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## REDLINE VERSION

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### **Fiberoptik – Anslutningsdon och passiva komponenter – Provning och mätning – Del 2-1: Provning – Sinusvibration**

*Fibre optic interconnecting devices and passive components –  
Basic test and measurement procedures –  
Part 2-1: Tests –  
Vibration (sinusoidal)*

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IEC 61300-2-1

Edition 4.0 2023-01  
REDLINE VERSION

# INTERNATIONAL STANDARD



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**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –  
Part 2-1: Tests – Vibration (sinusoidal)**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

ICS 33.180.20

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**FIBRE OPTIC INTERCONNECTING  
DEVICES AND PASSIVE COMPONENTS –  
BASIC TEST AND MEASUREMENT PROCEDURES –****Part 2-1: Tests – Vibration (sinusoidal)****FOREWORD**

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**This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 61300-2-1:2009. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.**

IEC 61300-2-1 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 2009. This edition constitutes a technical revision.

This edition includes the following significant technical change with respect to the previous edition: harmonizing with the test conditions in IEC 61753-1:2018 and revising severities.

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

Draft	Report on voting
86B/4692/FDIS	86B/4724/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts of 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](http://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
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# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

## Part 2-1: Tests – Vibration (sinusoidal)

### 1 Scope

This part of IEC 61300 evaluates the effects of vibration on fibre optic devices at the predominant frequency ranges and magnitudes that ~~may be~~ **are** encountered during field service **on attenuation**.

NOTE Most vibrations encountered in service are not of a simple harmonic nature. However, it has been shown that tests based on vibrations of this type are satisfactory to simulating actual service.

### 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 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

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

IEC 61300-3-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-1: Examinations and measurements – Visual examination*

~~IEC 61300-3-3, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-3: Examinations and measurements – Active monitoring of changes in attenuation and return loss*~~

IEC 61300-3-28, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-28: Examinations and measurements – Transient loss*

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## Fiberoptik – Anslutningsdon och passiva komponenter – Provning och mätning – Del 2-1: Provning – Sinusvibration

*Fibre optic interconnecting devices and passive components –  
Basic test and measurement procedures –  
Part 2-1: Tests –  
Vibration (sinusoidal)*

Som svensk standard gäller europastandarden EN IEC 61300-2-1:2023. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61300-2-1:2023.

### Nationellt förord

Europastandarden EN IEC 61300-2-1:2023

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61300-2-1, Fourth edition, 2023 - Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal)**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61300-2-1, utg 3:2010 med eventuella tillägg, ändringar och rättelser, gäller ej fr o m 2024-02-27

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English Version

**Fibre optic interconnecting devices and passive components -  
Basic test and measurement procedures - Part 2-1: Tests -  
Vibration (sinusoidal)  
(IEC 61300-2-1:2023)**

Dispositifs d'interconnexion et composants passifs  
fibroniques - Procédures fondamentales d'essais et de  
mesures - Partie 2-1: Essais - Vibrations (sinusoïdales)  
(IEC 61300-2-1:2023)

Lichtwellenleiter - Verbindungselemente und passive  
Bauteile - Grundlegende Prüf- und Messverfahren - Teil 2-  
1: Prüfungen - Schwingung (sinusförmig)  
(IEC 61300-2-1:2023)

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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

## **European foreword**

The text of document 86B/4692/FDIS, future edition 4 of IEC 61300-2-1, 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 approved by CENELEC as EN IEC 61300-2-1:2023.

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) 2023-11-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-02-27

This document supersedes EN 61300-2-1:2009 and all of its amendments and corrigenda (if any).

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Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

### **Endorsement notice**

The text of the International Standard IEC 61300-2-1:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61753-1:2018 NOTE Approved as EN IEC 61753-1:2018 (not modified)

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

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.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
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 61300-3-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination	EN 61300-3-1	-
IEC 61300-3-28	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss	EN 61300-3-28	-

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



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**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –  
Part 2-1: Tests – Vibration (sinusoidal)**

**Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures –  
Partie 2-1: Essais – Vibrations (sinusoïdales)**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**FIBRE OPTIC INTERCONNECTING  
DEVICES AND PASSIVE COMPONENTS –  
BASIC TEST AND MEASUREMENT PROCEDURES –****Part 2-1: Tests – Vibration (sinusoidal)****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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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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts of 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.

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

## **Part 2-1: Tests – Vibration (sinusoidal)**

### **1 Scope**

This part of IEC 61300 evaluates the effects of vibration on fibre optic devices at the predominant frequency ranges and magnitudes that are encountered during field service on attenuation.

NOTE Most vibrations encountered in service are not of a simple harmonic nature. However, it has been shown that tests based on vibrations of this type are satisfactory to simulating actual service.

### **2 Normative references**

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IEC 61300-3-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-1: Examinations and measurements – Visual examination*

IEC 61300-3-28, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-28: Examinations and measurements – Transient loss*