



BSI Standards Publication

Fibre optic interconnecting devices and passive components — Performance standard

Part 111-09: Sealed closures — Category S — Subterranean

National foreword

This British Standard is the UK implementation of EN IEC 61753-111-09:2021. It is identical to IEC 61753-111-09:2021. It supersedes BS EN 61753-111-9:2010, which will be withdrawn on 23 May 2022.

The UK participation in its preparation was entrusted to Technical Committee GEL/86/2, Fibre optic interconnecting devices and passive components.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Amendments/corrigenda issued since publication

Date	Text affected
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English Version

Fibre optic interconnecting devices and passive components -
Performance standard - Part 111-09: Sealed closures - Category
S - Subterranean
(IEC 61753-111-09:2021)

Dispositifs d'interconnexion et composants passifs
fibroniques - Norme de performance - Partie 111-09:
Boîtiers étanches pour la catégorie S - Souterrains
(IEC 61753-111-09:2021)

Lichtwellenleiter - Verbindungselemente und passive
Bauteile - Betriebsverhalten - Teil 111-9: Druckdichte
Muffen für die Kategorie S - unterirdische Verlegung
(IEC 61753-111-09:2021)

This European Standard was approved by CENELEC on 2021-10-19. 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.

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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

European foreword

The text of document 86B/4494/FDIS, future edition 1 of IEC 61753-111-09, prepared by SC 86B “Fibre optic interconnecting devices and passive components” of IEC/TC 86 “Fibre optics” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61753-111-09:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-07-19 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-10-19 document have to be withdrawn

This document supersedes EN 61753-111-9:2010 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 61753-111-09:2021 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-1	NOTE Harmonized as EN 60068-1
IEC 60068-2 (series)	NOTE Harmonized as EN IEC 60068-2 (series)
IEC 60721-3-1	NOTE Harmonized as EN IEC 60721-3-1
IEC 60721-3-2	NOTE Harmonized as EN IEC 60721-3-2
IEC 60793-2	NOTE Harmonized as EN IEC 60793-2
IEC 60794-1-2	NOTE Harmonized as EN IEC 60794-1-2
IEC 60794-2	NOTE Harmonized as EN 60794-2
IEC 60794-3	NOTE Harmonized as EN 60794-3
IEC 61300 (series)	NOTE Harmonized as EN 61300 (series)
IEC 62005 (series)	NOTE Harmonized as EN IEC 62005 (series)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-10	-	Environmental testing - Part 2-10: Tests - Test J and guidance: Mould growth	EN 60068-2-10	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN IEC 60793-2-50	-
IEC 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	-
IEC 61300-2-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal)	EN 61300-2-1	-
IEC 61300-2-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre or cable retention	EN IEC 61300-2-4	-
IEC 61300-2-5	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion	EN 61300-2-5	-
IEC 61300-2-9	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-9: Tests - Shock	EN 61300-2-9	-
IEC 61300-2-10	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-10: Tests - Crush and load resistance	EN IEC 61300-2-10	-
IEC 61300-2-11	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-11: Tests - Axial compression	EN 61300-2-11	-

EN IEC 61753-111-09:2021 (E)

IEC 61300-2-12	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-12: Tests - Impact	EN 61300-2-12	-
IEC 61300-2-22	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature	EN 61300-2-22	-
IEC 61300-2-23	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-23: Tests - Sealing for non-pressurized closures of fibre optic devices	EN 61300-2-23	-
IEC 61300-2-26	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-26: Tests - Salt mist	EN 61300-2-26	-
IEC 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	EN 61300-2-33	-
IEC 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	EN 61300-2-34	-
IEC 61300-2-37	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-37: Tests - Cable bending for fibre optic closures	EN 61300-2-37	-
IEC 61300-2-38	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-38: Tests - Sealing for pressurized fibre optic closures	EN 61300-2-38	-
IEC 61300-3-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination	EN 61300-3-1	-
IEC 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	EN 61300-3-3	-
IEC 61300-3-28	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss	EN 61300-3-28	-

IEC 61753-1	2018	Fibre optic interconnecting devices and passive components - Performance standard - Part 1: General and guidance	EN IEC 61753-1	2018
IEC 61756-1	2019	Fibre optic interconnecting devices and passive components - Interface standard for fibre management systems - Part 1: General and guidance	EN IEC 61756-1	2020
ISO 4892-3	-	Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps	EN ISO 4892-3	-

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 Abbreviated terms	11
5 General requirements	11
5.1 Storage, transportation and packaging.....	11
5.2 Installation and intervention	12
5.3 Marking and identification	12
5.4 Materials.....	12
5.5 Safety	13
6 Test.....	13
6.1 General.....	13
6.2 Test sample preparation	13
6.3 Test and measurement methods	14
6.4 Sample size	14
6.5 Pass/fail criteria	14
6.6 Test report.....	14
7 Performance requirements.....	15
7.1 Sealing, optical and visual examination pass/fail criteria	15
7.2 Sealing performance requirements.....	16
7.3 Optical performance requirements	20
Annex A (normative) Sample definition	23
A.1 Fibre type for test sample	23
A.2 Closure optical test sample configuration	24
Annex B (normative) Intervention and reconfiguration/resplicing	27
B.1 Handling of the closure	27
B.2 Movements of splice trays to gain access to the actual fibre circuits	27
B.3 Addition and connection of drop cables	27
B.4 Rearranging splices	27
B.5 Rearranging optical connector sets, patchcords or pigtails (when applicable).....	28
B.6 Addition and connection of extra FMS elements.....	28
B.7 Handling of the closure	28
Bibliography.....	29
Figure A.1 – Track/spur joint configuration sample.....	24
Figure A.2 – Optical circuits in track/spur joint closure	25
Figure A.3 – Distribution joint configuration sample.....	25
Figure A.4 – Optical circuits in the distribution joint closure	26
Table 1 – Sealing, optical and visual examination pass/fail criteria	15
Table 2 – Sealing performance requirements	16
Table 3 – Optical performance requirements.....	20

Table A.1 – Fibre references for IEC 60793-2-50, sub-category B-652.D	23
Table A.2 – Fibre references for IEC 60793-2-50, sub-category B-657.A1.....	23
Table A.3 – Fibre references for IEC 60793-2-50, sub-category B-657.A2.....	24

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES AND
PASSIVE COMPONENTS – PERFORMANCE STANDARD –****Part 111-09: Sealed closures – Category S – Subteranean**

FOREWORD

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IEC 61753-111-09 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This first edition cancels and replaces IEC 61753-111-9 published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61753-111-9:

- a) terms and definitions updated according to IEC 61753-1:2018 and IEC 61756-1:2019;
- b) detailed test severities added for UV light and fungus resistance tests of materials;
- c) test severities updated according to IEC 61753-1:2018;
- d) laboratory test conditions harmonized with IEC 61300-1 to +23 °C ± 5 °C, unless otherwise specified;

- e) addition of B-657 fibre types with minimum bending radius of stored fibres according to IEC 61756-1:2019;
- f) vibration sealing test changed to 10 Hz, 3 mm amplitude and 1 000 000 cycles;
- g) reduced loads added in cable retention test for small diameter cables and tubes;
- h) reduced loads for cable axial compression test for small diameter cables and tubes;
- i) duration of the cycles in torsion and bending test added;
- j) free fall test removed (is covered now by the optical shock test);
- k) assembly and disassembly test duration reduced to 5 cycles;
- l) resistance to solvents and contaminating fluids: changed duration of immersion in diesel to 1 h and 24 h drying time and removed immersion in kerosene;
- m) duration of the change of temperature reduced to 12 cycles.

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

Draft	Report on voting
86B/4494/FDIS	86B/4515/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts of IEC 61753 series, published under the general title *Fibre optic interconnecting devices and passive components – Performance standard*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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