



NSAI
Standards

Irish Standard
I.S. EN 61300-2-50:2007

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-50: Tests - Fibre optic connector proof test with static load - Singlemode and multimode

I.S. EN 61300-2-50:2007

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National Foreword

I.S. EN 61300-2-50:2007 is the adopted Irish version of the European Document EN 61300-2-50:2007, Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-50: Tests - Fibre optic connector proof test with static load - Singlemode and multimode

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61300-2-50

August 2007

ICS 33.180.20

English version

**Fibre optic interconnecting devices and passive components -
Basic test and measurement procedures -
Part 2-50: Tests -
Fibre optic connector proof test with static load -
Singlemode and multimode
(IEC 61300-2-50:2007)**

Dispositifs d'interconnexion
et composants passifs à fibres optiques -
Méthodes fondamentales d'essais
et de mesures -
Partie 2-50: Essais -
Essai de résistance des connecteurs
à fibres optiques sous charge statique -
Unimodal et multimodal
(CEI 61300-2-50:2007)

Lichtwellenleiter -
Verbindungselemente
und passive Bauteile -
Grundlegende Prüf- und Messverfahren -
Teil 2-50: Prüfungen -
Festigkeitsprüfung
für Lichtwellenleiter-Steckverbinder -
Einmoden und Mehrmoden
(IEC 61300-2-50:2007)

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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 document 86B/2509/FDIS, future edition 1 of IEC 61300-2-50, 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 61300-2-50 on 2007-07-01.

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) 2008-04-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-07-01

Annex ZA has been added by CENELEC.

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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 61300-3-6	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss	EN 61300-3-6	2003 ²⁾
IEC 61300-3-34	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-34: Examinations and measurements - Attenuation of random mated connectors	EN 61300-3-34	2002 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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IEC 61300-2-51:2007/COR1:2015

– 1 –

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INTERNATIONAL ELECTROTECHNICAL COMMISSION
COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

IEC 61300-2-51
Edition 1.0 2007-06

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

**Part 2-51: Tests –
Fibre optic connector test for
transmission with applied tensile load –
Singlemode and multimode**

IEC 61300-2-51
Édition 1.0 2007-06

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

**Partie 2-51: Essais –
Essai des connecteurs à fibres
optiques en transmission lorsqu'une
charge de traction est appliquée –
Unimodal et multimodal**

CORRIGENDUM 1

2. Normative references

*Delete the following existing normative
reference*

IEC 61300-3-34, *Fibre optic
interconnecting devices and passive
components – Basic test and
measurement procedures – Part 3-34:
Examinations and measurements –
Attenuation of random mated connectors*

Add the following new normative reference

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

2. Références normatives

*Supprimer la référence normative
existante suivante*

IEC 61300-3-34, *Fibre optic
interconnecting devices and passive
components – Basic test and
measurement procedures – Part 3-34:
Examinations and measurements –
Attenuation of random mated connectors*
(disponible uniquement en anglais)

*Ajouter la nouvelle référence normative
suivante*

CEI 61300-3-4, *Dispositifs
d'interconnexion et composants passifs à
fibres optiques – Méthodes fondamentales
d'essais et de mesures – Partie 3-4:
Examens et mesures – Affaiblissement*

5.5.1

Replace the existing text with the following new text

Measure attenuation and return loss as described in IEC 61300-3-4 and IEC 61300-3-6 respectively.

5.5.1

Remplacer le texte existant par le nouveau texte suivant

Mesurer l'affaiblissement, et l'affaiblissement de réflexion tels que décrit dans l'IEC 61300-3-4 et l'IEC 61300-3-6 respectivement.

**INTERNATIONAL
STANDARD**

**IEC
CEI**

**NORME
INTERNATIONALE**

61300-2-50

First edition
Première édition
2007-06

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

Part 2-50:

Tests –

**Fibre optic connector proof test with static load –
Singlemode and multimode**

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

Partie 2-50:

Essais –

**Essai de résistance des connecteurs à fibres
optiques sous charge statique –
Unimodal et multimodal**



Reference number
Numéro de référence
IEC/CEI 61300-2-50:2007



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61300-2-50

First edition
Première édition
2007-06

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

Part 2-50:

Tests –

**Fibre optic connector proof test with static load –
Singlemode and multimode**

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

Partie 2-50:

Essais –

**Essai de résistance des connecteurs à fibres
optiques sous charge statique –
Unimodal et multimodal**



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International Electrotechnical Commission
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Pour prix, voir catalogue en vigueur*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-50: Tests – Fibre optic connector proof test with static load – Singlemode and multimode

FOREWORD

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International Standard IEC 61300-2-50 has been prepared by subcommittee 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:

FDIS	Report on voting
86B/2509/FDIS	86B/2543/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

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

Part 2-50: Tests – Fibre optic connector proof test with static load – Singlemode and multimode

1 Scope

This part of IEC 61300 describes a test to quantitatively assess the capability of connector terminated patchcord cable assemblies to withstand static loads without uncoupling of the connector, physical damage to the assembly or permanent degradation of optical performance. This test is intended to apply to terminated reinforced jacketed cable of any diameter, both singlemode and multimode.

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

IEC 61300-3-6, *Fiber optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-6: Examinations and measurements – Return Loss*

IEC 61300-3-34, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-34: Examinations and measurements - Attenuation of random mated connectors*

3 General description

Static loads are applied to the cable of a patchcord assembly at 0° (straight pull) and at 90° (side pull) to the connector axis and held for a fixed time, while the mated connector assembly is held fixed by the adapter. The sample is examined and measured for attenuation and return loss before and after each load is applied.

4 Apparatus

The apparatus for this test is shown in Figure 1.

The patchcord tension is applied with weights through a capstan. The patchcord is flexed at the point of entrance to the connector plug by rotating the test arm. The position of the connector assembly along the test arm should be adjusted so that, when the arm is at 90°, the centerline along which the cable hangs passes through the test point. The fixture is to be designed to allow the capstan to be rotated about the axis of the section of cable under tension.

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