

Fibre management systems and protective housings to
be used in optical fibre communication systems -
Product specifications - Part 6-1: Unprotected
microduct for category S and A

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50411-6-1:2022 sisaldab Euroopa standardi EN 50411-6-1:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 50411-6-1:2022 consists of the English text of the European standard EN 50411-6-1:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 29.04.2022.	Date of Availability of the European standard is 29.04.2022.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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English Version

**Fibre management systems and protective housings to be used
in optical fibre communication systems - Product specifications -
Part 6-1: Unprotected microduct for category S and A**

Systèmes de gestion des fibres et boîtiers de protection
destinés à être utilisés dans les systèmes de
communication par fibres optiques - Spécifications de
produits - Partie 6-1 : Microconduits non protégés pour les
catégories S et A

LWL-Spleißkassetten und -Muffen für die Anwendung in
LWL-Kommunikationssystemen - Produktnormen - Teil 6-1:
Ungeschützte Mikrorohre für die Kategorien S und A

This European Standard was approved by CENELEC on 2022-03-14. 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.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50411-6-1:2022) has been prepared by CLC/TC 86BXA "Fibre optic interconnect, passive and connectorised components".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-03-14
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2023-03-14

This document will supersede EN 50411-6-1:2011 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50411-6-1:2021 includes the following significant technical changes with respect to EN 50411-6-1:2011:

- updated reference of cable tests EN 60794-1-21;
- more variants with different nominal outer and inner diameter added that are available on the market;
- updated the tests and test severities according to the new edition EN IEC 61753-1:2018.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

1 Scope

1.1 Product definition

This document contains the initial, start of life dimensional, mechanical and environmental performance requirements which an unprotected microduct are expected to meet.

1.2 Operating environment

The tests selected combined with the severities and duration are representative of an outside plant for subterranean and/or aerial environment defined by:

- ETS 300 019 class 8.1 - underground locations (without earthquake requirement);
- EN IEC 61753-1 - category A (aerial environment) and category S (subterranean environment).

1.3 Quality assurance

Compliance with this document does not guarantee the manufacturing consistency of the product. This is expected to be maintained using a recognized quality assurance programme.

1.4 Allowed product types

This document covers all European Standards on optical fibre unprotected microducts. This includes, but is not limited to, EN 60794-5, *Optical fibre cables - Part 5: Sectional specification - Microduct cabling for installation by blowing*.

1.5 Allowed microduct connector types

This microduct standard allows the use of all European Standard microduct connectors, including: straight, reducer/enlarger stem, reducer/enlarger, close down, liquid block, liquid block with barb end, and end stop connectors. This includes EN 50411-2-8, *Fibre organizers and closures to be used in optical fibre communication systems - Product specifications - Part 2-8: Microduct connectors, for air blown optical fibres, Type 1*.

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.

EN 590, *Automotive fuels - Diesel - Requirements and test methods*

EN 60068-2-2, *Environmental testing - Part 2-2: Tests - Test B: Dry heat (IEC 60068-2-2)*

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

EN 61300-1, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance*

EN 61300-2-34, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-34: Tests - Resistance to solvents and contaminating fluids of interconnecting components and closures (IEC 61300-2-34)*

EN 61300-3-1, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination (IEC 61300-3-1)*

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*