the following significant technical changes with respect to EN 61754-6:1997 + A1:2001 + A2:2005 :

a) addition of standard references;

b) revision of intermateability.

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Endorsement notice

The text of the International Standard IEC 61754-6:2013 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 61755-3-1		Fibre optic interconnecting devices and passive components -Fibre optic connector optical interfaces - Part 3-1:Connectors with 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrule, non-angled single mode non-dispersion shifted fibres	prEN 61755-3-1 [1)]	
IEC 61755-3-2		Fibre optic interconnecting devices and passive components -Fibre optic connector optical interfaces - Part 3-2: Connectors with 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrule, angled single mode non-dispersion shifted fibres	prEN 61755-3-2 [1)]	

1) At draft stage.

IEC 61754-6

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INTERNATIONAL STANDARD

Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 6: Type MU connector family

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 6: Type MU connector family

FOREWORD

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International Standard IEC 61754-6 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 1997 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) addition of standard references;

b) revision of intermateability.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/3627/FDIS	86B/3662/RVD

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

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

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

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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

Part 6: Type MU connector family

1 Scope

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

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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 Description

The parent connector for type MU connector family is a miniature single-position plug which is characterized by a cylindrical, spring-loaded butting ferrule(s) of a 1,25 mm typical diameter, and a push-pull coupling mechanism. The optical alignment mechanism of the connectors is of a rigid hole or a resilient sleeve style.

This part 6 type MU connector family defines the standard interface dimensions of active device receptacles for the type MU connectors. The receptacles are used to retain the connector plugs and mechanically maintain the optical datum target of the plugs at a defined position within the receptacle housings.

4 Interfaces

This standard contains the following standard interfaces.

Interface IEC 61754-6-1: Simplex plug connector interface – Push/pull (See Figure 1)

Interface IEC 61754-6-2: 4,5 mm duplex plug connector interface – Push/pull (See Figure 2)

Interface IEC 61754-6-3: Simplex adaptor connector interface – Push/pull (See Figure 3)

Interface IEC 61754-6-4: 4,5 mm duplex adaptor connector interface – Push/pull (see Figure 5)

Interface IEC 61754-6-5: 8-port adaptor connector interface – Push/pull (See Figure 6)

Interface IEC 61754-6-6: Plug connector interface – for printed board housings (See Figure 7)

Interface IEC 61754-6-7: Sleeve holder interface – for printed board housings (See Figure 8)

Interface IEC 61754-6-8: 2-port backplane housing interface – Self-retentive (See Figure 9)

Interface IEC 61754-6-9: 2-port printed board housing interface – Self-retentive (See Figure 10)

Interface IEC 61754-6-10: 8-port backplane housing interface – Self-retentive (See Figure 11)

Interface IEC 61754-6-11 8-port printed board housing interface – Self-retentive (See Figure 12)

Interface IEC 61754-6-12: Simplex active device receptacle interface – for PC connector plug (See Figure 13)

Interface IEC 61754-6-13: 4,5 mm duplex active device receptacle interface – for PC connector plug (See Figure 15)

Interface IEC 61754-6-14: 6,25 mm duplex active device receptacle interface – for PC connector plug (See Figure 17)

Interface IEC 61754-6-15: Plug connector interface – for printed board housings, APC 8 degrees (See Figure 19)

Interface IEC 61754-6-16: Simplex plug connector interface – Push/pull, APC 8 degrees (See Figure 20)

Interface IEC 61754-6-17: 4,5 mm duplex plug connector interface – Push/pull, APC 8 degrees (See Figure 21)

Interface IEC 61754-6-18: 6,25 mm duplex plug connector interface – Push/pull, APC 8 degrees (See Figure 22)

Interface IEC 61754-6-19: 6,25 mm duplex plug connector interface – Push/pull (See Figure 23)

Interface IEC 61754-6-20: 6,25 mm duplex adaptor connector interface – Push/pull (See Figure 24)

Interface IEC 61754-6-21: Horizontal duplex plug connector interface – Push/pull (See Figure 25)

Interface IEC 61754-6-22: Horizontal duplex adaptor connector interface – Push/pull (See Figure 26)

The plugs of interfaces IEC 61754-6-1, IEC 61754-6-2, IEC 61754-6-6, IEC 61754-6-19 and IEC 61754-6-21 have a ferrule(s) with a spherically polished endface, and realize physical contact (PC). The plugs of interfaces IEC 61754-6-15, IEC 61754-6-16, IEC 61754-6-17 and IEC 61754-6-18 have a ferrule(s) with a spherically polished angled endface and realize angled PC (APC).

The type MU connector family comprises two types of connector set: MU-A connector set (see Annex A) and MU-B connector set (see Annex B). The MU-A connector set is a plug/adaptor configuration with a push-pull coupling mechanism. The MU-B connector set is a plug-in type back-plane connector configuration which is plug/backplane and printed board housings/plug for printed board housing/sleeve holder configuration and is equipped with a self-retentive mechanism.

The type MU-A connector set consists of simplex and duplex plugs, and simplex, duplex and 8-port adaptors. The plugs are common to the backplane connector housings of the type MU-B connector set.

The type MU-B connector set consists of 2-port and 8-port backplane and printed board connector housings, simplex and duplex plugs, plug for printed board connector housings, and sleeve holder. The plug for printed board connector housing is used as a jack together with the sleeve holder. The jack is attached into the printed board connector housing.

TableS 1, 2 and 3 show the intermateablitiy of the standard interfaces. It shall be noted however that in order to obtain the designated optical performance, any plug shall be connected to a counterpart plug whose ferrule end is polished to the same condition.

Table 1 – MU-A connector set

Plugs	Adaptors				
	61754-6-3	61754-6-4	61754-6-5	61754-6-20	61754- 6-22
61754-6-1	Mate	Mate	Mate	Mate	Mate
61754-6-2	Not mate	Mate	Mate	Not mate	Not mate
61754-6-16	Mate	Mate	Mate	Mate	Mate
61754- 6-17	Not Mate	Mate	Mate	Not Mate	Not mate
61754-6-18	Not mate	Not mate	Not mate	Mate	Not mate
61754-6-19	Not mate	Not mate	Not mate	Mate	Not mate
61754-6-21	Not mate	Not mate	Not mate	Not mate	Mate

Table 2 – MU-B connector set

Plugs	Connector housings			
	Backplane connector housing		Printed board connector housing	
	61754-6-8	61754-6-10	61754-6-9	61754-6-11
61754-6-1	Mate	Mate	Not mate	Not mate
61754-6-2	Mate	Mate	Not mate	Not mate
61754-6-6 with 61754-6-7	Not mate	Not mate	Mate	Mate
61754-6-15 with 61754- 6-7	Not mate	Not mate	Mate	Mate
61754-6-16	Mate	Mate	Not mate	Not mate
61754-6-17	Mate	Mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate	Not mate
61754-6-19	Not mate	Not mate	Not mate	Not mate
61754-6-21	Not mate	Not mate	Not mate	Not mate