



IEC 60335-2-103

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COMMENTED VERSION

INTERNATIONAL STANDARD



**Household and similar electrical appliances – Safety –
Part 2-103: Particular requirements for drives for gates, doors and windows**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 13.120, 91.060.50

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CONTENTS

FOREWORD	4
INTRODUCTION	7
1 Scope	8
2 Normative references	9
3 Terms and definitions	9
4 General requirement	11
5 General conditions for the tests	11
6 Classification	12
7 Marking and instructions	12
8 Protection against access to live parts	15
9 Starting of motor-operated appliances	15
10 Power input and current	15
11 Heating	16
12 Void Charging of metal-ion batteries	17
13 Leakage current and electric strength at operating temperature	17
14 Transient overvoltages	17
15 Moisture resistance	17
16 Leakage current and electric strength	18
17 Overload protection of transformers and associated circuits	18
18 Endurance	18
19 Abnormal operation	18
20 Stability and mechanical hazards	19
21 Mechanical strength	20
22 Construction	20
23 Internal wiring	21
24 Components	21
25 Supply connection and external flexible cords	21
26 Terminals for external conductors	22
27 Provision for earthing	22
28 Screws and connections	22
29 Clearances, creepage distances and solid insulation	22
30 Resistance to heat and fire	23
31 Resistance to rusting	23
32 Radiation, toxicity and similar hazards	23
Annexes	28
Annex B (normative) Battery-operated appliances, separable batteries and detachable batteries for battery-operated appliances	29
Annex R (normative) Software evaluation	30
Annex AA (normative) Drives for powered pedestrian doors used in emergency routes and emergency exits	31
Annex BB (normative) Drives for windows	33
Annex CC (normative) Drives for pedestrian doors	38

Annex DD (normative) Drives for horizontally and vertically moving doors and gates	43
Annex EE (normative) Measuring point for protective devices of horizontally moving pedestrian doors	50
Annex FF (normative) Reference bodies	59
Annex GG (normative) Test method of entrapment protection system of drives for revolving doors	61
Annex HH (normative) Limitation of impact forces of pedestrian doors	62
Annex II (normative) Measuring points for limitation of impact forces of pedestrian doors	65
Annex JJ (normative) Low energy movement of pedestrian doors	68
Annex KK (normative) Speed setting for low energy movement of pedestrian doors.....	69
Annex LL (normative) Safeguarding of swing pedestrian doors	71
Bibliography.....	73
List of comments.....	74
Figure 101 – Examples of driven parts	25
Figure 102 – Inactive floor areas of pressure-sensitive pads.....	26
Figure 103 – Probe for measuring surface temperatures.....	27
Figure CC.1 – Safety distances for opening movement of swing door.....	42
Figure EE.1 – Single-leaf sliding doorset.....	50
Figure EE.2 – Double-leaf sliding doorset	50
Figure EE.3 – Single-leaf swing doorset.....	51
Figure EE.4 – Double-leaf swing doorset	51
Figure EE.5 – Folding doorset	52
Figure EE.6 – Revolving doorset, two leaves.....	54
Figure EE.7 – Revolving doorset, three leaves	56
Figure EE.8 – Revolving doorset, four leaves	58
Figure FF.1 – Reference bodies.....	60
Figure HH.1 – Force versus time	63
Figure II.1 – Single-leaf sliding doorset	65
Figure II.2 – Double-leaf sliding doorset.....	65
Figure II.3 – Folding doorset.....	66
Figure II.4 – Revolving doorset, 2-leaf	66
Figure II.5 – Revolving doorset, 3-leaf	67
Figure II.6 – Revolving doorset, 4-leaf	67
Figure LL.1 – Areas of the door sweep.....	71
Table 101 – Maximum temperature rises for specified external accessible surfaces under normal operating conditions	17
Table HH.1 – Permissible dynamic forces	62
Table KK.1 – Speed settings	69
Table KK.2 – Minimum travelling time per doorset leaf vs. mass of door leaf.....	70
Table LL.1 – Minimum width of door leaf to be protected vs. radius of doorset and doorset travelling time.....	72

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-103: Particular requirements for drives for gates, doors and windows

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

This commented version (CMV) of the official standard IEC 60335-2-103:2023 edition 4.0 allows the user to identify the changes made to the previous IEC 60335-2-103:2015+AMD1:2017+AMD2:2019 CSV edition 3.2. Furthermore, comments from IEC TC 61 experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 60335-2-103 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 2015, Amendment 1:2017 and Amendment 2:2019. This edition constitutes a technical revision.

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

- a) the text has been aligned with IEC 60335-1:2020;
- b) scope includes DC-supplied appliances and battery-operated appliances (Clause 1);
- c) some notes have been converted to normative text (Clause 1);
- d) additional requirements for installation instructions have been incorporated (7.12);
- e) application of test probe 18 and test probe 19 have been introduced (8.1.1, 20.2, Annexes BB, CC and DD);
- f) addition of surface temperatures for external accessible surfaces (11.3, 11.8);
- g) requirements for loading accessible appliance outlets and socket outlets have been added (11.7);
- h) requirements for appliances incorporating integral batteries or separable batteries have been added (11.7);
- i) requirements have been added for drives intended for permanent connection delivered with a connector to ease the installation (22.108, 24.101, 25.3).

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

Draft	Report on voting
61/7017/FDIS	61/7082/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 drives for gates, doors and windows.

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 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.

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.

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

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 ~~may~~ 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 and generic standards~~ 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. ~~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.~~ **1**

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. **2**

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-103: Particular requirements for drives for gates, doors and windows

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electric **drives** for horizontally and vertically moving gates, doors, garage doors and **windows** for household and similar purposes, their **rated voltage** being not more than 250 V for single-phase **drives** and 600 V for other **drives** including direct current (DC) supplied appliances and **battery-operated appliances** **3**. It also covers the hazards associated with the movement of the **driven part**.

~~Battery-operated drives and other d.c. supplied drives are within the scope of this standard. Dual supply drives, either mains-supplied or battery-operated, are regarded as battery-operated drives when operated in the battery mode.~~

Drives not intended for normal household use but which nevertheless ~~may~~ can be a source of danger to the public, such as **drives** intended to be used by laymen in shops, offices, hotels, restaurants, hospitals, in industry and on farms, are within the scope of this standard.

Requirements for **drives** for doors that ~~may~~ can be used in emergency routes and exits are given in **normative Annex AA**.

~~NOTE 101~~ Examples of **drives** within the scope of this standard are **drives** for

- folding doors;
- revolving doors;
- rolling doors;
- roof **windows**;
- sectional overhead doors;
- swinging and sliding gates or doors.

NOTE 101 Examples are shown in Figure 101.

NOTE 102 **Drives** ~~may~~ can be supplied with a **driven part**.

As far as is practicable, this standard deals with the common hazards presented by **drives** that are encountered by all persons in and around the home. However, in general, it does not take into account

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the **drive** safely without supervision or instruction;
- children playing with the **drive**.

~~NOTE 103~~ For appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can be necessary. ~~Attention is drawn to the fact that~~ 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 **4** and similar authorities.

~~NOTE 104~~—This standard does not apply to **drives**

- for vertically moving garage doors for residential use (60335-2-95);
- for shutters covering doors and **windows** (including locations where the door is set back from the shutter), awnings, blinds and similar equipment (60335-2-97);
- intended exclusively to be used by trained persons in commercial and industrial premises;
- for specific purposes, such as fire doors;
- for natural smoke exhaust ventilators not used as **windows** (ISO 21927-2);
- intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

~~NOTE 105~~—This standard does not apply to movement of a pedestrian door where such movement is based solely on stored energy.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60068-2-52:2017, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution)*

IEC 60584-1, *Thermocouples – Part 1: EMF specifications and tolerances*

IEC 60825-1:2014, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 61496-3:~~2008~~2018, *Safety of machinery – Electro-sensitive protective equipment – Part 3: Particular requirements for active opto-electronic protective devices responsive to diffuse reflection (AOPDDR)*

IEC 61984:2008, *Connectors – Safety requirements and tests*

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Household and similar electrical appliances – Safety –
Part 2-103: Particular requirements for drives for gates, doors and windows**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-103: Exigences particulières pour les motorisations de portails, portes
et fenêtres**

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	9
3 Terms and definitions	9
4 General requirement.....	11
5 General conditions for the tests	11
6 Classification.....	11
7 Marking and instructions.....	12
8 Protection against access to live parts.....	14
9 Starting of motor-operated appliances	15
10 Power input and current.....	15
11 Heating.....	15
12 Charging of metal-ion batteries.....	17
13 Leakage current and electric strength at operating temperature.....	17
14 Transient overvoltages	17
15 Moisture resistance	17
16 Leakage current and electric strength.....	18
17 Overload protection of transformers and associated circuits	18
18 Endurance	18
19 Abnormal operation	18
20 Stability and mechanical hazards.....	19
21 Mechanical strength	19
22 Construction	19
23 Internal wiring.....	21
24 Components	21
25 Supply connection and external flexible cords	21
26 Terminals for external conductors.....	22
27 Provision for earthing	22
28 Screws and connections	22
29 Clearances, creepage distances and solid insulation	22
30 Resistance to heat and fire	22
31 Resistance to rusting.....	22
32 Radiation, toxicity and similar hazards.....	23
Annexes	27
Annex B (normative) Battery-operated appliances, separable batteries and detachable batteries for battery-operated appliances	28
Annex R (normative) Software evaluation	29
Annex AA (normative) Drives for powered pedestrian doors used in emergency routes and emergency exits.....	30
Annex BB (normative) Drives for windows.....	32
Annex CC (normative) Drives for pedestrian doors.....	37

Annex DD (normative) Drives for horizontally and vertically moving doors and gates	42
Annex EE (normative) Measuring point for protective devices of horizontally moving pedestrian doors	49
Annex FF (normative) Reference bodies	58
Annex GG (normative) Test method of entrapment protection system of drives for revolving doors	60
Annex HH (normative) Limitation of impact forces of pedestrian doors	61
Annex II (normative) Measuring points for limitation of impact forces of pedestrian doors	64
Annex JJ (normative) Low energy movement of pedestrian doors	67
Annex KK (normative) Speed setting for low energy movement of pedestrian doors	68
Annex LL (normative) Safeguarding of swing pedestrian doors	70
Bibliography	72
Figure 101 – Examples of driven parts	24
Figure 102 – Inactive floor areas of pressure-sensitive pads	25
Figure 103 – Probe for measuring surface temperatures	26
Figure CC.1 – Safety distances for opening movement of swing door	41
Figure EE.1 – Single-leaf sliding doorset	49
Figure EE.2 – Double-leaf sliding doorset	49
Figure EE.3 – Single-leaf swing doorset	50
Figure EE.4 – Double-leaf swing doorset	50
Figure EE.5 – Folding doorset	51
Figure EE.6 – Revolving doorset, two leaves	53
Figure EE.7 – Revolving doorset, three leaves	55
Figure EE.8 – Revolving doorset, four leaves	57
Figure FF.1 – Reference bodies	59
Figure HH.1 – Force versus time	62
Figure II.1 – Single-leaf sliding doorset	64
Figure II.2 – Double-leaf sliding doorset	64
Figure II.3 – Folding doorset	65
Figure II.4 – Revolving doorset, 2-leaf	65
Figure II.5 – Revolving doorset, 3-leaf	66
Figure II.6 – Revolving doorset, 4-leaf	66
Figure LL.1 – Areas of the door sweep	70
Table 101 – Maximum temperature rises for specified external accessible surfaces under normal operating conditions	17
Table HH.1 – Permissible dynamic forces	61
Table KK.1 – Speed settings	68
Table KK.2 – Minimum travelling time per doorset leaf vs. mass of door leaf	69
Table LL.1 – Minimum width of door leaf to be protected vs. radius of doorset and doorset travelling time	71

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Part 2-103: Particular requirements for drives for gates, doors and windows

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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.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-103: Particular requirements for drives for gates, doors and windows

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electric **drives** for horizontally and vertically moving gates, doors, garage doors and **windows** for household and similar purposes, their **rated voltage** being not more than 250 V for single-phase **drives** and 600 V for other **drives** including direct current (DC) supplied appliances and **battery-operated appliances**. It also covers the hazards associated with the movement of the **driven part**.

Drives not intended for normal household use but which nevertheless can be a source of danger to the public, such as **drives** intended to be used by laymen in shops, offices, hotels, restaurants, hospitals, in industry and on farms, are within the scope of this standard.

Requirements for **drives** for doors that can be used in emergency routes and exits are given in normative Annex AA.

Examples of **drives** within the scope of this standard are **drives** for

- folding doors;
- revolving doors;
- rolling doors;
- roof **windows**;
- sectional overhead doors;
- swinging and sliding gates or doors.

NOTE 101 Examples are shown in Figure 101.

NOTE 102 **Drives** can be supplied with a **driven part**.

As far as is practicable, this standard deals with the common hazards presented by **drives** that are encountered by all persons in and around the home. However, in general, it does not take into account

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the **drive** safely without supervision or instruction;
- children playing with the **drive**.

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 **drives**

- for vertically moving garage doors for residential use (60335-2-95);
- for shutters covering doors and **windows** (including locations where the door is set back from the shutter), awnings, blinds and similar equipment (60335-2-97);
- intended exclusively to be used by trained persons in commercial and industrial premises;
- for specific purposes, such as fire doors;
- for natural smoke exhaust ventilators not used as **windows** (ISO 21927-2);
- intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

This standard does not apply to movement of a pedestrian door where such movement is based solely on stored energy.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60068-2-52:2017, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution)*

IEC 60584-1, *Thermocouples – Part 1: EMF specifications and tolerances*

IEC 60825-1:2014, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 61496-3:2018, *Safety of machinery – Electro-sensitive protective equipment – Part 3: Particular requirements for active opto-electronic protective devices responsive to diffuse reflection (AOPDDR)*

IEC 61984:2008, *Connectors – Safety requirements and tests*

SOMMAIRE

AVANT-PROPOS	77
INTRODUCTION.....	80
1 Domaine d'application	81
2 Références normatives	82
3 Termes et définitions	82
4 Exigences générales	84
5 Conditions générales d'essais	84
6 Classification	85
7 Marquage et instructions	85
8 Protection contre l'accès aux parties actives.....	88
9 Démarrage des appareils à moteur	89
10 Puissance et courant	89
11 Échauffements.....	89
12 Charge des batteries à ions métalliques	91
13 Courant de fuite et rigidité diélectrique à la température de régime	91
14 Surtensions transitoires	91
15 Résistance à l'humidité.....	91
16 Courant de fuite et rigidité diélectrique	92
17 Protection contre la surcharge des transformateurs et des circuits associés	92
18 Endurance	92
19 Fonctionnement anormal	92
20 Stabilité et dangers mécaniques	93
21 Résistance mécanique.....	93
22 Construction	93
23 Conducteurs internes.....	95
24 Composants	95
25 Raccordement au réseau et câbles souples extérieurs	95
26 Bornes pour conducteurs externes	96
27 Dispositions en vue de la mise à la terre	96
28 Vis et connexions	96
29 Distances dans l'air, lignes de fuite et isolation solide.....	96
30 Résistance à la chaleur et au feu.....	97
31 Protection contre la rouille	97
32 Rayonnement, toxicité et dangers analogues.....	97
Annexes	101
Annexe B (normative) Appareils alimentés par batteries, batteries séparables et batteries amovibles pour les appareils alimentés par batteries.....	102
Annexe R (normative) Évaluation des logiciels.....	103
Annexe AA (normative) Motorisations de portes piétonnes motorisées utilisées pour les voies et les issues de secours	104
Annexe BB (normative) Motorisations de fenêtres.....	106
Annexe CC (normative) Motorisations de portes piétonnes	112

Annexe DD (normative) Motorisations de portes et portails à déplacement horizontal et vertical.....	117
Annexe EE (normative) Point de mesure des dispositifs de protection de portes piétonnes à déplacement horizontal.....	125
Annexe FF (normative) Corps de référence.....	134
Annexe GG (normative) Méthode d'essai de système de protection contre l'écrasement des motorisations de portes tournantes.....	136
Annexe HH (normative) Limitation des forces de choc des portes piétonnes.....	138
Annexe II (normative) Points de mesure visant à limiter les forces de choc des portes piétonnes.....	141
Annexe JJ (normative) Mouvement à basse énergie des portes piétonnes.....	144
Annexe KK (normative) Réglage de vitesse pour mouvement à basse énergie de portes piétonnes.....	145
Annexe LL (normative) Protection des portes piétonnes battantes.....	147
Bibliographie.....	149
Figure 101 – Exemples de parties entraînées.....	98
Figure 102 – Zones inactives des tapis de sol sensibles à la pression.....	99
Figure 103 – Calibre pour le mesurage des températures de surface.....	100
Figure CC.1 – Distances de sécurité pour le mouvement d'ouverture d'une porte battante.....	116
Figure EE.1 – Ensemble-porte coulissant à un battant.....	125
Figure EE.2 – Ensemble-porte coulissant à double battant.....	125
Figure EE.3 – Ensemble-porte battant à un battant.....	126
Figure EE.4 – Ensemble-porte battant à double battant.....	126
Figure EE.5 – Ensemble-porte pliant.....	127
Figure EE.6 – Ensemble-porte tournant, deux battants.....	129
Figure EE.7 – Ensemble-porte tournant, trois battants.....	131
Figure EE.8 – Ensemble-porte tournant, quatre battants.....	133
Figure FF.1 – Corps de référence.....	135
Figure HH.1 – Force en fonction du temps.....	139
Figure II.1 – Ensemble-porte coulissant à un battant.....	141
Figure II.2 – Ensemble-porte coulissant à double battant.....	141
Figure II.3 – Ensemble-porte pliant.....	142
Figure II.4 – Ensemble-porte tournant, deux battants.....	142
Figure II.5 – Ensemble-porte tournant, trois battants.....	143
Figure II.6 – Ensemble-porte tournant, quatre battants.....	143
Figure LL.1 – Zones du bas de porte.....	147
Tableau 101 – Échauffements maximaux pour les surfaces accessibles extérieures spécifiées en conditions de fonctionnement normal.....	91
Tableau HH.1 – Forces dynamiques admissibles.....	138
Tableau KK.1 – Réglages de vitesse.....	145
Tableau KK.2 – Temps minimal de déplacement par battant d'ensemble-porte en fonction de la masse du battant d'ensemble-porte.....	146

Tableau LL.1 – Largeur minimale du battant de porte à protéger en fonction du rayon
de l'ensemble-porte et du temps de déplacement de l'ensemble-porte 148

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – SÉCURITÉ –

Partie 2-103: Exigences particulières pour les motorisations de portails, portes et fenêtres

AVANT-PROPOS

- 1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
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- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'IEC attire l'attention sur le fait que la mise en application du présent document peut entraîner l'utilisation d'un ou de plusieurs brevets. L'IEC ne prend pas position quant à la preuve, à la validité et à l'applicabilité de tout droit de brevet revendiqué à cet égard. À la date de publication du présent document, l'IEC n'avait pas reçu notification qu'un ou plusieurs brevets pouvaient être nécessaires à sa mise en application. Toutefois, il y a lieu d'avertir les responsables de la mise en application du présent document que des informations plus récentes sont susceptibles de figurer dans la base de données de brevets, disponible à l'adresse <https://patents.iec.ch>. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 60335-2-103 a été établie par le comité d'études 61 de l'IEC: Sécurité des appareils électrodomestiques et analogues. Il s'agit d'une Norme internationale.

Cette quatrième édition annule et remplace la troisième édition parue en 2015, l'Amendement 1:2017 et l'Amendement 2:2019. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) le texte a été aligné sur l'IEC 60335-1:2020;
- b) le domaine d'application comprend les appareils alimentés en courant continu et les appareils alimentés par batteries (Article 1);
- c) certaines notes ont été converties en texte normatif (Article 1);
- d) des exigences supplémentaires relatives aux instructions d'installation ont été incorporées (7.12);
- e) l'application du calibre d'essai 18 et du calibre d'essai 19 a été introduite (8.1.1, 20.2, Annexes BB, CC et DD);
- f) des températures de surface ont été ajoutées pour les surfaces accessibles extérieures (11.3, 11.8);
- g) des exigences relatives au chargement des socles femelles de connecteurs et socles de prises de courant accessibles ont été ajoutées (11.7);
- h) des exigences ont été ajoutées pour les appareils qui comportent des batteries intégrées ou des batteries séparables (11.7);
- i) des exigences ont été ajoutées pour les motorisations destinées à être raccordées de façon permanente livrées avec un connecteur afin de faciliter l'installation (22.108, 24.101, 25.3).

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
61/7017/FDIS	61/7082/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

Une liste de toutes les parties de la série IEC 60335, publiées sous le titre général *Appareils électrodomestiques et analogues – Sécurité*, se trouve sur le site web de l'IEC.

La présente partie 2 doit être utilisée conjointement avec la dernière édition de l'IEC 60335-1 et ses amendements sauf si cette édition l'exclut. Dans ce cas, la dernière édition qui n'exclut pas la présente partie 2 est utilisée. Elle a été établie sur la base de la sixième édition (2020) de cette norme.

NOTE 1 L'expression "la Partie 1" utilisée dans la présente norme fait référence à l'IEC 60335-1.

La présente partie 2 complète ou modifie les articles correspondants de l'IEC 60335-1, de façon à transformer cette publication en norme IEC: Exigences particulières pour les motorisations de portails, portes et fenêtres.

Lorsqu'un paragraphe particulier de la Partie 1 n'est pas mentionné dans la présente partie 2, ce paragraphe s'applique pour autant que cela soit raisonnable. Lorsque la présente norme mentionne "addition", "modification" ou "remplacement", le texte correspondant de la Partie 1 doit être adapté en conséquence.

NOTE 2 Le système de numérotation suivant est utilisé:

- les paragraphes, tableaux et figures qui s'ajoutent à ceux de la Partie 1 sont numérotés à partir de 101;
- à l'exception de celles qui sont dans un nouveau paragraphe ou de celles qui concernent des notes de la Partie 1, les notes sont numérotées à partir de 101, y compris celles des articles ou paragraphes qui sont remplacés;
- les annexes qui sont ajoutées sont désignées AA, BB, etc.

NOTE 3 Les caractères d'imprimerie suivants sont utilisés:

- exigences: caractères romains;
- *modalités d'essais: caractères italiques;*
- notes: petits caractères romains.

Les termes en **gras** dans le texte sont définis à l'Article 3. Lorsqu'une définition concerne un adjectif, l'adjectif et le nom associé figurent également en gras.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé, ou
- révisé.

NOTE 4 L'attention des Comités nationaux est attirée sur le fait que les fabricants d'appareils et les organismes d'essai peuvent avoir besoin d'une période transitoire après la publication d'une nouvelle publication IEC, ou d'une publication amendée ou révisée, pour fabriquer des produits conformes aux nouvelles exigences et pour adapter leurs équipements aux nouveaux essais ou aux essais révisés.

Le comité recommande que le contenu de cette publication soit adopté pour application nationale (obligatoire) au plus tôt 12 mois et au plus tard 36 mois après la date de publication.

INTRODUCTION

Il a été admis par hypothèse, en établissant la présente Norme internationale, que l'exécution de ses dispositions était confiée à des personnes expérimentées et ayant une qualification appropriée.

Les documents de recommandations concernant l'application des exigences de sécurité pour les appareils peuvent être consultés dans les documents de support du CE 61, accessibles sur le site web de l'IEC à l'adresse:

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

Cette information est donnée à l'intention des utilisateurs de la présente Norme internationale et ne constitue nullement un remplacement du texte normatif de la présente norme.

La présente norme reconnaît le niveau de protection internationalement accepté contre les dangers électriques, mécaniques, thermiques, liés au feu et au rayonnement des appareils, lorsqu'ils fonctionnent comme en usage normal en tenant compte des instructions du fabricant. Elle couvre également les situations anormales auxquelles on peut s'attendre dans la pratique et elle tient compte de la façon dont les phénomènes électromagnétiques peuvent affecter le fonctionnement sûr des appareils.

La présente norme tient compte autant que possible des exigences de l'IEC 60364, de façon à rester compatible avec les règles d'installation quand l'appareil est raccordé au réseau d'alimentation. Cependant, des règles nationales d'installation peuvent être différentes.

Si un appareil relevant du domaine d'application de la présente norme comporte également des fonctions couvertes par une autre partie 2 de l'IEC 60335, la partie 2 correspondante est appliquée à chaque fonction séparément, dans la limite du raisonnable. Si cela s'applique, l'influence d'une fonction sur les autres fonctions est prise en compte.

Lorsqu'une partie 2 ne comporte pas d'exigences complémentaires pour couvrir les dangers traités dans la Partie 1, la Partie 1 s'applique.

NOTE 1 Cela signifie que les comités d'études responsables pour les parties 2 ont déterminé qu'il n'était pas nécessaire de spécifier des exigences particulières pour l'appareil en question en plus des exigences générales.

La présente norme est une norme de famille de produits traitant de la sécurité d'appareils et a préséance sur les normes horizontales et génériques couvrant le même sujet.

NOTE 2 Les publications horizontales, les publications fondamentales de sécurité et les publications groupées de sécurité couvrant un danger ne s'appliquent pas, parce qu'elles ont été prises en considération lorsque les exigences générales et particulières ont été étudiées pour la série de normes IEC 60335.

Un appareil conforme au texte de la présente norme ne sera pas nécessairement jugé conforme aux principes de sécurité de la norme si, lorsqu'il est examiné et soumis aux essais, il apparaît qu'il présente d'autres caractéristiques qui compromettent le niveau de sécurité visé par ces exigences.

Un appareil utilisant des matériaux ou présentant des modes de construction différents de ceux décrits dans les exigences de la présente norme peut être examiné et soumis aux essais en fonction de l'objectif poursuivi par ces exigences et, s'il est jugé pratiquement équivalent, il peut être estimé conforme aux principes de sécurité de la présente norme.

NOTE 3 Les normes traitant des aspects non relatifs à la sécurité des appareils électrodomestiques sont:

- les normes IEC publiées par le comité d'études 59 concernant les méthodes de mesure d'aptitude à la fonction;
- les normes CISPR 11 et CISPR 14-1, ainsi que les normes applicables de la série IEC 61000-3 concernant les émissions électromagnétiques;
- la norme CISPR 14-2 concernant l'immunité électromagnétique;
- les normes IEC publiées par le comité d'études 111 concernant l'environnement.

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – SÉCURITÉ –

Partie 2-103: Exigences particulières pour les motorisations de portails, portes et fenêtres

1 Domaine d'application

L'article de la Partie 1 est remplacé par le texte suivant.

La présente partie de l'IEC 60335 traite de la sécurité des **motorisations** électriques de portails, portes et portes de garage et **fenêtres**, à déplacement horizontal ou vertical pour usage domestique et analogue, dont la **tension assignée** n'est pas supérieure à 250 V pour les **motorisations** monophasées et à 600 V pour les autres **motorisations**, y compris les appareils alimentés en courant continu et les **appareils alimentés par batteries**. Elle couvre également les dangers liés au mouvement de la **partie entraînée**.

Les **motorisations** non destinées à un usage domestique normal, mais qui néanmoins peuvent constituer une source de danger pour le public, telle que les **motorisations** destinées à être utilisées par des utilisateurs non avertis dans des magasins, des bureaux, des hôtels, des restaurants, des hôpitaux, dans l'industrie et dans des fermes, sont comprises dans le domaine d'application de la présente norme.

Les exigences pour les **motorisations** des portes qui peuvent être utilisées en cas d'urgence sont données à l'Annexe AA normative.

Les **motorisations** applicables aux éléments suivants sont des exemples de **motorisations** qui entrent dans le domaine d'application de la présente norme:

- portes pliantes;
- portes tournantes;
- portes à enroulement;
- **fenêtres** de toit;
- portes sectionnelles relevantes;
- portails ou portes de type battant et coulissant.

NOTE 101 Des exemples sont représentés à la Figure 101.

NOTE 102 Les **motorisations** peuvent être livrées avec une **partie entraînée**.

Dans la mesure du possible, la présente norme traite des dangers ordinaires présentés par les **motorisations**, encourus par toutes les personnes à l'intérieur et autour de l'habitation. Cependant, elle ne tient pas compte en général

- des personnes (y compris des enfants) dont
 - les capacités physiques, sensorielles ou mentales; ou
 - le manque d'expérience et de connaissanceles empêchent d'utiliser la **motorisation** en toute sécurité sans surveillance ou instruction;
- de l'utilisation de la **motorisation** comme jouet par des enfants.

Pour les appareils destinés à être utilisés dans des véhicules ou à bord de navires ou d'avions, des exigences supplémentaires peuvent être nécessaires. Dans de nombreux pays, des exigences supplémentaires sont spécifiées par les organismes nationaux de la santé, par les organismes nationaux responsables de la protection des travailleurs, par les organismes nationaux responsables de l'alimentation en eau et par des organismes similaires.

La présente norme ne s'applique pas aux **motorisations**

- des portes de garage à ouverture verticale pour usage résidentiel (IEC 60335-2-95);
- des volets qui couvrent les portes et les **fenêtres** (y compris dans les cas où la porte est en retrait par rapport au volet), des stores, des rideaux et des équipements analogues (IEC 60335-2-97);
- destinées exclusivement à une utilisation par des personnes averties dans des locaux à usage commercial et industriel;
- pour des usages spécifiques, comme les portes coupe-feu;
- pour des dispositifs d'évacuation naturelle des fumées non utilisés comme **fenêtres** (ISO 21927-2);
- destinées à être utilisées dans des locaux présentant des conditions particulières, telles que la présence d'une atmosphère corrosive ou explosive (poussière, vapeur ou gaz).

La présente norme ne s'applique pas au mouvement d'une porte piétonne lorsque ce mouvement repose uniquement sur l'énergie stockée.

2 Références normatives

L'article de la Partie 1 s'applique, avec l'exception suivante.

Addition:

IEC 60068-2-52:2017, *Essais d'environnement – Partie 2-52: Essais – Essai Kb: Brouillard salin, essai cyclique (solution de chlorure de sodium)*

IEC 60584-1, *Couples thermoélectriques – Partie 1: Spécifications et tolérances en matière de FEM*

IEC 60825-1:2014, *Sécurité des appareils à laser – Partie 1: Classification des matériels et exigences*

IEC 61496-3:2018, *Sécurité des machines – Équipements de protection électro-sensibles – Partie 3: Exigences particulières pour les équipements utilisant des dispositifs protecteurs optoélectroniques actifs sensibles aux réflexions diffuses (AOPDDR)*

IEC 61984:2008, *Connecteurs – Exigences de sécurité et essais*