



**SLOVENSKI STANDARD**  
**SIST EN 60794-2-22:2017**

**01-maj-2017**

---

**Optični kabli - 2-22. del: Notranji optični kabli - Podrobna specifikacija večsimpleksnih odporno oplaščenih optičnih kablov, ki se zaključujejo s konektorjem (IEC 60794-2-22:2016)**

Optical fibre cables - Part 2-22: Indoor optical fibre cables - Detail specification for multi-simplex breakout optical cables to be terminated with connector (IEC 60794-2-22:2016)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 60794-2-22:2017](https://standards.iteh.ai/catalog/standards/sist/084b8590-6e00-4300-bb72-f5a3c5bb961/sist-en-60794-2-22-2017)

**Ta slovenski standard je istoveten z: EN 60794-2-22:2017**

---

**ICS:**

33.180.10 (Optična) vlakna in kabli Fibres and cables

**SIST EN 60794-2-22:2017 en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 60794-2-22:2017](#)

<https://standards.iteh.ai/catalog/standards/sist/084b8590-6e00-4300-b872-15fa3e3bb961/sist-en-60794-2-22-2017>

EUROPEAN STANDARD

**EN 60794-2-22**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 33.180.10

English Version

Optical fibre cables - Part 2-22: Indoor cables -  
Detail specification for multi-simplex breakout optical cables to  
be terminated with connectors  
(IEC 60794-2-22:2016)

Câbles à fibres optiques - Partie 2-22: Câbles intérieurs -  
Spécification particulière pour câbles optiques épanouis  
simplex multiples munis de connecteurs  
(IEC 60794-2-22:2016)

Lichtwellenleiterkabel - Teil 2-22: LWL-Innenkabel -  
Bauartspezifikation für mit Steckverbinder abzuschließende  
Simplex-Breakout-Kabel  
(IEC 60794-2-22:2016)

This European Standard was approved by CENELEC on 2017-01-11. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN 60794-2-22:2017****European foreword**

The text of document 86A/1765/FDIS, future edition 1 of IEC 60794-2-22, prepared by SC 86A "Fibres and cables" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60794-2-22:2017.

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) 2017-10-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-01-11

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.

**iTeh STANDARD PREVIEW**  
**Endorsement notice**  
**(standards.iteh.ai)**

The text of the International Standard IEC 60794-2-22:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 61753-1                      NOTE                      Harmonized as EN 61753-1.

## 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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60811-202	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 202: General tests - Measurement of thickness of non-metallic sheath	EN 60811-202	-
IEC 60811-203	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 203: General tests - Measurement of overall dimensions	EN 60811-203	-
IEC 60793-1-1	-	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance	EN 60793-1-1	-
IEC 60793-1-20	-	Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry	EN 60793-1-20	-
IEC 60793-1-21	-	Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry	EN 60793-1-21	-
IEC 60793-2	-	Optical fibres - Part 2: Product specifications - General	EN 60793-2	-
IEC 60793-2-10	-	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 60794-1-1	-	Optical fibre cables - Part 1-1: Generic specification - General	EN 60794-1-1	-
IEC 60794-1-21	-	Optical fibre cables - Part 1-21: Generic specification - Basic optical cable test procedures - Mechanical tests methods	EN 60794-1-21	-

**EN 60794-2-22:2017**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60794-1-22	-	Optical fibre cables - Part 1-22: Generic specification - Basic optical cable test procedures - Environmental test methods	EN 60794-1-22	-
IEC 60794-2	-	Optical fibre cables - Part 2: Indoor cables - Sectional specification	EN 60794-2	-
IEC 60794-2-20	-	Optical fibre cables - Part 2-20: Indoor cables - Family specification for multi-fibre optical cables	EN 60794-2-20	-
IEC 60794-2-50	-	Optical fibre cables - Part 2-50: Indoor cables - Family specification for simplex and duplex cables for use in terminated cable assemblies	EN 60794-2-50	-
IEC 60794-2-51	-	Optical fibre cables - Part 2-51: Indoor cables - Detail specification for simplex and duplex cables for use in cords for controlled environment	EN 60794-2-51	-

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60794-2-22:2017](https://standards.iteh.ai/catalog/standards/sist/084b8590-6e00-4300-b872-15fa3e3bb961/sist-en-60794-2-22-2017)

<https://standards.iteh.ai/catalog/standards/sist/084b8590-6e00-4300-b872-15fa3e3bb961/sist-en-60794-2-22-2017>



# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Optical fibre cables –** **STANDARD PREVIEW**  
**Part 2-22: Indoor cables – Detail specification for multi-simplex breakout optical**  
**cables to be terminated with connectors**

**Câbles à fibres optiques –**  
**Partie 2-22: Câbles intérieurs – Spécification particulière pour câbles optiques**  
**épanouis simplex multiples munis de connecteurs**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 33.180.10

ISBN 978-2-8322-3793-9

**Warning! Make sure that you obtained this publication from an authorized distributor.**  
**Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references .....	5
3 Terms and definitions .....	6
4 Construction .....	6
4.1 General.....	6
4.2 Optical fibres .....	7
4.3 Simplex cables.....	7
4.4 Strength and anti-buckling members .....	7
4.5 Ripcord.....	7
4.6 Cable sheath .....	7
4.7 Sheath marking.....	7
4.8 Examples of cable constructions .....	7
5 Tests .....	7
5.1 General.....	7
5.2 Dimensions .....	8
5.3 Mechanical requirements .....	8
5.3.1 General.....	8
5.3.2 Cable bend.....	8
5.4 Environmental requirements – Temperature cycling .....	8
6 Transmission requirements.....	9
7 Fire performance.....	9
Annex A (normative) Cable sample preparation for bend and temperature cycling test.....	10
Annex B (informative) Examples of cable constructions .....	11
B.1 Breakout cable with simplex cables.....	11
B.2 Breakout cable with subunit containing simplex cables.....	11
Bibliography.....	12
Figure A.1 – Cable sample preparation and lengths .....	10
Figure B.1 – Example of a cross-section of a six-fibre breakout cable .....	11
Figure B.2 – Example of a cross-section of a 24-fibre breakout cable .....	11
Table 1 – Temperatures.....	8



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## OPTICAL FIBRE CABLES –

**Part 2-22: Indoor cables –  
Detail specification for multi-simplex breakout  
optical cables to be terminated with connectors**

## 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60794-2-22 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

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

FDIS	Report on voting
86A/1765/FDIS	86A/1773/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.