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

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/24

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EUROPEAN STANDARD

**EN IEC 61643-332**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2024

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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)

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## 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 (dop) 2025-02-22 level by publication of an identical national standard or by endorsement
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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

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NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cencenelec.eu](http://www.cencenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**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)**



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**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)**

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**COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –****Part 332: Selection and application principles  
for metal oxide varistors (MOV)**

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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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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## 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*

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