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Irish Standard
I.S. EN 61300-3-33:2012

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-33: Examinations and measurements - Withdrawal force from a resilient alignment sleeve using gauge pins (IEC 61300-3-33:2012 (EQV))

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61300-3-33

May 2012

ICS 33.180.20

Supersedes EN 61300-3-33:1999

English version

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-33: Examinations and measurements - Withdrawal force from a resilient alignment sleeve using gauge pins

(IEC 61300-3-33:2012)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Méthodes fondamentales d'essais et de mesures - Partie 3-33: Examens et mesures - Force de retenue des manchons d'alignement élastiques, au moyen de broches calibrées (CEI 61300-3-33:2012)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Grundlegende Prüf- und Messverfahren - Teil 3-33: Untersuchungen und Messungen - Ausziehkraft aus einer verformbaren Zentrierhülse unter Verwendung von Prüfstiften (IEC 61300-3-33:2012)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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Foreword

The text of document 86B/3221/CDV, future edition 2 of IEC 61300-3-33, prepared by IEC/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 61300-3-33:2012.

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)	2012-12-28
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2013-03-28

This document supersedes EN 61300-3-33:1999.

The changes with respect to EN 61300-3-33:1999 are to reconsider the entire document according to the updated CENELEC rules and to add a gauge and a solvent into Clause 4, and to add a general subclause and cleaning procedure into Clause 6.

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.

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The text of the International Standard IEC 61300-3-33:2012 was approved by CENELEC as a European Standard without any modification.

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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.

Publication	Year	Title	EN/HD	Year
IEC 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	-
IEC 61754	Series	Fibre optic connector interfaces	EN 61754	Series
IEC 61755-3	Series	Fibre optic connector optical interfaces	EN 61755-3	Series
IEC/TR 62627-01	-	Fibre optic interconnecting devices and passive components - Part 01: Fibre optic connector cleaning methods	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 3-33: Examinations and measurements – Withdrawal force from a resilient alignment sleeve using gauge pins

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61300-3-33 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 1999. It constitutes a technical revision. The changes with respect to the previous edition are to reconsider the entire document according to the updated IEC rules and to add a gauge and a solvent into Clause 4, and to add a general subclause and cleaning procedure into Clause 6.

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The text of this standard is based on the following documents:

CDV	Report on voting
86B/3221/CDV	86B/3289/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 61300 series, under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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

Part 3-33: Examinations and measurements – Withdrawal force from a resilient alignment sleeve using gauge pins

1 Scope

This part of IEC 61300 describes the procedure to measure the withdrawal force between the ferrule (gauge pin) of the plug connector and the resilient alignment sleeve of the adapter. The gauge pin should have the same shape (chamfer) like the normal ferrules described in the optical interface, see IEC 61755-3 series and IEC 61754 series. This measurement procedure is applicable to single-fibre cylindrical ferrule optical connectors.

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

IEC 61754 (all parts), *Fibre optic connector interfaces*

IEC 61755-3 (all parts), *Fibre optic connector optical interfaces*

IEC/TR 62627-01, *Fibre optic interconnecting devices and passive components – Part 01: Fibre optic connector cleaning methods*

3 General description

The contact force between the mating ferrules in a fibre optic connector is the difference between the breakaway friction force and the spring force of the connector. To maintain contact, the breakaway friction force must remain below the spring force.

The ferrule withdrawal force is the highest force (breakaway force) required to remove one of the ferrules from the sleeve of a fibre optic connector.

The mechanics of friction result in significant variations in the measurement of breakaway friction force. The criteria to be applied to the results of these measurements must account for the spread that is inherent in the mechanism being measured (see Annex B).

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