SLOVENSKI STANDARD
SIST EN IEC 60869-1:2019

01-marec-2019

Nadomešča:
SIST EN 60869-1:2013

Optični spojni elementi in pasivne komponente - Pasivne optične naprave za krmiljenje moči - 1. del: Splošna specifikacija (IEC 60869-1:2018)

Fibre optic interconnecting devices and passive components - Fibre optic passive power control devices - Part 1: Generic specification (IEC 60869-1:2018)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Passive Bauteile zur Leistungsbegrenzung - Teil 1: Fachgrundspezifikation (IEC 60869-1:2018)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Dispositifs à fibres optiques passifs de contrôle de la puissance - Partie 1: Spécification générique (IEC 60869-1:2018)

Ta slovenski standard je istoveten z: **EN IEC 60869-1:2018**

ICS:

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60869-1

December 2018

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Supersedes EN 60869-1:2013

English Version

Fibre optic interconnecting devices and passive components - Fibre optic passive power control devices - Part 1: Generic specification (IEC 60869-1:2018)

Dispositifs d'interconnexion et composants passifs fibroniques - Dispositifs fibroniques passifs de contrôle de la puissance - Partie 1: Spécification générique (IEC 60869-1:2018)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Passive Bauteile zur Leistungsbegrenzung - Teil 1: Fachgrundspezifikation (IEC 60869-1:2018)

This European Standard was approved by CENELEC on 2018-12-20. 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.

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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/4139/FDIS, future edition 5 of IEC 60869-1, 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 approved by CENELEC as EN IEC 60869-1:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-09-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-12-21

This document supersedes EN 60869-1:2013.

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

Endorsement notice

The text of the International Standard IEC 60869-1:2018 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 60874 (series)	NOTE	Harmonized as EN 60874 (series)
IEC 61073-1	NOTE	Harmonized as EN 61073-1
IEC 61300-1	NOTE	Harmonized as EN 61300-1
IEC 61300-2 (series)	NOTE	Harmonized as EN 61300-2 (series)
IEC 61300-3 (series)	NOTE	Harmonized as EN 61300-3 (series)
IEC 61753 (series)	NOTE	Harmonized as EN 61753 (series)
IEC 61753-051-3	NOTE	Harmonized as EN 61753-051-3
IEC 61753-052-3	NOTE	Harmonized as EN 61753-052-3
IEC 61753-052-6	NOTE	Harmonized as EN 61753-052-6
IEC 61753-053-2	NOTE	Harmonized as EN 61753-053-2
IEC 61753-056-2	NOTE	Harmonized as EN 61753-056-2

IEC 61753-057-2	NOTE	Harmonized as EN 61753-057-2
IEC 61753-058-2	NOTE	Harmonized as EN 61753-058-2
IEC 61753-059-2	NOTE	Harmonized as EN 61753-059-2
IEC 61754 (series)	NOTE	Harmonized as EN 61754 (series)
IEC 61754-2	NOTE	Harmonized as EN 61754-2
IEC 61754-4	NOTE	Harmonized as EN 61754-4
IEC 61754-13	NOTE	Harmonized as EN 61754-13
IEC 61754-20	NOTE	Harmonized as EN 61754-20
IEC 61755 (series)	NOTE	Harmonized as EN 61755 (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.

Publication	Year	Title	EN/HD	Year
IEC 60027	series	Letter symbols to be used in electrical technology	EN 60027	series
IEC 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC 60617	-	Graphical symbols for diagrams	-	-
IEC 60695-11-5	-	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	-
IEC 60825	series	Radiation safety of laser products, equipment classification, requirements and user's guide	-	-
IEC 61300	series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN 61300	series
IEC/TS 62627-09	-	Fibre optic interconnecting devices and passive components - Vocabulary for passive optical devices	-	-
ISO 129-1	-	Technical drawings - Indication of dimensions and tolerances - Part 1: General principles	-	-
ISO 286-1	-	Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes - Part 1: Basis of tolerances, deviations and fits	EN ISO 286-1	-
ISO 1101	-	Geometrical product specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out	EN ISO 1101	-
ISO 8601	-	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-

IEC 60869-1

Edition 5.0 2018-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Fibre optic interconnecting devices and passive components – Fibre optic passive power control devices –
Part 1: Generic specification

Dispositifs d'interconnexion et composants passifs fibroniques – Dispositifs fibroniques passifs de contrôle de la puissance –
Partie 1: Spécification générique

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CONTENTS

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC PASSIVE POWER CONTROL DEVICES –

Part 1: Generic specification

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60869-1 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC TC 86: Fibre optics.

This fifth edition cancels and replaces the fourth edition published in 2012 and constitutes a technical revision.

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

a) the terms and definitions have been reviewed;
b) the requirement concerning the IEC Quality Assessment System has been reviewed;
c) the clause concerning quality assessment procedures has been deleted;
d) Annex G, relating to technical information on variable optical attenuators, has been added.

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

FDIS	Report on voting
86B/4139/FDIS	86B/4144/RVD

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

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC PASSIVE POWER CONTROL DEVICES –

Part 1: Generic specification

1 Scope

This part of IEC 60869 applies to fibre optic passive power control devices. These have all of the following general features:

– they are passive in that they contain no optoelectronic or other transducing elements;
– they have two ports for the transmission of optical power and control of the transmitted power in a fixed or variable fashion;
– the ports are non-connectorized optical fibre pigtails, connectorized optical fibres or receptacles.

This document establishes generic requirements for the following passive optical devices:

– optical attenuator;
– optical fuse;
– optical power limiter.

This document also provides generic information including terminology for the IEC 61753-05x series. Published IEC 61753-05x series documents are listed in Bibliography.

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

IEC 60050-731, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication* (available at www.electropedia.org)

IEC 60617, *Graphical symbols for diagrams* (available at http://std.iec.ch/iec60617)

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60825 (all parts), *Safety of laser products*

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

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

ISO 129-1, *Technical product documentation (TPD) – Presentation of dimensions and tolerances*

ISO 286-1, *Geometrical product specifications (GPS) – ISO code system for tolerances on linear sizes – Part 1: Basis of tolerances, deviations and fits*

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

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, IEC TS 62627-09 and the following 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 Component terms

3.1.1
fibre optic passive power control device
passive optical device (component) which controls a transmittance with a designed wavelength-independent transfer coefficient

Note 1 to entry: The transfer coefficient may be controlled for all intensity of input power or for input power over a threshold power.

3.1.2
optical attenuator
passive optical device (component), which produces a wavelength-independent controlled signal attenuation in an optical fibre transmission line

Note 1 to entry: An attenuator is intended to be wavelength independent.

3.1.3
fixed optical attenuator
optical attenuator in which attenuation is constant

3.1.4
variable optical attenuator
VOA
optical attenuator in which attenuation is controllable

Note 1 to entry: Attenuation values of variable optical attenuators are generally controlled by manual or electric means.

Note 2 to entry: This note applies to the French language only.

3.1.5
optical fuse
fibre optic passive power control device, which produces controlled, permanent, signal blocking for higher optical power than a predetermined power threshold in an optical fibre transmission line