SVENSK STANDARD SS-EN 60269-1

Fastställd	Utgåva	Sida	Ansvarig kommitté
2008-02-25	3	1 (1+80)	SEK TK 32B

Lågspänningssäkringar – Del 1: Allmänna fordringar

Low-voltage fuses – Part 1: General requirements

Som svensk standard gäller europastandarden EN 60269-1:2007. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60269-1:2007.

Nationellt förord

Europastandarden EN 60269-1:2007

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60269-1, Fourth edition, 2006 - Low-voltage fuses - Part 1: General requirements**

utarbetad inom International Electrotechnical Commission, IEC.

Denna standard ersätter SS-EN 60269-1, utgåva 2, 1999, SS-EN 60269-1/A1, utgåva 1, 2005 samt delvis SS-EN 60269-2, utgåva 1, 1995, SS-EN 60269-2/A1, utgåva 2, 1999, SS-EN 60269-2/A2, utgåva 1, 2002, SS-EN 60269-3, utgåva 1, 1995 och SS-EN 60269-3/A1, utgåva 1, 2003.

Tidigare fastställd svensk standard SS-EN 60269-1, utgåva 2, 1999, SS-EN 60269-1/A1, utgåva 1, 2005, SS-EN 60269-2, utgåva 1, 1995, SS-EN 60269-2/A1, utgåva 2, 1999, SS-EN 60269-2/A2, utgåva 1, 2002, SS-EN 60269-3, utgåva 1, 1995 och SS-EN 60269-3/A1, utgåva 1, 2003, gäller ej fr o m 2010-03-01.

ICS 29.120.50

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@elstandard.se. *Internet*: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven 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

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

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
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

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

SEK Svensk Elstandard

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.

CONTENTS

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*

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 – Bilingual edition*