

Optické káble Časť 1-402: Kmeňová špecifikácia Základné skúšobné postupy pre optické káble Elektrické skúšobné metódy Skúška bleskom (pre OPGW, OPPC a OPAC), metóda H2

STN EN IEC 60794-1-402

35 9223

Optical fibre cables - Part 1-402: Generic specification - Basic optical cable test procedures - Electrical test methods - Lightning test (for OPGW, OPPC and OPAC), Method H2

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. 11/21

Obsahuje: EN IEC 60794-1-402:2021, IEC 60794-1-402:2021

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN IEC 60794-1-402

September 2021

ICS 33.180.10

Supersedes EN 60794-1-24:2014 (partially)

English Version

Optical fibre cables - Part 1-402: Generic specification - Basic optical cable test procedures - Electrical test methods - Lightning test (for OPGW, OPPC and OPAC), Method H2 (IEC 60794-1-402:2021)

Câbles à fibres optiques - Procédures fondamentales d'essais des câbles optiques - Partie 402: Méthodes d'essais électriques - Essai foudre (pour les OPGW, les OPPC et les OPAC), Méthode H2 (IEC 60794-1-402:2021) Lichtwellenleiterkabel - Fachgrundspezifikation - Teil 402: Elektrische Prüfverfahren - Blitzeinschlagsimulation (für Lichtwellenleitererdseil, Lichtwellenleiterphasenseil, Lichtwellenleiterkabel befestigt am Phasenseil) Verfahren H2 (IEC 60794-1-402:2021)

This European Standard was approved by CENELEC on 2021-08-31. 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, Turkey and the United Kingdom.



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/2045/CDV, future edition 1 of IEC 60794-1-402, 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 60794-1-402:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022–05–31 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024–08–31 document have to be withdrawn

This document partially supersedes EN 60794-1-24:2014 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.

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 60794-1-402:2021 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 60794-1-2 NOTE Harmonized as EN IEC 60794-1-2

IEC 60794-1-24:2014 NOTE Harmonized as EN 60794-1-24:2014 (not modified)

EN IEC 60794-1-402:2021 (E)

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.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60793-1-46	-	Optical fibres - Part 1–46: Measureme methods and test procedures - Monitorio of changes in optical transmittance		-
IEC 60794-1-1	-	Optical fibre cables - Part 1–1: General specification - General	ricEN 60794-1-1	-



IEC 60794-1-402

Edition 1.0 2021-07

INTERNATIONAL STANDARD

Optical fibre cables -

Part 1-402: Generic specification – Basic optical cable test procedures – Electrical test methods – Lightning test (for OPGW, OPPC and OPAC), Method H2





THIS PUBLICATION IS COPYRIGHT PROTECTED Copyright © 2021 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 3, rue de Varembé CH-1211 Geneva 20 Switzerland

Tel.: +41 22 919 02 11

info@iec.ch

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.

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

IEC publications search - webstore.iec.ch/advsearchform

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 once a month by email.

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: sales@iec.ch.

IEC online collection - oc.iec.ch

Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 18 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.



IEC 60794-1-402

Edition 1.0 2021-07

INTERNATIONAL STANDARD

Optical fibre cables -

Part 1-402: Generic specification – Basic optical cable test procedures – Electrical test methods – Lightning test (for OPGW, OPPC and OPAC), Method H2

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 33.180.10 ISBN 978-2-8322-1008-5

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

- 2 - IEC 60794-1-402:2021 © IEC 2021

CONTENTS

FOREW	ORD	
INTROD	UCTION	5
1 Sco	ppe	6
	mative references	
3 Teri	ms, definitions and abbreviated terms	6
3.1 3.2	Terms and definitionsAbbreviated terms	
v	neral	
5 San	nple	7
6 App	paratus	7
7 Pro	cedure	8
8 Rec	quirements	8
9 Deta	ails to be specified	8
	aphy	
Figure 1	– Lightning test arrangement	7
Table 1	– Test parameters	8
Table 2	Details to be specified for each lightning strike	9

IEC 60794-1-402:2021 © IEC 2021

– 3 –

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES -

Part 1-402: Generic specification – Basic optical cable test procedures – Electrical test methods – Lightning test (for OPGW, OPPC and OPAC), Method H2

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.

IEC 60794-1-402 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This first edition cancels and replaces the first edition of IEC 60794-1-24 published in 2014. This edition constitutes a technical revision.

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

a) OPPC cables are included.

- 4 - IEC 60794-1-402:2021 © IEC 2021

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

Draft	Report on voting
86A/2045/CDV	86A/2128/RVC

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/standardsdev/publications.

A list of all the 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 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,
- replaced by a revised edition, or
- amended.

IEC 60794-1-402:2021 © IEC 2021

- 5 -

INTRODUCTION

The electrical tests contained in IEC 60794-1-24:2014 will now be individually numbered in the IEC 60794-1-4xx series. Each test method is now considered to be an individual document rather than part of a multi-test method compendium. Full cross-reference details are given in IEC 60794-1-2.

- 6 - IEC 60794-1-402:2021 © IEC 2021

OPTICAL FIBRE CABLES -

Part 1-402: Generic specification – Basic optical cable test procedures – Electrical test methods – Lightning test (for OPGW, OPPC and OPAC), Method H2

1 Scope

This part of IEC 60794 applies to the test intended to evaluate the impact of a lightning strike on an optical ground wire (OPGW), optical phase conductor (OPPC) or optical attached cable (OPAC).

2 Normative references

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.

IEC 60793-1-46, Optical fibres – Part 1-46: Measurement methods and test procedures – Monitoring of changes in optical transmittance

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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN