



# SLOVENSKI STANDARD

## SIST EN 60794-2-20:2010

01-marec-2010

Nadomešča:

SIST EN 60794-2-20:2004

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**Optični kabli - 2-20. del: Optični kabli za notranjo uporabo - Skupinska specifikacija za večvlakenske optične distribucijske kanale (IEC 60794-2-20:2008)**

Optical fibre cables - Part 2-20: Indoor optical fibre cables - Family specification for multi-fibre optical distribution cables (IEC 60794-2-20:2008)

Lichtwellenleiterkabel - Teil 2-20: LWL-Innenkabel - Familienspezifikation für Mehrfaserverteilerkabel (IEC 60794-2-20:2008)

Câbles à fibres optiques - Partie 2-20: Câbles intérieurs - Spécification de famille pour les câbles optiques multifibres de distribution (CEI 60794-2-20:2008)

**Ta slovenski standard je istoveten z: EN 60794-2-20:2010**

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**ICS:**

33.180.10 (Optična) vlakna in kabli Fibres and cables

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**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60794-2-20**

January 2010

ICS 33.180.01

Supersedes EN 60794-2-20:2003

English version

**Optical fibre cables -  
Part 2-20: Indoor cables -  
Family specification for multi-fibre optical distribution cables  
(IEC 60794-2-20:2008)**

Câbles à fibres optiques -  
Partie 2-20: Câbles intérieurs -  
Spécification de famille pour les câbles  
optiques multifibres de distribution  
(CEI 60794-2-20:2008)

Lichtwellenleiterkabel -  
Teil 2-20: LWL-Innenkabel -  
Familienspezifikation  
für Mehrfaserverteilerkabel  
(IEC 60794-2-20:2008)

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This European Standard was approved by CENELEC on 2009-12-01. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 86A/1187/CDV, future edition 2 of IEC 60794-2-20, prepared by SC 86A, Fibres and cables, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60794-2-20 on 2009-12-01

This European Standard supersedes EN 60794-2-20:2003.

The main changes are listed below:

- cable crush to be measured both during and after load;
- cable torsion test length parameter correlated to cable outer diameter;
- cable description and construction blank detail specification annexes;
- MICE environment blank detail specification is addressed in Annex B.

This standard is to be used in conjunction with EN 60794-1-1, EN 60794-1-2 and EN 60794-2.

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) 2010-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-12-01

Annex ZA has been added by CENELEC.

[SIST EN 60794-2-20:2010](https://standards.iteh.ai/catalog/standards/sist/b2459c77-7a25-4ed4-be65-0324a3a4d82a/sist-en-60794-2-20-2010)

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### Endorsement notice

The text of the International Standard IEC 60794-2-20:2008 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60654	NOTE	Harmonized in EN 60654 series (not modified).
IEC 60721-1	NOTE	Harmonized as EN 60721-1 (not modified).
IEC 60721-3-3 + A2	NOTE	Harmonized as EN 60721-3-3 + A2 (not modified).
IEC 60794-1-2	NOTE	Harmonized as EN 60794-1-2 (not modified).
IEC 61000-6-2	NOTE	Harmonized as EN 61000-6-2 (not modified).
IEC 61326	NOTE	Harmonized as EN 61326 (not modified).
IEC 61918	NOTE	Harmonized as EN 61918 (modified).

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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 60189-1	-	Low-frequency cables and wires with PVC insulation and PVC sheath - Part 1: General test and measuring methods	-	-
IEC 60304	-	Standard colours for insulation for low-frequency cables and wires	HD 402 S2	-
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 60794-2	-	Optical fibre cables - Part 2: Indoor cables - Sectional specification	EN 60794-2	-
IEC 60811-1-4	-	Insulating and sheathing materials of electric and optical cables - Common test methods - Part 1-4: General application - Tests at low temperature	EN 60811-1-4	-
IEC/TR 62222	-	Fire performance of communication cables installed in buildings	-	-

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IEC 60794-2-20

Edition 2.0 2008-11

# INTERNATIONAL STANDARD

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**Optical fibre cables –**  
**Part 2-20: Indoor cables – Family specification for multi-fibre optical distribution cables**

**STANDARD PREVIEW**  
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SIST EN 60794-2-20:2010  
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COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## OPTICAL FIBRE CABLES –

**Part 2-20: Indoor cables –  
Family specification for multi-fibre optical distribution cables**

## 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.
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International Standard IEC 60794-2-20 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2003. It constitutes a technical revision.

The main changes from the previous edition include:

- cable crush to be measured both during and after load;
- cable torsion test length parameter correlated to cable outer diameter;
- cable description and construction blank detail specification annexes;
- MICE environment blank detail specification is addressed in Annex B.

This standard is to be used in conjunction with IEC 60794-1-1 and IEC 60794-1-2, and IEC 60794-2.

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

CDV	Report on voting
86A/1187/CDV	86A/1221/RVC

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

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

A list of all parts of IEC 60794 series, published under the general title *Optical fibre cables*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

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## OPTICAL FIBRE CABLES –

### Part 2-20: Indoor cables – Family specification for multi-fibre optical distribution cables

#### 1 Scope

This part of IEC 60794 is a family specification covering multi-fibre optical distribution cables for indoor use. The requirements of the sectional specification IEC 60794-2 are applicable to cables covered by this standard.

Annex B contains requirements that supersede the normal requirements in case the cables are intended to be used in installation governed by the MICE table of ISO/IEC 24702 (i.e. Industrial premises).

#### 2 Normative references

The following referenced documents are indispensable for the application 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.

They complete the normative references already listed in the generic specification (IEC 60794-1-1, Clause 2, and IEC 60794-1-2, Clause 2).

[SIST EN 60794-2-20:2010](#)

IEC 60189-1, *Low-frequency cables and wires with PVC insulation and PVC sheath – Part 1: General test and measuring methods*

IEC 60304, *Standard colours for insulation for low-frequency cables and wires*

IEC 60793-2-10, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

IEC 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

IEC 60794-2, *Optical fibre cables – Part 2: Indoor cables – Sectional specification*

IEC 60811-1-4, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general application – Section four: Tests at low temperature*

IEC 62222, *Fire performance of communication cables installed in buildings*

#### 3 Construction

##### 3.1 General

In addition to the constructional requirements in IEC 60794-2, the following considerations apply to multi-fibre indoor cables.

The cable shall be designed and manufactured for an expected operating lifetime of at least 15 years. In this context, the attenuation at the operational wavelength(s) of the optical fibres contained in the installed cable shall not exceed values agreed between customer and