IEC 60335-2-84

Edition 4.0 2026-11

INTERNATIONAL STANDARD

Household and similar electrical appliances – Safety -
Part 2-84: Particular requirements for toilet appliances

ICS 91.140.70

ISBN 978-2-8327-1589-5

IEC 60335-2-84:2026-11 (en)

CONTENTS

FOREWORD 3
INTRODUCTION 6
1 Scope 7
2 Normative references 8
3 Terms and definitions 8
4 General requirement 9
5 General conditions for the tests 9
6 Classification 9
7 Marking and instructions 10
8 Protection against access to live parts 10
9 Starting of motor-operated appliances 11
10 Power input and current 11
11 Heating 11
12 Charging of metal-ion batteries 12
13 Leakage current and electric strength at operating temperature 13
14 Transient overvoltages 13
15 Moisture resistance 13
16 Leakage current and electric strength 13
17 Overload protection of transformers and associated circuits 13
18 Endurance 13
19 Abnormal operation 14
20 Stability and mechanical hazards 14
21 Mechanical strength 14
22 Construction 16
23 Internal wiring 17
24 Components 17
25 Supply connection and external flexible cords 18
26 Terminals for external conductors 18
27 Provision for earthing 18
28 Screws and connections 18
29 Clearances, creepage distances and solid insulation 18
30 Resistance to heat and fire 19
31 Resistance to rusting 19
32 Radiation, toxicity and similar hazards 20
Annexes 22
Annex B (normative) Battery-operated appliances, separable batteries and detachable batteries for battery-operated appliances 23
Annex R (normative) Software evaluation 24
Bibliography 25

Figure 101 – Probe for measuring surface temperatures 20

Figure 102 – Diagram for leakage current measurement for water heaters having bare heating elements 21
Figure 103 – Mechanical strength test for toilet seat lifter without a toilet seat 21

Table 101 – Maximum temperature rises for specified accessible surfaces under normal operating conditions 12
Table 102 – Maximum temperature rises for specified accessible surfaces under abnormal conditions 14

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Household and similar electrical appliances - Safety - Part 2-84: Particular requirements for toilet appliances

FOREWORD

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IEC 60335-2-84 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2019. This edition constitutes a technical revision.

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

a) alignment with IEC 60335-1:2020;
b) add toilet seat lifters in the scope and relevant requirements in Clause 3, Clause 11 and Clause 21;
c) add probe 19 in Clause 8 and Clause 20;
d) modify 3.1.9 to move operating time and cycles to Clause 10 and Clause 11;
e) modify Table 101 and Table 102 to remove the ambiguity;

f) remove 19.101;

g) move 22.101 requirement to 6.101;

h) move 22.102 requirement to 22.36;

i) add earthing requirements of class I spray seats to 27.1;

j) modify 31.101 to allow an alternative method.

The text of this International Standard is based on the following documents:

Draft	Report on voting
61/7657/FDIS	61/7696/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of the sixth edition (2020) 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: Particular requirements for toilet appliances.

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.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations can 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.

– 3.1.9: Normal operation is different (USA);
– 6.2: Toilets, spray seats and heated seats are allowed to be IPX3 (Japan);
– 22.103: The test is different (USA).

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

– reconfirmed,
– withdrawn, or
– revised.

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.

Guidance documents concerning the application of the safety requirements for appliances can be accessed via TC 61 supporting documents on the IEC website

https://www.iec.ch/tc61/supportingdocuments

This information is given for the convenience of users of this International Standard and does not constitute a replacement for the normative text in this standard.

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 can 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 publications, basic safety publications and group safety publications 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.

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.

NOTE 3 Standards dealing with non-safety aspects of household appliances are:

– IEC standards published by TC 59 concerning methods of measuring performance;
– CISPR 11, CISPR 14-1 and relevant IEC 61000-3 series standards concerning electromagnetic emissions;
– CISPR 14-2 concerning electromagnetic immunity;
– IEC standards published by TC 111 concerning environmental matters.

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electrical toilet appliances, in which excrement is stored, dried or destructed or which assist the use of other toilet equipment, their rated **voltage** being not more than 250 V including direct current (DC) supplied appliances and **battery-operated appliances**.

Examples of such electrical toilets are the following and they can be used to process garbage such as paper and food waste:

– **mouldering toilets**;
– **package toilets**;
– **freezing toilets**;
– **vacuum toilets**.

This standard also applies to electrical equipment for use with conventional and electrical toilets.

Examples of such electrical appliances are:

– automatic seat covering devices;
– chopping units;
– heated seats;
– pumping units;
– water heaters for **spray seats**;
– **spray seats**;
– **toilet seat lifters**.

This standard deals with reasonably foreseeable hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account children playing with the appliance.

For **toilet seat lifters**, motorized parts are also evaluated according to IEC 60335-2-116.

Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can be necessary;
- in many countries, additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

This standard does not apply to:

- 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);
- chemical toilets;
- toilets in which excrement is destructed by combustion;
- assistive products for toileting (ISO 17966).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

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

Bibliography

The bibliography of Part 1 is applicable except as follows.

IEC 60335-2-116, *Household and similar electrical appliances - Safety - Part 2-116: Particular requirements for furniture with electrically motorized parts*

ISO 17966, *Assistive products for toileting, bathing and showering - Requirements and test methods*

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