



SLOVENSKI STANDARD

SIST EN IEC 60794-3-40:2022

01-september-2022

Nadomešča:

SIST EN 60794-3-40:2009

Optični kabli - 3-40. del: Kabli za zunanjo uporabo - Skupinska specifikacija za kable, namenjene za meteorne in sanitarne kanale (IEC 60794-3-40:2022)

Optical fibre cables - Part 3-40: Outdoor cables - Family specification for cables for storm and sanitary sewers (IEC 60794-3-40:2022)

Lichtwellenleiterkabel - Teil 3-40: Außenkabel - Familienspezifikation für Kabel in Abwasserkanälen für die Verlegung durch Einblasen und/oder Einziehen in nicht zugänglichen Regenwasser- und Abwasserkanälen (IEC 60794-3-40:2022)

Câbles à fibres optiques - Partie 3-40: Câbles extérieurs - Spécification de famille pour les câbles destinés aux évacuations d'eaux sanitaires et pluviales (IEC 60794-3-40:2022)

Ta slovenski standard je istoveten z: EN IEC 60794-3-40:2022

ICS:

33.180.10 (Optična) vlakna in kabli Fibres and cables

SIST EN IEC 60794-3-40:2022

en

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 60794-3-40

June 2022

ICS 33.180.10

Supersedes EN 60794-3-40:2008

English Version

**Optical fibre cables - Part 3-40: Outdoor cables - Family
specification for cables for storm and sanitary sewers
(IEC 60794-3-40:2022)**

Câbles à fibres optiques - Partie 3-40: Câbles extérieurs -
Spécification de famille pour les câbles destinés aux
évacuations d'eaux sanitaires et pluviales
(IEC 60794-3-40:2022)

Lichtwellenleiterkabel - Teil 3-40: Außenkabel -
Familienspezifikation für Kabel in Regen- und
Abwasserkanälen
(IEC 60794-3-40:2022)

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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 60794-3-40:2022 (E)**European foreword**

The text of document 86A/2189/FDIS, future edition 2 of IEC 60794-3-40, 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 60794-3-40:2022.

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) 2023-03-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-06-01

This document supersedes EN 60794-3-40:2008 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 60794-3-40:2022 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 60794-3-10	NOTE	Harmonized as EN 60794-3-10
IEC 60794-3-20	NOTE	Harmonized as EN 60794-3-20
IEC 60794-4	NOTE	Harmonized as EN IEC 60794-4
IEC 62305-1	NOTE	Harmonized as EN 62305-1

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>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-2	-	Optical fibres - Part 2: Product specifications	-	-
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 - Basic optical cable test procedures - General guidance	EN IEC 60794-1-2	-
IEC 60794-1-21	-	Optical fibre cables - Part 1-21: Generic specification - Basic optical cable test procedures - Mechanical tests methods	EN 60794-1-21	-
IEC 60794-1-22	-	Optical fibre cables - Part 1-22: Generic specification - Basic optical cable test procedures - Environmental test methods	EN IEC 60794-1-22	-
IEC 60794-1-23	-	Optical fibre cables - Part 1-23: Generic specification - Basic optical cable test procedures - Cable element test methods	EN IEC 60794-1-23	-
IEC 60794-1-215	-	Optical fibre cables - Part 1-215: Generic specification - Basic optical cable test procedures - Environmental test methods - Cable external freezing test, Method F15	EN IEC 60794-1-215	-
IEC 60794-3	2014	Optical fibre cables - Part 3: Outdoor cables - Sectional specification	EN 60794-3	2015
IEC 60794-5	-	Optical fibre cables - Part 5: Sectional specification - Microduct cabling for installation by blowing	EN 60794-5	-
IEC 60794-5-10	-	Optical fibre cables - Part 5-10: Family specification - Outdoor microduct optical fibre cables, microducts and protected microducts for installation by blowing	EN 60794-5-10	-

EN IEC 60794-3-40:2022 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60811-501	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 501: Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds	EN 60811-501	-
IEC/TR 62362	2020	Selection of optical fibre cable specifications relative to mechanical, ingress, climatic or electromagnetic characteristics - Guidance	-	-

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IEC 60794-3-40

Edition 2.0 2022-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Optical fibre cables –
Part 3-40: Outdoor cables – Family specification for cables for storm and
sanitary sewers

Câbles à fibres optiques –
Partie 3-40: Câbles extérieurs – Spécification de famille pour les câbles destinés
aux évacuations d'eaux sanitaires et pluviales

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 33.180.10

ISBN 978-2-8322-1101-0

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

**Part 3-40: Outdoor cables –
Family specification for cables for storm and sanitary sewers**

FOREWORD

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IEC 60794-3-40 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

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

- a) this document follows the new structure for family specifications: symbols and abbreviations were included in Clause 3, and Clause 4 became the General requirements with 4.1 Optical fibres, 4.2 Cable element and 4.3 Optical fibre cable construction;
- b) Annex D has been removed as it is part of IEC TR 62691;
- c) this document has been streamlined by cross-referencing IEC 60794-1-1, IEC 60793-2, IEC 60794-3 and the IEC 60794-1-2x series;
- d) the fibre strain allowance for tensile tests was updated;

e) characteristics Table 5, Table 6, Table 7 were moved to the Annex A (informative).

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

Draft	Report on voting
86A/2189/FDIS	86A/2191/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. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/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 in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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OPTICAL FIBRE CABLES –

Part 3-40: Outdoor cables – Family specification for cables for storm and sanitary sewers

1 Scope

This part of IEC 60794 is a family specification that covers sewer cables and conduits for installation by blowing and/or pulling in man accessible and non-man accessible storm and sanitary sewers. Systems built with components covered by this document are subject to the requirements of sectional specification IEC 60794-3.

Sewer cable and conduit constructions need to meet the different requirements of the sewer operating companies and/or associations regarding chemical, environmental, operational, cleaning and in general maintenance conditions.

Preferential applications, describing sewer cable characteristics versus methods of installation is reported in Annex A and Annex B for non-man accessible sewers.

Clause 5 describes characteristics of sewer cables and conduits for installation by blowing, pulling or other means in storm and sanitary sewers.

Detail specifications can be prepared on the basis of this family specification.

It is important that acceptance criteria are interpreted with respect to this consideration. The number of fibres tested is representative of the sewer cable and is agreed between the customer and the supplier.

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 60793-2, *Optical fibres – Part 2: Product specifications – General*

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 – Basic optical cable test procedures – General guidance*

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 element test methods*

IEC 60794-1-215, *Optical fibre cables – Part 1-215: Generic specification – Basic optical cable test procedures – Environmental test methods – Cable external freezing test, Method F15*