STN	Optické káble. Časť 3-21: Vonkajšie káble. Výrobková špecifikácia na optické samonosné závesné telekomunikačné káble na inštaláciu v objektoch.	STN EN 60794-3-21
		35 9223

Optical fibre cables - Part 3-21: Outdoor cables - Product specification for optical self-supporting aerial telecommunication cables for use in premises cabling

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/16

Obsahuje: EN 60794-3-21:2016, IEC 60794-3-21:2015

Oznámením tejto normy sa od 24.12.2018 ruší STN EN 60794-3-21 (35 9223) z októbra 2006

123276

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2016 Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

EN 60794-3-21

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2016

ICS 33.180.10

Supersedes EN 60794-3-21:2006

English Version

Optical fibre cables - Part 3-21: Outdoor cables - Product specification for optical self-supporting aerial telecommunication cables for use in premises cabling (IEC 60794-3-21:2015)

Câbles à fibres optiques - Partie 3-21: Câbles extérieurs -Spécification de produit pour les câbles optiques de télécommunication aériens autoporteurs utilisés dans le câblage de locaux (IEC 60794-3-21:2015) Lichtwellenleiterkabel - Teil 3-21: LWL-Außenkabel -Produktspezifikation für selbsttragende Fernmelde-Luftkabel für anwendungsneutrale Standortverkabelung (IEC 60794-3-21:2015)

This European Standard was approved by CENELEC on 2015-12-24. 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, 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

© 2016 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

European foreword

The text of document 86A/1564/CDV, future edition 2 of IEC 60794-3-21, 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 60794-3-21:2016.

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)	2016-09-24
•	latest date by which the national standards conflicting with the	(dow)	2018-12-24

document have to be withdrawn

This document supersedes EN 60794-3-21:2006.

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.

Endorsement notice

The text of the International Standard IEC 60794-3-21:2015 was approved by CENELEC as a European Standard without any modification.

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

Publication	<u>Year</u>	Title	<u>EN/HD</u>	<u>Year</u>
IEC 60793-2-10	2011	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10	2011
IEC 60793-2-50	2012	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single- mode fibres	EN 60793-2-50	2013
IEC 60794-1-1	-	Optical fibre cables - Part 1-1: Generic specification - General	EN 60794-1-1	-
IEC 60794-1-2	-	Optical fibre cables - Part 1-2: Generic specification - Cross reference table for optical cable test procedures	EN 60794-1-2	-
IEC 60794-3	-	Optical fibre cables - Part 3: Outdoor cables - Sectional specification	EN 60794-3	-
IEC 60794-3-20	-	Optical fibre cables - Part 3-20: Outdoor cables - Family specification for self-supporting aerial telecommunication cables	EN 60794-3-20	-
ISO/IEC 11801	-	Information technology - Generic cabling for customer premises	-	-
ISO/IEC 24702	-	Information technology - Generic cabling - Industrial premises	-	-



IEC 60794-3-21

Edition 2.0 2015-11

INTERNATIONAL STANDARD



Optical fibre cables – Part 3-21: Outdoor cables – Product specification for optical self-supporting aerial telecommunication cables for use in premises cabling





THIS PUBLICATION IS COPYRIGHT PROTECTED Copyright © 2015 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office	Tel.: +41 22 919 02 11
3, rue de Varembé	Fax: +41 22 919 03 00
CH-1211 Geneva 20	info@iec.ch
Switzerland	www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 15 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

More than 60 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.



IEC 60794-3-21

Edition 2.0 2015-11

INTERNATIONAL STANDARD



Optical fibre cables – Part 3-21: Outdoor cables – Product specification for optical self-supporting aerial telecommunication cables for use in premises cabling

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 33.180.10

ISBN 978-2-8322-3001-5

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOF	REWO	RD	3
1	Scop	e	5
2	Norm	native references	5
3	Gene	eral requirements	5
4	Partio	cular requirements	6
4	l.1	General	6
4	.2	Environmental requirements – Temperature cycling	6
4	.3	Transmission requirements	6
	4.3.1		
	4.3.2	Fibre bandwidth requirements	7
	4.3.3	Polarization mode dispersion (PMD) requirements	7
Tab	le 1 –	Multimode maximum cable attenuation coefficient (dB/km)	6
Tab	le 2 –	Single-mode maximum cable attenuation coefficient (dB/km)	7
Tab	le 3 –	Minimum multimode fibre bandwidth (MHz·km)	7

IEC 60794-3-21:2015 © IEC 2015

- 3 -

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

Part 3-21: Outdoor cables – Product specification for optical self-supporting aerial telecommunication cables for use in premises cabling

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.
- 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.
- 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 60794-3-21 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 2005. This edition constitutes a technical revision.

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

- a) reference to ISO 24702;
- b) reference to Fibre B6 (IEC 60793-2-50);
- c) reference to the OS2 Fibre as defined by ISO/IEC 11801.

- 4 - IEC 60794-3-21:2015 © IEC 2015

This standard shall be used in conjunction with IEC 60794-1-1, IEC 60794-1-2, IEC 60794-3 and IEC 60794-3-20.

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

CDV	Report on voting
86A/1564/CDV	86A/1624/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 in the 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 stability 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication 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.

IEC 60794-3-21:2015 © IEC 2015

OPTICAL FIBRE CABLES –

Part 3-21: Outdoor cables – Product specification for optical self-supporting aerial telecommunication cables for use in premises cabling

1 Scope

This part of IEC 60794 is a product specification. It presents the detailed requirements specific to optical self-supporting aerial telecommunication cables for use in premises cabling to ensure compatibility with ISO/IEC 11801 and ISO/IEC 24702. The requirements of the family specification IEC 60794-3-20 and sectional specification IEC 60794-3 are applicable to cables covered by this standard.

2 Normative references

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.

IEC 60793-2-10:2011, Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres

IEC 60793-2-50:2012, Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres

IEC 60794-1-1, Optical fibre cables – Part 1-1: Generic specification – General

IEC 60794-1-2, Optical fibre cables – Part 1-2: Generic specification – Cross reference table for optical cable test procedures

IEC 60794-3, Optical fibre cables – Part 3: Outdoor cables – Sectional specification

IEC 60794-3-20, Optical fibre cables – Part 3-20: Outdoor cables – Family specification for self-supporting aerial telecommunication cables

ISO/IEC 11801, Information technology – Generic cabling for customers premises

ISO/IEC 24702, Information technology – Generic cabling – Industrial premises

koniec náhľadu – text ďalej pokračuje v platenej verzii STN