

---

**Niskonapetostne varovalke - 7. del: Dodatne zahteve za taljive vložke za zaščito baterij in baterijskih sistemov (IEC 60269-7:2021)**

Low-voltage fuses - Part 7: Supplementary Requirements for fuse-links for the protection of batteries and battery systems (IEC 60269-7:2021)

Niederspannungssicherungen - Teil 7: Zusätzliche Anforderungen an Sicherungseinsätze zum Schutz von Batterien und Batteriesystemen (IEC 60269-7:2021)

Fusibles basse tension - Partie 7: Exigences supplémentaires concernant les éléments de remplacement utilisés pour la protection des batteries et des systèmes de batterie (IEC 60269-7:2021)

**Ta slovenski standard je istoveten z: EN IEC 60269-7:2024**

<https://standards.iteh.ai/catalog/standards/sist/af1cfc08-4c78-4fa9-b1d5-5d5ee4739ad1/sist-en-iec-60269-7-2025>

---

**ICS:**

29.120.50	Varovalke in druga nadtokovna zaščita	Fuses and other overcurrent protection devices
-----------	---------------------------------------	--

**SIST EN IEC 60269-7:2025****en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN IEC 60269-7**

December 2024

ICS 29.120.50

English Version

**Low-voltage fuses - Part 7: Supplementary Requirements for  
fuse-links for the protection of batteries and battery systems  
(IEC 60269-7:2021)**

Fusibles basse tension - Partie 7: Exigences  
supplémentaires concernant les éléments de remplacement  
utilisés pour la protection des batteries et des systèmes de  
batterie  
(IEC 60269-7:2021)

Niederspannungssicherungen - Teil 7: Zusätzliche  
Anforderungen an Sicherungseinsätze zum Schutz von  
Batterien und Batteriesystemen  
(IEC 60269-7:2021)

This European Standard was approved by CENELEC on 2024-01-18. 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**

**EN IEC 60269-7:2024 (E)****European foreword**

The text of document 32B/700/CDV, future edition 1 of IEC 60269-7, 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 60269-7:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-06-20 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-12-20 document have to be withdrawn

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.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of this document.

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**

SIST EN IEC 60269-7:2025

The text of the International Standard IEC 60269-7:2021 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 60086-4	NOTE	Approved as EN IEC 60086-4
IEC 60364-4-41	NOTE	Approved as HD 60364-4-41
IEC 60364-4-43	NOTE	Approved as HD 60364-4-43
IEC 62485-5	NOTE	Approved as EN IEC 62485-5
IEC 62485-6	NOTE	Approved as EN IEC 62485-6
IEC 62620	NOTE	Approved as EN 62620
IEC 62932-1	NOTE	Approved as EN IEC 62932-1

## 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](http://www.cencenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60269-1	-	Low-voltage fuses – Part 1: General requirements	EN 60269-1	2007
			+ A1	2009
			+ A2	2014
IECEE OD-5014 Ed.1	2019 <sup>1</sup>	IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System), Committee of Testing Laboratories (CTL), Instrument Accuracy Limits	-	-
ISO/IEC 17025	-	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	2017

---

<sup>1</sup> Dated as no EN equivalent exists.

## Annex ZZ (informative)

### Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardisation request relating to harmonised standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

**Table ZZ.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]**

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
(1)(a)	Clause 6	None
(1)(b)	Clause 7.1.2, Annex E7	None
(1)(c)	See items 2 and 3 of this table	None
(2)(a)	Clause 7, 7.2, 7.9, 8.2, 8.5, 8.8	Must meet the requirements of standard 61439 and subsequent parts when installed.
(2)(b)	Clause 5.5, 5.6, 7.10, 8.3, 8.5, 8.9	None
(2)(c)	Clause 5.5, 5.6, 7.1, 7.3, 7.5, 7.11, 7.13, 7.14, 8.3, 8.5, 8.8, 8.10	None
(2)(d)	See item (2)(a) of this table	None
(3)(a)	Clause 7	None
(3)(b)	Clause 7, 8	None
(3)(c)	Clause 5.2 up to 5.8, 7.4, 7.5, 7.10, 8.3, 8.4, 8.5, 8.10	None

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.



IEC 60269-7

Edition 1.0 2021-12

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Low voltage fuses –  
Part 7: Supplementary Requirements for fuse-links for the protection of  
batteries and battery systems**

**Fusibles basse tension –  
Partie 7: Exigences supplémentaires concernant les éléments de remplacement  
utilisés pour la protection des batteries et des systèmes de batterie**

<https://standards.iteh.ai/catalog/standards/sist/af1cfc08-4c78-4fa9-b1d5-5d5ec4739ad1/sist-en-iec-60269-7-2025>

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 29.120.50

ISBN 978-2-8322-4043-4

**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
INTRODUCTION.....	5
1 General .....	6
2 Terms and definitions .....	6
3 Conditions for operation in service.....	8
5 Characteristics of fuses .....	9
6 Markings.....	10
7 Standard conditions for construction.....	11
8 Tests .....	11
Annex AA (informative) Examples of standardized fuse-links for the protection of batteries and battery systems .....	16
Annex BB (informative) Guidance for the selection of a fuse for the protection of battery systems .....	17
Bibliography.....	18
Table 101 – Conventional times and currents for "gBat" fuse-links .....	10
Table 102 – Survey of complete tests on fuse-links and number of fuse-links to be tested .....	12
Table 103 – Survey of tests on fuse-links of the smallest rated current of a homogeneous series.....	12
Table 104 – Values for breaking-capacity tests on "gBat" fuse-links.....	14
Table 105 – Values for breaking-capacity tests on "aBat" fuse-link .....	15

[SIST EN IEC 60269-7:2025](https://standards.iteh.ai/catalog/standards/sist/en-iec-60269-7-2025)

<https://standards.iteh.ai/catalog/standards/sist/en-iec-60269-7-2025>



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LOW VOLTAGE FUSES –

**Part 7: Supplementary Requirements for fuse-links  
for the protection of batteries and battery systems**

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

IEC 60269-7 has been prepared by subcommittee 32B: Low-voltage fuses, of IEC technical committee 32: Fuses. It is an International Standard.

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

Draft	Report on voting
32B/700/CDV	32B/709/RVC

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 part is to be used in conjunction with IEC 60269-1, *Low-voltage fuses – Part 1: General requirements*.

This Part 7 supplements or modifies the corresponding clauses or subclauses of Part 1. Where no change is necessary, this Part 7 indicates that the relevant clause or subclause of Part 1 applies.

Tables and figures which are additional to those in Part 1 are numbered starting from 101. Additional annexes are lettered AA, BB, etc.

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts of the IEC 60269 series, under the general title: *Low-voltage fuses*, 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](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.

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

[SIST EN IEC 60269-7:2025](https://standards.iteh.ai/catalog/standards/sist/af1cfc08-4c78-4fa9-b1d5-5d5ee4739ad1/sist-en-iec-60269-7-2025)

<https://standards.iteh.ai/catalog/standards/sist/af1cfc08-4c78-4fa9-b1d5-5d5ee4739ad1/sist-en-iec-60269-7-2025>