
Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-42: Tests - Static side load for connectors (IEC 61300-2-42:1998)

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-42: Tests - Static side load for connectors

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Grundlegende Prüf- und Meßverfahren -- Teil 2-42: Prüfungen - Statische Seitenlast für Steckverbinder

Dispositifs d'interconnexion et composants passifs à fibre optiques - Méthodes fondamentales d'essais et de mesures -- Partie 2-42: Essais - Charge latérale statique pour connecteurs

Ta slovenski standard je istoveten z: EN 61300-2-42:1998

ICS:

33.180.20 Ú[ç^: [çæ] ^Á æ | æ^Á æ Fibre optic interconnecting devices
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SIST EN 61300-2-42:2002**en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61300-2-42

November 1998

ICS 33.180.20

Descriptors: Fibre optic interconnecting devices, measurement procedures, static side load for connectors

English version

**Fibre optic interconnecting devices and passive components
Basic test and measurement procedures
Part 2-42: Tests - Static side load for connectors
(IEC 61300-2-42:1998)**

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

Partie 2-42: Essais - Charge latérale
statique pour connecteurs
(CEI 61300-2-42:1998)

Lichtwellenleiter-Verbindungselemente
und passive Bauteile - Grundlegende
Prüf- und Meßverfahren

Teil 2-42: Prüfungen - Statische
Seitenlast für Steckverbinder
(IEC 61300-2-42:1998)

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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 document 86B/1097/FDIS, future edition 1 of IEC 61300-2-42, 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 61300-2-42 on 1998-10-01.

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) 1999-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2001-07-01

Endorsement notice

The text of the International Standard IEC 61300-2-42:1998 was approved by CENELEC as a European Standard without any modification.

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61300-2-42

Première édition
First edition
1998-08

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

Partie 2-42:

**Essais –
Charge latérale statique pour connecteurs**

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

Part 2-42:

**Tests –
Static side load for connectors**

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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES AND
PASSIVE COMPONENTS –
BASIC TEST AND MEASUREMENT PROCEDURES –
Part 2-42: Tests – Static side load for connectors**

FOREWORD

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International Standard IEC 61300-2-42 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/1097/FDIS	86B/1125/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 61300 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 2-42: Tests – Static side load for connectors**

1 General

1.1 Scope and object

The purpose of this part of IEC 61300 is to determine the influence of a side load applied by a length of cable to a connector plug which is inserted in an adaptor mounted in a patch panel.

1.2 General description

The sample plug is inserted in a horizontally mounted adaptor. A load, equal to several meters of cable, is applied to the cable attached to the connector and the change in optical attenuation is monitored during a specified period.

2 Apparatus

The apparatus consists of the following elements:

2.1 A standard adaptor which is mounted horizontally.

2.2 The load generator, which in this case is a mass that can be clamped to the cable. (The clamping should not introduce micro- or macro bending losses in the cable at the wavelength of interest.)

2.3 Equipment to monitor the change in attenuation – source, power meter and a device to record attenuation over time (X,t). The source shall provide the launch conditions specified in the detail specification and be consistent with IEC 61300-1, Annex B, and shall be stable over the test duration. Wavelength for single mode applications is 1 550 nm.

3 Procedure

The test sample consists of a complete optical connection (plug – adaptor-plug). All relevant parts of the optical interface shall be cleaned prior to the test.

3.1 The lead with connector 1 is attached to the optical source and the optical output is measured. (Use of reference connector is permitted but not required.) In case of single mode applications, care shall be taken that only the fundamental mode is propagated.

3.2 Both plugs are inserted in a horizontal mounted adaptor and the attenuation A of the connection is measured.

3.3 The mass is clamped 20 cm behind connector 2 to the cable. (Care must be taken that no micro- or macro bending losses are introduced.)

3.4 The load is gently applied to the cable within 5 s to 10 s without jerking and left there for the specified period.

During this period the change in the attenuation shall be continuously monitored. The use of power meters with electronic sampling is also allowed but sample rate shall be $>10/\text{min}$.

3.5 The load is released and the final attenuation is to be measured within 1 min.

3.6 If required the following steps can be taken.

3.7 The adaptor is rotated 90° and steps 3.1 to 3.5 are repeated.

Table 1 – Recommended load and durations for various cable diameters

Nominal cable diameter D mm	Recommended load N	Recommended duration min
≤ 1	0,2	5
$1 < D \leq 2$	0,5	30
$2 < D \leq 4$	1,0	60

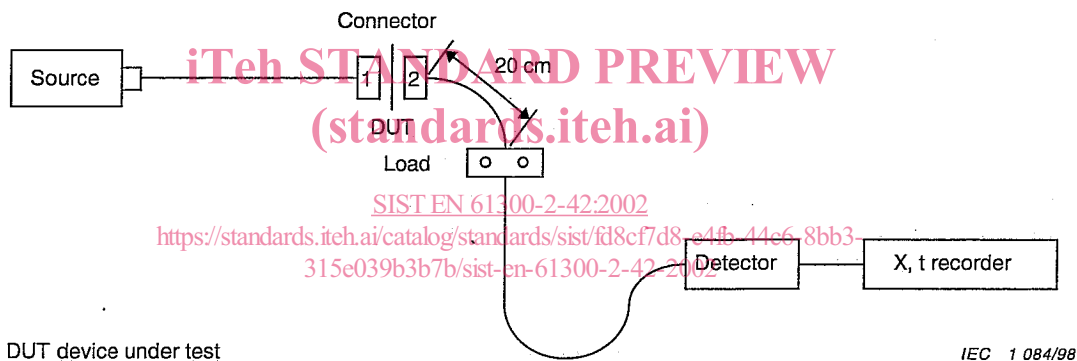


Figure 1 – Example of test set-up

4 Details to be specified

The following details, as applicable, shall be specified in the relevant specification:

- performance requirements, allowed change in attenuation during and after the test;
- magnitude of the applied load and the duration of the load application;
- cable diameter;
- number of directions of load application;
- number of specimens to be tested;
- deviations from test procedure.