

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Optical fibre cables –

Part 6-20: Indoor-outdoor cables – Family specification for flame retardant outdoor cables

Câbles à fibres optiques –

Partie 6-20: Câbles intérieurs/extérieurs – Spécification de famille pour les câbles extérieurs retardateurs de flamme



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

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms, definitions and abbreviated terms	7
4 General specifications	7
4.1 Optical fibres	7
4.2 Cable elements	7
5 Specifications for flame retardant outdoor cables – Construction	8
6 Details of family specifications and test conditions for flame retardant outdoor cables.....	8
6.1 Applicable tests	8
6.2 Mechanical tests	9
6.2.1 General	9
6.2.2 Tensile performance	10
6.2.3 Abrasion	10
6.2.4 Crush	11
6.2.5 Impact	11
6.2.6 Repeated bending	11
6.2.7 Torsion	12
6.2.8 Bend.....	12
6.2.9 Bending under tension	12
6.2.10 Kink	12
6.2.11 Rip cord functional test	12
6.3 Environmental tests	13
6.3.1 Temperature cycling	13
6.3.2 Water penetration	13
6.3.3 Ageing	14
6.3.4 UV resistance	14
6.3.5 Environmental stress cracking	14
6.3.6 Cable external freezing	14
6.3.7 Compound flow.....	15
6.3.8 Bleeding and evaporation	15
6.3.9 Material compatibility	15
6.4 Cable element tests	15
6.4.1 Ribbon strippability	15
6.4.2 Ribbon tear (separability)	15
6.4.3 Ribbon dimensions and geometry	16
6.4.4 Ribbon torsion	16
6.4.5 Ribbon residual twist	16
6.4.6 Tube kinking	16
6.4.7 Bend test for optical cable elements	16
6.4.8 Stripping force stability of cabled fibres	16
6.5 Other tests	17
6.5.1 Fire performance	17
6.5.2 Electrical continuity of cable metallic elements	17
6.5.3 Thickness of non-metallic sheath	17
6.5.4 Overall dimensions	17

Annex A (informative) Examples of flame retardant (FR) outdoor cables	19
Bibliography	20
Figure A.1 – Example of a stranded FR outdoor cable design	19
Figure A.2 – Example of an FR outdoor cable with a central tube design	19
Table 1 – Tests applicable for mechanical and environmental performance of flame retardant outdoor cables	8
Table 2 – Low and high temperatures	13

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

**Part 6-20: Indoor-outdoor cables –
Family specification for flame retardant outdoor cables**

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

FDIS	Report on voting
86A/2037/FDIS	86A/2051/RVD

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

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OPTICAL FIBRE CABLES –

Part 6-20: Indoor-outdoor cables – Family specification for flame retardant outdoor cables

1 Scope

This part of IEC 60794 is a family specification covering optical fibre outdoor cables which are flame retardant and thus also applicable to indoor environments. These cables generally possess the characteristics associated with outdoor cable designs having similar thermal and mechanical robustness that makes them suitable for use in the outside plant, while simultaneously exhibiting the fire performance required in indoor premises. A typical application is for example the extension of a "shorter length" of an outdoor cable into the building.

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 60332-1 (all parts), *Tests on electric and optical fibre cables under fire conditions – Part 1: Test for vertical flame propagation for a single insulated wire or cable*

IEC 60332-3 (all parts), *Tests on electric and optical fibre cables under fire conditions – Part 3: Test for vertical flame spread of vertically-mounted bunched wires or cables*

IEC 60754-2, *Test on gases evolved during combustion of materials from cables – Part 2: Determination of acidity (by pH measurement) and conductivity*

IEC 60793-2-10:2019, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

IEC 60793-2-50:2018, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

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

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

IEC 60794-1-22:2017, *Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental test methods*

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

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

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

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*

IEC 60794-3:2014, *Optical fibre cables – Part 3: Outdoor cables – Sectional specification*

IEC 60794-3-10:2015, *Optical fibre cables – Part 3-10: Outdoor cables – Family specification for duct, directly buried and lashed aerial optical telecommunication cables*

IEC 60794-4:2018, *Optical fibre cables – Part 4: Sectional specification – Aerial optical cables along electrical power lines*

IEC 60794-5:2014, *Optical fibre cables – Part 5: Sectional specification – Microduct cabling for installation by blowing*

IEC 60811-202, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 202: General tests – Measurement of thickness of non-metallic sheath*

IEC 60811-203, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 203: General tests – Measurement of overall dimensions*

IEC 60811-406, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 406: Miscellaneous tests – Resistance to stress cracking of polyethylene and polypropylene compounds*

IEC 61034 (all parts), *Measurement of smoke density of cables burning under defined conditions*

ISO 4892-2:2013, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

3 Terms, definitions and abbreviated terms

For the purposes of this document, the terms and definitions given in IEC 60794-1-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 General specifications

4.1 Optical fibres

The optical fibre shall conform to the requirements of IEC 60793-2-10 or IEC 60793-2-50. The fibre type shall be agreed between the customer and supplier. The cabled fibre shall conform to IEC 60794-3.

4.2 Cable elements

The cable elements shall conform to IEC 60794-3, IEC 60794-4, IEC 60794-5.