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Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-21: Examinations and measurements – Switching time

Dispositifs d'interconnexion et composants passifs fibroniques – Procedures fondamentales d'essais et de mesures – Partie 3-21: Examens et mesures – Temps de commutation

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

Part 3-21: Examinations and measurements – Switching time

FOREWORD

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International Standard IEC 61300-3-21 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This third edition cancels and replaces the second edition published in 2014. This edition constitutes a technical revision.

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

a) changes to remove redundant overlap with IEC 60876-1;
b) clarifications to definitions and diagrams;
c) generalization of the detection apparatus beyond an oscilloscope.

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

FDIS	Report on voting
86B/4218/FDIS	86B/4230/RVD

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

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

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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://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- withdrawn,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.

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

Part 3-21: Examinations and measurements – Switching time

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1 Scope

This part of IEC 61300 describes a method to measure the switching time and related performance parameters of a fibre optic spatial switch when the actuation energy is applied or removed to change the state of the switch.

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 61300-3-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-4: Examinations and measurements – Attenuation*

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
latency time
<switching from isolated state to conducting state> elapsed time until the output power of a specified output port reaches 10 % of its steady-state value from the time the actuation energy is applied for a normally-off switch or is removed for a normally-on switch

3.2
latency time
<switching from conducting state to isolated state> elapsed time until the output power of a specified output port reaches 90 % of its steady-state value from the time the actuation energy is removed for a normally-off switch or is applied for a normally-on switch

Note 1 to entry: For a latch type optical switch, when switching from conducting state to isolated state, actuation energy is applied or removed.

3.3
rise time
elapsed time for the output power of the specified output port to rise from 10 % of the steady-state conducting value to 90 % of the steady-state conducting value