SVENSK STANDARD SS-EN IEC 60794-1-23

Fastställd	Utgåva	Sida	Ansvarig kommitté
2020-02-19	2	1 (1+36)	SEK TK 86

Optokablar – Del 1-23: Artspecifikation – Grundläggande provningsmetoder – Provning av kabelelement

Optical fibre cables – Part 1-23: Generic specification – Basic optical cable test procedures – Cable element test methods

Som svensk standard gäller europastandarden EN IEC 60794-1-23:2019. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60794-1-23:2019.

Nationellt förord

Europastandarden EN IEC 60794-1-23:2019

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60794-1-23, Second edition, 2019 - Optical fibre cables - Part 1-23: Generic specification - Basic optical cable test procedures - Cable element test methods**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60794-1-23, utgåva 1, 2013, gäller ej fr o m 2022-11-13.

ICS 33.180.10

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60794-1-23

November 2019

ICS 33.180.10

Supersedes EN 60794-1-23:2012 and all of its amendments and corrigenda (if any)

English Version

Optical fibre cables - Part 1-23: Generic specification - Basic optical cable test procedures - Cable element test methods (IEC 60794-1-23:2019)

Câbles à fibres optiques - Partie 1-23: Spécification générique - Procédures fondamentales d'essai des câbles optiques - Méthodes d'essai des éléments de câble (IEC 60794-1-23:2019)

Lichtwellenleiterkabel - Teil 1-23: Fachgrundspezifikation - Grundlegende Prüfverfahren für Lichtwellenleiterkabel - Prüfverfahren für Kabelelemente (IEC 60794-1-23:2019)

This European Standard was approved by CENELEC on 2019-11-13. 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

Ref. No. EN IEC 60794-1-23:2019 E

SEK Svensk Elstandard SS-EN IEC 60794-1-23, utg 2:2020

European foreword

The text of document 86A/1912/CDV, future edition 2 of IEC 60794-1-23, 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 60794-1-23:2019.

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)	2020-08-13
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2022-11-13

This document supersedes EN 60794-1-23:2012 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.

Endorsement notice

The text of the International Standard IEC 60794-1-23:2019 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 60793-1-50:2014	NOTE	Harmonized as EN 60793-1-50:2015 (not modified)
IEC 60793-1-51:2014	NOTE	Harmonized as EN 60793-1-51:2014 (not modified)
IEC 60793-1-52:2014	NOTE	Harmonized as EN 60793-1-52:2014 (not modified)
IEC 60793-1-53:2014	NOTE	Harmonized as EN 60793-1-53:2014 (not modified)
IEC 60794-1-21:2015	NOTE	Harmonized as EN 60794-1-21:2015 (not modified)
IEC 60794-1-22:2017	NOTE	Harmonized as EN IEC 60794-1-22:2018 (not modified)
IEC 60811-403	NOTE	Harmonized as EN 60811-403
IEC 60811-404	NOTE	Harmonized as EN 60811-404
IEC 60811-501	NOTE	Harmonized as EN 60811-501
IEC 60811-505	NOTE	Harmonized as EN 60811-505

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.

Publication	Year	Title	EN/HD	Year
IEC 60793-1-32	2018	Optical fibres - Part 1-32: Measurement methods and test procedures - Coating strippability	EN IEC 60793-1-32	2018
IEC 60793-1-40	-	Optical fibres - Part 1-40: Attenuation measurement methods	EN IEC 60793-1-40	-
IEC 60793-1-46	-	Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in optical transmittance	EN 60793-1-46	-
IEC 60794-1-2	-	Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures – General guidance	EN 60794-1-2	-
IEC 60794-1-31	2018	Optical fibre cables – Part 1-31: Generic specification – Optical cable elements – Optical fibre ribbon	EN IEC 60794-1-31	2018
IEC 60811-401	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 401: Miscellaneous tests - Thermal ageing methods - Ageing in an air oven	EN 60811-401	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPTICAL FIBRE CABLES

Part 1-23: Generic specification – Basic optical cable test procedures – Cable element test methods

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.
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International Standard IEC 60794-1-23 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 2012. It constitutes a technical revision.

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

a) addition of a new test method G9: Bleeding and evaporation (formerly known as method E15 in IEC 60794-1-21:2015);
b) addition of a new test method G10A: Stripping force stability of cabled optical fibres (formerly known as method E5A in IEC 60794-1-21:2015);
c) addition of a new test method G10B: Strippability of optical fibre ribbons (formerly known as method E5B in IEC 60794-1-21:2015);
d) addition of a new test method G10C: Strippability of buffered optical fibres (formerly known as method E5C in IEC 60794-1-21:2015);

e) addition of a new test method G11A: Tensile strength and elongation of buffer tubes (included in IEC 60811-501);

f) addition of a new test method G11B: Elongation of buffer tubes at low temperature (included in IEC 60811-505);

g) clarification of the sample preparation procedure in method G5: Ribbon tear (separability);

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

CDV	Report on voting
86A/1912/CDV	86A/1945/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document 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 document will remain unchanged until the stability date indicated on the IEC website under "http://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.

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.

OPTICAL FIBRE CABLES

Part 1-23: Generic specification – Basic optical cable test procedures – Cable element test methods

1 Scope

This part of IEC 60794 describes test procedures to be used in establishing uniform requirements for the geometrical, material, mechanical, environmental properties of optical fibre cable elements.

This document applies to optical fibre cables for use with telecommunication equipment and devices employing similar techniques, and to cables having a combination of both optical fibres and electrical conductors.

Throughout the document, the wording "optical cable" can also include optical fibre units, microduct fibre units, etc.

NOTE The environmental testing of optical fibre ribbon would be valuable for some applications. Useful information about suitable test methods can be found in the optical fibre standards IEC 60793-1-50, IEC 60793-1-51, IEC 60793-1-52, and IEC 60793-1-53.

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 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures – General guidance*

IEC 60794-1-31:2018, *Optical fibre cables – Part 1-31: Generic specification – Optical cable elements – Optical fibre ribbon*

IEC 60793-1-32:2018, *Optical fibres – Part 1-32: Measurement methods and test procedures – Coating strippability*

IEC 60793-1-40, *Optical fibres – Part 1-40: Attenuation measurement methods*

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

IEC 60811-401, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 401: Miscellaneous tests – Thermal ageing methods – Ageing in an air oven*