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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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 pin gauges

Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures – Partie 3-33: Examens et mesures - Force d'extraction d'un manchon d'alignement élastique, avec utilisation de calibres de broches

IEC 61300-3-33:2022 (en-fr)

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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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 pin gauges

FOREWORD

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IEC 61300-3-33 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This third edition cancels and replaces the second edition published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) harmonize "gauge pin" to "pin gauge";
b) update test apparatus in Figure 1;
c) change of clause structure;
d) specified pin gauge requirements in Table 1.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86B/4559/FDIS	86B/4583/RVD

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

The language used for the development of this International Standard is English.

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

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn,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

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 pin gauges

1 Scope

This part of IEC 61300 describes the procedure to measure the withdrawal force between the pin gauge and the resilient alignment sleeve. This measurement procedure is applicable to single-fibre cylindrical ferrule optical connectors.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61754 (all parts), *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
resilient alignment sleeve
split sleeve in zirconia or metal material that align in its bore the ferrules of connector

4 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 shall 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.