Irish Standard
I.S. EN 60269-6:2011

Low-voltage fuses -- Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems (IEC 60269 -6:2010 (EQV) + corrigendum Dec. 2010 (EQV))

I.S. EN 60269-6:2011

Incorporating amendments/corrigenda issued since publication:

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EUROPEAN STANDARD

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EN 60269-6

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English version

Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems

(IEC 60269-6:2010 + corrigendum Dec. 2010)

Fusibles basse tension -
Partie 6: Exigences supplémentaires concernant les éléments de remplacement utilisés pour la protection des systèmes d'énergie solaire photovoltaïque
(CEI 60269-6:2010 + corrigendum Dec. 2010)

Niederspannungssicherungen -
Teil 6: Zusätzliche Anforderungen an Sicherungseinsätze für den Schutz von solaren photovoltaischen Energieerzeugungssystemen
(IEC 60269-6:2010 + corrigendum Dec. 2010)

This European Standard was approved by CENELEC on 2011-04-01. 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.

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CENELEC

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

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Foreword

The text of document 32B/561/FDIS, future edition 1 of IEC 60269-6, prepared by IEC/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 60269-6 on 2011-04-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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)	2012-01-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-04-01

This part is to be used in conjunction with EN 60269-1:2007, Low-voltage fuses, Part 1: General requirements.

This Part 6 supplements or modifies the corresponding clauses or subclauses of Part 1.

Where no change is necessary, this Part 6 indicates that the relevant clause or subclause applies.

Tables and figures which are additional to those in Part 1 are numbered starting from 101.

Additional annexes are lettered AA, BB, etc.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60269-6:2010 + corrigendum December 2010 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 60269 series	NOTE	Harmonized in EN 60269 series (partially modified).
IEC 60269-3	NOTE	Harmonized as HD 60269-3.
IEC 60269-4	NOTE	Harmonized as EN 60269-4.
IEC 60364-7-712	NOTE	Harmonized as HD 60364-7-712.
IEC 61215	NOTE	Harmonized as EN 61215.
IEC 61646	NOTE	Harmonized as EN 61646.
IEC/TS 61836:2007	NOTE	Harmonized as CLC/TS 61836:2009 (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 60269-1 + A1	2006 2009	Low-voltage fuses - Part 1: General requirements	EN 60269-1 + A1	2007 2009
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 J	HD 60269-2	-
ISO 3	-	Preferred numbers - Series of preferred numbers	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE FUSES –

Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems

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 60269-6 has been prepared by subcommittee 32B: Low-voltage fuses, of IEC technical committee 32: Fuses.

The text of this standard is based on the following documents:

FDIS	Report on voting
32B/561/FDIS	32B/569/RVD

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

This part is to be used in conjunction with IEC 60269-1:2006, *Low-voltage fuses, Part 1: General requirements.*

This Part 6 supplements or modifies the corresponding clauses or subclauses of Part 1.

Where no change is necessary, this Part 6 indicates that the relevant clause or subclause applies.

Tables and figures which are additional to those in Part 1 are numbered starting from 101.

Additional annexes are lettered AA, BB, etc.

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

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

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

The contents of the corrigendum of December 2010 have been included in this copy.

LOW-VOLTAGE FUSES –

Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems

1 General

IEC 60269-1 applies with the following supplementary requirements.

Fuse-links for the protection of solar photovoltaic (PV) energy systems shall comply with all requirements of IEC 60269-1, if not otherwise indicated hereinafter, and shall also comply with the supplementary requirements laid down below.

NOTE The abbreviation “PV” (photovoltaic) is used in this document.

1.1 Scope and object

These supplementary requirements apply to fuse-links for protecting PV strings and PV arrays in equipment for circuits of nominal voltages up to 1 500 V d.c.

Their rated voltage may be up to 1 500 V d.c.

NOTE 1 Such fuse-links are commonly referred to as “PV fuse-links”.

NOTE 2 In most cases, a part of the associated equipment serves the purpose of a fuse-base. Owing to the great variety of equipment, no general rules can be given; the suitability of the associated equipment to serve as a fuse-base should be subject to agreement between the manufacturer and the user. However, if separate fuse-bases or fuse-holders are used, they should comply with the appropriate requirements of IEC 60269 series.

NOTE 3 PV fuse-links protect down stream inverter components such as capacitors or the discharge of capacitors back into the arrays or array wiring up to the rated breaking capacity.

The object of these supplementary requirements is to establish the characteristics of PV fuse-links in such a way that they can be replaced by other fuse-links having the same characteristics, provided that their dimensions are identical. For this purpose, this standard refers in particular to

a) the following characteristics of fuses:
   1) their rated values;
   2) their utilisation category;
   3) their temperature rises in normal service;
   4) their power dissipation;
   4) their time-current characteristics;
   6) their breaking capacity;
   7) their dimensions or size (if applicable).
b) type tests for verification of the characteristics of fuses;
c) the markings on 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.