



SLOVENSKI STANDARD

SIST EN 61300-1:2011

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Optični spojni elementi in pasivne komponente - Postopki osnovnega preskušanja in merjenja - 1. del: Splošno in smernice (IEC 61300-1:2011)

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance (IEC 61300-1:2011)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Grundlegende Prüf- und Messverfahren - Teil 1: Allgemeines und Leitfaden (IEC 61300-1:2011)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Procédures fondamentales d'essais et de mesures - Partie 1: Généralités et lignes directrices (CEI 61300-1:2011)

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Ta slovenski standard je istoveten z: EN 61300-1:2011

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| 33.180.20 | Povezovalne naprave za optična vlakna | Fibre optic interconnecting devices |
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61300-1

May 2011

ICS 33.180.20

Supersedes EN 61300-1:2003

English version

**Fibre optic interconnecting devices and passive components -
Basic test and measurement procedures -
Part 1: General and guidance
(IEC 61300-1:2011)**

Dispositifs d'interconnexion et composants
passifs à fibres optiques -
Procédures fondamentales d'essais et de
mesures -
Partie 1: Généralités et lignes directrices
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Lichtwellenleiter -
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Teil 1: Allgemeines und Leitfaden
(IEC 61300-1:2011)

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This European Standard was approved by CENELEC on 2011-04-27. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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/3112/FDIS, future edition 3 of IEC 61300-1, 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 was approved by CENELEC as EN 61300-1 on 2011-04-27.

This European Standard supersedes EN 61300-1:2003.

The changes with respect to EN 61300-1:2003 are to reconsider the terms and definitions and multimode launch conditions.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2012-01-27 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2012-04-27 |

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61300-1:2011 was approved by CENELEC as a European Standard without any modification.

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

| | |
|---------------|----------------------------------|
| IEC 60068-2-1 | NOTE Harmonized as EN 60068-2-1. |
| IEC 61315 | NOTE Harmonized as EN 61315. |
| IEC 62614 | NOTE Harmonized as EN 62614. |
| ISO 4288 | NOTE Harmonized as EN ISO 4288. |

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|------------------|-------------|
| IEC 60050-731 | - | International Electrotechnical Vocabulary (IEV) - Chapter 731: Optical fibre communication | - | - |
| IEC 60617 | - | Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection for standard data element types and component classes | - | - |
| IEC 60825-1 | - | Safety of laser products - Part 1: Equipment classification and requirements | EN 60825-1 | - |
| IEC 60825-2 | - | Safety of laser products - Part 2: Safety of optical fibre communication systems (OFCS) | EN 60825-2 | - |
| IEC 61280-1-4 | - | Fibre optic communication subsystem test procedures - Part 1-4: General communication subsystems - Light source encircled flux measurement method | EN 61280-1-4 | - |
| IEC 61280-4-1 | - | Fibre optic communication subsystem test procedures - Part 4-1: Installed cable plant - Multimode attenuation measurement | EN 61280-4-1 | - |
| IEC 61300-2 | Series | Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2: Tests | EN 61300-2 | Series |
| IEC 61300-3 | Series | Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3: Examinations and measurements | EN 61300-3 | Series |
| IEC 61300-3-1 | - | Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination | EN 61300-3-1 | - |
| ISO/IEC 17025 | - | General requirements for the competence of testing and calibration laboratories | EN ISO/IEC 17025 | - |

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Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance

Dispositifs d'interconnexion et composants passifs à fibres optiques – Procédures fondamentales d'essais et de mesures – Partie 1: Généralités et lignes directrices

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 1: General and guidance

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61300-1 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre Optics.

This third edition cancels and replaces the second edition published in 2003. This edition constitutes a technical revision. The changes with respect to the previous edition are to reconsider the terms and definitions and multimode launch conditions.

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

| | |
|---------------|------------------|
| FDIS | Report on voting |
| 86B/3112/FDIS | 86B/3164/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.

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

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.

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INTRODUCTION

The publications in the IEC 61300 series contain information on environmental testing procedures and measurement procedures relating to fibre optic interconnecting devices and passive components. They are intended to be used to achieve uniformity and reproducibility in environmental testing procedures and measurement procedures.

The term "test procedure" refers to procedures commonly known as environmental tests. The expressions "environmental conditioning" and "environmental testing" refer to the environments to which components or equipment may be exposed so that an assessment may be made of their performance under the conditions of use, transport and storage.

The term "measurement procedure" refers to those measurements which are necessary to assess the physical and optical characteristics of a component and may also be used before, during or after a test procedure to measure the effects of environmental conditioning or testing. The return loss and attenuation tests are examples of measurement procedures.

The requirements for the performance of components or equipment subjected to the test and measurement procedures described in this standard are not included. The relevant specification for the device under test defines the allowed performance limits.

When drafting a specification or purchase contract, only those tests which are necessary for the relevant components or equipment taking into account the technical and economic aspects should be specified.

The environmental test procedures are contained in the IEC 61300-2 series and the measurement procedures in the IEC 61300-3 series. Each test or measurement procedure is published as a stand-alone publication so that it may be modified, expanded or cancelled without having an effect on any other test or measurement procedure. However it should be noted that, where practical, reference is made to other standards as opposed to repeating all or part of already existing standards. As an example, the cold test for fibre optic apparatus refers to IEC 60068-2-1, but it also provides other needed information such as purpose, recommended severities and a list of items to be specified.

Multiple methods may be contained in a test or measurement procedure. As an example, several methods of measuring attenuation are contained in the attenuation measurement procedure.

If more than one method is contained in a test or measurement procedure, the reference method is identified.

The tests in this standard permit the performance of sample components or equipment to be compared. To assess the overall quality of a production lot, the test procedures should be applied in accordance with a suitable sampling plan and may be supplemented by appropriate additional tests, if necessary.

To provide tests appropriate to the different intensities of an environmental condition, some of the test procedures have a number of degrees of severity. These different degrees of severity are obtained by varying the time, temperature or some other determining factor separately or in combination.