

# FINAL VERSION

## VERSION FINALE

**Household and similar electrical appliances – Safety  
Part 2-97: Particular requirements for drives for shutters, awnings, blinds and  
similar equipment**

**Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-97: Exigences particulières pour les motorisations des volets, stores,  
rideaux et équipements analogues**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

#### Part 2-97: Particular requirements for drives for shutters, awnings, blinds and similar equipment

#### FOREWORD

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This Consolidated version of IEC 60335-2-97 bears the edition number 3.1. It consists of the third edition (2016-04) [documents 61/5111/FDIS and 61/5141/RVD] and its amendment 1 (2019-11) [documents 61/5928/FDIS and 61/5944/RVD]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.

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 constitutes a technical revision.

The principal changes in this edition as compared with the second edition of IEC 60335-2-97 are as follows (minor changes are not listed):

- Deleted “rolling” from the title and modified the scope to cover appliance types other than shutters, awnings, and blinds that are operated in a rolling way;
- Revised 19.13 to allow drives to obtain a safe position;
- Added 19.101 to provide a new abnormal test for drives with rated operating time;
- Added 20.104.4 to establish a test intended to cover horizontal movement (non-rolling) drive parts;
- Added 20.104.5 to provide an additional test to cover rolling grills to address the risk of being lifted;
- Modified 22.46 and Annex R to introduce software requirements for programmable electronic circuits used to comply with Clause 20;
- Added 22.101 to introduce a requirement to prevent inadvertent adjustments that would lead to unsafe application of drives;
- Added examples of swing shutters and sliding shutters in Figure 101.

This publication has been drafted in accordance with the IEC/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 shutters, awnings, blinds and similar equipment.

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 the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE 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.

## 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 drive in question over and above the general requirements.

This standard is a product family standard dealing with the safety of drives 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 intent 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 2-97: Particular requirements for drives for shutters, awnings, blinds and similar equipment

#### 1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric **drives** for shutter, blinds and awnings, intended for household and similar purposes, their **rated voltage** being not more than 250 V for single-phase **drives** and 480 V for other **drives**.

NOTE 101 Battery-operated **drives** and other d.c. supplied **drives** are within the scope of this standard.

NOTE 102 Examples of equipment that can be driven are

- spring controlled folding arm awnings;
- curtains;
- grilles covering doors and windows;
- projection screens;
- shutters covering doors and windows;
- draperies.

Examples are shown in Figure 101.

NOTE 103 **Drives** may be supplied with a **drive** part.

**Drives** not intended for normal household use but that nevertheless may be a source of danger to the public, such as **drives** intended to be used by laymen in shops, in light industry, on farms and on industrial premises, are within the scope of this standard.

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 104 Attention is drawn to the fact that

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

NOTE 105 This standard does not apply to

- **drives** intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- **drives** for vertically moving garage doors for residential use (IEC 60335-2-95);
- **drives** for gates, doors and windows (IEC 60335-2-103);