

Fibre optic interconnecting devices and passive components - Performance standard -- Part 131-3: Singlemode mechanical fibre splice for category U - Uncontrolled environment

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61753-131-3:2011 sisaldab Euroopa standardi EN 61753-131-3:2011 ingliskeelset teksti.

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**Fibre optic interconnecting devices and passive components -
Performance standard -
Part 131-3: Single-mode mechanical fibre splice for category U -
Uncontrolled environment
(IEC 61753-131-3:2010)**

Dispositifs d'interconnexion et
composants passifs à fibres optiques -
Norme de performance -
Partie 131-3 : Epissure mécanique de
fibres unimodales pour Catégorie U -
Environnement non contrôlé
(CEI 61753-131-3:2010)

Lichtwellenleiter -
Verbindungselemente und passive
Bauteile -
Betriebsverhalten -
Teil 131-3: Mechanische Spleiße für
Einmoden-Lichtwellenleiter für die
Kategorie U -
Unkontrollierte Umgebung
(IEC 61753-131-3:2010)

This European Standard was approved by CENELEC on 2011-01-02. 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, Croatia, 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

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Foreword

The text of document 86B/2945/FDIS, future edition 1 of IEC 61753-131-3, 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 61753-131-3 on 2011-01-02.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level or publication of an identical national standard or by endorsement (dop) 2011-10-02
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2014-01-02

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61753-131-3:2010 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 60793-2-50:2008	NOTE Harmonized as EN 60793-2-50:2008 (not modified).
IEC 61753-1	NOTE Harmonized as EN 61753-1.
IEC 61300-2-46	NOTE Harmonized as EN 61300-2-46.
IEC 62005 series	NOTE Harmonized in EN 62005 series (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 60721-3-2	-	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 2: Transportation	EN 60721-3-2	-
IEC 61073-1	-	Fibre optic interconnecting devices and passive components - Mechanical splices and fusion splice protectors for optical fibres and cables - Part 1: Generic specification	EN 61073-1	-
IEC 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	-
IEC 61300-2-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal)	EN 61300-2-1	-
IEC 61300-2-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre/cable retention	EN 61300-2-4	-
IEC 61300-2-5	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion	EN 61300-2-5	-
IEC 61300-2-9	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-9: Tests - Shock	EN 61300-2-9	-
IEC 61300-2-17	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-17: Tests - Cold	EN 61300-2-17	-
IEC 61300-2-18	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-18: Tests - Dry heat - High temperature endurance	EN 61300-2-18	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61300-2-22	-	Basic test and measurement procedures - Part 2-22: Tests - Change of temperature	EN 61300-2-22	-
IEC 61300-2-26	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-26: Tests - Salt mist	EN 61300-2-26	-
IEC 61300-2-27	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-27: Tests - Dust - Laminar flow	EN 61300-2-27	-
IEC 61300-2-33	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-33: Tests - Assembly and disassembly of fibre optic closures	EN 61300-2-33	-
IEC 61300-3-3	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-3: Examinations and measurements - Active monitoring of changes in attenuation and return loss	EN 61300-3-3	-
IEC 61300-3-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements - Attenuation	EN 61300-3-4	-
IEC 61300-3-6	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss	EN 61300-3-6	-
IEC 61300-3-7	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-7: Examinations and measurements - Wavelength dependence of attenuation and return loss of single mode components	EN 61300-3-7	-
IEC 61300-3-28	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss	EN 61300-3-28	-

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INTRODUCTION

This part of IEC 61753 for mechanical splices defines the requirements for standard optical performance under a set of specified conditions. The standard contains a series or a set of tests and measurements with clearly stated conditions, severities and pass/fail criteria. The series of tests, commonly referred to as an operating service environment or performance category, is intended to be a basis to prove the product's ability to satisfy the requirements of a specific application, market sector or user group.

A product that has been shown to meet all the requirements of this performance standard may be declared as complying with this performance standard. Products having the same classification from one manufacturer that satisfy this performance standard, will operate within the boundaries set by the performance standard. There is no guarantee that products from different manufacturers, having the same classification and which conform to the same performance standard, will provide an equivalent level of performance when they are used together.

Conformance with IEC environmental policy according to IEC Guide 109 and concerning the need to reduce the impact on the natural environment of fibre management system products during all phases of their life – from acquiring materials to manufacturing, distribution, use, and end-of-life treatment (i.e. re-use, recycling (recovery and disposal)) are not part of this standard, but will be covered in the generic specification.

Conformance to a performance standard demonstrates that a product has passed a design verification test. It is not a guarantee of lifetime assured performance or reliability. Reliability testing are the subject of a separate test schedule, where the tests and severities selected are such that they are truly representative of the requirements of this reliability test programme. Consistency of manufacture should be maintained using a recognised Quality Assurance programme whilst the reliability of product should be evaluated using the procedures recommended in IEC 62005 series.

Tests and measurements are selected from the IEC 61300 series.

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – PERFORMANCE STANDARD –

Part 131-3: Single-mode mechanical fibre splice for category U – Uncontrolled environment

1 Scope

This part of IEC 61753 contains the minimum initial test and measurement requirements and severities which a mechanical fibre splice will satisfy in order to be categorised as meeting the requirements of single-mode fibre splice for use in uncontrolled environments.

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 60721-3-2, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 2: Transportation*

IEC 61073-1, *Fibre optic interconnecting devices and passive components – Mechanical splices and fusion splice protectors for optical fibres and cables – Part 1: Generic specification*

IEC 61300-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance*

IEC 61300-2-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-1: Tests – Vibration (sinusoidal)*

IEC 61300-2-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-4: Tests – Fibre/cable retention*

IEC 61300-2-5, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-5: Tests – Torsion*

IEC 61300-2-9, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-9: Tests – Shock*

IEC 61300-2-17, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-17: Tests – Cold*

IEC 61300-2-18, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-18: Tests – Dry heat – High temperature endurance*

IEC 61300-2-22, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-22: Tests – Change of temperature*

IEC 61300-2-26, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-26: Tests – Salt mist*

IEC 61300-2-27, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-27: Tests – Dust – Laminar flow*

IEC 61300-2-33, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-33: Tests – Assembly and disassembly of fibre optic closures*

IEC 61300-3-3, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-3: Examinations and measurements – Active monitoring of changes in attenuation and return loss*

IEC 61300-3-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-26: Tests – Salt mist*

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

IEC 61300-3-7, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-7: Examinations and measurements – Wavelength dependence of attenuation and return loss of single mode components*

IEC 61300-3-28, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-8: Examinations and measurements – Transient loss*

3 General requirements

3.1 Storage, transportation and packaging

The classes of environmental conditions and their severities to which the mechanical splice may be exposed during transportation are defined in IEC 60721-3-2. Normal transportation time is considered to be 30 days or less.

The product, in its original packaging, shall be suitable for normal public or commercial transportation and storage in weather protected non-temperature controlled storage environments.

3.2 Marking and identification

Marking of the packaging of the mechanical splice shall be according to IEC 61073-1.

Product marking and identification shall survive the storage and transportation.

Each test sample should contain the following information at the minimum:

- manufacturer's identification mark or logo;
- product designation, model or type;
- one of the following: lot number, batch number, date (at least month and year) of production or serial number;
- expiry date (at least year) if the product contains components with a limited shelf life.

3.3 Materials

For all applicable materials, a Material Safety Data Sheet must be made available upon request.