IEC 60335-1

Edition 5.1 2013-12

CONSOLIDATED VERSION

VERSION CONSOLIDÉE

colour inside

Household and similar electrical appliances – Safety – Part 1: General requirements

Appareils électrodomestiques et analogues – Sécurité – Partie 1: Exigences générales

IEC 60335-1:2010+A1:2013

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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Household and similar electrical appliances – Safety – Part 1: General requirements

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IEC 60335-1:2010+A1:2013

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 1: General requirements

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 IEC 60335-1 bears the edition number 5.1. It consists of the fifth edition (2010) [documents 61/3974/FDIS and 61/4014/RVD], its corrigendum 1 (2010), its corrigendum 2 (2011) and its amendment 1 (2013) [documents 61/4639/FDIS and 61/4675/RVD]. The technical content is identical to the base edition and its amendment.

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

This publication has been prepared for user convenience.

International Standard IEC 60335-1 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

The principal changes in this edition as compared with the fourth edition of IEC 60335-1 are as follows (minor changes are not listed):

– updated the text of the standard to align with the most recent editions of the dated normative references;
– modified the functional safety requirements using programmable electronic circuits including software validation requirements;
– updated Clause 29 to cover insulation requirements subjected to high frequency voltages as in switch mode power supply circuits;
– updated Subclause 30.2 to further align the pre-selection option with the end-product test option;
– deleted some notes and converted many other notes to normative text;
– clarified requirements for class III appliances and class III constructions.

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

This part is to be used in conjunction with the appropriate part 2 of IEC 60335. The parts 2 contain clauses to supplement or modify the corresponding clauses in this part to provide the relevant requirements for each type of appliance.

NOTE 1 The following annexes contain provisions suitably modified from other IEC standards:

–	Annex E	Needle-flame test	IEC 60695-11-5
–	Annex F	Capacitors	IEC 60384-14
–	Annex G	Safety isolating transformers	IEC 61558-1 and IEC 61558-2-6
–	Annex H	Switches	IEC 61058-1
–	Annex J	Coated printed circuit boards	IEC 60664-3
–	Annex N	Proof tracking test	IEC 60112
–	Annex R	Software evaluation	IEC 60730-1

NOTE 2 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 associated noun are also in bold.

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.

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 3 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.

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.

The following differences exist in the countries indicated below.

– Introduction: The Part 1 standard (UL60335-1) is only used in combination with a part 2 (UL60335-2-x). National differences are specified in these standards (USA).

– 5.7: The ambient temperature is 25 °C ± 10 °C (Japan).

– 5.7: The ambient temperature is 27 °C ± 5 °C (India).

– 6.1: Class 0 appliances and class 0I appliances are not allowed (Australia, Austria, Belgium, Czech Republic, Finland, France, Germany, Greece, Hungary, India, Israel, Ireland, Italy, Netherlands, New Zealand, Norway, Poland, Singapore, Slovakia, Sweden, Switzerland, United Kingdom).

– 7.12.2: The requirements for full disconnection do not apply (Japan).

– 13.2: The test circuit and some leakage current limits are different (India).

– 22.2: The second paragraph of this subclause dealing with single-phase class I appliances with heating elements cannot be complied with because of the supply system (France and Norway).

– 22.2: Double-pole switches or protective devices are required (Norway).

– 22.35 Accessible metal parts separated from live parts by earthed metal parts are not regarded as likely to become live in the event of an insulation fault (USA).

– 24.1: IEC component standard requirements are replaced by the relevant requirements of component standards specified in UL60335-1 and parts 2 (UL60335-2-x) (USA).

– 25.3: A set of supply leads is not permitted (Norway, Denmark, Finland, Netherlands).

– 25.8: 0,5 mm^2 supply cords are not allowed for class I appliances (Australia and New Zealand).

– 26.6: Conductor cross-sectional areas are different (USA).

– 29.1: Different rated impulse voltages are used between 50 V and 150 V (Japan).

IMPORTANT – The "colour inside" logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.