



SLOVENSKI STANDARD SIST EN IEC 60875-1:2024

01-julij-2024

Optični spojni elementi in pasivne komponente - Valvnodolžinsko neselektivni optični sklopniki - 1. del: Splošna specifikacija (IEC 60875-1:2024)

Fibre optic interconnecting devices and passive components - Non-wavelength-selective fibre optic branching devices - Part 1: Generic specification (IEC 60875-1:2024)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Wellenlängenunabhängige Lichtwellenleiter-Verzweiger - Teil 1: Fachgrundspezifikation (IEC 60875-1:2024)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Dispositifs de couplage à fibres optiques ne dépendant pas de la longueur d'onde - Partie 1: Spécification générique (IEC 60875-1:2024)

[SIST EN IEC 60875-1:2024](https://standards.iteh.ai/SIST/60875-1:2024)

<https://standards.iteh.ai/SIST/60875-1:2024> Ta slovenski standard je istoveten z: [EN IEC 60875-1:2024](https://standards.iteh.ai/EN/IEC/60875-1:2024) [036800/sist-en-iec-60875-1-2024](https://standards.iteh.ai/EN/IEC/60875-1:2024)

ICS:

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices
-----------	---------------------------------------	-------------------------------------

SIST EN IEC 60875-1:2024

en

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 60875-1

May 2024

ICS 33.180.20

Supersedes EN 60875-1:2015

English Version

**Fibre optic interconnecting devices and passive components -
Non-wavelength-selective fibre optic branching devices - Part 1:
Generic specification
(IEC 60875-1:2024)**

Dispositifs d'interconnexion et composants passifs
fibroniques - Dispositifs de couplage fibroniques ne
dépendant pas de la longueur d'onde - Partie 1:
Spécification générique
(IEC 60875-1:2024)

Lichtwellenleiter - Verbindungselemente und passive
Bauteile - Wellenlängenunabhängige Lichtwellenleiter-
Verzweiger - Teil 1: Fachgrundspezifikation
(IEC 60875-1:2024)

This European Standard was approved by CENELEC on 2024-05-17. 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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/0154c678-0bac-4ae0-b4f3-5961d6036800/sist-en-iec-60875-1-2024>



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

EN IEC 60875-1:2024 (E)**European foreword**

The text of document 86B/4868/FDIS, future edition 7 of IEC 60875-1, 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 60875-1:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-02-17 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2025-05-17 document have to be withdrawn

This document supersedes EN 60875-1:2015 and all of its amendments and corrigenda (if any).

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60875-1:2024 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 standard indicated:

IEC 60068 (series) NOTE Approved as EN 60068 (series)

IEC 60974 (series) NOTE Approved as EN IEC 60974 (series)

IEC 61753 (series) NOTE Approved as EN 61753 (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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60027	series	Letters symbols to be used in electrical technology	EN/HD 60027	series
IEC 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC 60617	series	Graphical symbols for diagrams	EN 60617	series
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	Safety of laser products	EN 60825	series
IEC 61300	series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN IEC 61300	series
IEC 61754	series	Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces	EN 61754	series
IEC/TR 61930	-	Fibre optic graphical symbology	-	-
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 - Part 1: General principles	EN ISO 129-1	-
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	-

EN IEC 60875-1:2024 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 8601	-	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN IEC 60875-1:2024](https://standards.iteh.ai/catalog/standards/sist/0154c678-0bac-4ac0-b4f3-5961d6036800/sist-en-iec-60875-1-2024)

<https://standards.iteh.ai/catalog/standards/sist/0154c678-0bac-4ac0-b4f3-5961d6036800/sist-en-iec-60875-1-2024>



IEC 60875-1

Edition 7.0 2024-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Fibre optic interconnecting devices and passive components – Non-wavelength-selective fibre optic branching devices – Part 1: Generic specification

Dispositifs d'interconnexion et composants passifs fibroniques – Dispositifs de couplage fibroniques ne dépendant pas de la longueur d'onde – Partie 1: Spécification générique

[SIST EN IEC 60875-1:2024](https://standards.iteh.ai/catalog/standards/sist/0154c678-0bac-4ac0-b4f3-5961d6036800/sist-en-iec-60875-1-2024)

<https://standards.iteh.ai/catalog/standards/sist/0154c678-0bac-4ac0-b4f3-5961d6036800/sist-en-iec-60875-1-2024>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 33.180.20

ISBN 978-2-8322-8701-9

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	6
3.1 Basic terms and definitions	6
3.2 Component definitions	6
3.3 Performance parameter definitions	7
4 Requirement.....	7
4.1 Classification	7
4.1.1 General	7
4.1.2 Types	8
4.1.3 Style	8
4.2 Documentation.....	8
4.2.1 Symbols	8
4.2.2 Drawings	8
4.2.3 Measurements.....	8
4.2.4 Test data sheets.....	9
4.2.5 Instructions for use	9
4.3 Standardization system of performance standards	9
4.4 Design and construction.....	9
4.4.1 Materials	9
4.4.2 Workmanship.....	10
4.5 Quality	10
4.6 Performance requirements.....	10
4.7 Identification and marking	10
4.7.1 General	10
4.7.2 Component marking.....	10
4.7.3 Package marking	10
4.8 Safety	10
Annex A (informative) Examples technologies of non-wavelength-selective fibre optic branching devices.....	12
Annex B (informative) Examples of fabrication technology of PLC chips	13
Bibliography.....	15
Figure A.1 – FBT-type optical branching device technology	12
Figure A.2 – PLC-type optical branching device technology	12
Figure B.1 – Fabrication by FHD method	13
Figure B.2 – Fabrication by CVD method	14
Figure B.3 – Fabrication by ion-exchange method.....	14

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE
COMPONENTS – NON-WAVELENGTH-SELECTIVE
FIBRE OPTIC BRANCHING 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60875-1 has been prepared by IEC technical committee 86B: Fibre optic interconnecting devices and passive components. It is an International Standard.

This seventh edition cancels and replaces the sixth edition published in 2015. This edition constitutes a technical revision.

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

- a) removal of variant and reference extensions in clause classification
- b) removal of specification system in clause documentation

- c) removal of interface standards, reliability standards and interlinking in clause standardization system

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

Draft	Report on voting
86B/4868/FDIS	86B/4903/RVD

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 in the IEC 60875 series, published under the general title *Fibre optic interconnecting and passive components – Non-wavelength-selective fibre optic branching devices*, 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.

IMPORTANT – The "colour inside" logo on the cover page of this document 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.