SVENSK STANDARD SS-EN IEC 60282-1

| Fastställd | Utgåva | Sida | Ansvarig kommitté |
|---|---|---|---|
| 2020-09-23 | 6 | 1 (1+81) | SEK TK 17AC |



# Säkringar för lägst 1 kV – Del 1: Strömbegränsande säkringar

*High-voltage fuses – Part 1: Current-limiting fuses*

Som svensk standard gäller europastandarden EN IEC 60282-1:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60282-1:2020.

**Nationellt förord**

Europastandarden EN IEC 60282-1:2020

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60282-1, Eight edition, 2020 - High-voltage fuses - Part 1: Current-limiting fuses**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60282-1, utgåva 5, 2010 och SS-EN 60282-1/A1, utgåva 1, 2014, gäller ej fr o m 2023-05-19.

ICS 29.120.50

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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## *Standarder underlättar utvecklingen och höjer elsäkerheten*

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

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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.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN IEC 60282-1

May 2020

ICS 29.120.50

Supersedes EN 60282-1:2009 and all of its amendments and corrigenda (if any)

English Version

# High-voltage fuses - Part 1: Current-limiting fuses (IEC 60282-1:2020)

Fusibles à haute tension - Partie 1: Fusibles limiteurs de courant
(IEC 60282-1:2020)

Hochspannungssicherungen - Teil 1: Strombegrenzende Sicherungen
(IEC 60282-1:2020)

This European Standard was approved by CENELEC on 2020-05-19. 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, Turkey 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**



Ref. No. EN IEC 60282-1:2020 E

## European foreword

The text of document 32A/347/FDIS, future edition 8 of IEC 60282-1, prepared by SC 32A "High-voltage fuses" of IEC/TC 32 "Fuses" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60282-1:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-02-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-19

This document supersedes EN 60282-1:2009 and all of its amendments and corrigenda (if any).

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.

## Endorsement notice

The text of the International Standard IEC 60282-1:2020 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 60085:2007 | NOTE | Harmonized as EN 60085:2008 (not modified) |
| IEC 62271-100:2008 | NOTE | Harmonized as EN 62271-100:2009 (not modified) |
| IEC 62271-100:2008/A1:2012 | NOTE | Harmonized as EN 62271-100:2009/A1:2012 (not modified) |
| IEC 62271-100:2008/A2:2017 | NOTE | Harmonized as EN 62271-100:2009/A2:2017 (not modified) |
| IEC 62271-103 | NOTE | Harmonized as EN 62271-103 |
| ISO 179 (series) | NOTE | Harmonized as EN ISO 179 (series) |

# 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.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60060-1 | 2010 | High-voltage test techniques - Part 1: General definitions and test requirements | EN 60060-1 | 2010 |
| IEC 60071-1 | - | Insulation co-ordination - Part 1: Definitions, principles and rules | EN IEC 60071-1 | - |
| IEC 60549 | - | High-voltage fuses for the external protection of shunt capacitors | EN 60549 | - |
| IEC 60644 | - | Specification for high-voltage fuse-links for motor circuit applications | EN 60644 | - |
| IEC 62271-105 | - | High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV | - | - |

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# HIGH-VOLTAGE FUSES –

# Part 1: Current-limiting fuses

## 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.
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International Standard IEC 60282-1 has been prepared by subcommittee 32A: High-voltage fuses, of IEC technical committee 32: Fuses.

This eighth edition cancels and replaces the seventh edition published in 2009.

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

– additional information concerning thermally operated strikers;
– the division of ratings, characteristics and type tests into those applicable to all fuses and those applicable to particular fuse-link types and applications;
– adjustment of Series II voltages and tests to meet present North American standard system voltages and applications;
– clarification of requirements for fuse-links used in surrounding temperatures above 40 °C; and

– clarification of homogeneous requirements for fuse-links containing one element.

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

| FDIS | Report on voting |
|---|---|
| 32A/347/FDIS | 32A/349/RVD |

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

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

A list of all parts in the IEC 60282 series, published under the general title *High-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 "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.

# HIGH-VOLTAGE FUSES –

# Part 1: Current-limiting fuses

## 1 Scope

This part of IEC 60282 applies to all types of high-voltage current-limiting fuses designed for use outdoors or indoors on alternating current systems of 50 Hz and 60 Hz and of rated voltages exceeding 1 000 V.

## 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 60060-1:2010, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60071-1*, Insulation coordination – Part 1: Definitions, principles and rules*

IEC 60549, *High-voltage fuses for the external protection of shunt capacitors*

IEC 60644, *Specification for high-voltage fuse-links for motor circuit applications*

IEC 62271-105, *High-voltage switchgear and controlgear – Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV*