SLOVENSKI STANDARD
SIST EN 60269-1:2007

01-november-2007

Nadomeġļ a:
SIST EN 60269-1:2000
SIST EN 60269-1:2000/A1:2006
SIST EN 60269-2:1995
SIST EN 60269-2:1995/A1:1999
SIST EN 60269-2:1995/A2:2003
SIST EN 60269-3:1995
SIST EN 60269-3:1995/A1:2004

Nizkonapetostne varovalke – 1. del: Splošne zahteve (IEC 60269-1:2006)

Low-voltage fuses -- Part 1: General requirements (IEC 60269-1:2006)

Niederspannungssicherungen -- Teil 1: Allgemeine Anforderungen (IEC 60269-1:2006)

Fusibles basse tension -- Partie 1: Exigences générales (IEC 60269-1:2006)

Ta slovenski standard je istoveten z: **EN 60269-1:2007**

ICS:

29.120.50	Varovalke in druga medtokovna zaġļ ita	Fuses and other overcurrent protection devices

SIST EN 60269-1:2007 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60269-1

May 2007

ICS 29.120.50

Supersedes EN 60269-1:1998 + A1:2005, partially supersedes EN 60269-2:1995 + A1:1998 + A2:2002 and EN 60269-3:1995 + A1:2003

English version

Low-voltage fuses - Part 1: General requirements (IEC 60269-1:2006)

Fusibles basse tension - Partie 1: Exigences générales (CEI 60269-1:2006)

Niederspannungssicherungen - Teil 1: Allgemeine Anforderungen (IEC 60269-1:2006)

This European Standard was approved by CENELEC on 2007-03-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60269-1:2007 E

Foreword

The text of document 32B/483/FDIS, future edition 4 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 was approved by CENELEC as EN 60269-1 on 2007-03-01.

This European Standard supersedes EN 60269-1:1998 + A1:2005, it also partially supersedes EN 60269-2:1995 + A1:1998 + A2:2004 and EN 60269-3:1995 + A1:2003.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-03-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-03-01

Annex ZA has been added by CENELEC.

———————

Endorsement notice

The text of the International Standard IEC 60269-1:2006 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 standards indicated:

IEC 60127	NOTE	Harmonized in EN 60127 series (not modified).
IEC 60947-3	NOTE	Harmonized as EN 60947-3:1999 (not modified).

———————

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60038 (mod)	1983	IEC standard voltages [1]	HD 472 S1 + corr. February	1989 2002
IEC 60050-441 A1	1984 2000	International Electrotechnical Vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60269-2	- [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 I	HD 60269-2	2007 [3]
IEC 60269-3	- [2]	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	HD 60269-3	2007 [3]
IEC 60269-4	- [2]	Low-voltage fuses - Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices	EN 60269-4	2007 [3]
IEC 60364-3 (mod)	1993	Electrical installations of buildings - Part 3: Assessment of general characteristics	HD 384.3 S2	1995
IEC 60364-5-52	2001	Electrical installations of buildings - Part 5-52: Selection and erection of electrical equipment - Wiring systems	-	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993

[1] The title of HD 472 S1 is: Nominal voltages for low voltage public electricity supply systems.

[2] Undated reference.

[3] Valid edition at date of issue.

Publication	Year	Title	EN/HD	Year
IEC 60584-1	1995	Thermocouples - Part 1: Reference tables	EN 60584-1	1995
IEC 60617	data-base	Graphical symbols for diagrams	-	-
IEC 60664-1 + A1 + A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2003
IEC 60695-2-1/0	1994	Fire hazard testing - Part 2: Test methods - Section 1/sheet 0: Glow-wire test methods - General	EN 60695-2-1/0 [4)]	1996
IEC 60695-2-1/1	1994	Fire hazard testing - Part 2: Test methods - Section 1/sheet 1: Glow-wire end-product test and guidance	EN 60695-2-1/1 [5)]	1996
IEC 60695-2-1/2	1994	Fire hazard testing - Part 2: Test methods - Section 1/sheet 2: Glow-wire flammability test on materials	EN 60695-2-1/2 [6)]	1996
IEC 60695-2-1/3	1994	Fire hazard testing - Part 2: Test methods - Section 1/sheet 3: Glow-wire ignitability test on materials	EN 60695-2-1/3 [7)]	1996
ISO 3	1973	Preferred numbers - Series of preferred numbers	-	-
ISO 478	1974	Paper - Untrimmed stock sizes for the ISO-A series - ISO primary range	-	-
ISO 593	1974	Paper - Untrimmed stock size for the ISO-A series - ISO supplementary range	-	-
ISO 4046	1978	Paper, board, pulp and related terms - Vocabulary	-	-

[4)] EN 60695-2-1/0 is superseded by EN 60695-2-10:2001, which is based on IEC 60695-2-10:2000.

[5)] EN 60695-2-1/1 is superseded by EN 60695-2-11:2001, which is based on IEC 60695-2-11:2000.

[6)] EN 60695-2-1/2 is superseded by EN 60695-2-12:2001, which is based on IEC 60695-2-12:2000.

[7)] EN 60695-2-1/3 is superseded by EN 60695-2-13:2001, which is based on IEC 60695-2-13:2000.

INTERNATIONAL STANDARD

IEC 60269-1

Fourth edition
2006-11

Low-voltage fuses –

Part 1:
General requirements

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE XC

For price, see current catalogue

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

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.

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 provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.

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.

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

This fourth edition cancels and replaces the third edition published in 1998 and amendment 1 (2005), as well as parts of IEC 60269-2 (1986) and IEC 60269-3 (1987) and constitutes a minor revision.

The general re-organization of the IEC 60269 series has led to the creation of this new edition.

The text of this standard is based on following documents:

FDIS	Report on voting
32B/483/FDIS	32B/490/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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

Part 1: General requirements

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

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

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

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

NOTE This part includes parts of IEC 60269-3 (second edition, 1987) and all of IEC 60269-3-1 (second edition, 2004).

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

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

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

NOTE Currently IEC/TR 61818 (2003).

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 publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

INTRODUCTION

A reorganization of the different parts of the IEC 60269 series has been carried out, in order to simplify its use, especially by the laboratories which test the fuses.

IEC 60269-1, IEC 60269-2, IEC 60269-3 and IEC 60269-3-1 have been integrated into either the new part 1 or the new parts 2 or 3, according to the subjects considered, so that the clauses which deal exclusively with “fuses for authorized persons” are separated from the clauses dealing with “fuses for unauthorized persons”.

As far as IEC 60269-4 and IEC 60269-4-1 are concerned, they have been integrated into the new part 4 which deals with the fuse-links used for semiconductor protection.

LOW-VOLTAGE FUSES –

Part 1: General requirements

1 General

1.1 Scope and object

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 a.c. circuits of nominal voltages not exceeding 1 000 V or d.c. 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.

NOTE 1 For "a" fuse-links, details of performance (see 2.2.4) on d.c. circuits should be subject to agreement between user and manufacturer.

NOTE 2 Modifications of, and supplements to, this standard 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 3 This standard does not apply to miniature fuses, these being covered by IEC 60127.

The object of this standard 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 refers in particular to

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

1.2 Normative references

The following referenced documents are indispensable for the application 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 60038:1983, *IEC standard voltages*

IEC 60050(441):1984, *International Electrotechnical Vocabulary (IEV) – Chapter 441: Switchgear, controlgear and fuses*
Amendment 1 (2000)

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 I)*

IEC 60269-3, *Low-voltage fuses – 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*

IEC 60269-4, *Low-voltage fuses – Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices*

IEC 60269-5, *Low-voltage fuses – Part 5: Guidance for the application of low-voltage fuses*

IEC 60364-3:1993, *Electrical installations of buildings – Part 3: Assessment of general characteristics*

IEC 60364-5-52:2001, *Electrical installations of buildings – Part 5-52: Selection and erection of electrical equipment – Wiring system*

IEC 60529:1989, *Degrees of protection provided by enclosures (Code IP)*

IEC 60584-1:1995, *Thermocouples – Part 1: Reference tables*

IEC 60617, *Graphical symbols for diagrams*

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

IEC 60695-2-1/0:1994, *Fire hazard testing – Part 2: Test methods – Section 1/sheet 0: Glow-wire test methods – General*

IEC 60695-2-1/1:1994, *Fire hazard testing – Part 2: Test methods – Section 1/sheet 1: Glow-wire end-product test and guidance*

IEC 60695-2-1/2:1994, *Fire hazard testing – Part 2: Test methods – Section 1/sheet 2: Glow-wire flammability test on materials*

IEC 60695-2-1/3:1994, *Fire hazard testing – Part 2: Test methods – Section 1/sheet 3: Glow-wire ignitability test on materials*