

<b>STN</b>	<b>Optické káble. Časť 5-20: Skupinová špecifikácia na vonkajšie mikrorúrkové vláknové jednotky, mikrorúrky a ochranné mikrorúrky na inštalovanie zafukovaním.</b>	<b>STN EN 60794-5-20</b>  35 9223
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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. 10/14

Obsahuje: EN 60794-5-20:2014, IEC 60794-5-20:2014

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EUROPEAN STANDARD

**EN 60794-5-20**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2014

ICS 33.180.01; 33.180.10

English Version

**Optical fibre cables - Part 5-20: Family specification - Outdoor  
microduct fibre units, microducts and protected microducts for  
installation by blowing  
(IEC 60794-5-20:2014)**

To be completed  
(CEI 60794-5-20:2014)

Lichtwellenleiterkabel - Teil 5-20: Familienspezifikation für  
Mikrorohr-LWL-Einheiten, Mikrorohre und geschützte  
Mikrorohre zur Installation durch Einblasen für die  
Anwendung im Freien  
(IEC 60794-5-20:2014)

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## Foreword

The text of document 86A/1497/CDV, future edition 1 of IEC 60794-5-20, 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 60794-5-20:2014.

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) 2014-12-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-03-21

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The text of the International Standard IEC 60794-5-20:2014 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](http://www.cenelec.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 60793-1-40 (mod)	-	Optical fibres - Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	-
IEC 60793-1-53	-	Optical fibres - Part 1-53: Measurement methods and test procedures - Water immersion tests	EN 60793-1-53	-
IEC 60793-2-10	-	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
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 - Cross reference table for optical cable test procedures	EN 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 60794-1-22	-
IEC 60794-3	2001	Optical fibre cables - Part 3: Sectional specification - Outdoor cables	EN 60794-3	2002
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	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	EN 60811-202	-
IEC 60811-203	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 203: General tests - Measurement of overall dimensions	EN 60811-203	-
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 60811-601	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 601: Physical tests - Measurement of the drop point of filling compounds	EN 60811-601	-
IEC 60811-602	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 602: Physical tests - Separation of oil in filling compounds	EN 60811-602	-
IEC 60811-604	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 604: Physical tests - Measurement of absence of corrosive components in filling compounds	EN 60811-604	-
ISO/IEC 11801	-	Information technology - Generic cabling for customer premises	EN ISO/IEC 11801	-



# INTERNATIONAL STANDARD



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**Optical fibre cables –  
Part 5-20: Family specification – Outdoor microduct fibre units, microducts and  
protected microducts for installation by blowing**





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Edition 1.0 2014-02

# INTERNATIONAL STANDARD



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**Optical fibre cables –  
Part 5-20: Family specification – Outdoor microduct fibre units, microducts and  
protected microducts for installation by blowing**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## OPTICAL FIBRE CABLES –

**Part 5-20: Family specification –  
Outdoor microduct fibre units, microducts and  
protected microducts for installation by blowing**

## FOREWORD

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International Standard IEC 60794-5-20 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

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

CDV	Report on voting
86A/1497/CDV	86A/1543/RVC

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.

A list of all parts of 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.

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## OPTICAL FIBRE CABLES –

### Part 5-20: Family specification – Outdoor microduct fibre units, microducts and protected microducts for installation by blowing

#### 1 Scope

This part of IEC 60794 is a family specification that covers outdoor microduct fibre units and corresponding microducts and protected microducts for installation by blowing. The protected microducts are intended for duct, directly buried or lashed applications.

Microduct fibre units differ from microduct optical fibre cables (see IEC 60794-5-10) in that they provide less protection to the fibres that they contain. Specifically, microduct fibre units rely on the structure of the microduct, protected microduct or appropriate housing to support installation and to provide additional mechanical protection for the optical fibre over the lifetime of the product.

Systems built with components covered by this standard are subject to the requirements of sectional specification IEC 60794-5 where applicable.

Annex A gives examples of microduct optical fibre units and microducts.

Annex B describes a blank detail specification for outdoor microduct fibre units and the associated microducts and incorporates some minimum requirements. Detail product specifications may be prepared on the basis of this family specification using Annex B as a guide. Annex C provides normative product constructions for microduct optical fibre units, microducts and protected microducts.

The parameters specified in this standard may be affected by measurement uncertainty arising either from measurement errors or calibration errors due to lack of suitable standards. Acceptance criteria should be interpreted with respect to this consideration.

The number of fibres tested is intended to be representative of the microduct fibre unit design and should be agreed between the customer and supplier.

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

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

IEC 60793-1-53, *Optical fibres – Part 1-53: Measurement methods and test procedures – Water immersion*

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

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

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*

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

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

IEC 60794-3:2001, *Optical fibre cables – Part 3: Sectional specification – Outdoor cables*

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

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*

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 60811-501, *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*

IEC 60811-601, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 601: Physical tests – Measurement of the drop-point of filling compounds*

IEC 60811-602, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 602: Physical tests – Separation of oil in filling compounds*

IEC 60811-604, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 604: Physical tests – Measurement of absence of corrosive components in filling compounds*

ISO/IEC 11801, *Information technology – Generic cabling for customers premises*

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