

**Kabli iz optičnih vlaken – 2-20. del: Notranji kabli - Rodovna specifikacija za distribucijske kable z več optičnimi vlakni (IEC 60794-2-20:2003)\***

Optical fibre cables - Part 2-20: Indoor cables - Family specification for multi-fibre optical distribution cables (IEC 60794-2-20:2003)

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EUROPEAN STANDARD

**EN 60794-2-20**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2003

ICS 33.180.10

English version

**Optical fibre cables**  
**Part 2-20: Indoor cables -**  
**Family specification for multi-fibre optical distribution cables**  
(IEC 60794-2-20:2003)

Câbles à fibres optiques  
Partie 2-20: Câbles intérieurs -  
Spécification de famille pour les câbles  
optiques multifibres de distribution  
(CEI 60794-2-20:2003)

Lichtwellenleiterkabel  
Teil 2-20: LWL-Innenkabel -  
Familienspezifikation  
für Mehrfaserverteilerkabel  
(IEC 60794-2-20:2003)

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This European Standard was approved by CENELEC on 2002-12-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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 86A/817/FDIS, future edition 1 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 2002-12-01.

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) 2003-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-12-01

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

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60794-2-20:2003 was approved by CENELEC as a European Standard without any modification. (standards.iteh.ai)

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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 60811-1-4	1985	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 1)	1995
ISO/IEC 11801	1995	Information technology - Generic cabling for customer premises	-	-

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1) EN 60811-1-4 includes corrigendum May 1986 + A1:1993 to IEC 60811-1-4.

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2003-01

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**Câbles à fibres optiques –**

**Partie 2-20:**

**Câbles intérieurs –**

**Spécification de famille pour les câbles  
optiques multifibres de distribution**

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**Optical fibre cables –**

SIST EN 60794-2-20:2004

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**Part 2-20:**

**Indoor cables –**

**Family specification for multi-fibre  
optical distribution cables**

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International Electrotechnical Commission  
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For price, see current catalogue

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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 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.
- 2) The formal decisions or agreements of the 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 National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 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 60794-2-20 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

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

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

FDIS	Report on voting
86A/817/FDIS	86A/829/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

IEC 60794 consists of the following parts, under the general title *Optical fibre cables*:

- Part 1: Generic specification
  - Part 1-1: General
  - Part 1-2: Basic optical cable test procedures

- Part 2: Indoor cables – Sectional specification
- Part 3: Outdoor cables – Sectional specification
- Part 4: Aerial optical cables for high-voltage power lines – Sectional specification<sup>1</sup>

The committee has decided that the contents of this publication will remain unchanged until April 2006. At this date, the publication will be

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

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<sup>1</sup> Under consideration.

## 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 which covers 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.

#### 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) or in the sectional specification (IEC 60794-2, Clause 2).

IEC 60811-1-4:1985, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general application – Section Four: Tests at low temperatures.*

[SIST EN 60794-2-20:2004](http://standards.iteh.ai/catalog/standards/sist/37d56802-9ba4-471f-84f-f8d060af7822/sist-en-60794-2-20-2004)

ISO/IEC 11801:1995, *Information technology – Generic cabling for customer premises*

#### 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 of the installed cable at the operational wavelength(s) shall not exceed the values agreed between the customer and the manufacturer. The materials in the cable shall not present a health hazard within its intended use.

There shall be no fibre splice in a delivery length unless otherwise agreed by the customer and the manufacturer.

It shall be possible to identify each individual fibre throughout the length of the cable.

##### 3.2 Optical fibres and primary coating

Multimode or single-mode optical fibres meeting the requirements of IEC 60793-2 shall be used.