
Gospodinjski in podobni električni aparati - Varnost - 2-97. del: Posebne zahteve za pogonske sklope rolojev, ponjav, senčnikov in podobne opreme - Dopolnilo A11

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

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-97: Besondere Anforderungen für Antriebe für Rollläden, Markisen, Jalousien und ähnliche Einrichtungen

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

Ta slovenski standard je istoveten z: EN IEC 60335-2-97:2023/A11:2023

ICS:

13.120	Varnost na domu	Domestic safety
29.120.01	Električna dodatna oprema na splošno	Electrical accessories in general
91.060.50	Vrata in okna	Doors and windows

SIST EN IEC 60335-2-97:2023/A11:2023 en

EUROPEAN STANDARD

EN IEC 60335-2-97:2023/A11

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2023

ICS 29.120.01; 91.060.50

English Version

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

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ähnliche Zwecke - Teil 2-97: Besondere Anforderungen für
Antriebe für Rollläden, Markisen, Jalousien und ähnliche
Einrichtungen

This amendment A11 modifies the European Standard EN IEC 60335-2-97:2023; it was approved by CENELEC on 2023-03-01. 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.

SIST EN IEC 60335-2-97:2023/A11:2023

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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EN IEC 60335-2-97:2023/A11:2023 (E)

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European foreword

This document (EN IEC 60335-2-97:2023/A11:2023) 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 at national level by publication of an identical national standard or by endorsement (dop) 2024–03–01
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026–03–01

This document is read in conjunction with EN IEC 60335-2-97:2023 and EN IEC 60335-2-97:2023/A1:2023.

The numbering system for European 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 shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association.

Any feedback and questions on this document should be directed to the users’ national committee. A complete listing of these bodies can be found on the CENELEC website.

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1 Modification to Introduction

Add:

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

The intended use of the **drives** covered by this standard is for them to be installed together with shutters, awnings or blinds and the necessary ancillary components (e.g. controls, safety devices) to create a power operated shutter, awning or blind, the safety of which is ensured by this standard and the product standards EN 13659 for shutters, EN 13120 for internal blinds, and EN 13561 for external blinds (including awnings).

This document covers the hazards generated by the **drive**.

Drives put on the market as machines may be installed by the final user. The requirements of this standard cover **drives** and also the foreseeable misuse of the power operated shutters, blinds and awnings.

Drives placed 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; this document can be used as guidance.

This document does not deal with any specific requirements on noise emitted from **drives** for shutters, awnings, blinds and similar equipment as the generated noise is not considered to be a relevant hazard.

With European Amendment A11, EN 60335-2-97:2006+A11:2008+A2:2010+A12:2015 is superseded.

This European Amendment A11, supplements or modifies the corresponding clauses of the standards below:

- EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:—¹
(Part 1)
- EN IEC 60335-2-97:2023+A1:2023 (Part 2)

2 Modification to Clause 1, “Scope”

Add at the end of the second paragraph the following:

It also covers the hazards associated with the movement of the equipment such as shutters, blinds and awnings

Replace the third and fourth paragraphs starting with “Drives not intended for normal ...” up to “... children playing with the drive”, except the notes 104 and 105 by the following:

This document 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 **drive**;
- the use of the **drive** by **very young children**;
- the use of the **drive** by **young children** without supervision.

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

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 document.

¹ To be published in 2023. Stage at the time of publication: FprEN 60335-1:2012/A16:2021.

NOTE Z101 Examples of places where shutters, blinds and awnings for household environment can 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 Z102 Household environment includes the dwelling and its associated buildings, the garden, etc.

Addition:

NOTE Z103 Within this document the terms **drive** and appliance are interchangeable.

Products covered by this document and installed according to the manufacturer instructions do not create a noise hazard.

3 Modification to Clause 2, “Normative references”

Addition:

EN 60825-1:2014², *Safety of laser products – Part 1: Equipment classification and requirements*

EN 60811-605:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 605: Physical tests - Measurement of carbon black and/or mineral filler in polyethylene compounds*

4 Modification to Clause 3, “Terms and definitions”

Addition:

3.Z101 Tubular drive

Drive intended to be used in the tube of the rolling **driven part**

5 Modification to Clause 4, “General requirement”

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 may be carried out safely.

6 Modification to Clause 5, “General conditions for the tests”

5.3 *Add at the end of the clause of Part 1:*

*When a **drive** incorporates a sub-assembly or a part which has already been tested against relevant clause(s) of this document, 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.*

² As impacted by EN 60825-1:2014/AC:2017-06, EN 60825-1:2014/A11:2021, and EN 60825-1:2014/A11:2021/AC:2022-03.

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Add the following note:

NOTE Z101 This load is considered to be the **driven part** for the tests of 20.101, 20.102 and 20.103.

Add new subclause:

5.Z101 Drives shall be tested for compliance with this document 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.

7 Modification to Clause 7, “Marking and instructions”

This clause of Part 1 is applicable except as follows.

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;
- 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 document – 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, add if relevant explanation of the code of the manufacturer 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.

Add after the first warning in Part 2:

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

Add after the fifth dashed item:

The instructions for **drives** supplied with a supply cord shall include the substance of the following:

The supply cord of this drive can only be replaced by the same type of cable supplied by the manufacturer of the drive

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

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.

7.12.1 Addition after Note 101:

For **drives** intended to be installed by the end-user, the installation instructions shall specify all components needed for compliance with this document.

For **drives** not intended to be installed by the end-user and when components needed for compliance with this document 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 shall specify that **children** shall not be near the appliance during the installation phase.

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 starting with “that the actuating member ...” 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;

*Add the following items in the paragraph starting with “For **drives** supplied without...”:*

- 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 shall be clearly visible after installation;
- a list of all components included in the drive when the drive is delivered not assembled.

Replace the last paragraph by the following:

The installation instructions for drive for projecting awnings with an edge at a height ≤ 2000 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 opposing permanent object.

7.15 Marking

In the Addition, replace the second sentence by the following:

The markings shall also be provided with the instructions excluding the serial number, if any, and production year.

8 Modification to Clause 20, “Stability and mechanical hazards”

20.2 Addition:

NOTE Z101 Stairs and terraces are examples of access levels. Surfaces not normally used for standing on, such as window-sills, and movable equipment such as ladders, are not considered to be access levels.

20.104 *Replace the third paragraph starting with “For **drives** for rolling **driven parts**...” by the following:*

*For **drives** for roller shutters fitted to a roof or ceiling window, compliance is checked by inspection, by measurement or by the tests of 20.104.1, or 20.104.2 or 20.104.3.*

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For **drives** for vertically moving **driven parts**, compliance is checked by inspection, by measurement or by the tests of 20.104.1 or 20.104.2.

20.104.1

Replace with the following:

The **drive** is supplied at **rated voltage** and operated under **normal operation** in the unrolling direction. The force exerted by the bottom edge of the **driven part** is measured at 100 mm and 400 mm above the fully unrolled position.

The force is measured at the following locations:

- in the centre of the leading edge;
- 200 mm from each end of the leading edge if this edge is longer than 800 mm.

The force shall not exceed:

- 25 N, for more than 5 s;
- 150 N, for more than 0,5 s.

20.104.3

Replace with the following:

The **drive** is supplied at **rated voltage** and operated under **normal operation** in the unrolling direction. An obstacle is placed 160 mm above the fully unrolled position. When the **driven part** reaches the obstacle, the **drive** shall stop the movement of the **driven part**, and within 5 s start to reverse automatically.

The force is measured at the following locations:

- in the centre of the leading edge;
- 200 mm from each end of the leading edge if this edge is longer than 800 mm.

During this period, the force shall not exceed

- 250 N during the first 2 s;
- 150 N during a further period of 3 s;
- 25 N thereafter.

The distance between the bottom edge of the **driven part** and the obstacle is measured after the automatic reversing has stopped. The distance shall be at least 40 mm.

20.104.5

Replace the third paragraph starting with “If the bottom edge of the driven...” by the following:

The movement shall stop before 500mm or the test piece reaches the top edge, whichever occurs first.

9 Modification to Clause 22, “Construction”

Add the following new subclauses:

22.Z101 Controls supplied with the **drive** shall have the different functions clearly identified.

Compliance is checked by inspection.

22.Z102 Drives weighing more than 20 kg shall incorporate suitable means for handling, such as hooks.