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BSI Standards Publication

High-voltage fuses

Part 1: Current-limiting fuses

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National foreword

This British Standard is the UK implementation of EN IEC 60282-1:2020. It is identical to IEC 60282-1:2020. It supersedes BS EN 60282-1:2009+A1:2014, which will be withdrawn on 19 May 2023.

The UK participation in its preparation was entrusted to Technical Committee PEL/32, Fuses.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
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EUROPÄISCHE NORM

May 2020

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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.

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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

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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)

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(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 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

HIGH-VOLTAGE FUSES –

Part 1: Current-limiting fuses

FOREWORD

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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

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- 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.

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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*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 Electrical characteristics

3.1.1

rated value

value of a quantity used for specification purposes, established for a specified set of operating conditions of a component, device, equipment, or system

Note 1 to entry: Examples of rated value usually stated for fuses: voltage, current and breaking current.

[SOURCE: IEC 60050-441:2000, 441-18-35, modified – "used for specification purposes" and "system" added, "assigned, generally by the manufacturer" deleted.]