CSA C22.2 No. 62368-1:19
(IEC 62368-1:2018, MOD)
National Standard of Canada

CSA C22.2 No. 62368-1:19
Audio/video, information and communication technology equipment — Part 1: Safety requirements
(IEC 62368-1:2018, MOD)

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Cette Norme Nationale du Canada est disponible en versions française et anglaise.

Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

National Standard of Canada

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Audio/video, information and communication technology equipment — Part 1: Safety requirements
(IEC 62368-1:2018, MOD)

Note: *For brevity, this Standard will be referred to as "CSA C22.2 No. 62368-1" throughout.*

DECEMBER 13, 2019

This national standard is based on publication IEC 62368-1, Third Edition (2018).

Prepared by
International Electrotechnical Commission

Reviewed by

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ANSI/UL 62368-1-2019

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This standard is issued jointly by the Canadian Standards Association (operating as "CSA Group") and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA Group or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of CSA Group and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. The technical content of IEC and ISO publications is kept under constant review by IEC and ISO. To submit a proposal for change, please send the following information to inquiries@csagroup. org and include "Proposal for change" in the subject line: Standard designation (number); relevant clause, table, and/or figure number; wording of the proposed change; and rationale for the change.

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This ANSI/UL Standard for Safety consists of the Third Edition.

The most recent designation of ANSI/UL 62368-1 as an American National Standard (ANSI) occurred on December 13, 2019. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface. The National Difference Page and IEC Foreword are also excluded from the ANSI approval of IEC-based standards.

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CONTENTS

Annex G (normative) Components

Annex K (normative) Safety interlocks

Annex L (normative) Disconnect devices

Annex M (normative) Equipment containing batteries and their protection circuits

Preface

This is the harmonized CSA Group and UL standard for Audio/video, information and communication technology equipment – Part 1: Safety requirements. It is the third edition of CSA C22.2 No. 62368-1 and the third edition of UL 62368-1. This edition of CSA-C22.2 No. 62368-1 supersedes the previous edition published on December 1, 2014. This edition of UL 62368-1 supersedes the previous edition published on December 1, 2014.

This harmonized standard is based on IEC Publication 62368-1, third edition, Audio/video, information and communication technology equipment – Part 1: Safety requirements, issued October 2018. IEC Publication 62368-1 is copyrighted by the IEC.

This harmonized standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Committee (THC 62368) for Audio/Video, Information Technology, and Communication Technology Equipment are gratefully acknowledged.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This standard was reviewed by the CSA Subcommittee on Safety of Electronic Equipment within the Field of Audio/Video, Information, and Communication Technology, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of harmonization

This standard adopts the IEC text with national differences.

This standard is published as an equivalent standard for CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

All national differences from the IEC text are included in the CSA Group and UL versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

Reasons for differences from IEC

Differences from the IEC are being added in order to address safety and regulatory situations present in the US and Canada.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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NATIONAL DIFFERENCES

GENERAL

National Differences from the text of International Electrotechnical Commission (IEC) Publication 62368-1, Audio/video, information and communication technology equipment – Part 1: Safety requirements, copyright 2018, are indicated by notations (differences) and are presented in bold text. The national difference type is included in the body.

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DR – These are National Differences based on the **national regulatory requirements**.

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D2 – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

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FOREWORD

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AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – Part 1: Safety requirements

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International Standard IEC 62368-1 has been prepared by TC 108: Safety of electronic equipment within the field of audio/video, information technology and communication technology.

This third edition cancels and replaces the second edition published in 2014. This edition constitutes a technical revision.

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

– addition of requirements for outdoor equipment;

– new requirements for optical radiation;

– addition of requirements for insulating liquids;

– addition of requirements for work cells;

– addition of requirements for wireless power transmitters;

– addition of requirements for fully insulated winding wire (FIW);

– alternative method for determination of top, bottom and side openings for fire enclosures;

– alternative requirements for sound pressure.

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

FDIS	Report on voting
108/701/FDIS	108/707/RVD

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

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

A list of all parts in the IEC 62368 series, published under the general title *Audio/video, information and communication technology equipment*, can be found on the IEC website.

The “in some countries” notes regarding differing national practices are contained in the following clauses, subclauses and tables:

0.2.1, 1, 3.3.8.1, 3.3.8.3, 4.1.15, 4.7.3, 5.2.2.2, 5.4.2.3.2.4, 5.4.2.5, 5.4.5.1, 5.4.10.2.1, 5.4.10.2.2, 5.4.10.2.3, 5.5.2.1, 5.5.6, 5.6.4.2.1, 5.6.8, 5.7.6, 5.7.7.1, 8.5.4.2.3, 10.5.3, 10.6.1, F.3.3.6, Y.4.1, Y.4.5, Table 12, Table 13, Table 14 and Table 39.

In this document, the following print types or formats are used:

– requirements proper and normative annexes: in roman type;

– compliance statements and test specifications: *in italic type*;

– notes/explanatory matter: in smaller roman type;

– normative conditions within tables: in smaller roman type;

– terms that are defined in 3.3: **bold**.

In figures and tables, if colour is available:

– green colour denotes a class 1 energy source;

– yellow colour denotes a class 2 energy source;

– red colour denotes a class 3 energy source.

A comparison of terms introduced in this document that are different from other existing IEC documents is given in Annex W.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore. iec. ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE Explanatory information related to IEC 62368-1 is contained in IEC TR 62368-2. It provides rationale together with explanatory information related to this document.

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DV.1 DE *Modification: Add the following to the IEC Foreword:*

The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.

No Text on This Page

INTRODUCTION

0 Principles of this product safety standard

0.1 Objective

This part of IEC 62368 is a product safety standard that classifies energy sources, prescribes SAFEGUARDS against those energy sources, and provides guidance on the application of, and requirements for, those SAFEGUARDS.

The prescribed SAFEGUARDS are intended to reduce the likelihood of pain, injury and, in the case of fire, property damage.

The objective of the INTRODUCTION is to help designers to understand the underlying principles of safety in order to design safe equipment. These principles are informative and not an alternative to the detailed requirements of this document.

0.2 Persons

0.2.1 General

This document describes SAFEGUARDS for the protection of three kinds of persons: the ORDINARY PERSON, the INSTRUCTED PERSON, and the SKILLED PERSON. Unless otherwise specified, the requirements for an ORDINARY PERSON apply. This document assumes that a person will not intentionally create conditions or situations that could cause pain or injury.

NOTE 1 In Australia, the work conducted by an instructed person or skilled person may require formal licensing from regulatory authorities.

NOTE 2 In Germany, a person may only be regarded as an instructed person or a skilled person if certain legal requirements are fulfilled.

0.2.2 Ordinary person

ORDINARY PERSON is the term applied to all persons other than INSTRUCTED PERSONS and SKILLED PERSONS. ORDINARY PERSONS include not only users of the equipment, but also all persons who may have access to the equipment or who may be in the vicinity of the equipment. Under NORMAL OPERATING CONDITIONS or ABNORMAL OPERATING CONDITIONS, ORDINARY PERSONS should not be exposed to parts comprising energy sources capable of causing pain or injury. Under a SINGLE FAULT CONDITION, ORDINARY PERSONS should not be exposed to parts comprising energy sources capable of causing injury.

0.2.3 Instructed person

INSTRUCTED PERSON is a term applied to persons who have been instructed and trained by a SKILLED PERSON, or who are supervised by a SKILLED PERSON, to identify energy sources that may cause pain (see Table 1) and to take precautions to avoid unintentional contact with or exposure to those energy sources. Under NORMAL OPERATING CONDITIONS, ABNORMAL OPERATING CONDITIONS or SINGLE FAULT CONDITIONS, INSTRUCTED PERSONS should not be exposed to parts comprising energy sources capable of causing injury.

0.2.4 Skilled person

SKILLED PERSON is a term applied to persons who have training or experience in the equipment technology, particularly in knowing the various energies and energy magnitudes used in the equipment. SKILLED PERSONS are expected to use their training and experience to recognize energy sources capable of causing pain or injury and to take action for protection from injury from those energies. SKILLED PERSONS should also be protected against unintentional contact or exposure to energy sources capable of causing injury.