IEC 60335-2-82

Edition 3.1 2020-06
CONSOLIDATED VERSION

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Household and similar electrical appliances – Safety – Part 2-82: Particular requirements for amusement machines and personal service machines

Appareils électrodomestiques et analogues – Sécurité – Partie 2-82: Exigences particulières pour les machines de divertissement et les machines de service pour les personnes



IEC 60335-2-82:2017-10+AMD1:2020-06 CSV(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-82: Particular requirements for amusement machines and personal service machines

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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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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 60335-2-82 edition 3.1 contains the third edition (2017-10) [documents 61/5293/CDV and 61/5379A/RVC] and its amendment 1 (2020-06) [documents 61/5935/CDV and 61/6008/RVC].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60335-2-82 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This third edition constitutes a technical revision.

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

– It is clarified that 22.44 is not applicable to amusement machines;
– Modified some Notes to make them normative text (5.6, 11.2, 11.8, 15.2.101, 15.2.102, 15.2.104, 15.3, 19.4, 19.101, 24.101, 24.102).
– Reference to 22.106 is made in Annex R.

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

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, can be found on the IEC website.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fifth edition (2010) of that standard.

NOTE 1 When “Part 1” is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for amusement machines and personal service machines.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

– subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
– unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
– additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

– requirements: in roman type;
– *test specifications: in italic type*;
– notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site 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.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

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It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

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INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-82: Particular requirements for amusement machines and personal service machines

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1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric commercial amusement machines and personal service machines, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 101 Examples of appliances that are within the scope of this standard are

– amusement machines:
  - tables;
  - bowling machines;
  - dartboards;
  - driving simulators;
  - gaming machines;
  - kiddie rides;
  - laser shooting appliances;
  - pinball machines;
  - video games;
  - personal service machines;
  - card re-value machines;
  - currency dispensers;
  - luggage lockers;
  - weighing machines;
  - shoe shining appliances.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by users and **maintenance persons**.

NOTE 102 Attention is drawn to the fact that

– for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;

– in many countries, additional requirements are specified by the national authorities responsible for health, for the protection of labour and similar authorities.

NOTE 103 This standard does not apply to

– appliances intended exclusively for household use;

– appliances intended exclusively for industrial purposes;

– appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);

– appliances for washing cars;

– dispensing appliances and vending machines (IEC 60335-2-75);

– appliances within the scope of IEC 60065, such as jukeboxes and household video games;

– appliances within the scope of IEC 60950-1, such as copying machines, ticket machines and automatic teller machines;

– appliances intended to be used when a trained attendant is present, such as virtual reality systems;

– equipment intended exclusively for fairgrounds, such as carousels;

– self-balancing personal transport devices.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60068-2-52:1996, *Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution)*

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

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1.9 *Replacement:*

normal operation
operation of the appliance under the following conditions

The appliance is operated in the **stand-by mode** until steady conditions are established and then under the most unfavourable conditions of normal use.

The appliance is refilled when necessary in accordance with the instructions for use, or the **instructions for maintenance**, and the next operating period started as soon as possible.

Appliances that support persons in normal use are loaded as follows:

– **kiddie rides**, 50 kg for each riding position;

– other appliances, 100 kg for the first riding position and 75 kg for each additional riding position.

Note 1 to entry: The riding position may be for a sitting or standing person.

If the instructions state that higher loads are allowed, the appliance is loaded accordingly.

Audio amplifiers are operated in accordance with the normal operating conditions specified in IEC 60065.

3.5.101
kiddie ride
moving appliance having a stationary base for use by one or two children between the ages of three and ten years, under the supervision of an adult

3.6.2 *Replacement:*

detachable part
part that can be removed without the aid of a **tool**, part that is removed in accordance with the instructions for use or **instructions for maintenance**, even if a **tool** or **access key** is needed for removal, or part that does not fulfil the test of 22.11

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