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Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements - Attenuation

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/23

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EN IEC 61300-3-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2023

ICS 33.180.20

Supersedes EN 61300-3-4:2013

English Version

**Fibre optic interconnecting devices and passive components -
Basic test and measurement procedures - Part 3-4:
Examinations and measurements - Attenuation
(IEC 61300-3-4:2023)**

Dispositifs d'interconnexion et composants passifs
fibroniques - Procédures fondamentales d'essais et de
mesures - Partie 3-4: Examens et mesures -
Affaiblissement
(IEC 61300-3-4:2023)

Lichtwellenleiter - Verbindungselemente und passive
Bauteile - Grundlegende Prüf- und Messverfahren - Teil 3-
4: Untersuchungen und Messungen - Dämpfung
(IEC 61300-3-4:2023)

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Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 61300-3-4:2023 (E)**European foreword**

The text of document 86B/4656/FDIS, future edition 4 of IEC 61300-3-4, 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 approved by CENELEC as EN IEC 61300-3-4:2023.

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) 2024-03-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-06-13

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In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 61280-1-3 NOTE Approved as EN IEC 61280-1-3

IEC 61300-3-2 NOTE Approved as EN 61300-3-2

IEC 61300-3-29 NOTE Approved as EN 61300-3-29

IEC 61300-3-34 NOTE Approved as EN 61300-3-34

IEC 61300-3-45 NOTE Approved as EN 61300-3-45

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-2-10	-	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN IEC 60793-2-10 -	
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN IEC 60793-2-50 -	
IEC 60825-1	-	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	-
IEC 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN IEC 61300-1	-
IEC 61300-3-35	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-35: Examinations and measurements - Visual inspection of fibre optic connectors and fibre-stub transceivers	EN IEC 61300-3-35 -	
IEC 61755	series	Fibre optic interconnecting devices and passive components - Connector optical interfaces for single-mode fibres	EN IEC 61755	series
IEC 63267	series	Fibre optic interconnecting devices and passive components - Fibre optic connector optical interfaces	EN IEC 63267	series



IEC 61300-3-4

Edition 4.0 2023-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –
Part 3-4: Examinations and measurements – Attenuation**

**Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures –
Partie 3-4: Examens et mesures – Affaiblissement**



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IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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IEC 61300-3-4

Edition 4.0 2023-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –
Part 3-4: Examinations and measurements – Attenuation**

**Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures –
Partie 3-4: Examens et mesures – Affaiblissement**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 3-4: Examinations and measurements – Attenuation

FOREWORD

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IEC 61300-3-4 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.

This fourth edition cancels and replaces the third edition published in 2012. This edition constitutes a technical revision.

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

- a) addition of Clause 3 containing terms, definitions and abbreviated terms;
- b) addition of a new LSPM measurement method, insertion method (D);
- c) addition of Annex A describing attenuation measurement of multicore fibre;
- d) changed reference test method to insertion C and alternative test method to substitution or insertion D for power meter and type 4 DUT.

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

Draft	Report on voting
86B/4656/FDIS	86B/4675/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.

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

A list of all the parts in IEC 61300 series, published under the general title, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*, can be found on the IEC website.

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

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

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 3-4: Examinations and measurements – Attenuation

1 Scope

This part of IEC 61300 describes the various methods available to measure the attenuation of optical components. It is not, however, applicable to random mate attenuation measurements as described in IEC 61300-3-34 and IEC 61300-3-45 nor for attenuation measurements of dense wavelength division multiplexing (DWDM) devices as described in IEC 61300-3-29.

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 60793-2-10, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

IEC 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

IEC 60825-1, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 61300-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance*

IEC 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Visual inspection of fibre optic connectors and fibre-stub transceivers*

IEC 61755 (all parts), *Fibre optic interconnecting devices and passive components – Connector optical interfaces for single-mode fibres*

IEC 63267 (all parts), *Fibre optic interconnecting devices and passive components – Connector optical interfaces for enhanced macro bend loss multimode fibres*

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