

STN	Optické káble Časť 1-209: Kmeňová špecifikácia Základné skúšobné postupy pre optické káble Skúšobné metódy vplyvu prostredia Starnutie, metóda F9	STN EN IEC 60794-1-209 35 9223
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Optical fibre cables - Part 1-209: Generic specification - Basic optical cable test procedures - Environmental test methods - Ageing, method F9

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. 09/24

Táto norma čiastočne nahrádza normu STN EN IEC 60794-1-22 z júla 2018. Súbežná platnosť do 4. 7. 2027.

Obsahuje: EN IEC 60794-1-209:2024, IEC 60794-1-209:2024

139114

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2024
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii v znení neskorších predpisov.

EUROPEAN STANDARD

EN IEC 60794-1-209

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2024

ICS 33.180.10

Supersedes EN IEC 60794-1-22:2018 (partially)

English Version

Optical fibre cables - Part 1-209: Generic specification - Basic
optical cable test procedures - Environmental test methods -
Ageing, method F9
(IEC 60794-1-209:2024)

Câbles à fibres optiques - Partie 1-209: Spécification
générique - Procédures fondamentales d'essai des câbles
optiques - Méthodes d'essai d'environnement -
Vieillessement, méthode F9
(IEC 60794-1-209:2024)

Lichtwellenleiterkabel - Teil 1-209: Fachgrundspezifikation -
Grundlegende Prüfverfahren für optische Kabel -
Umweltprüfverfahren - Alterung, Verfahren F9
(IEC 60794-1-209:2024)

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Comité Européen de Normalisation Electrotechnique
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EN IEC 60794-1-209:2024 (E)**European foreword**

The text of document 86A/2443/FDIS, future edition 1 of IEC 60794-1-209, 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 60794-1-209:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-04-04 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-07-04 document have to be withdrawn

This document partially supersedes EN IEC 60794-1-22:2018 and all of its amendments and corrigenda (if any).

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60304	-	Standard colours for insulation for low-frequency cables and wires	HD 402 S2	-
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 60794-1-201	-	Optical fibre cables - Part 1-201: Generic specification - Basic optical cable test procedures - Environmental test methods - Temperature cycling, method F1	EN IEC 60794-1-201	-



IEC 60794-1-209

Edition 1.0 2024-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Optical fibre cables –
Part 1-209: Generic specification – Basic optical cable test procedures –
Environmental test methods – Ageing, method F9**

**Câbles à fibres optiques –
Partie 1-209: Spécification générique – Procédures fondamentales d’essai des
câbles optiques – Méthodes d’essai d’environnement – Vieillessement, méthode
F9**



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IEC 60794-1-209

Edition 1.0 2024-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Optical fibre cables –
Part 1-209: Generic specification – Basic optical cable test procedures –
Environmental test methods – Ageing, method F9**

**Câbles à fibres optiques –
Partie 1-209: Spécification générique – Procédures fondamentales d’essai des
câbles optiques – Méthodes d’essai d’environnement – Vieillissement, méthode
F9**

INTERNATIONAL
ELECTROTECHNICAL
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COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 33.180.10

ISBN 978-2-8322-8962-4

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

**Part 1-209: Generic specification – Basic optical cable test procedures –
Environmental test methods – Ageing, method F9**

FOREWORD

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IEC 60794-1-209 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This document partially cancels and replaces IEC 60794-1-22:2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 60794-1-22:2017:

- a) the ambient temperature test condition has been defined as per IEC 60794-1-2;
- b) all the maximum allowable attenuation increase values for single-mode and multimode fibres have been deleted, and have been included in the list of details to be specified.

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

Draft	Report on voting
86A/2443/FDIS	86A/2466/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/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, or
- revised.

INTRODUCTION

This document cancels and replaces method F9 of IEC 60794-1-22:2017, which will be withdrawn. It includes an editorial revision, based on the new structure and numbering system for optical fibre cable test methods. Additionally, technical changes were implemented. The environmental tests contained in IEC 60794-1-22:2017 will be individually numbered in the IEC 60794-1-2xx 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.

The numbering of this test method continues the F-series numbering sequence of IEC 60794-1-22:2017.

OPTICAL FIBRE CABLES –

Part 1-209: Generic specification – Basic optical cable test procedures – Environmental test methods – Ageing, method F9

1 Scope

This part of IEC 60794-1 defines test procedures to be used in establishing uniform requirements for the environmental performance of:

- optical fibre cables for use with telecommunication equipment and devices employing similar techniques; and
- cables having a combination of both optical fibres and electrical conductors.

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

This document defines a test standard to determine cable aging performance by high temperature exposure and temperature cycling in order to simulate lifetime behaviour of the attenuation of cables, or physical attributes.

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

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 60304, *Standard colours for insulation for low-frequency cables and wires*

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*

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