



NSAI
Standards

Irish Standard
I.S. EN 61300-2-48:2009

**Fibre optic interconnecting devices
and passive components - Basic
test and measurement procedures
-- Part 2-48: Tests - Temperature-
humidity cycling (IEC 61300-2
-48:2009 (EQV))**

I.S. EN 61300-2-48:2009

Incorporating amendments/corrigenda issued since publication:

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EUROPEAN STANDARD
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EN 61300-2-48

May 2009

ICS 33.180.20

Supersedes EN 61300-2-48:2003

English version

**Fibre optic interconnecting devices and passive components -
Basic test and measurement procedures -
Part 2-48: Tests -
Temperature-humidity cycling
(IEC 61300-2-48:2009)**

Dispositifs d'interconnexion
et composants passifs à fibres optiques -
Méthodes fondamentales d'essais
et de mesures -
Partie 2-48: Essais -
Cycles d'humidité et de température
(CEI 61300-2-48:2009)

Lichtwellenleiter -
Verbindungselemente
und passive Bauteile -
Grundlegende Prüf- und Messverfahren -
Teil 2-48: Prüfungen -
Temperatur-Feuchte-Zyklus
(IEC 61300-2-48:2009)

This European Standard was approved by CENELEC on 2009-04-01. 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, 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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 86B/2807/FDIS, future edition 2 of IEC 61300-2-48, 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 61300-2-48 on 2009-04-01.

This European Standard supersedes EN 61300-2-48:2003.

The main changes are the addition of the Category O cycle procedure and the severity reconsideration.

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) 2010-01-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-04-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61300-2-48:2009 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 61300-2-21 | NOTE | Harmonized as EN 61300-2-21:1997 (not modified). |
| IEC 61300-2-46 | NOTE | Harmonized as EN 61300-2-46:2006 (not modified). |
-

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 61300-1	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	2003 ²⁾
IEC 61300-3-1	- 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	2005 ²⁾
IEC 61300-3-4	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements - Attenuation	EN 61300-3-4	2001 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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IEC 61300-2-48

Edition 2.0 2009-03

INTERNATIONAL STANDARD

**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –
Part 2-48: Tests – Temperature-humidity cycling**



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IEC 61300-2-48

Edition 2.0 2009-03

INTERNATIONAL STANDARD

**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –
Part 2-48: Tests – Temperature-humidity cycling**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-48: Tests – Temperature-humidity cycling

FOREWORD

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International Standard IEC 61300-2-48 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition of IEC 61300-2-48 cancels and replaces the first edition published in 2003 and constitutes a technical revision. The main changes are the addition of the Category O cycle procedure and the severity reconsideration.

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

FDIS	Report on voting
86B/2807/FDIS	86B/2829/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 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 publication will remain unchanged until the maintenance result 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 – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 2-48: Tests – Temperature-humidity cycling

1 Scope

This part of IEC 61300 details a procedure for determining the suitability of a fibre optic device or closure to withstand variations in humidity and temperature that may occur during operation, storage and/or transport. The test is intended to indicate the performance of such devices when exposed to heat and humidity followed by short-term freezing.

In general terms, this test provides a high temperature to induce potential failures due to softening and expansion, a high humidity to encourage moisture absorption and swelling and a low temperature to facilitate ice formation, embrittlement and contraction.

This test differs from other cyclic environmental tests, notably the damp heat cyclic test of IEC 61300-2-46 and the composite temperature-humidity cyclic test of 61300-2-21, by incorporating alternative levels of severity. This is achieved through

- a) a greater number of cycles;
- b) a greater cyclic temperature range;
- c) a decreased cyclic period.

2 Normative references

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.

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 61300-3-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-4: Examinations and measurements – Attenuation*

3 General description

The specimen is placed in an environmental chamber and subjected to a number of temperature-humidity cycles, as defined in the relevant specification. The attenuation of the specimen is monitored throughout the duration of the test.

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