



**NSAI**  
Standards

Irish Standard  
I.S. EN 60335-2-95:2015&A1:2015

# Household and similar electrical appliances - Safety - Part 2-95: Particular requirements for drives for vertically moving garage doors for residential use

**I.S. EN 60335-2-95:2015&A1:2015**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

EN 60335-2-95:2015/A1:2015

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*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60335-2-95:2015/A1**

July 2015

ICS 13.120; 29.120.01; 91.090

English Version

Household and similar electrical appliances - Safety -  
Part 2-95: Particular requirements for drives for vertically moving  
garage doors for residential use  
(IEC 60335-2-95:2011/A1:2015)

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-95: Règles particulières pour les motorisations de  
portes de garage à ouverture verticale, pour usage  
résidentiel  
(IEC 60335-2-95:2011/A1:2015)

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 2-95: Besondere Anforderungen für  
Antriebe von Garagentoren mit Senkrechtbewegung zur  
Verwendung im Wohnbereich  
(IEC 60335-2-95:2011/A1:2015)

This amendment A1 modifies the European Standard EN 60335-2-95:2015; it was approved by CENELEC on 2015-06-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

**EN 60335-2-95:2015/A1:2015**

**European foreword**

This document (EN 60335-2-95:2015/A1:2015) consists of the text of IEC 60335-2-95:2011/A1:2015 prepared by IEC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which the document has to be implemented (dop) 2016-06-15  
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2018-06-15  
with the document have to be withdrawn

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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.

For the relationship with EU Directive see informative Annex ZZ, included in EN 60335-2-95:2015.

**Endorsement notice**

The text of the International Standard IEC 60335-2-95:2011/A1:2015 was approved by CENELEC as a European Standard without any modification.

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60335-2-95**

January 2015

ICS 13.120; 29.120.01; 91.090

Supersedes EN 60335-2-95:2004

English Version

**Household and similar electrical appliances - Safety - Part 2-95:  
Particular requirements for drives for vertically moving garage  
doors for residential use  
(IEC 60335-2-95:2011 , modified)**

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-95: Règles particulières pour les motorisations de  
portes de garage à ouverture verticale, pour usage  
résidentiel  
(CEI 60335-2-95:2011 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 2-95: Besondere Anforderungen für  
Antriebe von Garagentoren mit Senkrechtbewegung zur  
Verwendung im Wohnbereich  
(IEC 60335-2-95:2011 , 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.

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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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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**

## Foreword

The text of document 61/4103/CDV, future edition 3 of IEC 60335-2-95, prepared by IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60335-2-95:2015.

A draft amendment, which covers common modifications to IEC 60335-2-95, was prepared by CLC/TC 61, "Safety of household and similar electrical appliances" and approved by CENELEC.

The following dates are fixed:

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

This document is to be used in conjunction with EN 60335-1:2012 including its amendments.

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 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 are placed clause or subclause;
- additional annexes are lettered AA, BB, etc.;

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

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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 60335-2-95:2011 was approved by CENELEC as a European Standard with agreed common modifications.

## COMMON MODIFICATIONS

## **Introduction**

*Add:*

This European Standard has been prepared to provide a means of conforming to essential safety requirements of the Machinery Directive 2006/42/EC. Other requirements and other EU Directives may be applicable to the drives falling within the scope of this standard.

The relevant requirements of Annex ZE of Part 1 have been incorporated in the text of this part 2.

Therefore, compliance with the requirements of EN 60335-1 and of this Part 2 gives presumption of conformity of the product with the Essential Health and Safety Requirements (EHSR) of Directive 2006/42/EC as stated in Annex ZZ.

Drives put on the market as machines may be installed by the final user. The requirements of this standard also cover the foreseeable misuse of the power operated garage door.

Drives put on the market as partly completed machines should not be installed by the final user. In case of partly completed machines, reference should be made to the specific procedures of the Machinery Directive 2006/42/EC; this standard can, anyhow, be used as guidance.

## 1 Scope

### *Replacement:*

This clause of part 1 is replaced by the following.

This European Standard deals with the safety of electric **drives** for garage doors for residential use that open and close in a vertical direction, the **rated voltage** of the **drives** 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 these electrically driven garage doors.

NOTE Z101 Examples of garage doors are shown in Figure 101.

NOTE Z102 The **drive** may be supplied with a garage door.

NOTE Z103 This standard also applies to **entrapment protection devices** for use with **drives**.

NOTE Z104 Within the standard the terms **drive** and appliance are interchangeable.

This standard deals with the reasonably foreseeable hazards presented by drives that are encountered by all persons in and around the installation place. However, in general, it does not take into account:

- **children** playing with the appliance;
- the use of the appliance by **very young children**;
- the use of the appliance by **young children** without supervision.

It is recognized that **very vulnerable people** may have needs beyond the level addressed in this standard.

NOTE Z105 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.

This standard also covers **automatic drives**.

NOTE Z106 This standard does not apply to **drives**

- for rolling shutters, awnings, blinds and similar equipment (EN 60335-2-97);
- for garage doors for use by more than one household (EN 60335-2-103);
- for commercial and industrial purposes;
- 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 European Standard does not deal with any specific requirements on noise emitted from these drives as the generated noise is not considered to be a relevant hazard. Thus the emission sound pressure level  $L_{pA}$  is considered to be  $L_{pA} \leq 70$  dB(A).

## 2 Normative references

### *Add the following reference:*

EN 12978, *Industrial, commercial and garage doors and gates - Safety devices for power operated doors and gates - Requirements and test methods*





**IEC 60335-2-95**

Edition 3.0 2011-09

# **INTERNATIONAL STANDARD**

## **NORME INTERNATIONALE**



**Household and similar electrical appliances – Safety –  
Part 2-95: Particular requirements for drives for vertically moving garage doors  
for residential use**

**Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-95: Règles particulières pour les motorisations de portes de garage à  
ouverture verticale, pour usage résidentiel**



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**IEC 60335-2-95**

Edition 3.0 2011-09

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



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**Household and similar electrical appliances – Safety –  
Part 2-95: Particular requirements for drives for vertically moving garage doors  
for residential use**

**Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-95: Règles particulières pour les motorisations de portes de garage à  
ouverture verticale, pour usage résidentiel**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –**

#### **Part 2-95: Particular requirements for drives for vertically moving garage doors for residential use**

### 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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- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

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

This third edition cancels and replaces the second edition published in 2002 including its Amendment 1 (2004) and its Amendment 2 (2008). It constitutes a technical revision.

The principal changes in this edition as compared with the second edition of IEC 60335-2-95 are as follows (minor changes are not listed).

- Some notes have been converted to normative text (11.7, 20.2, 20.101).
- A requirement to fit an entrapment protection device has been added (22.109).

The text of this standard is based on the following documents:

CDV	Report on voting
61/4103/CDV	61/4201/RVC

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

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 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 drives for vertically moving garage doors for residential use.

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 publication 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 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.

- 6.1: Class 0I appliances are allowed (Japan).

- 7.1: Additional markings are required (USA).
- 7.12.1: Additional warnings and instructions are required (USA).
- 11.7: The test conditions are different (USA).
- 19.9: A running overload test is carried out (USA).
- 20.101: The test is not carried out (USA).

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.

**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 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.

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.



## HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

### Part 2-95: Particular requirements for drives for vertically moving garage doors for residential use

#### 1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric **drives** for garage doors for residential use that open and close in a vertical direction, the **rated voltage** of the **drives** 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 these electrically driven garage doors.

NOTE 101 Examples of garage doors are shown in Figure 101.

NOTE 102 The **drive** may be supplied with a garage door.

NOTE 103 This standard also applies to **entrapment protection devices** for use with **drives**. It does not cover hazards related to the mechanisms of the door itself.

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 playing with the appliance by young children, but recognizes that children may be in the vicinity of the garage door.

NOTE 104 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 105 This standard does not apply to **drives**

- for rolling shutters, awnings, blinds and similar equipment (IEC 60335-2-97);
- for garage doors for use by more than one household (IEC 60335-2-103);
- for commercial and industrial purposes;
- intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

#### 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)*

#### 3 Terms and definitions

This clause of Part 1 is applicable except as follows.

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