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**Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-21: Examinations and measurements - Switching time and bounce time (IEC 61300-3-21:1998)**

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

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Grundlegende Prüf- und Meßverfahren -- Teil 3-21: Untersuchungen und Messungen - Schaltzeit und Prellzeit

Dispositifs d'interconnection et composants passifs à fibres optiques - Méthodes fondamentales d'essais et de mesures -- Partie 3-21: Examens et mesures - Durée de fermeture et de rebondissement à la commutation

**Ta slovenski standard je istoveten z: EN 61300-3-21:1998**

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**ICS:**

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices
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**SIST EN 61300-3-21:1999****en**

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English version

**Fibre optic interconnecting devices and passive components  
Basic test and measurement procedures  
Part 3-21: Examinations and measurements  
Switching time and bounce time  
(IEC 61300-3-21:1998)**

Dispositifs d'interconnexion et  
composants passifs à fibres optiques  
Méthodes fondamentales d'essais et  
de mesures  
Partie 3-21: Examens et mesures  
Durée de fermeture et de  
rebondissement à la commutation  
(CEI 61300-3-21:1998)

Lichtwellenleiter-Verbindungselemente  
und passive Bauteile - Grundlegende  
Prüf- und Meßverfahren  
Teil 3-21: Untersuchungen und  
Messungen - Schaltzeit und Prellzeit  
(IEC 61300-3-21:1998)

This European Standard was approved by CENELEC on 1998-04-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of document 86B/1046/FDIS, future edition 1 of IEC 61300-3-21, 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 was approved by CENELEC as EN 61300-3-21 on 1998-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 1999-01-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2001-01-01

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### Endorsement notice

The text of the International Standard IEC 61300-3-21:1998 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**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 60876-1	1994	Fibre optic switches Part 1: Generic specification	-	-

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**61300-3-21**

Première édition  
First edition  
1998-04

**Dispositifs d'interconnexion et composants  
passifs à fibres optiques –  
Méthodes fondamentales d'essais et de mesure –**

**Partie 3-21:**

**Examens et mesures –  
Durée de fermeture et de rebondissement  
à la commutation**

[SIST EN 61300-3-21:1999](https://standards.iteh.ai/catalog/standards/sist/613e9ac4-04f0-4192-b4cd-225511241000/sist-en-61300-3-21-1999)

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**Fibre optic interconnecting devices  
and passive components –  
Basic test and measurement procedures –**

**Part 3-21:**

**Examinations and measurements –  
Switching time and bounce time**

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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For price, see current catalogue*

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 3-21: Examinations and measurements –  
Switching time and bounce time**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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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- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

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.

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

FDIS	Report on voting
86B/1046/FDIS	86B/1082/RVD

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

IEC 61300 consists of the following parts, under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*:

Part 1: General and guidance

Part 2: Tests

Part 3: Examinations and measurements



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

## Part 3-21: Examinations and measurements – Switching time and bounce time

### 1 General

#### 1.1 Scope and object

The purpose of this part of IEC 61300 is to measure the switching time and bounce time of the output signal from a port of an optical switch when the actuation energy is applied or removed to change the state of the switch.

#### 1.2 General description

When the actuation energy specified in the relevant specification is applied or removed, the actuation signal and optical output change are observed simultaneously on the oscilloscope display to measure the switching time and bounce time.

#### 1.3 Normative reference

IEC 60876-1:1994, *Fibre optic switches – Part 1: Generic specification*

[SIST EN 61300-3-21:1999](https://standards.iteh.ai/catalog/standards/sist/61300-3-21:1999)

### 2 Apparatus

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The apparatus shall consist of the following:

#### 2.1 Optical source S

The source shall be sufficiently stable over the time required to perform the measurements. The source shall be capable of producing the spectral characteristics defined in the relevant specification (both wavelength and spectral width).

#### 2.2 Excitation unit E

This is a special launch fibre or imaging system designed to achieve the required launch conditions.

#### 2.3 Detector

The detector shall have sufficient speed to measure the switching time and bounce time to the accuracy specified in the relevant specification. The detector shall have sufficient dynamic range to make the measurement and be linear over the optical power levels expected to be encountered.

#### 2.4 Actuation energy supply

The actuation signal rise and fall time shall be sufficient to measure the switching time and bounce time to the accuracy specified in the relevant specification.