SLOVENSKI STANDARD
SIST EN IEC 60794-2-20:2025

01-marec-2025

Optični kabli - 2-20. del: Notranji kabli - Skupinska specifikacija za distribucijske kable z več optičnimi vlakni (IEC 60794-2-20:2024)

Optical fibre cables - Part 2-20: Indoor cables - Family specification for multi-fibre optical cables (IEC 60794-2-20:2024)

Lichtwellenleiterkabel - Teil 2-20: LWL-Innenkabel - Familienspezifikation für Mehrfaser-Lichtwellenleiterkabel (IEC 60794-2-20:2024)

Câbles à fibres optiques - Partie 2-20: Câbles intérieurs - Spécification de famille pour les câbles optiques multifibres (IEC 60794-2-20:2024)

Ta slovenski standard je istoveten z: **EN IEC 60794-2-20:2025**

ICS:

33.180.10 (Optična) vlakna in kabli Fibres and cables

SIST EN IEC 60794-2-20:2025 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60794-2-20

January 2025

ICS 33.180.01

Supersedes EN 60794-2-20:2014

English Version

Optical fibre cables - Part 2-20: Indoor cables - Family specification for multi-fibre optical cables (IEC 60794-2-20:2024)

Câbles à fibres optiques - Partie 2-20 : Câbles intérieurs - Spécification de famille pour les câbles optiques multifibres (IEC 60794-2-20:2024)

Lichtwellenleiterkabel - Teil 2-20: LWL-Innenkabel - Familienspezifikation für Mehrfaser-Lichtwellenleiterkabel (IEC 60794-2-20:2024)

This European Standard was approved by CENELEC on 2025-01-15. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

CENELEC

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 86A/2431/FDIS, future edition 4 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 approved by CENELEC as EN IEC 60794-2-20:2025.

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) 2026-01-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-01-31

This document supersedes EN 60794-2-20:2014 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document is read in conjunction with EN IEC 60794-1-1:2023, .EN IEC 60794-1-2:2021, EN 60794-1-21:2015[1], EN IEC 60794-1-22:2018, EN IEC 60794-1-23:2019, and EN 60794-2:2017.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60794-2-20:2024 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 standard indicated:

IEC 60654 series	NOTE	Approved as EN 60654 series
IEC 60721-1	NOTE	Approved as EN 60721-1
IEC 60721-3-3	NOTE	Approved as EN IEC 60721-3-3
IEC 60794-1-3	NOTE	Approved as EN 60794-1-3
IEC 60794-1-21	NOTE	Approved as EN 60794-1-21
IEC 61000-6-2	NOTE	Approved as EN IEC 61000-6-2
IEC 61753-1	NOTE	Approved as EN IEC 61753-1
IEC 61918	NOTE	Approved as EN IEC 61918
IEC 60794-2 series	NOTE	Approved as EN IEC 60794-2 series

[1] As impacted by EN 60794-1-21:2015/A1:2020.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60304	-	Standard colours for insulation for low-frequency cables and wires	HD 402 S2	-
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 60793-1-40	-	Optical fibres - Part 1-40: Attenuation measurement methods	EN IEC 60793-1-40	-
IEC 60793-1-44	-	Optical fibres - Part 1-44: Measurement methods and test procedures - Cut-off wavelength	EN IEC 60793-1-44	-
IEC 60793-1-46	-	Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in attenuation	EN IEC 60793-1-46	-
IEC 60793-2-10	-	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN IEC 60793-2-10	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN IEC 60793-2-50	-
IEC 60794-1-1	2023	Optical fibre cables - Part 1-1: Generic specification - General	EN IEC 60794-1-1	2023
IEC 60794-1-2	2021	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures - General guidance	EN IEC 60794-1-2	2021
IEC 60794-1-21	2015	Optical fibre cables - Part 1-21: Generic specification - Basic optical cable test procedures - Mechanical tests methods	EN 60794-1-21	2015
+ A1	2020		+ A1	2020

Publication	Year	Title	EN/HD	Year
IEC 60794-1-22	2017	Optical fibre cables - Part 1-22: Generic specification - Basic optical cable test procedures - Environmental test methods	EN IEC 60794-1-22	2018
IEC 60794-1-23	2019	Optical fibre cables - Part 1-23: Generic specification - Basic optical cable test procedures - Cable element test methods	EN IEC 60794-1-23	2019
IEC 60794-1-31	-	Optical fibre cables - Part 1-31: Generic specification - Optical cable elements - Optical fibre ribbon	EN IEC 60794-1-31	-
IEC 60794-2	2017	Optical fibre cables - Part 2: Indoor cables - Sectional specification	EN 60794-2	2017
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 60794-2-20

Edition 4.0 2024-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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

Câbles à fibres optiques –
Partie 2-20: Câbles intérieurs – Spécification de famille pour les câbles optiques multifibres

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 33.180.01

ISBN 978-2-8327-0082-2

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

____

OPTICAL FIBRE CABLES –

Part 2-20: Indoor cables – Family specification for multi-fibre optical 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.
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) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

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

This fourth edition cancels and replaces the third edition published in 2013. This edition constitutes a technical revision.

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

a) update of the normative references;
b) review update of parameters and requirements for mechanical tests and environmental tests, maintaining alignment with additional relevant standards in the IEC 60794-2 series;
c) addition of cabled fibre attenuation requirements;

d) addition of cable design examples.

This document is to be used in conjunction with IEC 60794-1-1:2023, IEC 60794-1-2:2021, IEC 60794-1-21:2015 and IEC 60794-1-21:2015/AMD:2020, IEC 60794-1-22:2017, IEC 60794-1-23:2019 and IEC 60794-2:2017.

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

Draft	Report on voting
86A/2431/FDIS	86A/2520/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.