SVENSK STANDARD

SS-EN IEC 60269-1, utg 4:2025

Fastställd	Sida	Ansvarig kommitté
2025-05-07	1 (86)	SEK TK 32B

Lågspänningssäkringar – Del 1: Allmänna fordringar

Low-voltage fuses – Part 1: General requirements

Som svensk standard gäller europastandarden EN IEC 60269-1:2025. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60269-1:2025.

Nationellt förord

Europastandarden EN IEC 60269-1:2025

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60269-1, Fifth edition, 2024 - Low-voltage fuses – Part 1: General requirements**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60269-1, utg 3:2008 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2028-04-30.

ICS 29.120.50

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

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Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60269-1

April 2025

ICS 29.120.50

Supersedes EN 60269-1:2007; EN 60269-1:2007/A1:2009; EN 60269-1:2007/A2:2014

English Version

Low-voltage fuses - Part 1: General requirements (IEC 60269-1:2024)

Fusibles basse tension - Partie 1: Exigences générales (IEC 60269-1:2024)

Niederspannungssicherungen - Teil 1: Allgemeine Anforderungen (IEC 60269-1:2024)

This European Standard was approved by CENELEC on 2024-10-16. 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.

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

Ref. No. EN IEC 60269-1:2025 E

European foreword

The text of document 32B/748/FDIS, future edition 5 of IEC 60269-1, prepared by SC 32B "Low-voltage fuses" of IEC/TC 32 "Fuses" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60269-1:2025.

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) 2026-04-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-04-30

This document supersedes EN 60269-1:2007 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 60269-1:2024 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 60038:2009	NOTE	Approved as EN 60038:2011
IEC 60127-2	NOTE	Approved as EN 60127-2
IEC 60228:2023	NOTE	Approved as EN IEC 60228:2024 (not modified)
IEC 60269-4	NOTE	Approved as EN 60269-4
IEC 60269-6	NOTE	Approved as EN 60269-6
IEC 60269-7	NOTE	Approved as EN IEC 60269-7
IEC 60695-2-10	NOTE	Approved as EN IEC 60695-2-10
IEC 60947-3	NOTE	Approved as EN IEC 60947-3

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60269-2 (mod)	2013	Low-voltage fuses - Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) - Examples of standardized systems of fuses A to K	HD 60269-2	2013
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60584-1	2013	Thermocouples - Part 1: EMF specifications and tolerances	EN 60584-1	2013
IEC 60617	-	Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection of standard data element types and component classes	-	-
IEC 60664-1	1992	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	-	-
+ A1	2000		-	-
+ A2	2002		-	-

IEC 60269-1

Edition 5.0 2024-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Low-voltage fuses – Part 1: General requirements

Fusibles basse tension – Partie 1: Exigences générales

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LOW-VOLTAGE FUSES –

Part 1: General requirements

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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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 60269-1 has been prepared by subcommittee 32B: Low-voltage fuses, of IEC technical committee 32: Fuses. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2006, Amendment 1:2009 and Amendment 2:2014. This edition constitutes a technical revision.

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

a) New numbering, editorial corrections and normative references updated;
b) Term "discrimination" replaced by "selectivity" and "utilization category" by "utilization class";
c) Term "fuses for authorized and unskilled persons" updated;
d) Replacement of fuse-link added;

e) Standard values for AC and DC voltages updated;

f) Rated currents 425A, 355A, and 1 600A added;

g) Marking: requirements and tests separated to the relevant subclauses;

h) Requirements for temperature rise limited to terminal temperature rise only;

i) Graphic symbol for fuse-base updated,

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

Draft	Report on voting
32B/748/FDIS	32B/756/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.

IEC 60269 consists of the following parts, under the general title *Low-voltage fuses*:

Part 1: General requirements

Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to I

Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar application) – Examples of standardized systems of fuses A to F

Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices

Part 5: Guidance for the application of low-voltage fuses

Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems

Part 7: Battery Fuses

For reasons of convenience, when a part of this publication has come from other publications, a remark to this effect has been inserted in the text.

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.

LOW-VOLTAGE FUSES –

Part 1: General requirements

1 Scope

This part of IEC 60269 is applicable to fuses incorporating enclosed current-limiting fuse-links with rated breaking capacities of not less than 6 kA, intended for protecting power-frequency AC circuits of nominal voltages not exceeding 1 000 V or DC circuits of nominal voltages not exceeding 1 500 V.

Subsequent parts of this standard, referred to herein, cover supplementary requirements for such fuses intended for specific conditions of use or applications.

Fuse-links intended to be included in fuse-switch combinations according to IEC 60947-3 should also comply with the following requirements.

As far as not stated in subsequent parts for fuse-links, details of performance (see 3.2.4) on DC circuits should be stated in the manufacturer's literature.

NOTE 1 Modifications of, and supplements to, this document required for certain types of fuses for particular applications – for example, certain fuses for rolling stock, or fuses for high-frequency circuits – will be covered, if necessary, by separate standards.

NOTE 2 This document does not apply to miniature fuses, these being covered by IEC 60127.

The object of this standard series is to establish the characteristics of fuses or parts of fuses (fuse-base, fuse-carrier, fuse-link) in such a way that they can be replaced by other fuses or parts of fuses having the same characteristics provided that they are interchangeable as far as their dimensions are concerned. For this purpose, this standard series refers in particular to

– the following characteristics of fuses:
  - rated values;
  - insulation;
  - temperature rise in normal service;
  - power dissipation and acceptable power dissipation;
  - time/current characteristics;
  - breaking capacity;
  - cut-off current characteristics and their I^2t characteristics.
– type test for verification of the characteristics of fuses;
– the marking of fuses.

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 60269-2, *Low-voltage fuses – Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to K*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60584-1:2013, *Thermocouples – Part 1: EMF specifications and tolerances*

IEC 60617, *Graphical symbols for diagrams*

IEC 60664-1:2002, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*