

# INTERNATIONAL STANDARD

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**Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -  
Part 2-33: Tests - Assembly and disassembly of fibre optic mechanical splices, fibre management systems, protective housings and hardened connectors**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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IEC 61300-2-33 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 fourth edition cancels and replaces the third 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) update of the terms and definitions according to IEC 61753-1:2018 and IEC 61756-1:2019;
- b) update of the test severities according to the new edition of IEC 61753-1:2018;

- c) addition of procedure D to verify the sealing performance after frequent mating and demating of a hardened connector.

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

Draft	Report on voting
86B/5175/FDIS	86B/5201/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.

The list of all parts of 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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## 1 Scope

This part of IEC 61300, evaluates the behaviour of a fibre optic mechanical splice, a fibre management system, a protective housing or a hardened connector after being subjected to a specified number of assembly and disassembly operations.

The test procedures described in this document simulate conditions that the component can encounter during its service lifetime to check the following performance characteristics:

- capability of an optical mechanical splice to be reinstalled after being disassembled;
- capability to reintroduce fibre management systems and protective housings, accessing fibres and optical components and making reconfigurations without disturbing transmission in adjacent fibre circuits;
- sealing performance of the protective housing after frequent opening and closing operations;
- sealing performance of the hardened connector after frequent mating and demating operations.

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

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

IEC 61753 (all parts), *Fibre optic interconnecting devices and passive components - Performance standard*

IEC 61753-1, *Fibre optic interconnecting devices and passive components - Performance standard - Part 1: General and guidance*

IEC 61753-131 (all parts), *Fibre optic interconnecting devices and passive components - Performance standard: Single-mode mechanical fibre splice*

IEC 62005 (all parts), *Reliability of fibre optic interconnecting devices and passive components*