ICS 33.180.20, 33.180.99 SLOVENSKÁ TECHNICKÁ NORMA November 2019

STN	**Vláknové organizátory a kryty používané v optovláknových komunikačných systémoch Špecifikácie výrobku Časť 4-1: Pasívna optická vonkajšia rozvodná skriňa pre kategóriu A**	**STN EN 50411-4-1** 35 9231

Fibre management systems and protective housings to be used in optical fibre communication systems - Product specifications - Part 4-1: Passive optical street cabinet for category A

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. 10/19

Obsahuje: EN 50411-4-1:2019

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50411-4-1

June 2019

ICS 33.180.20; 33.180.99

English Version

Fibre management systems and protective housings to be used in optical fibre communication systems - Product specifications - Part 4-1: Passive optical street cabinet for category A

Organiseurs et boîtiers de fibres à utiliser dans les systèmes de communication par fibres optiques - Spécifications de produits - Partie 4-1

LWL-Spleißkassetten und -Muffen für die Anwendung in LWL-Kommunikationssystemen - Produktnormen - Teil 4-1

This European Standard was approved by CENELEC on 2019-05-20. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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 50411-4-1:2019 (E)

Contents

EN 50411-4-1:2019 (E)

European foreword

This document (EN 50411-4-1:2019) 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) 2020-05-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-05-20

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.

Fibre management systems and protective housings to be used in optical fibre communication systems – Product specifications
Part 4-1: Passive optical street cabinet for category A

Description	Typical installation configuration	Typical mounting options
Street Cabinet	Outdoor Fibre Distribution Cabinet	On the ground

Typical fibre management configurations

- Direct spliced fibres with and without branching devices
- Interconnect with and without branching devices
- Cross-connect with and without branching devices

Operating service environments

Applications: Optical fibre cable networks For outdoor above ground (aerial) applications	EN 61753-1 category A

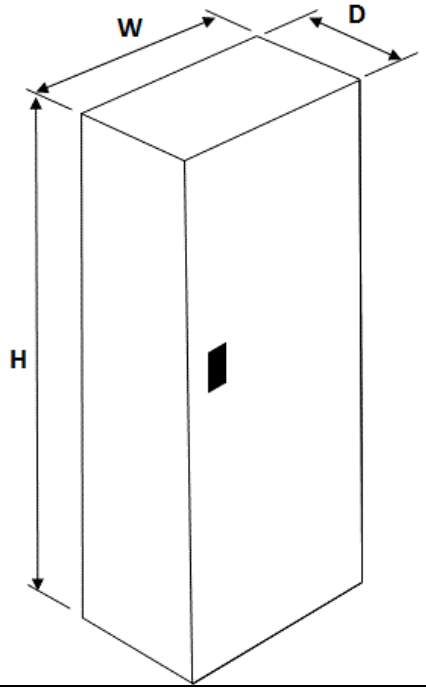
Modular adapter plates for the following connectors

Connector type	Adapter size	Standard
SC	Simplex or duplex	EN 61754-4
LC	Simplex or duplex	EN 61754-20
LSH	Simplex or Duplex	EN 61754-15
LF3	Simplex or Duplex	EN 61754-28
MPO	Simplex	EN 61754-7

Fibre separation levels in Fibre Management System

Single circuit (1, 2 or 4 fibre splices per tray), Single element (6, 8 or 12 fibre splices per tray), Multiple element (up to 144 fibre splices per tray)	Single ribbon (1 ribbon splice per tray), Multiple ribbon (12 ribbon splices per tray)

Street cabinet sizes and dimensions



Size	Maximum fibre splice capacity	Maximum connections (adapters) capacity	Maximum outline dimensions (mm)		
			W	H	D
A	288	216	500	1 000	400
B	576	432	800	1 000	400
C	768	576	1 300	1 200	400
D	1 024	768	1 300	1 500	400
E	1 296	972	1 900	1 500	400
F	1 728	1 296	1 900	1 800	400

1 Scope

1.1 Product definition

This document covers passive optical fibre street cabinets for use in outside plant environments under category A according to EN 61753-1.

This document contains the dimensional, optical, mechanical and environmental performance requirements of an installed passive optical fibre street cabinet, in order for it to be categorised as an European standard product.

The street cabinet is a protective housing containing a modular fibre management system with splice trays for various fibre separation levels and connector mounting plates. The street cabinet may contain one or more of the following:

– storage and routing of fibre and cable;

– uncut (looped) fibre and cable storage;

– splice trays;

– adapters and connectors;

– passive optical components (optical power splitters and wavelength division multiplexers).

Street cabinets can also contain active optical components (amplifiers, converters, power supplies), but these applications are not part of this document.

1.2 Operating environment

The tests selected, combined with the severity and duration, are representative of outside plant above ground environments defined by EN 61753-1 Category A: Aerial environment.

1.3 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this document does not guarantee the reliability of the product. This should be predicted using a recognised reliability assessment programme.

1.4 Quality assurance

Compliance with this document does not guarantee the manufacturing consistency of the product. This should be maintained using a recognised quality assurance programme.

1.5 Allowed fibre and cable types

This street cabinet standard allows EN 60793-2-50 single-mode fibres and EN 60793-2-10 A1-OM1 to A1-OM5 multimode fibres to be used and is suitable for all EN 60794 series optical fibre cables with their various fibre capacities, types and designs as long as fitting in the cabinet does not contravene the minimum bend radius.

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.

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

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

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

EN 61300-2-1, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal) (IEC 61300-2-1)*

EN 61300-2-4, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre/cable retention (IEC 61300-2-4)*

EN 61300-2-9, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-9: Tests - Shock (IEC 61300-2-9)*

EN 61300-2-12, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-12: Tests-Impact (IEC 61300-2-12)*

EN 61300-2-22, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature (IEC 61300-2-22)*

EN 61300-2-26, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-26: Tests - Salt mist (IEC 61300-2-26)*

EN 61300-2-33, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-33: Tests - Assembly and disassembly of fibre optic mechanical splices, fibre management systems and closures (IEC 61300-2-33)*

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)*

EN 61300-3-3, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-3: Examinations and measurements - Active monitoring of changes in attenuation and return loss (IEC 61300-3-3)*

EN 61300-3-28, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss (IEC 61300-3-28)*

EN 61753-1, *Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards (IEC 61753-1)*

EN 61756-1, *Fibre optic interconnecting devices and passive components - Interface standard for fibre management systems - Part 1: General and guidance (IEC 61756-1)*