SVENSK STANDARD SS-EN 60794-1-21

Fastställd	Utgåva	Sida	Ansvarig kommitté
2015-10-21	1	1 (1+80)	SEK TK 86

Optokablar – Del 1-21: Artspecifikation – Grundläggande provningsmetoder – Mekanisk provning

Optical fibre cables – Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical test methods

Som svensk standard gäller europastandarden EN 60794-1-21:2015. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60794-1-21:2015.

Nationellt förord

Europastandarden EN 60794-1-21:2015

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60794-1-21, First edition, 2015 - Optical fibre cables - Part 1-21: Generic specification - Basic optical cable test procedures - Mechanical test methods**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60794-1-1.

Tidigare fastställd svensk standard SS-EN 60794-1-2, utgåva 2, 2003, gäller ej fr o m 2018-04-14.

ICS 33.180.10

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60794-1-21

May 2015

ICS 33.180.10

Supersedes EN 60794-1-2:2003 (partially)

English Version

Optical fibre cables - Part 1-21: Generic specification - Basic optical cable test procedures - Mechanical tests methods (IEC 60794-1-21:2015)

Câbles à fibres optiques - Partie 1-20: Spécification générique - Procédures fondamentales d'essais des câbles optiques - Méthodes d'essais mécaniques
(IEC 60794-1-21:2015)

Lichtwellenleiter - Teil 1-21: Fachgrundspezifikation - Grundlegende - Prüfverfahren für Lichtwellenleiterkabel - Mechanische Prüfverfahren
(IEC 60794-1-21:2015)

This European Standard was approved by CENELEC on 2015-04-14. 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

Ref. No. EN 60794-1-21:2015 E

SEK Svensk Elstandard

Foreword

The text of document 86A/1638/FDIS, future edition 1 of IEC 60794-1-21, 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 60794-1-21:2015.

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)	2016-01-14
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-04-14

This document supersedes EN 60794-1-2:2003 (partially).

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 60794-1-21:2015 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	Year	Title	EN/HD	Year
IEC 60227-2	-	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V -- Part 2: Test methods	-	-
IEC 60793-1-22	2001	Optical fibres -- Part 1-22: Measurement methods and test procedures - Length measurement	EN 60793-1-22	2002
IEC 60793-1-32	2010	Optical fibres -- Part 1-32: Measurement methods and test procedures - Coating strippability	EN 60793-1-32	2010
IEC 60793-1-40	-	Optical fibres -- Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	-
IEC 60793-1-46	2001	Optical fibres -- Part 1-46: Measurement methods and test procedures - Monitoring of changes in optical transmittance	EN 60793-1-46	2002
IEC 60794-1-1	-	Optical fibre cables -- Part 1-1: Generic specification - General	EN 60794-1-1	-
IEC 60794-1-2	2013	Optical fibre cables -- Part 1-2: Generic specification - Cross reference table for optical cable test procedures	EN 60794-1-2	2014
IEC 60794-1-20	2014	Optical fibre cables -- Part 1-20: Generic specification - Basic optical cable test procedures - General and Definitions	EN 60794-1-20	2014
IEC 60794-1-22	2012	Optical fibre cables -- Part 1-22: Generic specification - Basic optical cable test procedures - Environmental test methods	EN 60794-1-22	2012
IEC 61300-2-44	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-44: Tests - Flexing of the strain relief of fibre optic devices	EN 61300-2-44	-
IEC/TR 62691	-	Optical fibre cables - Guide to the installation of optical fibre cables	-	-

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPTICAL FIBRE CABLES –

Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical 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 60794-1-21 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This first edition of IEC 60794-1-21 cancels and replaces the mechanical tests part of the second edition of IEC 60794-1-2, published in 2003. It constitutes a technical revision.

It has been decided to split the second edition of IEC 60794-1-2 into six new documents:

– IEC 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*
– IEC 60794-1-20, *Optical fibre cables – Part 1-20: Generic specification – Basic optical cable test procedures – General and definitions*

– IEC 60794-1-21, *Optical fibre cables – Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical tests methods*

– IEC 60794-1-22, *Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental tests methods*

– IEC 60794-1-23, *Optical fibre cables – Part 1-23: Generic specification – Basic optical cable test procedures – Cable elements tests methods*

– IEC 60794-1-24, *Optical fibre cables – Part 1-24: Generic specification – Basic optical cable test procedures – Electrical tests methods*

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

FDIS	Report on voting
86A/1638/FDIS	86A/1655/RVD

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.

This standard is intended to be used in conjunction with IEC 60794-1-1.

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.

OPTICAL FIBRE CABLES –

Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical test methods

1 Scope and object

This part of IEC 60794 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.

The object of this standard is to define test procedures to be used in establishing uniform requirements for mechanical requirement performance.

Throughout this standard the wording “optical cable” may also include optical fibre units, microduct fibre units, etc.

General requirements and definitions are given in IEC 60794-1-20 and a complete reference guide to test method of all types in the IEC 60794-1-2.

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 60227-2, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 2: Test methods*

IEC 60793-1-22:2001, *Optical fibres – Part 1-22: Measurement methods and test procedures – Length measurement*

IEC 60793-1-32:2010, *Optical fibres – Part 1-32: Measurement methods and test procedures – Coating strippability*

IEC 60793-1-40, *Optical fibres – Part 1-40: Measurement methods and test procedures – Attenuation*

IEC 60793-1-46:2001, *Optical fibres – Part 1-46: Measurement methods and test procedures – Monitoring of changes in optical transmittance*

IEC 60794-1-1, *Optical fibres – Part 1-1: Generic specification – General*

IEC 60794-1-2:2013, *Optical fibre cables – Part 1-2: Generic specification – Cross reference table for optical cable test procedures*

IEC 60794-1-20:2014, *Optical fibre cables – Part 1-20: Generic specification – Basic optical cable test procedures – General and definitions*

IEC 60794-1-22:2012, *Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental test methods*

IEC TR 62691, *Guide to the installation of optical fibre cables*

IEC 61300-2-44, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-44: Tests – Flexing of the strain relief of fibre optic devices*