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Fibre optic enclosures Part 1: Generic specification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 33.180.99

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EUROPEAN STANDARD

EN 62134-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2002

ICS 33.180.99

English version

**Fibre optic enclosures
Part 1: Generic specification
(IEC 62134-1:2002)**

Enveloppes pour fibres optiques
Partie 1: Spécification générique
(CEI 62134-1:2002)

Lichtwellenleitergarnituren
Teil 1: Fachgrundspezifikation
(IEC 62134-1:2002)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 86B/1642/FDIS, future edition 1 of IEC 62134-1, 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 was approved by CENELEC as EN 62134-1 on 2002-05-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-05-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62134-1:2002 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IECQ 001001	- 1)	IEC Quality Assessment System for Electronic Components (IECQ) - Basic Rules	-	-
IECQ 001002-2	1998	IEC Quality Assessment System for Electronic Components (IECQ) - Rules of Procedure Part 2: Documentation	-	-
IECQ 001002-3	1998	Part 3: Approval procedures	-	-
IEC Guide 102	- 1)	Electronic components - Specification structures for quality assessment (Qualification approval and capability approval)	-	-
IEC 60027	Series	Letter symbols to be used in electrical technology	HD 245	Series
IEC 60050-731	- 1)	International Electrotechnical Vocabulary (IEV) Chapter 731: Optical fibre communication	-	-
IEC 60410	- 1)	Sampling plans and procedures for inspection by attributes	-	-
IEC 60617	Series	Graphical symbols for diagrams	EN 60617	Series
IEC 60695-2-2	- 1)	Fire hazard testing Part 2: Test methods - Section 2: Needle-flame test	EN 60695-2-2	1994 2)
IEC 60793-2	- 1)	Optical fibres Part 2: Product specifications	-	-

1) Undated reference.

2) Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60794-2	- ¹⁾	Optical fibre cables Part 2: Product specifications	-	-
IEC 60825-1	- ¹⁾	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1 + corr. February + A11 + corr. July	1994 ²⁾ 1995 1996 1997
IEC 61073-1	- ¹⁾	Mechanical splices and fusion splice protectors for optical fibres and cables Part 1: Generic specification	EN 61073-1	2000 ²⁾
IEC 61300-2	Series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures Part 2: Tests	EN 61300-2	Series
IEC 61300-2-16	- ¹⁾	Part 2-16: Tests - Mould growth	EN 61300-2-16	1997 ²⁾
IEC 61300-2-30	- ¹⁾	Part 2-30: Tests - Solar radiation	EN 61300-2-30	1997 ²⁾
IEC 61300-2-36	- ¹⁾	Part 2-36: Tests - Flammability (fire hazard)	EN 61300-2-36	1997 ²⁾
IEC 61300-3	Series	Part 3: Examinations and measurements	EN 61300-3	Series
IEC 61753-1-1	- ¹⁾	Fibre optic interconnecting devices and passive components performance standard Part 1-1: General and guidance - Interconnecting devices (connectors)	EN 61753-1-1	2001 ²⁾
IEC/TR3 61930	- ¹⁾	Fibre optic graphical symbology	-	-
ISO 129	- ¹⁾	Technical drawings - Dimensioning - General principles, definitions, methods of execution and special indications	-	-
ISO 286-1	- ¹⁾	ISO system of limits and fits Part 1: Bases of tolerances, deviations and fits	-	-
ISO 370	- ¹⁾	Toleranced dimensions - Conversion from inches into millimetres and vice versa	-	-
ISO 1101	- ¹⁾	Technical drawings - Geometrical tolerancing - Tolerancing of form, orientation, location and run-out - Generalities, definitions, symbols, indications on drawings	-	-

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fibre optic interconnecting devices and passive components – Fibre optic closures –
Part 1: Generic specification**

**Dispositifs d'interconnexion et composants passifs à fibres optiques – Boîtiers à fibres optiques –
Partie 1: Spécification générique**





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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fibre optic interconnecting devices and passive components – Fibre optic closures –

Part 1: Generic specification

Dispositifs d'interconnexion et composants passifs à fibres optiques – Boîtiers à fibres optiques –

Partie 1: Spécification générique

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES
AND PASSIVE COMPONENTS –
FIBRE OPTIC CLOSURES –****Part 1: Generic specification****FOREWORD**

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International Standard IEC 62134-1 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2002. It constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

- addition and rewording of some terms and definitions;
- reconsideration of type, style and variant in the requirements;
- removal of quality assessment procedures.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/2846/FDIS	86B/2885/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

INTRODUCTION

Closures comprise a broad component family that functions to protect, secure and store passive fibre optic components (such as splices or connectors) or other non-interconnecting devices (such as optical branching devices). They are installed at either indoor or outdoor locations, and provide access to the optical path of one or more cabled optical fibres. They also generally provide a fibre management system for the orderly management, routing, and storage of optical fibres. Configuration definitions may specify integrated functions, or permit grouped combinations of compatible independent sub-units. Specific classification requirements vary, and may or may not include isolation from environmental hazards (such as water ingress), structure codes (such as fire safety), or other appropriate considerations.

Closures are not intended to provide the primary packaging or structure for uncabled optical fibre splices (such as a rigid mechanical splice shell, or a fusion splice protection sleeve). Specification for those devices is defined in IEC 61073-1.

It is also intended that closures specified under this standard are not sufficiently characterized for continuous brine or deep-water submersion. Examples of this are oceanic or lake-crossing applications. Cables, closures and installation methods suited to this use are highly specialised and are not within the scope of this standard or supporting test procedures.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CLOSURES –

Part 1: Generic specification

1 Scope

This part of IEC 62134 establishes uniform generic requirements for fibre optic closures.

This standard does not cover test and measurement procedures, which are described in IEC 61300 series.

2 Normative references

The following referenced documents are indispensable for the application 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.

IECQ 001002-3:2005, *IEC Quality Assessment System for Electronic Components (IECQ) – Rules of Procedure – Part 3: Approval procedures*

IEC 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050(731), *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication*

IEC 60068 (all parts), *Environmental testing*

IEC 60068-2-10, *Environmental testing – Part 2-10: Tests – Test J and guidance: Mould growth*

IEC 60617 (all parts), *Graphical symbols for diagrams*

IEC 60695 (all parts), *Fire hazard testing*

IEC 60695-1-1, *Fire hazard testing – Part 1-1: Guidance for assessing the fire hazard of electrotechnical products – General guidelines*

IEC 60793-2, *Optical fibres – Part 2: Product specifications*

IEC 60794-2, *Optical fibre cables – Part 2: Indoor cables – Sectional specification*

IEC 60825-1, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 61300-2 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2: Tests*

IEC 61300-3 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3: Examinations and measurements*

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

IEC 61754 (all parts), *Fibre optic connector interfaces*

IEC/TR 61930, *Fibre optic graphical symbology*

IEC/TR 61931, *Fibre optic – Terminology*

IEC 62005 (all parts); *Reliability of fibre optic interconnecting devices and passive optical components*

ISO 129-1, *Technical drawings – Indication of dimensions and tolerances – Part 1: General principles*

ISO 286-1, *ISO system of limits and fits – Part 1: Bases of tolerances, deviations and fits*

ISO 1101, *Geometrical Product Specifications (GPS) – Geometrical tolerancing – Tolerances of form, orientation, location and run-out*

ISO 4892-3, *Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps*

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050(731) and IEC 61931, as well as the following apply.

3.1

cable splice

permanent or separable joint between two or more optical fibre cables. It may consist of optical fibre joints, fibre management systems, closures or other safety devices

3.2

closure

all external housings except, outdoor wall boxes, cabinets or pedestals

3.3

enclosure

indoor and outdoor housings (wall boxes, cabinets, cases, distribution frames or pedestals)

3.4

fibre management system

system to control, protect and store fibres from the incoming to the outgoing fibres. It is intended for installation within another closure

3.5

fibre splice

permanent or separable splice between two or more optical fibres