



**SLOVENSKI STANDARD**  
**oSIST prHD 60269-3:2022**  
**01-julij-2022**

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**Niskonapetostne varovalke - 3. del: Dodatne zahteve za varovalke, ki jih uporabljajo nestrokovne osebe (uporaba varovalk zlasti v gospodinjstvu in podobnih okoljih) - Primeri standardiziranih sistemov varovalk od A do F**

Low-voltage fuses - 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

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PREVIEW**

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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**Ta slovenski standard je istoveten z: prHD 60269-3:2022**

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**ICS:**

29.120.50	Varovalke in druga nadtokovna zaščita	Fuses and other overcurrent protection devices
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32B/719/CDV

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OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
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TITLE:

**Low-voltage fuses - 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**

PROPOSED STABILITY DATE: 2025

NOTE FROM TC/SC OFFICERS:

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2 **Secr Remark: The content different in this WD to the presently valid version of**  
 3 **IEC 60269-3, Ed 4.2 is marked in red in this document. Content has only been**  
 4 **added/changed in chapters 1 and 6.**

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**LOW-VOLTAGE FUSES –**

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335  
336 **Part 3: Supplementary requirements for fuses**  
337 **for use by unskilled persons**  
338 **(fuses mainly for household and similar applications) –**  
339 **Examples of standardized systems of fuses A to F**  
340  
341

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376 patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

**DISCLAIMER**

**This Consolidated version is not an official IEC Standard and has been prepared for user convenience. Only the current versions of the standard and its amendment(s) are to be considered the official documents.**

377 **This Consolidated version of IEC 60269-3 bears the edition number 4.2. It consists of**  
378 **the fourth edition (2010-05) [documents 32B/553/FDIS and 32B/557/RVD], its**  
379 **amendment 1 (2013-01) [documents 32B/594/CDV and 32B/602A/RVC] as well as its**  
380 **corrigenda 1 (2013-03) and 2 (2013-06), and its amendment 2 (2019-06) [documents**  
381 **32B/650/CDV and 32B/666/RVC]. The technical content is identical to the base edition**  
382 **and its amendments.**

383 **This Final version does not show where the technical content is modified by**  
384 **amendments 1 and 2. A separate Redline version with all changes highlighted is**  
385 **available in this publication.**

386 International Standard IEC 60269-3 has been prepared by subcommittee 32B: Low-voltage  
387 fuses, of IEC technical committee 32: Fuses.

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388 This part is to be used in conjunction with IEC 60269-1:2006, *Low-voltage fuses – Part 1:*  
389 *General requirements* and its Amendment 1 (2009).

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

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

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

395 This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

397 Part 1: General requirements

398 NOTE This part includes IEC 60269-1 (third edition, 1998) and parts of IEC 60269-2 (second edition,  
399 1986) and IEC 60269-3 (second edition, 1987).

400 Part 2: **Examples of standardized systems of fuses A to J” to “...Examples of standardized**  
401 **systems of fuses A to K”**

402 ~~NOTE This part includes parts of IEC 60269-2 (second edition, 1986) and all of IEC 60269-2-1 (fourth~~  
403 ~~edition, 2004).~~

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

406 ~~NOTE This edition of IEC 60269-3 is based on edition 3. Edition 3 was a result of a restructuring of the~~  
407 ~~IEC 60269 series of standards in 2006. Edition 3 included parts of IEC 60269-3 (second edition, 1987)~~  
408 ~~and all of IEC 60269-3-1 (second edition, 2004).~~

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

411 ~~NOTE This part includes IEC 60269-4 (third edition, 1986) and IEC 60269-4-1 (first edition, 2002).~~

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

413 ~~NOTE Currently IEC/TR 61818 (2003).~~  
~~[https://standards.iteh.ai/catalog/standards/sist/59c65d80-](https://standards.iteh.ai/catalog/standards/sist/59c65d80-7f4f-41c0-8bb6-d09ef36678e0/osist-prhd-60269-3-2022)~~  
~~[7f4f-41c0-8bb6-d09ef36678e0/osist-prhd-60269-3-2022](https://standards.iteh.ai/catalog/standards/sist/59c65d80-7f4f-41c0-8bb6-d09ef36678e0/osist-prhd-60269-3-2022)~~

414 A list of all parts of the IEC 60269 series, under the general title, *Low-voltage fuses*, can be  
415 found on the IEC website.

416 The committee has decided that the contents of the base publication and its amendments will  
417 remain unchanged until the stability date indicated on the IEC web site under  
418 "http://webstore.iec.ch" in the data related to the specific publication. At this date, the  
419 publication will be

- 420 • reconfirmed,
- 421 • withdrawn,
- 422 • replaced by a revised edition, or
- 423 • amended.

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**IMPORTANT – The “colour inside” logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.**

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**LOW-VOLTAGE FUSES –**

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

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**1 General scope**

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 standard is divided into four fuse systems, each dealing with a specific example of standardized fuses for use by unskilled persons:~~

~~● Fuse system A: D type fuse system~~

~~● Fuse system B: Cylindrical fuses (NF cylindrical fuse system)~~

~~● Fuse system C: Cylindrical fuses (BS cylindrical fuse system)~~

~~● Fuse system F: Cylindrical fuse-links for use in plugs (BS plugtop fuse system)~~

~~NOTE 1— Examples of standardized fuses complying with the requirements of IEC 60269-1 are listed in the present standard. Other examples may be added, provided that they comply with these requirements.~~

~~For recommendations for future designs of fuses, see Annex CC.~~

~~NOTE 2— The following fuse systems are standardized systems with respect to their safety aspects.~~

~~The National Committees may select from the examples of standardized fuses one or more systems for their own standards. Colour codes are not specified for each fuse system. Where colour codes are indicated, they apply only to that particular fuse system.~~

451

~~This standard 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) whereas the protection of cables and lines is ensured. The applicant required to take care of replacing a fuse-link by the same type.~~

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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

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~~Note 1: Applicants of system A and F may have fuse-bases in their installation not providing degree of protection IP2X all the time. They have to take care when replacing the fuse-link, the degree of protection may temporarily be reduced to IP1X. 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,~~

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464 as there is enough experience with interchanging of incandescent lamps, where comparable  
465 degrees of safety exist. For future designs annex CC recommends that the degree of  
466 protection against electric shock during the period of replacing a fuse-link should be at least  
467 IP2X.

468 Note 2: Not to interchange with fuse-links of the same dimension but with different  
469 characteristic (e. g. aM)

470

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

## 473 1.2 Normative references

474 The following referenced documents are indispensable for the application of this document.  
475 For dated references, only the edition cited applies. For undated references, the latest edition  
476 of the referenced document (including any amendments) applies.

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

479 IEC 60269-1:2006, *Low-voltage fuses – Part 1: General requirements*  
480 *Amendment 1 (2009)*

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

482 IEC 60898-1:2002, *Electrical accessories – Circuit-breakers for overcurrent protection for*  
483 *household and similar installations – Part 1: Circuit-breakers for a.c. operation*  
484 *Amendment 1(2002)*  
485 *Amendment 2 (2003)*

486 IEC 60999:1990, *Connecting devices – Electrical copper conductors – Safety requirements*  
487 *for screw-type and screwless-type clamping units for electrical copper conductors*

<https://standards.iteh.ai/catalog/standards/sist/59c65d80-7f4f-41c0-8bb6-d09ef36678e0/osist-prhd-60269-3-2022>

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## Fuse system A – D type fuse system

### 499 1 General

500 IEC 60269-1 applies with the following supplementary requirements.

## 501 1.1 Scope

502 The following additional requirements apply to "gG" fuses for use by unskilled persons for  
503 domestic and similar applications with rated currents up to and including 100 A and rated  
504 voltages of up to and including 500 V a.c. and 500 V d.c.

505 The following characteristics of the fuses are specified in addition to IEC 60269-1:

- 506 • rated voltage;
- 507 • rated power dissipation of the fuse-link and rated acceptable power dissipation of a fuse-  
508 holder;
- 509 • time-current characteristic;
- 510 • gates,  $I^2t$  characteristics and conventional times and currents;
- 511 • rated breaking capacity;
- 512 • marking on the fuse;
- 513 • standard conditions for construction;
- 514 • tests.

## 515 2 Terms and definitions

516 IEC 60269-1 applies.

## 517 3 Conditions for operation in service

518 IEC 60269-1 applies.

## 519 4 Classification

520 IEC 60269-1 applies. <https://standards.iteh.ai/catalog/standards/sist/59c65d80-7f4f-41c0-8bb6-d09ef36678e0/osist-prhd-60269-3-2022>

## 521 5 Characteristics of fuses

522 IEC 60269-1 applies with the following supplementary requirements.

### 523 5.2 Rated voltage

524 For a.c., the standard values of rated voltages are 400 V for size D01, D02 and D03<sup>1</sup> and 500  
525 V for size DII, DIII and DIV.

526 For d.c., the rated voltages are 250 V for D01, D02 and D03 and 500 V for DII, DIII and DIV.

#### 527 5.3.1 Rated current of the fuse-link

528 The rated currents of the fuse-links are given in Figures 110 and 111.

#### 529 5.3.2 Rated current of the fuse-holder

530 The rated currents of the fuse-carriers are given in Figures 112, 113 and 114. The rated  
531 currents of the fuse-bases are given in Figures 118, 119 and 120.

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<sup>1</sup> These three sizes are also applicable for 415 V networks.