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Low-voltage fuses - Part 3: Supplementary requirements for fuses for operation by unskilled persons (fuses mainly for household and similar applications) - Examples of standardized systems of fuses A to F

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/25

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English Version

**Low-voltage fuses - Part 3: Supplementary requirements for fuses for operation by unskilled persons (fuses mainly for household and similar applications) - Examples of standardized systems of fuses A to F
(IEC 60269-3:2024)**

Fusibles basse tension - Partie 3: Exigences supplémentaires pour les fusibles destinés à être utilisés par des personnes non qualifiées (fusibles pour usages essentiellement domestiques et analogues) - Exemples de systèmes de fusibles normalisés A à F
(IEC 60269-3:2024)

Niederspannungssicherungen - Teil 3: Ergänzende Anforderungen an Sicherungen zur Betätigung durch Laien (Sicherungen vorwiegend für den Hausgebrauch und ähnliche Anwendungen) - Beispiele für genormte Sicherungssysteme A bis F
(IEC 60269-3:2024)

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EN IEC 60269-3:2025 (E)**European foreword**

The text of document 32B/745/FDIS, future edition 5 of IEC 60269-3, 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 60269-3:2025.

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IEC 60529	NOTE	Approved as EN 60529
IEC 60269-6	NOTE	Approved as EN 60269-6
ISO 228-1	NOTE	Approved as EN ISO 228-1
ISO 228-2	NOTE	Approved as EN ISO 228-2

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 60068-2-31	-	Environmental testing - Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens	EN 60068-2-31	-
IEC 60269-1	2024	Low-voltage fuses - Part 1: General requirements	EN IEC 60269-1	2025
IEC 60664	series	Insulation coordination for equipment within low-voltage supply systems	EN IEC 60664	series
IEC 60898-1 (mod)	2015	Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1: Circuit-breakers for a.c. operation	EN 60898-1	2019
-	-		+ A11	2024
+ AMD1	2019		+ A1	2024
IEC 60999-1	1999	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm ² up to 35 mm ² (included)	EN 60999-1	2000
IEC 61439-1	-	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	EN IEC 61439-1	-
IEC 61439-3	2012	Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO)	EN 61439-3	2012



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



Low-voltage fuses –

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Fusibles basse tension –

Partie 3: Exigences supplémentaires pour les fusibles destinés à être utilisés par des personnes non qualifiées (fusibles pour usages essentiellement domestiques et analogues) – Exemples de systèmes de fusibles normalisés A à F

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE FUSES –**Part 3: Supplementary requirements for fuses
for operation by unskilled persons
(fuses mainly for household and similar applications) –
Examples of standardized systems of fuses A to F**

FOREWORD

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IEC 60269-3 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 2010, Amendment 1:2013 and Amendment 2:2019. This edition constitutes a technical revision.

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

- a) Introduction and general scope fully updated;
- b) Normative references updated and editorial changes;

- c) Terms “ordinary person”, “operation” and “non-interchangeability” defined;
- d) In System A: Parts defined for removal;
- e) In System A: Marking of fuse-bases added for direction of current flow;
- f) In System A: Clarifications added for connection;
- g) In System A: Clarification of construction of fuse-carrier and fuse-link;
- h) In System A: Clarification of voltage drop measurement.

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

Draft	Report on voting
32B/745/FDIS	32B/754/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 part is to be used in conjunction with IEC 60269-1:2024, *Low-voltage fuses – Part 1: General requirements*.

This Part 3 supplements or modifies the corresponding clauses or subclauses of Part 1.

Where no change is necessary, this Part 3 indicates that the relevant clause or subclause applies.

Tables and figures which are additional to those in Part 1 are numbered starting from 101. Additional annexes are numbered 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. 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 K*

Part 3: *Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar applications) – 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*

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 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.

INTRODUCTION

Fuses for use by unskilled persons according to the following fuse systems comply with all subclauses of IEC 60269-1 and with the requirements laid down in the relevant fuse systems.

This part of IEC 60269 is divided into four fuse systems, each dealing with a specific example of standardized fuses for use by unskilled persons.

All systems provide their own mechanical solution to avoid the use of a fuse-link with higher current rating (non-interchangeability) to ensure the protection of cables and lines. The applicant is required to take care to replace a fuse-link by the same type.

Fuse system	Principles of non-interchangeability
Fuse system A: D type fuse system 1)	Diameter and shape at bottom side of the fuse-links differs, fuse bases require gauge-pieces
Fuse system B: Cylindrical fuses (NF cylindrical fuse system) 2)	Fuse-links and suitable fuse-holders (fuse-carriers) provide unique dimensions
Fuse system C: Cylindrical fuses (BS cylindrical fuse system) 2)	Fuse-links and suitable fuse-holders (fuse-carriers) provide unique dimensions
Fuse system F: Cylindrical fuse-links for use in plugs (BS plugtop fuse system) 1)	Fuse-links and suitable fuse-holders (fuse-carriers) provide unique dimensions

NOTE 1 Applicants of system A and F may have fuse-bases in their installation not providing degree of protection IP2X all the time. The degree of protection may temporarily be reduced to IP1X, when replacing the fuse-link. The temporary suspension of the complete protection IP2X against electric shock (after many years of sufficiently safe application of the D-type fuse system by unskilled users) need not be regarded as dangerous, as there is enough experience with interchanging of incandescent lamps, where comparable degrees of safety exist. For future designs Annex CC recommends that the degree of protection against electric shock during the period of replacing a fuse-link should be at least IP2X.

NOTE 2 Fuse-links are not to be interchanged with fuse-links of the same dimension but with different characteristics (e. g. aM).

It is important for safety and therefore strictly forbidden to mix components of different fuse-systems such as fuse-links, fuse-holders and fuse-bases.

LOW-VOLTAGE FUSES –

Part 3: Supplementary requirements for fuses
for operation by unskilled persons
(fuses mainly for household and similar applications) –
Examples of standardized systems of fuses A to F

1 General Scope

This part of IEC 60269 is divided into four fuse systems, each dealing with a specific example of standardized fuses for use by unskilled persons.

This part applies to “gG” fuses only.

Unskilled persons do not have technical knowledge or sufficient experience. To avoid dangers, which electricity may create, the relevant part of the fuse standard shall provide requirements for maximum safety in service. IEC 60269-3 provides four systems for use by unskilled persons. Instructions for the safe operation of fuse-links are provided in the manufacturer’s literature.

All systems provide their own mechanical solution to avoid the use of a fuse-link with higher current rating (non-interchangeability) whereas the protection of cables and lines is ensured. The applicant is required to take care to replace a fuse-link by the same type.

Fuse system	Principles of non-interchangeability
Fuse system A: D type fuse system 1)	Diameter and shape at bottom side of the fuse-links differs, fuse bases require gauge-pieces
Fuse system B: Cylindrical fuses (NF cylindrical fuse system) 2)	Fuse-links and suitable fuse-holders (fuse-carriers) provide unique dimensions
Fuse system C: Cylindrical fuses (BS cylindrical fuse system) 2)	Fuse-links and suitable fuse-holders (fuse-carriers) provide unique dimensions
Fuse system F: Cylindrical fuse-links for use in plugs (BS plugtop fuse system) 1)	Fuse-links and suitable fuse-holders (fuse-carriers) provide unique dimensions

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 60068-2-31, *Environmental testing – Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens*

IEC 60269-1:2024, *Low-voltage fuses – Part 1: General requirements*

IEC 60664 (all parts), *Insulation coordination for equipment within low-voltage systems*

IEC 60898-1:2015, *Electrical accessories – Circuit-breakers for overcurrent protection for household and similar installations – Part 1: Circuit-breakers for AC operation*
IEC 60898-1:2015/AMD1:2019

IEC 60999-1:1999, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm² up to 35 mm² (included)*

IEC 61439-1, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 61439-3:2012, *Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)*

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