SVENSK STANDARD SS-EN 60335-2-103

Fastställd	Utgåva	Sida	Ansvarig kommitté
2015-02-18	2	1 (1+57)	SEK TK 61

Elektriska hushållsapparater och liknande bruksföremål – Säkerhet – Del 2-103: Särskilda fordringar på drivanordningar för portar, dörrar och fönster

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

Som svensk standard gäller europastandarden EN 60335-2-103:2015. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60335-2-103:2015.

Nationellt förord

Europastandarden EN 60335-2-103:2015

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
- **IEC 60335-2-103[*)], Second edition, 2011 - Household and similar electrical appliances - Safety - Part 2-103: Particular requirements for drives for gates, doors and windows**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60335-1, utgåva 5, 2012.

Tidigare fastställd svensk standard SS-EN 60335-2-103, utgåva 1, 2003 och SS-EN 60035-2-103/A11, utgåva 1, 2009, gäller ej fr o m 2017-09-29.

[*)] Amendment No 1, 2007 till IEC 60335-2-103:2011 är inarbetat i texten. Ändringarna är i rött och är markerade med ett lodrätt streck i marginalen.

ICS 13.120.00; 91.060.50

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60335-2-103

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ICS 13.120; 91.060.50

Supersedes EN 60335-2-103:2003

English Version

Household and similar electrical appliances - Safety - Part 2-103: Particular requirements for drives for gates, doors and windows (IEC 60335-2-103:2006 , modified + A1:2010 , modified)

Appareils électrodomestiques et analogues - Sécurité - Partie 2-103: Règles particulières pour les motorisations de portails, portes et fenêtres (CEI 60335-2-103:2006 , modifiée + A1:2010 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-103: Besondere Anforderungen für Antriebe für Tore, Türen und Fenster (IEC 60335-2-103:2006 , modifiziert + A1:2010 , modifiziert)

This European Standard was approved by CENELEC on 2014-09-29. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 60335-2-103:2015 E

SEK Svensk Elstandard

Foreword

This document (EN 60335-2-103:2015) consists of the text of IEC 60335-2-103:2006 + A1:2010 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2015-09-29
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2017-09-29

This document supersedes EN 60335-2-103:2003 + A11:2009.

The principal changes as compared with EN 60335-2-103:2003 + A11:2009 are as follows. Minor changes are not listed.

– Adds definitions for automatic drive, horizontally moving pedestrian door and reversible drive (3.109, 3.110, 3.111).

– Clarifies the marking requirements for reversible drives and horizontal moving pedestrian doors (7.12 and 7.12.1).

– Clarifies requirements for the use of a biased-off switch (19.11.2, 20.109, 22.107).

– Clarifies the mechanical hazard requirements for drives (20.105, 20.107 to 20.107.2.3).

– Adds requirements for the use of pressure sensitive pads (20.107.1.4, Figure 102).

– Modifies the requirements for batteries supplied with automatic opening doors (22.204.2 in Annex AA).

This Part 2 is to be used in conjunction with EN 60335-1:2012.

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

This Part 2 supplements or modifies the corresponding clauses in EN 60335-1, so as to convert that publication into the European Standard: *Safety 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" it is to be understood as addition or modification or replacement to the published IEC Part 2, unless the introductory sentence mentions Part 1.

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.;

– subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

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.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60335-2-103:2006 + A1:2010 are prefixed “Z”.

CENELEC draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning entrapment protection systems defined in 3.107 and the particular function to override an entrapment protection system under fault conditions as described in 19.11.2 and 22.107.

CENELEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured CENELEC that he is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from:

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Elmhurst, IL 60126
USA

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60335-2-103:2006 + A1:2010 was approved by CENELEC as a European Standard with agreed common modifications.

Annex ZC
(normative)

Normative references to international publications with their corresponding European publications

Addition:

Publication	Year	Title	EN/HD	Year
IEC 60068-2-52	-	Environmental testing - Part 2-52: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution)	EN 60068-2-52	-
IEC 60825-1	2007	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	2007
		Power operated pedestrian doorsets - Safety in use - Requirements and test methods	EN 16005	2012
		Industrial, commercial and garage doors and gates - Safety devices for power operated doors and gates - Requirements and test methods	EN 12978	-

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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.
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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.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning entrapment protection systems defined in 3.107 and the particular function to override an entrapment protection system under fault conditions as described in 19.11.2 and 22.107.

IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from:

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC shall not be held responsible for identifying any or all such patent rights.

This consolidated version of IEC 60335-2-103 consists of the second edition (2006) [documents 61/3002/FDIS and 61/3076/RVD] and its amendment 1 (2010) [documents 61/4048/FDIS and 61/4078/RVD]. It bears the edition number 2.1.

The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience. A vertical line in the margin shows where the base publication has been modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through.

This part of International Standard IEC 60335 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 first edition of IEC 60335-2-103 are as follows. Minor changes are not listed.

– Adds definitions for automatic drive, horizontally moving pedestrian door and reversible drive (3.109, 3.110, 3.111).
– Clarifies the marking requirements for reversible drives and horizontal moving pedestrian doors (7.12 and 7.12.1).
– Clarifies requirements for the use of a biased-off switch (19.11.2, 20.109, 22.107).
– Clarifies the mechanical hazard requirements for drives (20.105, 20.107 to 20.107.2.3).
– Adds requirements for the use of pressure sensitive pads (20.107.1.4, Figure 102).
– Modifies the requirements for batteries supplied with automatic opening doors (22.204.2 in Annex AA).

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

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 fourth edition (2001) 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 electric 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 following differences exist in the countries indicated below.

– 6.1: Class 0 and class 01 are allowed for appliances for indoor use having a rated voltage up to 150 V (Japan).

The committee has decided that the contents of the base publication and its amendments 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.

It is the recommendation of the committee that the content of the amendment 1 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 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.

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.

~~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.~~

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.

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 International Standard deals with the safety of electric **drives** for horizontally and vertically moving gates, doors and **windows** for household and similar purposes, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances. It also covers the hazards associated with the movement of the **driven part**.

Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances 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 be used in emergency routes and exits are given in 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.

Examples are shown in Figure 101.

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

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

~~– the use of appliances by young children or infirm persons without supervision;~~
~~– playing with the appliance by young children.~~
– persons (including children) whose
  • physical, sensory or mental capabilities; or
  • lack of experience and knowledge

  prevents them from using the appliance safely without supervision or instruction;
– children playing with the appliance.

NOTE 103 Attention is drawn to the fact that in many countries additional requirements are specified by the national authorities responsible for the protection of labour and similar authorities.

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

– for vertically moving garage doors for residential use (60335-2-95);
– for rolling shutters covering doors and windows (including locations where the door is set back from the shutter), awnings, blinds and similar equipment (60335-2-97);

– for horizontally moving pedestrian doors having an opening width exceeding 3 m and an opening area exceeding 6,25 m^2 ;

– intended exclusively to be used by trained persons in commercial and industrial premises;

– for specific purposes, such as fire barriers;

– 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, *Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 60825-1:1993, *Safety of laser products – Part 1: Equipment classification, requirements and user's guide*
Amendment 1 (1997)
Amendment 2 (2001)[1)]

1) A consolidated edition 1.2 (2002) exists that comprises edition 1 and its Amendments 1 and 2.