BS EN 60950-22:2017



BSI Standards Publication

Information technology equipment — Safety

Part 22: Equipment to be installed outdoors (IEC 60950-22:2016)

bsi.

National foreword

This British Standard is the UK implementation of EN 60950-22:2017. It is identical to IEC 60950-22:2016. It supersedes BS EN 60950-22:2006 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/108, Safety of electronic equipment within the field of audio/video, information technology and communication technology.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

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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.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-04-14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

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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 (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.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-11	-	Basic environmental testing procedures - 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 - Safety - Part 1: General requirements	EN 60950-1	2006
-	-		+ 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 communication technology equipment - Part 1: Safety requirements	EN 62368-1	2014
-	-		+ AC	2015
-	-		+ AC	2017-03
ISO 178	-	Plastics - Determination of flexural properties	EN ISO 178	-
ISO 179	series	Plastics - Determination of Charpy impact properties	EN ISO 179	series
ISO 180	-	Plastics - Determination of Izod impact strength	EN ISO 180	-
ISO 527	series	Plastics - Determination of tensile properties	EN ISO 527	series

Publication	Year	Title	EN/HD	Year
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	-	-

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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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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*