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## Utrustning för informationsbehandling – Säkerhet – Del 22: Utrustning för installation utomhus

*Information technology equipment –  
Safety –  
Part 22: Equipment to be installed outdoors*

Som svensk standard gäller europastandarden EN 60950-22:2017. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60950-22:2017.

### Nationellt förord

Europastandarden EN 60950-22:2017

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60950-22, Second edition, 2016 - Information technology equipment - Safety - Part 22: Equipment to be installed outdoors**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60950-22, utgåva 1, 2006, SS-EN 60950-22 C1, utgåva 1, 2008, SS-EN 60950-22/A11, utgåva 1, 2008 och SS-EN 60950-22/A11 C1, utgåva 1, 2009, gäller ej fr o m 2020-04-14.

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### **SEK Svensk Elstandard**

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English Version

**Information technology equipment - Safety -  
Part 22: Equipment to be installed outdoors  
(IEC 60950-22:2016)**

Matériels de traitement de l'information - Sécurité -  
Partie 22: Matériels destinés à être installés à l'extérieur  
(IEC 60950-22:2016)

Einrichtungen der Informationstechnik - Sicherheit -  
Teil 22: Einrichtungen für den Außenbereich  
(IEC 60950-22:2016)

This European Standard was approved by CENELEC on 2016-02-11. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## **European foreword**

The text of document 108/615/FDIS, future edition 2 of IEC 60950-22, prepared by IEC/TC 108 "Safety of electronic equipment within the field of audio/video, information technology and communication technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60950-22:2017.

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) 2017-10-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-04-14

This document supersedes EN 60950-22:2006.

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

## **Endorsement notice**

The text of the International Standard IEC 60950-22:2016 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 60364-4-43:2008            | NOTE | Harmonized as HD 60364-4-43:2010 (modified).  |
| IEC 60364-5-53<br>(Clause 534) | NOTE | Harmonized as HD 60364-5-534.                 |
| IEC 60664-1                    | NOTE | Harmonized as EN 60664-1.                     |
| IEC 60721-3-4                  | NOTE | Harmonized as EN 60721-3-4.                   |
| IEC 60896-21                   | NOTE | Harmonized as EN 60896-21.                    |
| IEC 60896-22                   | NOTE | Harmonized as EN 60896-22.                    |
| IEC 61439-5:2014               | NOTE | Harmonized as EN 61439-5:2015 (not modified). |
| IEC 61587-1:2011               | NOTE | Harmonized as EN 61587-1:2012 (not modified). |
| IEC 61643                      | NOTE | Harmonized in EN 61643 / CLC/TS 61643 series. |
| IEC 61643-11                   | NOTE | Harmonized as EN 61643-11.                    |

|                  |      |   |
|------------------|------|---|
| IEC 61969-3      | NOTE | Harmonized as EN 61969-3.                 |
| IEC 62305-1:2010 | NOTE | Harmonized as EN 62305-1:2011 (modified). |
| ISO 4628-3       | NOTE | Harmonized as EN ISO 4628-3.              |

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 When 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.cenelec.eu](http://www.cenelec.eu).

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u>      | <u>Year</u> |
|--------------------|-------------|---|-------------------|-------------|
| IEC 60068-2-11     | -           | Basic environmental testing procedures -<br>Part 2-11: Tests - Test Ka: Salt mist | EN 60068-2-11     | -           |
| IEC 60364          | series      | Low-voltage electrical installations  | HD 384 / HD 60364 | series      |
| IEC 60529          | 1989        | Degrees of protection provided by enclosures (IP Code)                            | EN 60529          | 1991        |
| -                  | -           |   | + corrigendum May | 1993        |
| + A1               | 1999        |   | + A1              | 2000        |
| + A2               | 2013        |   | + A2              | 2013        |
| IEC 60950-1 (mod)  | 2005        | Information technology equipment -<br>Safety -                                    | EN 60950-1        | 2006        |
| -                  | -           | Part 1: General requirements  | + AC              | 2011        |
| -                  | -           |   | + A11             | 2009        |
| + A1 (mod)         | 2009        |   | + A1              | 2010        |
| -                  | -           |   | + A12             | 2011        |
| + A2 (mod)         | 2013        |   | + A2              | 2013        |
| IEC 62368-1 (mod)  | 2014        | Audio/video, information and<br>communication technology equipment -              | EN 62368-1        | 2014        |
| -                  | -           | Part 1: Safety requirements   | + AC              | 2015        |
| -                  | -           |   | + AC              | 2017-03     |
| ISO 178            | -           | Plastics - Determination of flexural<br>properties                                | EN ISO 178        | -           |
| ISO 179            | series      | Plastics - Determination of Charpy<br>impact properties                           | EN ISO 179        | series      |
| ISO 180            | -           | Plastics - Determination of Izod impact<br>strength                               | EN ISO 180        | -           |
| ISO 527            | series      | Plastics - Determination of tensile<br>properties                                 | EN ISO 527        | series      |

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u>  | <u>Year</u> |
|--------------------|-------------|---|---------------|-------------|
| ISO 3231           | -           | Paints and varnishes - Determination of resistance to humid atmospheres containing sulfur dioxide | EN ISO 3231   | -           |
| ISO 4892-1         | -           | Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance             | EN ISO 4892-1 | -           |
| ISO 4892-2         | -           | Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps              | EN ISO 4892-2 | -           |
| ISO 4892-4         | -           | Plastics - Methods of exposure to laboratory light sources - Part 4: Open-flame carbon-arc lamps  | -             | -           |
| ISO 8256           | -           | Plastics - Determination of tensile-impact strength   | EN ISO 8256   | -           |
| ISO/TS 18173       | 2005        | Non-destructive testing - General terms and definitions   | -             | -           |
| ASTM D 471         | 1998        | Standard Test Method for Rubber Property-Effect of Liquids  | -             | -           |

## CONTENTS

|  |    |
|--|----|
| FOREWORD.....  | 4  |
| INTRODUCTION.....  | 6  |
| 1 Scope.....   | 7  |
| 1.1 Equipment covered.....   | 7  |
| 1.2 Additional requirements.....   | 7  |
| 2 Normative references.....  | 7  |
| 3 Terms and definitions.....   | 8  |
| 4 Conditions for outdoor equipment.....                                  | 8  |
| 4.1 Ambient air temperature.....   | 8  |
| 4.2 Mains supply.....  | 9  |
| 4.2.1 General.....   | 9  |
| 4.2.2 Mains transient voltage on AC mains supply.....                    | 9  |
| 4.2.3 Mains transient voltage on DC mains supply.....                    | 9  |
| 4.3 Rise of earth potential.....   | 10 |
| 5 Marking and instructions.....  | 10 |
| 6 Protection from electrical shock in an outdoor location.....           | 10 |
| 6.1 Voltage limits of user-accessible parts in outdoor locations.....    | 10 |
| 6.2 Limited current circuits in outdoor locations.....                   | 10 |
| 6.3 Protection for socket-outlet in outdoor locations.....               | 10 |
| 7 Wiring terminals for connection of external conductors.....            | 11 |
| 8 Construction requirements for outdoor enclosures.....                  | 11 |
| 8.1 General.....   | 11 |
| 8.2 Resistance to ultra-violet radiation.....                            | 11 |
| 8.3 Resistance to corrosion.....   | 12 |
| 8.3.1 General.....   | 12 |
| 8.3.2 Test apparatus.....  | 12 |
| 8.3.3 Test procedure.....  | 13 |
| 8.3.4 Compliance criteria.....   | 13 |
| 8.4 Bottoms of fire enclosures.....                                      | 13 |
| 8.5 Gaskets.....   | 13 |
| 8.5.1 General.....   | 13 |
| 8.5.2 Oil resistance.....  | 14 |
| 8.5.3 Securing means.....  | 14 |
| 9 Protection of equipment within an outdoor enclosure.....               | 14 |
| 9.1 Protection from moisture.....  | 14 |
| 9.2 Protection from plants and vermin.....                               | 15 |
| 9.3 Protection from excessive dust.....                                  | 15 |
| 9.3.1 General.....   | 15 |
| 9.3.2 IP5X equipment.....  | 15 |
| 9.3.3 IP6X equipment.....  | 16 |
| 10 Mechanical strength of enclosures.....                                | 16 |
| 10.1 General.....  | 16 |
| 10.2 Impact test.....  | 16 |
| 11 Outdoor equipment containing valve regulated or vented batteries..... | 16 |



|                       |   |    |
|-----------------------|---|----|
| 11.1                  | Risk of explosion from lead acid, NiCd and NiMH batteries .....   | 16 |
| 11.2                  | Ventilation preventing an explosive gas concentration .....   | 17 |
| 11.3                  | Ventilation test.....   | 19 |
| Annex A (normative)   | Water-saturated sulphur dioxide atmosphere (see 8.3.2 and 8.3.3 .....   | 20 |
| Annex B (normative)   | Water spray test (see 9.1) .....  | 21 |
| Annex C (normative)   | Ultraviolet light conditioning test (see 8.2).....  | 24 |
| C.1                   | Test apparatus.....   | 24 |
| C.2                   | Mounting of test samples .....  | 24 |
| C.3                   | Carbon-arc light-exposure apparatus .....   | 24 |
| C.4                   | Xenon-arc light-exposure apparatus.....   | 24 |
| Annex D (normative)   | Gasket tests (see 8.5).....   | 25 |
| D.1                   | Gasket tests.....   | 25 |
| D.2                   | Tensile strength and elongation tests.....  | 25 |
| D.3                   | Compression test.....   | 25 |
| D.4                   | Oil immersion test.....   | 26 |
| Annex E (informative) | Rationale.....  | 27 |
| E.1                   | General.....  | 27 |
| E.2                   | Electric shock .....  | 27 |
| E.3                   | Energy related hazards .....  | 27 |
| E.4                   | Fire .....  | 27 |
| E.5                   | Mechanical hazards .....  | 28 |
| E.6                   | Heat related hazards.....   | 28 |
| E.7                   | Radiation .....   | 28 |
| E.8                   | Chemical hazards .....  | 28 |
| E.9                   | Biological hazards.....   | 28 |
| E.10                  | Explosion hazards.....  | 29 |
| Bibliography.....     |   | 30 |
| Figure B.1            | – Water-spray test spray-head piping.....   | 22 |
| Figure B.2            | – Water-spray test spray head .....   | 23 |
| Figure D.1            | – Gasket test.....  | 26 |
| Table 1               | – Minimum property retention limits after UV exposure .....   | 12 |
| Table 2               | – Examples of the provision of pollution degree environments.....   | 14 |
| Table 3               | – Values for current $I_{float}$ and $I_{boost}$ , factors $f_g$ and $f_s$ , and voltages $U_{float}$ and $U_{boost}$ ..... | 18 |

# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## INFORMATION TECHNOLOGY EQUIPMENT – SAFETY –

### Part 22: Equipment to be installed outdoors

#### 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) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60950-22 has been prepared by IEC TC 108: Safety of electronic equipment within the field of audio/video, information technology and communication technology.

This second edition cancels and replaces the first edition published in 2005. It constitutes a technical revision.

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

- more extensive requirements for battery ventilation.

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

| FDIS         | Report on voting |
|--------------|------------------|
| 108/615/FDIS | 108/634/RVD      |

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

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

This Part 22 of IEC 60950 is intended to be used with IEC 60950-1:2005. The subclauses of IEC 60950-1 apply as far as reasonable. Where safety aspects are similar to those of Part 1 the relevant Part 1 clause or subclause is shown for reference in parentheses after the clause or subclause title in Part 22. Where a requirement in Part 22 refers to a requirement or criterion of Part 1, a specific reference to IEC 60950-1, is made.

A list of all parts in the IEC 60950 series, published under the general title *Information technology equipment – Safety*, can be found on the IEC website.

In this standard, the following print types are used:

- requirements proper and normative annexes: roman type;
- *compliance statements and test specifications: italic type;*
- notes in the text and in tables: smaller roman type;
- terms that are defined on Clause 3 and in IEC 60950-1: SMALL CAPITALS.

The following differing practices of a less permanent nature exist in the countries indicated below.

- 4.1: Outdoor equipment demand special design at temperatures down to –50 °C (Finland, Norway, Sweden)
- 4.3: Rise of earth potential requirements (USA, Canada)
- 8.5.1: Enclosure types specifications (USA, Canada).
- D.4: In Canada and United States, IRM Immersion Oil No. 903 is accepted (USA, Canada).

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

## INTRODUCTION

This standard proposes safety requirements for information technology equipment intended to be installed, when exposed wholly or partly, in a location where protection from the weather and other outdoor influences such as rain, dust, etc. normally provided by a building or other structure is limited or non-existent. There are many examples of information technology equipment in use throughout the world that are housed in special ENCLOSURES located on pavements, mounted on telecommunications poles and situated underground. Presently, IEC 60950 has no requirements for such equipment and this proposal would rectify this omission. The proposed requirements would not apply to portable or transportable equipment that may be occasionally used outdoors, but are not intended to be installed in conditions of inclement weather.

It is expected that IEC TC108 will continue to coordinate the output of its work with other technical committees dealing with equipment installed outdoors, such as IEC TC70 (Degrees of protection provided by enclosures, responsible for IEC 60529) and IEC TC 48 (Electrical connectors and mechanical structures for electrical and electronic equipment).

Annex E describes the rationale behind the treatment of specific safety aspects in this standard.

## INFORMATION TECHNOLOGY EQUIPMENT – SAFETY –

### Part 22: Equipment to be installed outdoors

#### 1 Scope

##### 1.1 Equipment covered

This part of IEC 60950 applies to information technology equipment intended to be installed in an OUTDOOR LOCATION.

The requirements for OUTDOOR EQUIPMENT also apply, where relevant, to OUTDOOR ENCLOSURES suitable for direct installation in the field and supplied for housing information technology equipment to be installed in an OUTDOOR LOCATION.

##### 1.2 Additional requirements

Each installation may have particular requirements. Some examples are given in 4.2. In addition, requirements for protection of the OUTDOOR EQUIPMENT against the effects of direct lightning strikes are not covered by the standard. For information on this subject, see IEC 62305-1.

#### 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 60068-2-11, *Environmental testing procedures – Part 2-11: Tests – Test Ka: Salt mist*

IEC 60364 (all parts), *Low-voltage electrical installations*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60529:1989/AMD1:1999

IEC 60529:1989/AMD2:2013

IEC 60950-1:2005, *Information technology equipment – Safety – Part 1: General requirements*

IEC 60950-1:2005/AMD1:2009

IEC 60950-1:2005/AMD2:2013

IEC 62368-1:2014, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*

ISO 178, *Plastics – Determination of flexural properties*

ISO 179 (all parts), *Plastics – Determination of Charpy impact properties*

ISO 180, *Plastics – Determination of Izod impact strength*

ISO 527 (all parts), *Plastics – Determination of tensile properties*

ISO 3231, *Paints and varnishes – Determination of resistance to humid atmospheres containing sulfur dioxide*

ISO 4892-1, *Plastics – Methods of exposure to laboratory light sources – General guidance*

ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Xenon-arc lamps*

ISO 4892-4, *Plastics – Methods of exposure to laboratory light sources – Open-flame carbon-arc lamps*

ISO 8256, *Plastics – Determination of tensile-impact strength*

ISO/TS 18173:2005, *Non-destructive testing – General terms and definitions*

ASTM D471-98, *Standard Test Method for Rubber Property-Effect of Liquids*