

|            |                                                                                                                                                                                                  |                                                                  |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>STN</b> | <b>Optické káble</b><br><b>Časť 1-119: Kmeňová špecifikácia</b><br><b>Základné skúšobné postupy pre optické káble</b><br><b>Mechanické skúšobné metódy</b><br><b>Eolské vibrácie, metóda E19</b> | <b>STN</b><br><b>EN IEC</b><br><b>60794-1-119</b><br><br>35 9223 |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|

Optical fibre cables - Part 1-119: Generic specification - Basic optical cable test procedures - Mechanical tests methods - Aeolian vibration, Method E19

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. 11/25

Táto norma čiastočne nahrádza normu STN EN 60794-1-21 zo septembra 2015. Súbežná platnosť do 30. 9. 2028.

Obsahuje: EN IEC 60794-1-119:2025, IEC 60794-1-119:2025

**141434**

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2025

Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii v znení neskorších predpisov.



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN IEC 60794-1-119**

September 2025

ICS 33.180.10

Supersedes EN 60794-1-21:2015 (partially); EN 60794-1-21:2015/A1:2020 (partially)

English Version

**Optical fibre cables - Part 1-119: Generic specification - Basic  
optical cable test procedures - Mechanical tests methods -  
Aeolian vibration, Method E19  
(IEC 60794-1-119:2025)**

Câbles à fibres optiques - Partie 1-119: Spécification  
générique - Procédures fondamentales d'essais des câbles  
optiques - Méthodes d'essais mécaniques - Vibrations  
éoliennes, Méthode E19  
(IEC 60794-1-119:2025)

Lichtwellenleiterkabel - Teil 1-119: Fachgrundspezifikation -  
Grundlegende Prüfverfahren für Lichtwellenleiterkabel -  
Äolisches Schwingen, Verfahren E19  
(IEC 60794-1-119:2025)

This European Standard was approved by CENELEC on 2025-08-20. 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.



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**

**EN IEC 60794-1-119:2025 (E)****European foreword**

The text of document 86A/2573/FDIS, future edition 1 of IEC 60794-1-119, 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 60794-1-119:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2026-09-30 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2028-09-30 document have to be withdrawn

This document partially supersedes EN 60794-1-21:2015 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 60794-1-119:2025 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 60794-1-2      NOTE Approved as EN IEC 60794-1-2

IEC 62567:2013      NOTE Approved as EN 62567:2013 (not modified)

## **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](http://www.cencenelec.eu).

| <u>Publication</u> | <u>Year</u> | <u>Title</u>                                                                                               | <u>EN/HD</u>      | <u>Year</u> |
|--------------------|-------------|------------------------------------------------------------------------------------------------------------|-------------------|-------------|
| 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 60794-1-1      | -           | Optical fibre cables - Part 1-1: Generic specification - General                                           | EN 60794-1-1      | -           |



IEC 60794-1-119

Edition 1.0 2025-07

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

---

**Optical fibre cables -**

**Part 1-119: Generic specification - Basic optical cable test procedures -  
Mechanical tests methods - Aeolian vibration, Method E19**

**Câbles à fibres optiques -**

**Partie 1-119: Spécification générique - Procédures fondamentales d'essais des  
câbles optiques - Méthodes d'essais mécaniques - Vibrations éoliennes,  
Méthode E19**

**THIS PUBLICATION IS COPYRIGHT PROTECTED****Copyright © 2025 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.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Secretariat  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://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 corrigendum or an amendment might have been published.

**IEC publications search -****[webstore.iec.ch/advsearchform](http://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](http://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](http://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](mailto:sales@iec.ch).

**IEC Products & Services Portal - [products.iec.ch](http://products.iec.ch)**

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

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

The world's leading online dictionary on electrotechnology, containing more than 22 500 terminological entries in English and French, with equivalent terms in 25 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

**A propos de l'IEC**

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

**A propos des publications IEC**

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

**Recherche de publications IEC -****[webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études, ...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

**IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

**Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [sales@iec.ch](mailto:sales@iec.ch).

**IEC Products & Services Portal - [products.iec.ch](http://products.iec.ch)**

Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications, symboles graphiques et le glossaire. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 500 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 25 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

**Warning! Make sure that you obtained this publication from an authorized distributor.****Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## IEC 60794-1-119:2025 © IEC 2025

## CONTENTS

|                                                     |    |
|-----------------------------------------------------|----|
| FOREWORD .....                                      | 2  |
| 1 Scope .....                                       | 4  |
| 2 Normative references .....                        | 4  |
| 3 Terms and definitions .....                       | 4  |
| 3.1 Terms and definitions.....                      | 4  |
| 3.2 Abbreviated terms.....                          | 4  |
| 4 Method E19: aeolian vibration .....               | 4  |
| 4.1 Object.....                                     | 4  |
| 4.2 Sample .....                                    | 5  |
| 4.3 Apparatus .....                                 | 5  |
| 4.4 Procedure .....                                 | 5  |
| 4.5 Requirements .....                              | 6  |
| 4.6 Details to be specified.....                    | 7  |
| 4.7 Details to be reported .....                    | 7  |
| Annex A (informative) Aeolian vibration basics..... | 8  |
| Bibliography.....                                   | 10 |
| Figure 1 – Aeolian vibration test .....             | 5  |
| Figure A.1 – Standing wave vibration.....           | 8  |

IEC 60794-1-119:2025 © IEC 2025

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Optical fibre cables -  
Part 1-119: Generic specification - Basic optical cable test procedures -  
Mechanical tests methods - Aeolian vibration, method E19**

## 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 60794-1-119 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 test method E19 of the first edition of IEC 60794-1-21 published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 60794-1-21:

- a) addition of a system to maintain a constant cable tension during the test as well as means to measure the free loop antinode amplitude;
- b) definition of the cable load which is now fixed to 25 % of the rated tensile strength for OPGW/OPPC, or to the maximum installation tension (MIT) for ADSS cables;
- c) addition of the target free loop peak-to-peak antinode amplitude to the procedure. The quality of the aeolian vibration motion is done through the average antinode peak velocity;
- d) addition of fatigue damage and ovality changes of the optical core to 4.5.

## IEC 60794-1-119:2025 © IEC 2025

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

| Draft         | Report on voting |
|---------------|------------------|
| 86A/2573/FDIS | 86A/2596/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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 document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## 1 Scope

This part of IEC 60794 applies to aerial optical fibre cables such as all-dielectric self-supporting (ADSS) cables, optical ground wire (OPGW) cables, and optical phase conductor (OPPC) cables that can be exposed to aeolian vibrations.

This document defines the test procedures to establish uniform mechanical performance requirements relating to aeolian vibrations.

See IEC 60794-1-2 for general requirements and definitions and for a complete reference guide to test methods of all types.

## 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 60794-1-1, *Optical fibre cables - Part 1-1: Generic specification - General*.

IEC 60793-1-46, *Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in attenuation*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**