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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 K

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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 K

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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This consolidated version of the official IEC Standard and its amendments has been prepared for user convenience.

IEC 60269-2 edition 5.2 contains the fifth edition (2013-07) [documents 32B/611/FDIS and 32B/615/RVD], its amendment 1 (2016-08) [documents 32B/641/CDV and 32B/648/RVC] and its amendment 2 (2024-06) [documents 32B/743/FDIS and 32B/755/RVD] and its corrigendum 1 (2025-06).

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in

strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60269-2 has been prepared by subcommittee 32B: Low-voltage fuses, of IEC technical committee 32: Fuses.

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

a) fuse systems A and B: modified values for the power dissipation of NH aM fuse-links;

b) fuse systems A and B: introduction of dimension r for NH fuse-links;

c) addition of new fuse system K: gK fuse-links with contacts for bolted connections.

This part is to be used in conjunction with IEC 60269-1:2006, *Low-voltage fuses – Part 1: General requirements* and its Amendment 1 (2009).

This Part 2 supplements or modifies the corresponding clauses or subclauses of Part 1.

Where no change is necessary, this Part 2 indicates that the relevant clause or subclause applies.

Tables and figures which are additional to those in Part 1 are numbered starting from 101 in fuse system A, from 201 in fuse system B, etc. Additional annexes are numbered AA, BB, etc.

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

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

The committee has decided that the contents of this document and its amendments will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The *'colour inside'* logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

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

Part 1: General requirements

Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to K

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

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

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

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

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 K

1 General scope

1.1 Scope

Fuses for use by authorized persons are generally designed to be used in installations where the fuse-links are accessible to, and may be replaced by, authorized persons only.

Fuses for use by authorized persons according to the following fuse systems also comply with the requirements of the corresponding subclauses of IEC 60269-1, unless otherwise defined in this standard.

This standard is divided into fuse systems, each dealing with a specific example of standardized fuses for use by authorized persons:

Fuse system A: Fuses with fuse-links with blade contacts (NH fuse system)

Fuse system B: Fuses with striker fuse-links with blade contacts (NH fuse system)

Fuse system C: Fuse-rails (NH fuse system)

Fuse system D: Fuse-bases for busbar mounting (NH fuse system)

Fuse system E: Fuses with fuse-links for bolted connections (BS bolted fuse system)

Fuse system F: Fuses with fuse-links having cylindrical contact caps (NF cylindrical fuse system)

Fuse system G: Fuses with fuse-links with offset blade contacts (BS clip-in fuse system)

Fuse system H: Fuses with fuse-links having "gD" and "gN" characteristic (class J class L and class T time delay and non time delay fuse types)

Fuse system I: gU fuse-links with wedge tightening contacts

Fuse system J: Fuses with fuse-links having "gD class CC" and "gN class CC" characteristics (class CC time delay and non-time delay fuse types)

Fuse system K: gK fuse-links with blade for bolted connections – High fuse-link ratings from 1 250 A up to 4 800 A (master fuse-links)

NOTE The above-mentioned fuse systems are standardized systems in respect to their safety aspects. The National Committees can select from the examples of standardized fuses one or more systems for their own standards.

1.2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60269-1, *Low-voltage fuses – Part 1: General requirements*

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

IEC 60999 (all parts), *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units*

IEC 60999-1, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm^2 up to 35 mm^2 (included)*

IEC 60999-2, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 2: Particular requirements for clamping units for conductors above 35 mm^2 up to 300 mm^2 (included)*

~~ISO 6988, *Metallic and other non organic coatings – Sulfur dioxide test with general condensation of moisture*~~

ISO 22479, *Corrosion of metals and alloys – Sulfur dioxide test in a humid atmosphere (fixed gas method)*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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 K

FOREWORD

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This consolidated version of the official IEC Standard and its amendments has been prepared for user convenience.

IEC 60269-2 edition 5.2 contains the fifth edition (2013-07) [documents 32B/611/FDIS and 32B/615/RVD], its amendment 1 (2016-08) [documents 32B/641/CDV and 32B/648/RVC] and its amendment 2 (2024-06) [documents 32B/743/FDIS and 32B/755/RVD] and its corrigendum 1 (2025-06).

This Final version does not show where the technical content is modified by amendments 1 and 2. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 60269-2 has been prepared by subcommittee 32B: Low-voltage fuses, of IEC technical committee 32: Fuses.

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

a) fuse systems A and B: modified values for the power dissipation of NH aM fuse-links;

b) fuse systems A and B: introduction of dimension *r* for NH fuse-links;

c) addition of new fuse system K: gK fuse-links with contacts for bolted connections.

This part is to be used in conjunction with IEC 60269-1:2006, *Low-voltage fuses – Part 1: General requirements* and its Amendment 1 (2009).

This Part 2 supplements or modifies the corresponding clauses or subclauses of Part 1.

Where no change is necessary, this Part 2 indicates that the relevant clause or subclause applies.

Tables and figures which are additional to those in Part 1 are numbered starting from 101 in fuse system A, from 201 in fuse system B, etc. Additional annexes are numbered AA, BB, etc.

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

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

The committee has decided that the contents of this document and its amendments will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The *'colour inside'* logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

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

Part 1: General requirements

Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to K

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

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

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

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

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 K

1 General scope

1.1 Scope

Fuses for use by authorized persons are generally designed to be used in installations where the fuse-links are accessible to, and may be replaced by, authorized persons only.

Fuses for use by authorized persons according to the following fuse systems also comply with the requirements of the corresponding subclauses of IEC 60269-1, unless otherwise defined in this standard.

This standard is divided into fuse systems, each dealing with a specific example of standardized fuses for use by authorized persons:

Fuse system A: Fuses with fuse-links with blade contacts (NH fuse system)

Fuse system B: Fuses with striker fuse-links with blade contacts (NH fuse system)

Fuse system C: Fuse-rails (NH fuse system)

Fuse system D: Fuse-bases for busbar mounting (NH fuse system)

Fuse system E: Fuses with fuse-links for bolted connections (BS bolted fuse system)

Fuse system F: Fuses with fuse-links having cylindrical contact caps (NF cylindrical fuse system)

Fuse system G: Fuses with fuse-links with offset blade contacts (BS clip-in fuse system)

Fuse system H: Fuses with fuse-links having "gD" and "gN" characteristic (class J class L and class T time delay and non time delay fuse types)

Fuse system I: gU fuse-links with wedge tightening contacts

Fuse system J: Fuses with fuse-links having "gD class CC" and "gN class CC" characteristics (class CC time delay and non-time delay fuse types)

Fuse system K: gK fuse-links with blade for bolted connections – High fuse-link ratings from 1 250 A up to 4 800 A (master fuse-links)

NOTE The above-mentioned fuse systems are standardized systems in respect to their safety aspects. The National Committees can select from the examples of standardized fuses one or more systems for their own standards.

1.2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60269-1, *Low-voltage fuses – Part 1: General requirements*

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

IEC 60999 (all parts), *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units*

IEC 60999-1, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm^2 up to 35 mm^2 (included)*

IEC 60999-2, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 2: Particular requirements for clamping units for conductors above 35 mm^2 up to 300 mm^2 (included)*

ISO 22479, *Corrosion of metals and alloys – Sulfur dioxide test in a humid atmosphere (fixed gas method)*