IEC 60869-1

Edition 5.0 2018-11

REDLINE VERSION

colour inside

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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.180.20

ISBN 978-2-8322-6298-6

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 1: Generic specification

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This Redline version provides you with a quick and easy way to compare all the changes between this standard and its previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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.

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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 unconnectorized optical fibre tails or optical fibre pigtails with connectors.~~

– 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.

~~Test and measurement procedures for the above products are described in IEC 61300-1, the IEC 61300-2 series and the 61300-3 series [1,2,3] [1].~~

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*

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~~[1] References in square brackets refer to the Bibliography.~~

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

~~ISO 129, *Technical drawings – Indication of dimensions and tolerances*~~

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

ISO 286-1, *Geometrical product specifications (GPS) – ISO ~~coding~~ code system for tolerances ~~of~~ on linear sizes – Part 1: ~~Bases~~ 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*

IEC 60869-1

Edition 5.0 2018-11

INTERNATIONAL STANDARD

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



IEC 60869-1:2018-11(en-fr)

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COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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DISPOSITIFS D'INTERCONNEXION ET COMPOSANTS PASSIFS FIBRONIQUES – DISPOSITIFS FIBRONIQUES PASSIFS DE CONTRÔLE DE LA PUISSANCE –

Partie 1: Spécification générique

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La Norme internationale IEC 60869-1 a été établie par le sous-comité 86B: Dispositifs d'interconnexion et composants passifs à fibres optiques, du comité d'études 86 de l'IEC: Fibres optiques.

Cette cinquième édition annule et remplace la quatrième édition parue en 2012 et constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) les termes et définitions ont été revus;
b) l'exigence concernant le système IEC 'd'évaluation de la qualité a été revue;
c) l'article concernant les procédures d'assurance de la qualité a été supprimé;

d) l'Annexe G, concernant les informations techniques des affaiblisseurs optiques variables, a été ajoutée.

Le texte de cette Norme internationale est issu des documents suivants:

FDIS	Rapport de vote
86B/4139/FDIS	86B/4144/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

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DISPOSITIFS D'INTERCONNEXION ET COMPOSANTS PASSIFS FIBRONIQUES – DISPOSITIFS FIBRONIQUES PASSIFS DE CONTRÔLE DE LA PUISSANCE –

Partie 1: Spécification générique

1 Domaine d'application

La présente partie de l'IEC 60869 s'applique aux dispositifs fibroniques passifs de contrôle de la puissance. Ceux-ci présentent toutes les caractéristiques générales suivantes:

– ils sont passifs dans le sens où ils ne contiennent aucun élément optoélectronique ou autre élément transducteur;

– ils disposent de deux ports pour la transmission de la puissance optique et ils contrôlent l'énergie transmise de manière fixe ou variable;

– les ports sont des fibres amorces optiques dépourvues de connecteurs, des fibres optiques munies de connecteurs ou des embases.

Le présent document établit les exigences génériques pour les dispositifs optiques passifs suivants:

– affaiblisseur optique,

– fusible optique,

– limiteur de puissance optique.

Le présent document prévoit également l'information générique y compris la terminologie pour la série IEC 61753-05x. Les publications de la série IEC 61753-05x sont indiquées dans la Bibliographie.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60027 (toutes les parties), *Symboles littéraux à utiliser en électrotechnique*

IEC 60050-731, *Vocabulaire Electrotechnique International – Chapitre 731: Télécommunications par fibres optiques* (disponible sur le site web www.electropedia.org)

IEC 60617, *Symboles graphiques pour schémas* (disponible sur le site web http://std.iec.ch/iec60617)

IEC 60695-11-5, *Essais relatifs aux risques du feu – Partie 11-5: Flammes d'essai – Méthode d'essai au brûleur-aiguille – Appareillage, dispositif d'essai de vérification et lignes directrices*

IEC 60825 (toutes les parties), *Sécurité des appareils à laser*

IEC 61300 (toutes les parties), *Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures*

IEC TS 62627-09, *Fibre optic interconnecting devices and passive components – Vocabulary for passive optical devices* (disponible en anglais seulement)

ISO 129-1, *Documentation technique de produits – Représentation des dimensions et tolérances*

ISO 286-1, *Spécification géométrique des produits (GPS) – Système de codification ISO pour les tolérances sur les tailles linéaires – Partie 1: Base des tolérances, écarts et ajustements*

ISO 1101, *Spécification géométrique des produits (GPS) – Tolérancement géométrique – Tolérancement de forme, orientation, position et battement*

ISO 8601, *Eléments de données et formats d'échange – Échange d'information – Représentation de la date et de l'heure*