PD IEC TR 62627-01:2023

BSI Standards Publication

Fibre optic interconnecting devices and passive components

Part 01: Fibre optic connector cleaning methods

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National foreword

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

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS –

Part 01: Fibre optic connector cleaning methods

FOREWORD

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IEC TR 62627-01 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is a Technical Report.

This third edition cancels and replaces the second edition published in 2016. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) addition of cleaning tools for adhesive pad type and adhesive pen type in terms and definitions (Clause 3), in information (7.5 and 7.6), in fibre optic connectors and their applicable cleaning tools (Table 1 and Clause 8) and procedures (9.5, 9.6 and 9.7);
b) addition of classification of cleaning tools and machines (Figure 1).

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The text of this Technical Report is based on the following documents:

Draft	Report on voting
86B/4625/DTR	86B/4647/RVDTR

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 Technical Report 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 in the IEC 62627 series, published under the general title *Fibre optic interconnecting devices and passive components*, 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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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS –

Part 01: Fibre optic connector cleaning methods

1 Scope

This part of IEC 62627, which is a Technical Report, details cleaning methods for fibre optic connectors. It includes typical cleaning tools and machines, and cleaning procedures. Other cleaning methods exist. The impact of contamination and the reasons for connector visual inspection and cleaning are described in Annex B. This document does not address the visual inspection procedures, which are covered in IEC 61300-3-35.

Optical fibre patch cords are handled by the operators and maintenance staff of optical network systems. This document is useful as a guideline to prepare instruction manuals for those involved in optical system maintenance and operation.

This document covers fibre optic connector plugs, optical adaptors, optical receptacles (excluding optical transceivers) and dust caps. Guidelines for fibre optic connector end-face cleaning methods for receptacle style optical transceivers are covered in IEC TR 62572-4.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1 Cleaners

3.1.1
adhesive backed stick type cleaner
cleaning tool for end-faces of fibre optic connector plugs, fibre optic connector receptacles and fibre optic connector adaptors using a soft adhesive backing at the end of a stick

3.1.2
adhesive pad type cleaner
cleaning tool for end-faces of fibre optic connector plugs using a pad style with soft adhesive surface

3.1.3
adhesive pen type cleaner
cleaning tool for end-faces of fibre optic connector plugs, fibre optic connector receptacles and fibre optic connector adaptors using a pen style with a soft adhesive tape at the top of the tool

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3.1.4
air duster
canned air
cleaning tool where compressed air is blown from a nozzle of a can

3.1.5
gas and vacuum type cleaning machine
fibre optic connector end-face cleaning machine in which volatile liquid solvent (gas) is injected and extracted from a nozzle

3.1.6
pen type cleaner
probe type cleaner
cleaning tool for fibre optic connector end-faces, receptacles and fibre optic connector adaptors where a tape cleaning cloth at the top of the tool moves and cleans

3.1.7
reel type cleaner
cassette type cleaner
fibre optic connector plug end-face cleaning tool, in which a cleaning cloth roll is packed in a cassette box, with a small window for cleaning

3.1.8
stick type cleaner
swab type cleaner
fibre optic connector receptacle and fibre optic connector adaptor end-face cleaning tool in which a cleaning cloth is attached to the top of a stick

3.2 Fibre optic connector parts

3.2.1
bulkhead adaptor
adaptor mounted in a panel

Note 1 to entry: A bulkhead adaptor has one or more alignment sleeves in which two or more ferrules are aligned.

3.2.2
dust cap
cover or cap which is attached to a fibre optic connector plug, a fibre optic connector adaptor or an optical receptacle when the fibre optic connector is not connected to protect it from contamination

3.2.3
exposed plug end-face
EPE
fibre optic plug without any fixed optical end-face protection that can be held in the hand

EXAMPLE End of a patch cord.

Note 1 to entry: The ferrule is exposed to the air and is not confined within an alignment sleeve of a bulkhead adaptor or device port. The end-face of the plug is easy to access and can be brought into contact with cleaning material.

3.2.4
port
open fibre optic alignment sleeve which contains a fibre optic plug end-face to which a fibre optic plug can be mated

Note 1 to entry: In the case of a bulkhead adaptor, it is the open side of the adaptor after a fibre optic plug has been inserted into one side. In the case of an optical device, it is the opening into which a user of the device will plug

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