



SLOVENSKI STANDARD
SIST EN 60335-1:1998/A2:2001
01-julij-2001

Varnost gospodinjskih in podobnih električnih aparatov - 1. del: Splošne zahteve (IEC 60335-1:1991/A2:1999) (vsebuje popravek AC:2004)

Safety of household and similar electrical appliances -- Part 1: General requirements

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 1: Allgemeine Anforderungen

Sécurité des appareils électrodomestiques et analogues -- Partie 1: Prescriptions générales

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Ta slovenski standard je istoveten z: EN 60335-1:1994/A2:2000

ICS:

13.120	Varnost na domu	Domestic safety
97.030	Električni aparati za dom na splošno	Domestic electrical appliances in general

SIST EN 60335-1:1998/A2:2001 **en**

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EUROPEAN STANDARD

EN 60335-1/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2000

ICS 13.120; 97.030

English version

Safety of household and similar electrical appliances
Part 1: General requirements
(IEC 60335-1:1991/A2:1999)

Sécurité des appareils
électrodomestiques et analogues
Partie 1: Prescriptions générales
(CEI 60335-1:1991/A2:1999)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 1: Allgemeine Anforderungen
(IEC 60335-1:1991/A2:1999)

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This amendment A2 modifies the European Standard EN 60335-1:1994; it was approved by CENELEC on 2000-08-01. 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.

<https://standards.iteh.ai/catalog/standards/sist/c856c09d-1e7e-457c-8cc0-83e3334089b7/sist-en-60335-1-1998-a2-2001>

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of amendment 2:1999 to IEC 60335-1:1991, prepared by the IEC Technical Committee 61, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A2 to EN 60335-1 on 2000-08-01.

The following dates are applicable:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-05-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2007-08-01

This amendment is applicable to all parts 2 used in conjunction with EN 60335-1:1994

This amendment supplements or modifies the corresponding clauses of EN 60335-1:1994 and its amendments.

As a consequence of endorsing amendment 1:1994 to IEC 60335-1, the common modifications in EN 60335-1 concerning subclauses 2.7.2, 7.12 and 8.2 are covered by similar IEC text and therefore withdrawn.

As a consequence of endorsing amendment 2:1999 to IEC 60335-1, the common modifications in EN 60335-1 concerning subclauses 4.2, 8.1.2, 8.1.5, 11.8, 15.1, 19.10, 22.22 (A13), 22.32, 22.40, 22.Z1, 23.5, 24.1, 24.1.1, 24.1.2, 24.1.3, 27.2, 27.Z1, 28.1, 28.2 and annexes ZC (A12), ZD and ZE are covered by similar IEC text and therefore withdrawn. In addition, amendment A12:1996 to EN 60335-1 is withdrawn.

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There are no special national conditions causing a deviation from this amendment.

There are no national deviations from this amendment.

- p NOTE - In this document p is used in the margin to indicate instructions for preparing the printed version.

Endorsement notice

The text of amendment 2:1999 to the International Standard IEC 60335-1:1991 was approved by CENELEC as an amendment to the European Standard without any modification.

Annex A:

p Replace by:

Annex A
(normative)**Normative references**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>IEC standard</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
60051-2	1984	Direct acting indicating analogue electrical measuring instruments and their accessories Part 2: Special requirements for ammeters and voltmeters	EN 60051-2	1989
60061-1 (mod)	1969	Lamp caps and holders together with gauges for the control of interchangeability and safety Part 1: Lamp caps	EN 60061-1 ¹⁾	1993
60065 (mod)	1998	Audio, video and similar electronic apparatus Safety requirements	EN 60065	1998
60068-2-75	1997	Environmental testing -- Part 2: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997
60085	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990
60112	1979	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	HD 214 S2	1980
60127	Series	Miniature fuses	EN 60127	Series
60227 (mod)	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	HD 21	Series
60245 (mod)	Series	Rubber insulated cables of rated voltages up to and including 450/750 V	HD 22	Series

1) EN 60061-1 includes supplements A:1970 to N:1992 to IEC 60061-1.

<u>IEC standard</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
60249-2-4	1987	Base materials for printed circuits Part 2: Specifications Specification No. 4: Epoxide woven glass fabric copper-clad laminated sheet, general purpose grade	EN 60249-2-4 ²⁾	1994
60249-2-5	1987	Specification No. 5: Epoxide woven glass fabric copper-clad laminated sheet of defined flammability (vertical burning test)	EN 60249-2-5 ³⁾	1994
60252 (mod)	1993	A.C. motor capacitors	EN 60252	1994
60309	Series	Plugs, socket-outlets and couplers for industrial purposes	EN 60309	Series
60320 (mod)	Series	Appliance couplers for household and similar general purposes	EN 60320	Series
60384-14	1993	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	-	-
60417-1	1998	Graphical symbols for use on equipment Part 1: Overview and application	EN 60417-1	1999
60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
60598-1 (mod)	1996	Luminaires -- Part 1: General requirements and tests	EN 60598-1 + A12 + A13	1997 1998 1999
60695-2-1/0	1994	Fire hazard testing -- Part 2: Test methods Section 1/sheet 0: Glow-wire test methods General	EN 60695-2-1/0	1996
60695-2-1/1	1994	Section 1/sheet 1: Glow-wire end-product test and guidance	EN 60695-2-1/1	1996
60695-2-2	1991	Section 2: Needle-flame test	EN 60695-2-2	1994
60695-2-3	1984	Section 3: Bad-connection test with heaters	HD 444.2.3 S1 ⁴⁾	1987
60707	1981	Methods of test for the determination of the flammability of solid electrical insulating materials when exposed to an igniting source	HD 441 S1 ⁵⁾	1983
60730 (mod)	Series	Automatic electrical controls for household and similar use	EN 60730	Series
60906-1	1986	IEC System of plugs and socket-outlets for household and similar purposes Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-

2) EN 60249-2-4 includes A2:1992 to IEC 60249-2-4.

3) EN 60249-2-5 includes A2:1992 to IEC 60249-2-5.

4) HD 444.2.3 has been withdrawn in 1996.

5) HD 441 is superseded by EN 60695-2/1:1996 and by EN 60707:1999, EN 60695-11-10:1999 and EN 60695-11-20:1999.

<u>IEC standard</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
60998-2-2	1991	Connecting devices for low-voltage circuits for household and similar purposes Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units	EN 60998-2-2	1993
60999-1 (mod)	1990	Connecting devices - Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors Part 1: General requirements and particular requirements for conductors from 0,5 mm ² up to 35 mm ² (included)	EN 60999-1	1993
61058-1	1996	Switches for appliances Part 1: General requirements	-	-
61558-1 (mod)	1997	Safety of power transformers, power supply units and similar Part 1: General requirements and tests	EN 61558-1	1997
61558-2-6	1997	Part 2-6: Particular requirements for safety isolating transformers for general use	EN 61558-2-6	1997

<u>ISO standard</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
1463	1982	Metallic and oxide coatings - Measurement of coating thickness - Microscopical method	EN ISO 1463	1994
2178	1982	Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method	EN ISO 2178	1995
7000	1989	Graphical symbols for use on equipment Index and synopsis	-	-

Reference documents

IEC 60083	1997	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC
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Corrigendum to EN 60335-1:1994/A2:2000

English version

24 Components

24.1.5 Delete the addition.

Annex R

R29 Creepage distances, clearances and distances through insulation

Replace the text by the following:

29.1 and **29.2** The distances specified in items 2a, 2c and 3 in Table 13 of IEC 61558-1 apply.

NOTE The values stated for pollution degree 2 are applicable.

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February 2004

INTERNATIONAL STANDARD

IEC
60335-1

1991

AMENDMENT 2
1999-06

Amendment 2

**Safety of household and similar
electrical appliances –**

**Part 1:
General requirements**

Amendement 2

*Sécurité des appareils électrodomestiques
et analogues –*

*Partie 1:
Prescriptions générales*

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International Electrotechnical Commission
Telefax: +41 22 919 0300

3, rue de Varembe Geneva, Switzerland
e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

M

For price, see current catalogue

FOREWORD

This amendment has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

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

FDIS	Report on voting
61/1569/FDIS	61/1623/RVD

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

NOTE – This version does not contain editorial modifications which only concern the French text.

FOREWORD

Delete the two paragraphs beginning "Individual countries may wish" and "If the functions of an appliance".

Modify the list of differences existing in some countries as follows:

2.8.5: *Delete.*

6.1: *Add "Greece, India and Switzerland".*

13.2: *Add "India".*

23.7: *Delete the first reference.*

24.1.3: *Replace by "The number of cycles is different and the note does not apply (USA)."*

25.16: *Add "New Zealand" to the first difference quoted.*

Replace "cold" by "cord".

27.2: *Delete "as IEC 685-2-1 is not used"*

Add:

2: *Steady conditions are defined (Poland).*

22.44: *Appliances may be acceptable based on additional evaluation (USA).*

27.6: *The requirement does not apply (USA).*

INTRODUCTION

Replace the last paragraph and the footnote by:

Individual countries may wish to consider the application of the standard, so far as reasonable, to appliances not mentioned in part 2, and to appliances designed on new principles.

If the functions of an appliance are covered by different parts 2 of IEC 60335, the relevant part 2 is applied to each function separately, so far as is reasonable. If applicable, the influence of one function on the other is taken into account.



Standards dealing with non-safety aspects of household appliances are:

- IEC Standards published by TC 59 concerning methods of measuring performance;
- CISPR 11¹⁾ and CISPR 14-1²⁾ concerning electromagnetic emissions;
- CISPR 14-2³⁾ and IEC 61000 series concerning electromagnetic compatibility.

1 Scope

Commence the last paragraph of the requirement by: "However, this standard" and combine it with the previous paragraph.

In note 3, delete the seventh and eighth dashed items.

2 Definitions

2.2.6 *In the third dashed item of the note, add "supplied at" before "rated voltages".*

2.4.6 *Delete "with" after "incorporating".*

2.4.8 *Delete note 4.*

2.7.2 *Replace the text by:*

detachable part: Part which can be removed without the aid of a **tool**, a part which is removed in accordance with the instructions for use, even if a **tool** is needed for removal, or a part which does not fulfil the test of 22.11.

NOTE 1 – If for installation purposes a part has to be removed, this part is not considered to be detachable even if the instructions state that it is to be removed.

NOTE 2 – Components which can be removed without the aid of a **tool** are considered to be detachable parts.

NOTE 3 – A part which can be opened is considered to be a part which can be removed.

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* IEC 60364: *Electrical installations of buildings*

¹⁾ CISPR 11: *Electromagnetic disturbance characteristics – Industrial, scientific and medical (ISM) radio-frequency equipment – Limits and methods of measurement*

²⁾ CISPR 14-1: *Limits and methods of measurement of radio disturbance characteristics of electrical motor operated and thermal appliances for household and similar purposes, electric tools and electrical apparatus*

³⁾ CISPR 14-2: *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 2: Immunity – Product family standard*

4 General conditions for the tests

Add:

Unless otherwise specified, the tests are carried out in accordance with this clause.

4.2 Replace the first paragraph by:

The tests are carried out on a single appliance, which shall withstand all the relevant tests. However, the tests of clauses 20, 22 (except 22.11 and 22.18) to 26, 28, 30 and 31 may be carried out on separate appliances.

Add to note 1:

If the tests of 24.1.3 are carried out, three switches or three additional appliances are needed.

If an intentionally weak part becomes open-circuit during the tests of clause 19, an additional appliance is needed.

If the tests of annex R are carried out, four additional transformers are needed.

4.3 Delete "Unless otherwise specified".

4.10 Delete "Unless otherwise specified".

4.11 Delete "Unless otherwise specified".

7 Marking and instructions

7.6 Add to the list of symbols



[Symbol No. 1641 of ISO 7000]read the instructions



[Symbol No. 0434 of ISO 7000]caution

7.12.2 Replace the requirement by:

If a **stationary appliance** is not provided with a **supply cord** and a plug or with other means for disconnection from the supply having a contact separation of at least 3 mm in all poles, the instructions shall state that means for disconnection must be incorporated in the fixed wiring according to the wiring rules.

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8 Protection against access to live parts

8.1.2 Add the following after the first paragraph:

The test pin is also applied through openings in earthed metal enclosures having a non-conductive coating such as enamel or lacquer.

Add the following note:

NOTE – Appliance outlets are not considered to be socket-outlets.

8.1.5 Replace the test specification by:

Compliance is checked by inspection and by the test of 8.1.1.