SLOVENSKI STANDARD

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Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-10: Examinations and measurements - Gauge retention force (IEC 61300-3-10:1995)

ICS 33.180.20

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Fibre optic interconnecting devices and passive components Basic test and measurement procedures Part 3-10: Examinations and measurements - Gauge retention force (IEC 61300-3-10:1995)

Dispositifs d'interconnexion et composants passifs à fibres optiques Méthodes fondamentales d'essais et de mesures Partie 3-10: Examens et mesures Force de rétention du calibre (CEI 61300-3-10:1995)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Grundlegende Prüf- und Meßverfahren Teil 3-10: Untersuchungen und Messungen - Lehrenhaltekraft (IEC 61300-3-10:1995)

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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

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Foreword

The text of the International Standard IEC 61300-3-10:1995, 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 61300-3-10 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- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-06-01

Endorsement notice

The text of the International Standard IEC 61300-3-10:1995 was approved by CENELEC as a European Standard without any modification.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI IEC 1300-3-10

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

Partie 3-10:

Examens et mesures –
Force de rétention du calibre

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

Part 3-10:

Examinations and measurements –
Gauge retention force

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 3-10: Examinations and measurements – Gauge retention force

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 1300-3-10 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/524/DIS	86B/589/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 3-10: Examinations and measurements – Gauge retention force

1 General

1.1 *Scope and object*

The purpose of this part of IEC 1300 is to ensure that the characteristics of resilient members, usually contained in optical connector sleeves, couplings or plugs are satisfactory when it is impractical to specify them using size dimensions.

1.2 *General description*

A weighted gauge is used to determine the acceptable retention forces of the resilient member. The method is applicable to either male or female resilient members.

2 Apparatus

The apparatus shall consist of the following elements.

2.1 *Gauge*

A ring type gauge is used for male features and a pin gauge is used for female features.

The gauge is generally produced to the maximum material size of the resilient feature. The gauge shall be defined in the detail specification. The definition shall include dimensions, material, weight and the surface hardness and finish for the area of the gauge in contact with the resilient member.

2.2 *Solvent*

The solvent(s) shall be capable of removing all traces of lubricant from the bearing surfaces of the gauge and the resilient member. A solvent shall be selected which will not damage the gauge or the resilient material of the specimen.

It is recommended to choose solvents and cleaning agents in the observance of safety rules.

3 Procedure

3.1 Pre-condition the specimen as specified.

3.2 Clean the resilient member with the solvent to remove all traces of lubricants.

3.3 Clean the gauge-bearing surface with the solvent to remove all traces of lubricants.

3.4 Engage the resilient member and the gauge to the specified depth. Hold the resilient member in a vertical position with the gauge down for the time specified in the detail specification. Unless otherwise specified, the specimen shall retain the weight of the gauge for 30 s minimum.

3.5 Perform the specified recovery procedure.

4 Details to be specified

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

- Gauge characteristics (dimensions, material hardness and surface finish at the bearing surfaces)
- Gauge weight
- Maximum allowable gauge insertion force
- Pre-conditioning procedure
- Recovery procedure
- Acceptance/failure criteria (gauge retention time)
- Number of times the test is performed on each component
- Configuration of the component under test
- Deviations from measuring procedure