SVENSK STANDARD

SS-EN IEC 61643-332, utg 1:2025

Fastställd	Sida	Ansvarig kommitté
2025-02-05	1 (63)	SEK TK 37A

Överspänningsskydd för lågspänning – Del 332: Principer för val och användning av metalloxidvaristorer (MOV)

Components for low-voltage surge protection – Part 332: Selection and application principles for metal oxide varistors (MOV)

Som svensk standard gäller europastandarden EN IEC 61643-332:2024. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61643-332:2024.

Nationellt förord

Europastandarden EN IEC 61643-332:2024

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61643-332, First edition, 2024 - Components for low-voltage surge protection – Part 332: Selection and application principles for metal oxide varistors (MOV)**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 31.040.20

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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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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 61643-332

May 2024

ICS 31.040.20

English Version

Components for low-voltage surge protection - Part 332: Selection and application principles for metal oxide varistors (MOV) (IEC 61643-332:2024)

Composants pour parafoudres basse tension - Partie 332: Choix et principes d'application des varistances à oxyde métallique (MOV) (IEC 61643-332:2024)

Bauelemente für den Überspannungsschutz bei Niederspannungen - Teil 332: Auswahl- und Anwendungsgrundsätze für Metalloxidvaristoren (MOV) (IEC 61643-332:2024)

This European Standard was approved by CENELEC on 2024-05-22. 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, Türkiye 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 61643-332:2024 E

European foreword

The text of document 37B/243/FDIS, future edition 1 of IEC 61643-332, prepared by SC 37B "Components for low-voltage surge protection" of IEC/TC 37 "Surge arresters" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61643-332:2024.

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) 2025-02-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-05-22

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61643-332:2024 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 standard indicated:

IEC 60364-5-51:2005	NOTE	Approved as HD 60364-5-51:2009 +A11:2013 +A12:2017
IEC 61000-4-2:2008	NOTE	Approved as EN 61000-4-2:2009 (not modified)
IEC 60068-1:2013	NOTE	Approved as EN 60068-1:2014 (not modified)
IEC 60068-2-20:2021	NOTE	Approved as EN IEC 60068-2-20:2021 (not modified)
IEC 60068-2-21:2021	NOTE	Approved as EN IEC 60068-2-21:2021 (not modified)
IEC 60068-2-78:2012	NOTE	Approved as EN 60068-2-78:2013 (not modified)
IEC 60721-3-3:2019	NOTE	Approved as EN IEC 60721-3-3:2019 (not modified)
IEC 61643-21:2000	NOTE	Approved as EN 61643-21:2001 (not modified)
IEC 61643-21:2000/A1:2008	NOTE	Approved as EN 61643-21:2001/A1:2009
IEC 61643-21:2000/A2:2012	NOTE	Approved as EN 61643-21:2001/A2:2013 (not modified)

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60664-1	2020	Insulation coordination for equipment within low-voltage supply systems - Part 1: Principles, requirements and tests	EN IEC 60664-1	2020
IEC 61051-1	2018	Varistors for use in electronic equipment - Part 1: Generic specification	EN IEC 61051-1	2018
IEC 61051-2	2021	Varistors for use in electronic equipment - Part 2: Sectional specification for surge suppression varistors	EN IEC 61051-2	2021
IEC 61643-11 (mod)	2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods	EN 61643-11	2012
-	-		+ A11	2018
IEC 61643-331	2020	Components for low-voltage surge protection - Part 331: Performance requirements and test methods for metal oxide varistors (MOV)	EN IEC 61643-331	2020
IEC 62368-1	2023	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN IEC 62368-1	2024

IEC 61643-332

Edition 1.0 2024-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Components for low-voltage surge protection – Part 332: Selection and application principles for metal oxide varistors (MOV)

Composants pour parafoudres basse tension – Partie 332: Choix et principes d'application des varistances à oxyde métallique (MOV)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 31.040.20

ISBN 978-2-8322-8594-7

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –

Part 332: Selection and application principles for metal oxide varistors (MOV)

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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9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 61643 has been prepared by subcommittee 37B: Components for low voltage surge protection, of IEC technical committee 37: Surge arresters. It is an International Standard.

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

Draft	Report on voting
37B/243/FDIS	37B/245/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 61643 series, published under the general title *Components for low-voltage surge protection*, 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 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 document 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.

COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –

Part 332: Selection and application principles for metal oxide varistors (MOV)

1 Scope

This part of IEC 61643 describes the theory of operation, principles for the selection and application of MOVs to be connected to power lines or telecommunication or signalling circuits, up to 1 000 V AC or 1 500 V DC. These SPCs are designed to protect apparatus or personnel, or both, from high transient voltages.

This document applies to MOVs having two electrodes and voltage dependent elements with or without disconnectors. It does not apply to assemblies that include MOVs and their influence on the MOV's characteristics.

This standard specifically discusses the zinc-oxide type of MOVs.

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 60664-1:2020, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*

IEC 61051-1:2018, *Varistors for use in electronic equipment – Part 1: Generic specification*

IEC 61051-2:2021, *Varistors for use in electronic equipment – Part 2: Sectional specification for surge suppression varistors*

IEC 61643-11:2011, *Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems – Requirements and test methods*

IEC 61643-331:2020, *Components for low-voltage surge protection – Part 331: Performance requirements and test methods for metal oxide varistors (MOV)*

IEC 62368-1:2023, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*