

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss

EESTI STANDARDI EESSÕNA

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ICS 33.180.20

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**Fibre optic interconnecting devices and passive components -
Basic test and measurement procedures -
Part 3-28: Examinations and measurements -
Transient loss
(IEC 61300-3-28:2012)**

Dispositifs d'interconnexion et composants
passifs à fibres optiques -
Méthodes fondamentales d'essais et de
mesures -
Partie 3-28: Examens et mesures -
Perte transitoire
(CEI 61300-3-28:2012)

Lichtwellenleiter -
Verbindungselemente und passive
Bauteile -
Grundlegende Prüf- und Messverfahren -
Teil 3-28: Untersuchungen und
Messungen -
Transiente Dämpfung
(IEC 61300-3-28:2012)

This European Standard was approved by CENELEC on 2012-04-19. 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.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 86B/3334/FDIS, future edition 2 of IEC 61300-3-28, 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 approved by CENELEC as EN 61300-3-28:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-01-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2013-04-19

This document supersedes EN 61300-3-28:2002.

Changes from EN 61300-3-28:2002 are to update the test method and to reconsider the requirements.

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

Endorsement notice

The text of the International Standard IEC 61300-3-28:2012 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 NOTE Harmonized as EN 60793-2.

IEC 61300-3-4 NOTE Harmonized as EN 61300-3-4.

Annex ZA
(normative)
**Normative references to international publications
with their corresponding European publications**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 60825-1	-	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	-
IEC 61300-1	2011	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	2011
IEC 61300-3-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination	EN 61300-3-1	-
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	EN 61300-3-35	-

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

Part 3-28: Examinations and measurements – Transient loss

1 Scope

This part of IEC 61300 describes methods to measure fast variation of attenuation due to mechanical stresses applied on optical fibres and passive optical components during their lifetime.

Transient loss measurement shows the effect of fast mechanical disturbances on fibres. These disturbances can be due to several types of action on the device under test (DUT), such as: dropping, vibration, bumping or manipulation of the fibres. Therefore this measurement will usually be performed on devices exposed to mechanical tests.

This method is not designed to measure very fast transient losses (with duration less than 1 ms) that could affect the performance of transmission systems. It is optimised to detect transient losses caused by mechanical stresses due to the tests prescribed in the component performance standards, whose duration is generally longer than several tens of milliseconds.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61300-1:2011, *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 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Fibre optic connector endface visual and automatic inspection*

IEC 60825-1, *Safety of laser products – Part 1: Equipment classification and requirements*

3 Precautions

The power in the fibre shall not be at a level high enough to generate non-linear scattering effects.

The position of the fibres between the measurement equipment and the DUT should be fixed during the measurements to avoid changes in attenuation due to bending loss.

The safety recommendations in IEC 60825-1 shall be followed.