

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-21: Tests - Composite temperature-humidity cyclic test (IEC 61300-2-21:1995)

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-21: Tests - Composite temperature-humidity cyclic test

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Grundlegende Prüf- und Meßverfahren -- Teil 2-21: Prüfungen (Temperatur/Feuchte), zyklisch

Dispositifs d'interconnexion et composants passifs à fibres optiques - Méthodes fondamentales d'essais et de mesures -- Partie 2-21: Essais - Essai cyclique composite de température et d'humidité

Ta slovenski standard je istoveten z: EN 61300-2-21:1997

ICS:

33.180.20 Ú[ç^: [çæ) ^Á ađ !æ^Á æ Fibre optic interconnecting devices
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SIST EN 61300-2-21:1999 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61300-2-21

August 1997

ICS 33.180.20

English version

**Fibre optic interconnecting devices and passive components
Basic test and measurement procedures
Part 2-21: Tests - Composite temperature-humidity cyclic test
(IEC 61300-2-21:1995)**

Dispositifs d'interconnexion et
composants passifs à fibres optiques
Méthodes fondamentales d'essais et
de mesures
Partie 2-21: Essais - Essai cyclique
composite de température et d'humidité
(CEI 61300-2-21:1995)

Lichtwellenleiter - Verbindungselemente
und passive Bauteile - Grundlegende
Prüf- und Meßverfahren
Teil 2-21: Prüfungen:
Temperatur/Feuchte, zyklisch
(IEC 61300-2-21:1995)

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This European Standard was approved by CENELEC on 1997-07-01. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 61300-2-21:1995, prepared by SC 86B, Fibre optic interconnecting devices and passive components, of IEC TC 86, Fibre optics, was submitted to the formal vote and was approved by CENELEC as EN 61300-2-21 on 1997-07-01 without any modification.

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) 1998-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-06-01

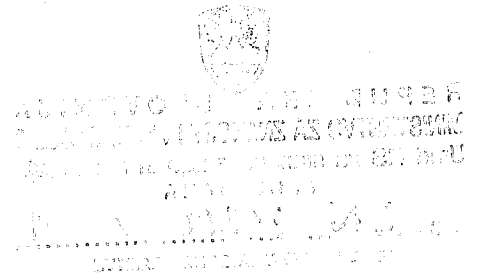
Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61300-2-21:1995 was approved by CENELEC as a European Standard without any modification.

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Annex ZA (normative)**Normative references to international publications
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 60068-2-38	1974	Basic environmental testing procedures Part 2: Tests - Test Z/AD: Composite temperature/humidity cyclic test	HD 323.2.38 S1	1988

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
1300-2-21

Première édition
First edition
1995-06

Dispositifs d'interconnexion et composants
passifs à fibres optiques –
Méthodes fondamentales d'essais
et de mesures –

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Partie 2-21:

Essais – Essai cyclique composite de température
et d'humidité

SIST EN 61300-2-21:1999

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Fibre optic interconnecting devices
and passive components –
Basic test and measurement procedures –

Part 2-21:

Tests – Composite temperature-humidity cyclic test

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 2-21: Tests – Composite temperature-humidity
cyclic test**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 1300-2-21 has been prepared by sub-committee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

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

DIS	Report on voting
86B/548/DIS	86B/628/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.

IEC 1300 consists of the following parts, under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*:

Part 1: General and guidance

Part 2: Tests

Part 3: Examinations and measurements

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

Part 2-21: Tests – Composite temperature-humidity cyclic test

1 General

1.1 *Scope and object*

The purpose of this part of IEC 1300 is to determine in an accelerated manner the resistance of a fibre optic device to the deteriorative effects of high temperature, humidity and cold conditions.

It is intended to reveal defects in a specimen caused by breathing as opposed to absorption of moisture. The test covers the effect of the freezing of trapped water in cracks and fissures as well as condensation. However, the degree of condensation will vary depending on the size and thermal mass of the specimen.

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This test differs from other cyclic damp heat tests in that it derives its increased severity from:

- a) a greater number of temperature variations or pumping actions in a given time;
- b) a greater cyclic temperature range;
- c) a higher rate of change of temperature;
- d) the inclusion of a number of excursions to sub-zero temperature.

This type of test is particularly important for fibre optic devices made of a variety of different materials, especially those devices having glass joints.

1.2 *General description*

This procedure is conducted in accordance with IEC 68-2-38, test Z/AD. The specimen is placed in a humidity chamber and subjected to 10 temperature-humidity cycles, each of 24 h duration. During any five of the first nine cycles after exposure to the humidity sub-cycle, the specimens shall be subjected to cold.

1.3 *Normative reference*

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of IEC 1300. At the time of publication, the edition indicated was valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1300 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.