

**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**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61300-3-3:2009 sisaldab Euroopa standardi EN 61300-3-3:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.06.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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English version

**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 61300-3-3:2009)**

Dispositifs d'interconnexion
et composants passifs à fibres optiques -
Méthodes fondamentales d'essais
et de mesures -
Partie 3-3: Examens et mesures
Contrôle actif des variations
de l'affaiblissement
et du facteur d'adaptation
(CEI 61300-3-3:2009)

Lichtwellenleiter -
Verbindungselemente
und passive Bauteile -
Grundlegende Prüf- und Messverfahren -
Teil 3-3: Untersuchungen
und Messungen -
Aufzeichnung der Änderung
von Dämpfung und Rückflusdämpfung
(IEC 61300-3-3:2009)

This European Standard was approved by CENELEC on 2009-04-01. 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.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, 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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 86B/2808/FDIS, future edition 3 of IEC 61300-3-3, 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 61300-3-3 on 2009-04-01.

This European Standard supersedes EN 61300-3-3:2003.

The change with respect to EN 61300-3-3:2003 is the structure of the document.

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with the EN have to be withdrawn (dow) 2010-04-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61300-3-3:2009 was approved by CENELEC as a European Standard without any modification.

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	-	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	2009 ²⁾
IEC 61300-3-35	200X ³⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-35: Examinations and measurements - Fibre optic cylindrical connector endface visual and automated inspection	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

³⁾ To be published.

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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

1 Scope

This part of IEC 61300 describes the procedure to monitor changes in attenuation and/or return loss of a component or an interconnecting device, when subjected to an environmental or mechanical test. Such a procedure is commonly referred to as active monitoring. In many instances, it is more efficient to monitor attenuation and return loss at the same time.

The procedure may be applied to measurements on single samples or to simultaneous measurements on multiple samples, both at single wavelengths and multiple wavelengths, by using branching devices and/or switches as appropriate.

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

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 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Fibre optic cylindrical connector endface visual and automated inspection*¹

3 General description

3.1 Test method

The procedure describes a number of active monitoring measurement methods. Method 1 describes the situation where a single sample is subject to mechanical or environmental stress testing. Methods 2 and 3 describe methods for monitoring changes in the optical performance of multiple samples. Methods 4 and 5 measure changes in the optical performance of samples using an OTDR. Methods 4 and 5 may be used only when the OTDR averaging time is much less than the variation time of the test conditions. Where there is any form of uncertainty over the measurement method used, method 1 shall be considered to be the reference method.

¹ To be published.