

SLOVENSKI STANDARD
SIST EN 60335-2-97:2007/A12:2015
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Gospodinjiski in podobni električni aparati - Varnost - 2-97. del: Posebne zahteve za pogonske sklope rolojev, ponjav, senčnikov in podobne opreme - Dopolnilo A12

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

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-97: Besondere Anforderungen für Rollläden, Markisen, Jalousien und ähnliche Einrichtungen
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Appareils électrodomestiques et analogues - Sécurité - Partie 2-97: Règles particulières pour les motorisations de volets, stores, rideaux et équipements enroulables analogues

Ta slovenski standard je istoveten z: EN 60335-2-97:2006/A12:2015

ICS:

| | | |
|-----------|-----------------|-------------------|
| 13.120 | Varnost na domu | Domestic safety |
| 91.060.50 | Vrata in okna | Doors and windows |

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EUROPEAN STANDARD

EN 60335-2-97:2006/A12

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English Version

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

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-97: Règles particulières pour les motorisations de
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ähnliche Zwecke - Teil 2-97: Besondere Anforderungen für
Rollläden, Markisen, Jalousien und ähnliche Einrichtungen

This amendment A12 modifies the European Standard EN 60335-2-97:2006; it 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 amendment 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 amendment 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

Foreword

This document (EN 60335-2-97:2006/A12:2015) has been 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 (dop) 2015-09-29
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-09-29

This amendment supplements or modifies the corresponding clauses of EN 60335-2-97:2006, EN 60335-2-97:2006/A11:2008 and EN 60335-2-97:2006/A2:2010.

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

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 EN Part 2, unless the introductory sentence mentions Part 1.

NOTE 1 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.;

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

NOTE 2 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.

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 2006/42/EC, see informative Annex ZZ, which is an integral part of this document.

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 shutters, blinds and awnings.

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.

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1 Scope

Replacement:

This clause of Part 1 is replaced by the following:

This European Standard deals with the safety of electric **drives** for rolling equipment such as shutters, 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. It also covers the hazards associated with the movement of the rolling equipment such as shutters, blinds and awnings.

Drives for equipment with a spring-controlled driven part, such as a folding arm awning, are also within the scope of this standard.

NOTE Z101 Battery-operated drives and other d.c. supplied drives are within the scope of this standard.

NOTE Z102 Examples of places where shutters, blinds and awnings for household environment may also be used by non expert users:

- shops, offices and other working environments
- farm houses;
- hotels, motels and other residential type environments where they are used by clients;
- bed and breakfast type environments.

NOTE Z103 Household environment includes the dwelling and its associated buildings, the garden, etc.

Drives being part of power operated shutters, blinds and awnings which are intended to be used by trained users in shops, in light industry and on farms, are also within the scope of this standard.

NOTE Z104 Examples of rolling equipment that can be driven are

- awnings;
- blinds;
- grilles covering doors and windows;
- projection screens;
- shutters covering doors and windows.

Examples are shown in Figure 101.

NOTE Z105 Drives may be supplied with a driven part.

NOTE Z106 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 Z107 This standard does not apply to

- drives for vertically moving garage doors for residential use (EN 60335-2-95);
- drives for rolling doors (EN 60335-2-103);
- drives for theatre curtains;
- sliding and trolley jack drives.

Products covered by this standard do not create a noise hazard.

2 Normative references

Addition:

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

EN 60811-4-1, *Insulating and sheathing materials of electric and optical cables – Common test methods – Part 4-1: Methods specific to polyethylene and polypropylene compounds – Resistance to environmental stress cracking – Measurement of the melt flow index – Carbon black and/or mineral filler content measurement in polyethylene by direct combustion – Measurement of carbon black content by thermogravimetric analysis (TGA) – Assessment of carbon black dispersion in polyethylene using a microscope (IEC 60811-4-1)*

3 Definitions

3.101 *Modification:*

Replace the text of the note by the following:

Examples of components are gears, controls, brakes, components for power transmission from the drive to the driven part (e.g. trolleys, rails, levers, etc.).

3.106 *Modification:*
biased-off switch

control device which initiates and maintains the drive movement only as long as the manual control (actuator) is actuated by the user

Note Z101 to entry: A **biased-off switch** is also called "hold to run control".

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4 General requirement

Replacement:

This clause of Part 1 is applicable except as follows.

Add at the end of the first paragraph of Part 1:

Drives shall also be constructed in such a way they ensure transportation, installation, adjusting and maintenance are carried out safely.

5 General conditions for the tests

5.2 *Addition:*

*When a test has to be carried out with a **driven part**, the **driven part** specified for installation with the **drive** that gives the most unfavourable conditions for the test is used. The **drive** is adjusted in accordance with the instructions.*

*The **driven part** may be simulated by an artificial load.*

5.3 *Addition:*

*When a **drive** incorporates a sub-assembly or a part which has already been tested against relevant clause(s) of this standard, those tests need not be repeated, if the incorporation of the sub-assembly or part into the drive does not change the performance of the sub-assembly or part.*

5.101 Replacement:

If a **driven part** is needed for a test, this **driven part** can be simulated by an artificial load according to the principles shown in Figure 102.

NOTE The load is considered to be the driven part for the tests of 20.101, 20.102 and 20.103.

Add a new subclause:

5.Z101 Drives shall be tested for compliance with this standard for any mode of operation described by the manufacturer in the installation instructions. Whenever required by the instructions, components shall be added or changed to perform the tests.

6 Classification

Replacement:

6.2 Addition:

Drives, or parts of **drives**, that are intended for exposure to outdoor conditions shall be at least IPX4.

Drives or parts of **drives** exposed to **driven parts** which are exposed to outdoor conditions are considered to be intended for exposure to outdoors conditions.

7 Marking and instructions

7.1 Replace the fourth and fifth dashed items in Part 1 as follows:

- trade mark or identification mark, business name and postal address or code of the manufacturer and, where applicable, his authorized representative. When, due to the size of the **drive**, this is not possible, trade mark or identification mark are acceptable on the product and business name and full address are included in the instructions for use;
- model or type reference, serial number, if any, and production year;

NOTE Z101 Production year is the year when the production process is completed. The production year can be part of the serial number.

Add a new dashed item:

- designation of the **drive**. The designation enables the identification of the drive as specified in the instructions and may be the generic denomination and function of the product (e.g. the terms used in the title of this standard – drive for shutter - may be used) or a combination of letters and/or numbers.

7.12 Add the following text after the first paragraph in Part 1:

The instructions shall contain at least the following information:

- the business name and full address of the manufacturer, if relevant explanation of the code and, where applicable, his authorized representative;
- model or type reference of the drive as marked on the drive itself, except for the serial number;
- designation of the **drive** together with its explanation if it is composed by a combination of letters and/or numbers.

Delete this text:

The instruction concerning persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge is not applicable.

Addition:

Add after the first warning the new following warning:

WARNING: the drive shall be disconnected from its power source during cleaning, maintenance and when replacing parts.

Addition:

The instructions shall state that the A-weighted emission sound pressure level of the drive is equal to or less than 70 dB(A), e.g. by writing $L_{pA} \leq 70$ dB(A).

NOTE Z101 The influence to the sound pressure level from the structure, including the driven part, to which the drive will be connected is not considered.

7.12.Z1 *Modification of Part 1:*

Replace the first sentence of the first paragraph by:

The specific instructions related to the safe operation of this drive (as given in 7.12 of this standard) shall be collated together in the front section of the user instructions, or in a separate dedicated document.

7.12.1 *Addition:*

Replace the two paragraphs and the note 101 after the warning by the following:

The installation instructions shall specify all components needed for compliance with this standard. When components are not delivered with the drive, the instructions shall either give reference needed to correctly identify these components or give reference to a website, catalogue or similar where details shall be made available.

The installation instructions for **drives** allowing access to unprotected moving parts of the **drive** after installation shall state the substance of the following:

Hazardous unprotected moving parts of the drive shall be installed higher than 2,5 m above the floor or other level that could provide access to it.

This information shall also be stated on the packaging.

Replace the third dashed item by the following:

- that the actuating member of a biased-off switch is to be located within direct sight of the driven part but away from moving parts. It is to be installed at a minimum height of 1,5 m and not accessible to the public;

Delete the fourth dashed item.

Replace the fifth dashed item by the following:

- the mass and the dimension of the driven part shall be compatible with the rated torque and rated operating time;

Add the following new dashed items:

- the necessary information for safe handling of a **drive** weighing more than 20 kg. This information shall describe how to use the handling means, such as hooks and ropes;
- fixed controls have to be clearly visible after installation;
- a list of all components included in the **drive** when the **drive** is delivered not assembled.
- the type of driven part the **drive** is intended for.

Replace the last sentence by the following:

The installation instructions for drives for projecting awnings with an edge at a height $\leq 2\ 000$ mm from the ground or any other access level when fully unrolled shall state that a horizontal distance of at least 0,4 m is to be maintained between the fully unrolled driven part and any permanent object.