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Part 042-02: Plug-pigtail-style and plug-receptacle-style OTDR reflecting devices for category C - Controlled environments

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International Standard IEC 61753-042-02 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components of IEC technical committee 86: Fibre optics.

This first edition cancels and replaces the first edition of IEC 61753-042-2, published in 2014, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61753-042-2:

a) harmonization of test requirements with the requirements specified in IEC 61753-1:2018

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

Draft	Report on voting
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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/publications.

A list of all parts of IEC 61753 series, 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– withdrawn, or
– revised.

1 Scope

This part of IEC 61753 contains the minimum initial performance, test and measurement requirements and severities for plug-pigtail style and plug-receptacle style OTDR reflecting devices to meet the requirements of category C-Controlled environments, as specified in Annex A of IEC 61753-1 [1][1]. These devices are utilized for out-of-band OTDR testing of an optical fibre system.

Annex B provides information concerning these devices.

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.

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

IEC 61300 (all parts), *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures*

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

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

IEC 61300-2-2, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-2: Tests - Mating durability*

IEC 61300-2-4, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests–Fibre or cable retention*

IEC 61300-2-5, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion*

IEC 61300-2-6, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-6: Tests - Tensile strength of coupling mechanism*

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

IEC 61300-2-14, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-14: Tests - High optical power*

IEC 61300-2-17, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-17: Tests - Cold*

IEC 61300-2-18, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-18: Tests - Dry heat*

[1] Numbers in square brackets refer to the Bibliography.

IEC 61300-2-19, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-19: Tests - Damp heat (steady state)*

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

IEC 61300-2-42, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-42: Tests - Static side load for strain relief*

IEC 61300-2-44, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-44: Tests - Flexing of the strain relief of fibre optic devices*

IEC 61300-3-2, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-2: Examination and measurements - Polarization dependent loss in a single-mode fibre optic device*

IEC 61300-3-6, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examination and measurements - Return loss*

IEC 61300-3-7, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-7: Examination and measurements - Wavelength dependence of attenuation and return loss of single mode components*

IEC 62074-1, *Fibre optic interconnecting devices and passive components - Fibre optic WDM devices - Part 1: Generic specification*

IEC TS 62627-09, *Fibre optic interconnecting devices and passive components - Vocabulary for passive optical devices*

Bibliography

[1] IEC 61753-1:2018, *Fibre optic interconnecting devices and passive components - Performance standard - Part 1: General and guidance*

[2] ITU-T Recommendation G.983.3, *A broadband optical access system with increased service capability by wavelength allocation*

[3] ITU-T Recommendation G.984.2, *Gigabit-capable Passive Optical Networks (GPON): Physical Media Dependent (PMD) layer specification*

[4] IEEE Std 802.3:2022, *IEEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 3: Standard for Ethernet*

[5] ITU-T L.66:2007, *Optical fibre cable maintenance criteria for in-service fibre testing in access networks*

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