Irish Standard
I.S. EN 50411-2-10:2015

Fibre organisers and closures to be used in optical fibre communication systems - Product specifications - Part 2-10: Sealed fibre splice closures type 2, category G, for FTTH optical distribution networks

I.S. EN 50411-2-10:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN 50411-2-10:2015	2015-01-16

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2015-02-19	NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50411-2-10

January 2015

ICS 33.180.20

English Version

Fibre organisers and closures to be used in optical fibre communication systems - Product specifications - Part 2-10: Sealed fibre splice closures type 2, category G, for FTTH optical distribution networks

Organiseurs et boîtiers de fibres à utiliser dans les systèmes de communication par fibres optiques - Spécifications de produits - Partie 2-10: Boîtiers à épissure de fibres scellés Type 2, catégorie G, pour réseaux de distribution optiques FttH

LWL-Spleißkassetten und -Muffen für die Anwendung in LWL-Kommunikationssystemen - Produktnormen - Teil 2-10: Abgedichtete LWL-Muffen Typ 2 für die Kategorie G für optische FTTH-Verteilnetze

This European Standard was approved by CENELEC on 2014-11-11. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, 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: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 50411-2-10:2015 E

Contents

Figures

Tables

Foreword

This document (EN 50411-2-10:2015) 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)	2015-11-11
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2017-11-11

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

Fibre organisers and closures to be used in optical fibre communication systems – Product specifications

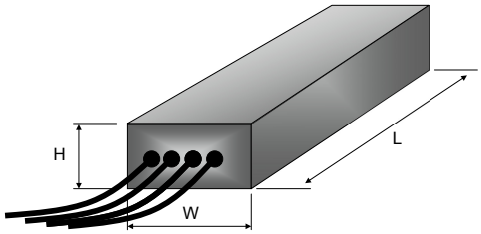
Part 2-10: Sealed fibre splice closures type 2, category G, for FTTH optical distribution networks

Description		Performance	
Construction:	Sealed closures IP67	**Applications**:	
Fibre management:	Single Circuit, Single Element, Multiple Element and/or Single/Multiple Ribbon	Optical fibre cable networks for ground level	EN 61753-1, category G

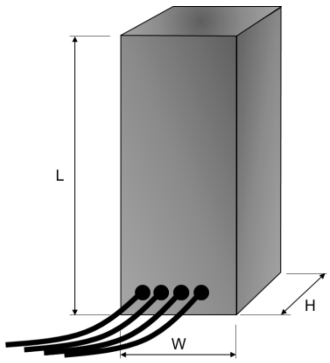
Related documents:

EN 60793-2-50	Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres (IEC 60793-2-50)
EN 60794-2	Optical fibre cables – Part 2: Indoor cables – Sectional specification (IEC 60794-2)
EN 60794-3	Optical fibre cables – Part 3: Sectional specification – Outdoor cables (IEC 60794-3)
EN 61753-1	Fibre optic interconnecting devices and passive components – Part 1: General and guidance for performance standard (IEC 61753-1)
EN 61300 series	Fibre optic interconnecting devices and passive components – Basic test and measurement procedures (IEC 61300 series)

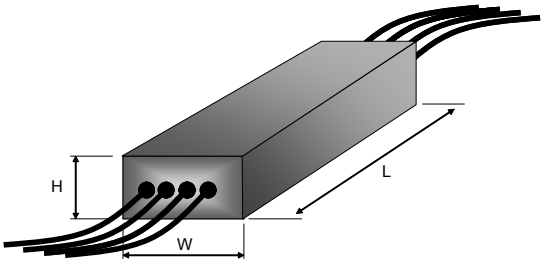
Construction and splice capacity:



Dome type



Pan type



In-line type

Closure size and minimum total splice capacity

	Fibre management system separation level				
Closure size	**Single Circuit (SC)**	**Single Element (SE)**	**Single Ribbon (SR)**	**Multiple Element (ME)**	**Multiple Ribbon (MR)**
R	4	12	-	-	-
A	8	12	-	24	-
B	16	24	12	48	24
C	32	48	24	96	48
D	48	72	48	144	96
E	96	144	96	288	192
F	144	216	144	432	288
G	192	288	192	576	384
H	288	432	288	864	576

1 Scope

1.1 Product definition

This specification contains the dimensional, optical, mechanical and environmental performance requirements of a fully installed splice closure for use in optical distribution networks at ground level (category G) in order for it to be categorised as an EN standard product. This type of sealed closure is intended for easy and/or frequent opening and closing in FTTH distribution and drop cable networks.

NOTE The sealing performance requirements and test severities of these closures are selected to obtain an IP 67 intrusion protection performance as defined in EN 60529.

1.2 Operating environment

The tests selected combined with the severity and duration are representative of an outside plant for ground level environment defined by EN 61753-1, category G: ground level. This corresponds with:

- operating temperature range: -40 °C to +65 °C;
- direct exposure to non weather protected outside plant conditions;
- deployment at ground level up to 3 metres above ground level;
- additionally to the category G environment, a deployment till 1 metre below ground level is added. Direct buried applications are allowed, however additional protection will be required when the locations are intended for passage of cars or other heavy vehicles.

1.3 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this specification 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 specification 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

Although the performance tests are carried out on test samples containing dispersion unshifted single mode fibre (see Annex A), the closure, once tested according to this product specification, will be also suited for other fibre types like dispersion shifted, non-zero dispersion shifted and multimode fibres.

This closure standard allows both single mode and multimode fibre to be used and covers IEC standard optical fibre cables with their various fibre capacities, types and designs. This includes, but is not limited to, optical fibre cable standards EN 60794-2 (indoor), EN 60794-3 (outdoor).

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

EN 60794-2 Optical fibre cables – Part 2: Indoor cables – Sectional specification (IEC 60794-2)

EN 61300 Series Fibre optic interconnecting devices and passive components – Basic test and measurement procedures (IEC 61300 Series)

EN 61300-2-1 Part 2-1: Tests – Vibration (sinusoidal) (IEC 61300-2-1)

EN 61300-2-4 Part 2-4: Tests – Fibre/cable retention (IEC 61300-2-4)

EN 61300-2-5 Part 2-5: Tests – Torsion (IEC 61300-2-5)