



Institut luxembourgeois de la normalisation  
de l'accréditation, de la sécurité et qualité  
des produits et services

## ILNAS-EN IEC 61969-1:2023

### **Mechanical structures for electrical and electronic equipment - Outdoor enclosures - Part 1: Design guidelines**

Structures mécaniques pour équipement  
électrique et électronique - Enveloppes  
de plein air - Partie 1: Lignes directrices  
pour la conception

Mechanische Bauweisen für elektrische  
und elektronische Einrichtungen -  
Außengehäuse - Teil 1:  
Konstruktionsleitfaden

03/2023



## National Foreword

This European Standard EN IEC 61969-1:2023 was adopted as Luxembourgish Standard ILNAS-EN IEC 61969-1:2023.

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- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

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ILNAS-EN IEC 61969-1:2023

EUROPEAN STANDARD **EN IEC 61969-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2023

ICS 31.240

Supersedes EN IEC 61969-1:2020

English Version

**Mechanical structures for electrical and electronic equipment -  
Outdoor enclosures - Part 1: Design guidelines  
(IEC 61969-1:2023)**

Structures mécaniques pour équipement électrique et  
électronique - Enveloppes de plein air - Partie 1: Lignes  
directrices pour la conception  
(IEC 61969-1:2023)

Mechanische Bauweisen für elektrische und elektronische  
Einrichtungen - Außengehäuse - Teil 1:  
Konstruktionsleitfaden  
(IEC 61969-1:2023)

This European Standard was approved by CENELEC on 2023-03-17. 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**

## European foreword

The text of document 48D/752/CDV, future edition 4 of IEC 61969-1, prepared by SC 48D "Mechanical structures for electrical and electronic equipment" of IEC/TC 48 "Electrical connectors and mechanical structures for electrical and electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61969-1:2023.

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) 2023-12-17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-03-17

This document supersedes EN IEC 61969-1:2020 and all of its amendments and corrigenda (if any).

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## Endorsement notice

The text of the International Standard IEC 61969-1:2023 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 60068-2-1	NOTE	Approved as EN 60068-2-1
IEC 60068-2-2	NOTE	Approved as EN 60068-2-2
IEC 60068-2-5	NOTE	Approved as EN IEC 60068-2-5
IEC 60068-2-6	NOTE	Approved as EN 60068-2-6
IEC 60068-2-10	NOTE	Approved as EN 60068-2-10
IEC 60068-2-11	NOTE	Approved as EN IEC 60068-2-11
IEC 60068-2-14	NOTE	Approved as EN 60068-2-14
IEC 60068-2-27	NOTE	Approved as EN 60068-2-27
IEC 60068-2-30	NOTE	Approved as EN 60068-2-30
IEC 60068-2-31	NOTE	Approved as EN 60068-2-31
IEC 60068-2-60	NOTE	Approved as EN 60068-2-60
IEC 60068-2-64	NOTE	Approved as EN 60068-2-64
IEC 60068-2-75	NOTE	Approved as EN 60068-2-75
IEC 60068-2-78	NOTE	Approved as EN 60068-2-78

## 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](http://www.cencenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60417	-	Graphical symbols for use on equipment. Index, survey and compilation of the single sheets.	-	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	-	-
IEC 60695-11-10	-	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	-
IEC 60721-3-2	-	Classification of environmental conditions - Part 3-2: Classification of groups of environmental parameters and their severities - Transportation and Handling	EN IEC 60721-3-2	-
IEC 60721-3-4	-	Classification of environmental conditions - Part 3-4: Classification of groups of environmental parameters and their severities - Stationary use at non-weatherprotected locations	EN IEC 60721-3-4	-
IEC 60754-2	-	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	EN 60754-2	-
IEC 60825-1	-	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	-
IEC 61034-1	-	Measurement of smoke density of cables burning under defined conditions - Part 1: Test apparatus	EN 61034-1	-
IEC 61140	-	Protection against electric shock - Common aspects for installation and equipment	EN 61140	-
IEC 61439-5	-	Low-voltage switchgear and controlgear assemblies - Part 5: Assemblies for power distribution in public networks	EN 61439-5	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61587-1	-	Mechanical structures for electrical and electronic equipment - Tests for IEC 60917 and IEC 60297 series - Part 1: Environmental requirements, test setups and safety aspects	EN IEC 61587-1	-
IEC 61587-2	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and 60297 - Part 2: Seismic tests for cabinets and racks	EN 61587-2	-
IEC 61587-3	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 3: Electromagnetic shielding performance tests for cabinets and subracks	EN 61587-3	-
IEC 61969-2	-	Mechanical structures for electronic equipment - Outdoor enclosures - Part 2: Coordination dimensions	EN 61969-2	-
IEC 61969-3	-	Mechanical structures for electrical and electronic equipment - Outdoor enclosures - Part 3: Environmental requirements, tests and safety aspects	EN IEC 61969-3	-
IEC 62194	-	Method of evaluating the thermal performance of enclosures	EN 62194	-
IEC 62262	-	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	EN 62262	-
IEC 62305-4	-	Protection against lightning - Part 4: Electrical and electronic systems within structures	EN 62305-4	-
IEC 62368-1	-	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN IEC 62368-1	-
ISO 1518-1	-	Paints and varnishes - Determination of scratch resistance - Part 1: Constant-loading method	EN ISO 1518-1	-
ISO 3864-2	-	Graphical symbols - Safety colours and safety signs - Part 2: Design principles for product safety labels	-	-
ISO 7779	-	Acoustics - Measurement of airborne noise emitted by information technology and telecommunications equipment	EN ISO 7779	-
ETSI EN 300 019-1-2	-	Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-2: Classification of environmental conditions; Transportation	-	-
ETSI EN 300 019-1-4	-	Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-4: Classification of environmental conditions; Stationary use at non-weatherprotected locations	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ETSI EN 300 019-2-2	-	Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-2: Specification of environmental tests; Transportation	-	-
ETSI EN 300 019-2-4	-	Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations	-	-
ETSI EN 300 753	-	Environmental Engineering (EE); Acoustic noise emitted by telecommunications equipment	-	-



# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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**Structures mécaniques pour équipement électrique et électronique –  
Enveloppes de plein air –  
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