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Institut luxembourgeois de la normalisation
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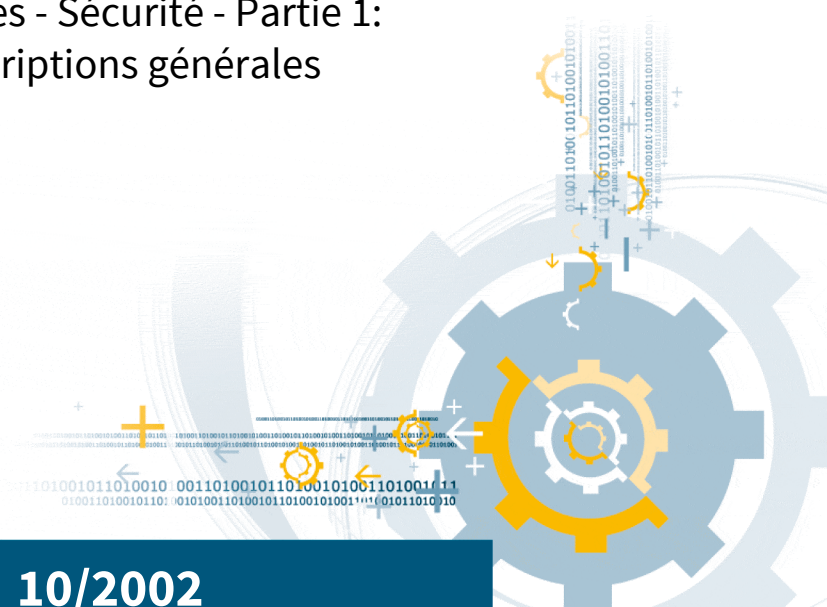
ILNAS-EN 60335-1:2002

Household and similar electrical appliances - Safety - Part 1: General requirements

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

Appareils électrodomestiques et
analogues - Sécurité - Partie 1:
Prescriptions générales

10/2002



National Foreword

This European Standard EN 60335-1:2002 was adopted as Luxembourgish Standard ILNAS-EN 60335-1:2002.

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- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

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EUROPEAN STANDARD

EN 60335-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2002

ICS 13.120; 97.030

Supersedes EN 60335-1:1994 + A11:1995 + A12:1996 + A1:1996 +
A13:1998 + A14:1998 + A2:2000 + A15:2000 + A16:2001

English version

Household and similar electrical appliances - Safety
Part 1: General requirements
 (IEC 60335-1:2001, modified)

Appareils électrodomestiques et
analogues - Sécurité
Partie 1: Prescriptions générales
(CEI 60335-1:2001, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 1: Allgemeine Anforderungen
(IEC 60335-1:2001, modifiziert)

This European Standard was approved by CENELEC on 2002-07-02. 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.

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 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 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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 document 61/1965/FDIS, future fourth edition of IEC 60335-1, prepared by the IEC Technical Committee 61, was submitted to the IEC-CENELEC parallel vote in January 2001. The comments were discussed during the Delft meeting of CENELEC TC 61 in May 2001 when it was decided to submit some common modifications to the formal vote (2MV).

This draft was circulated in November 2001, but did not receive sufficient support. The comments were discussed during the Kista meeting of CENELEC TC 61 in May 2002 when it was decided to retain only the common modifications from the previous edition. This new draft was approved by CENELEC as EN 60335-1 on 2002-07-02.

The following date is applicable:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-07-01

This European Standard replaces EN 60335-1:1994 and its amendments. However, EN 60335-1:1994 remains valid until all the parts 2 that are used in conjunction with it have been withdrawn. No date of withdrawal of conflicting national standards (dow) has therefore been fixed. However, when Part 1 is used for appliances not covered by a part 2, EN 60335-1:1994 is not to be used after 2008-07-01.

This part of EN 60335 is to be used in conjunction with the appropriate part 2. The parts 2 contain clauses to supplement or modify the corresponding clauses in Part 1 to provide the relevant requirements for each type of appliance.

NOTE 1 Subclauses, notes and annexes that are additional to those in IEC 60335-1 are prefixed with the letter Z.

Special national conditions causing a deviation from this European Standard are listed in Annex ZA.

National deviations from this European Standard are listed in Annex ZB.

Annexes B, C, D, E, F, G, H, I, J, K, M, N, ZA and ZC are normative and form an integral part of this standard.

Annexes A, L, O, ZB and ZD are for information only.

NOTE 2 The following annexes contain provisions suitably modified from other IEC standards:

- Annex E	Needle flame test	IEC 60695-2-2
- Annex F	Capacitors	IEC 60384-14
- Annex G	Safety isolating transformers	IEC 61558-1 and IEC 61558-2-6
- Annex H	Switches	IEC 61058-1
- Annex J	Coated printed circuit boards	IEC 60664-3
- Annex N	Proof tracking test	IEC 60112

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**.

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

Endorsement notice

The text of the International Standard IEC 60335-1:2001, excluding the corrigendum January 2002, was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Introduction

p Add:

The principal objectives of the Low Voltage Directive, 73/23/EEC, are covered by this standard. The essential safety requirements of the following directives, which can be applicable to some household and similar appliances, have also been taken into account:

- 98/37/EC – Machinery directive;
- 89/106/EEC – Construction products directive;
- 97/23/EC – Pressure equipment directive.

6 Classification

p 6.1 Delete “class 0” and “class 0I”.

7 Marking and instructions

p 7.1 Add:

The marking of **rated voltage** or **rated voltage range**, for appliances intended to be connected to the supply mains, shall cover:

- 230 V for single-phase appliances;
- 400 V for multi-phase appliances.

25 Supply connection and external flexible cords

p 25.6 Add:

Supply cords of single-phase **portable appliances** having a **rated current** not exceeding 16 A shall be fitted with a plug complying with the following standard sheets of IEC 60083:1975:

- for **class I appliances** standard sheet C2b, C3b or C4;
- for **class II appliances** standard sheet C5 or C6.

p 25.7 Add after the second dashed item:

- ordinary polychloroprene sheathed flexible cord (code designation 60245 IEC 57).

p Add before the note:

When **supply cords** having high flexibility are used, they shall not be lighter than

- rubber insulated and sheathed cord (code designation 60245 IEC 86);
- rubber insulated, crosslinked PVC sheathed cord (code designation 60245 IEC 87);
- crosslinked PVC insulated and sheathed cord (code designation 60245 IEC 88).

p Add after the note:

NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.

Annex ZA (normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard or Harmonization Document.

For the countries in which the relevant special national conditions apply, these provisions are normative. For other countries they are informative.

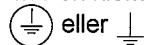
Clause Special national condition

7.12 **Denmark**

Supply cords of class I appliances, which are delivered without a plug, shall be provided with a visible tag with the following text:

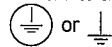
Vigtigt !

Ledere med grøn/gul isolation
må kun tilsluttes en klemme mærket



Important !

The conductor having green/yellow insulation
shall only be connected to a terminal marked



If it is essential for the safety of the appliance, the tag shall be provided with a diagram showing the connection of the other conductors or with the following text:

For tilslutning af de øvrige ledere,
se medfølgende installationsvejledning.

For the connection of the other conductors,
see the enclosed instructions for installation.

19.5 **Norway**

The test is also applicable to appliances intended to be permanently connected to fixed wiring.

22.2 **France and Norway**

The second paragraph of this subclause, that deals with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system.

- 25.6** Plugs according to standard sheet C 2b are not allowed in Belgium, France, Spain and the United Kingdom.

Plugs according to standard sheet C 3b are not allowed in Austria, Finland, Germany, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Denmark

Replace the common modification by the following:

Supply cords of single-phase portable appliances having a rated current not exceeding 13 A shall be provided with a plug according to the following:

- Class I appliances.....Section 107-2-D1, ed. 3, 1998
Standard Sheet DK 2-1a

For appliances covered by a part 2 of EN 60335, it is also allowed until further notice, and unless otherwise specified, to use plugs in accordance with Section 107-2-D1, ed. 3, 1998, Standard Sheet C 2b, C 3b or C 4.

- Class II appliances.....Section 107-2-D1, ed. 3, 1998
Standard Sheet C 1b, C 5, C 6,
DKA 2-1a and DKA 2-1b

If stationary single-phase appliances having a rated current not exceeding 13 A are provided with a supply cord and a plug, the plug shall be in accordance with the requirements specified above.

If multi-phase appliances and single-phase appliances having a rated current exceeding 13 A are provided with a supply cord and a plug, the plug shall comply with the following table:

Class	Plug	
	Section 107-2-D1 Standard sheet	EN 60309-2 Standard sheet
I	DK 6-1a	2-II, 2-IV
II	DK 6-1a*	2-II, 2-IV*
* Earthing contact not connected.		
NOTE These plugs are also allowed for appliances having a rated current equal to or less than 13 A.		

The maximum current for the plugs is as follows:

C5	: 2,5 A
DKA 2-1a and 1b	: 10 A
DK 2-1a	: 13A
C 1b and C 6	: 16 A
C 2b	: 16 A
C 3b	: 16 A
C 4	: 16 A

Ireland

Only plugs according to standard sheets B2 and C5 are allowed (see also Annex ZB).

Italy

Only plugs listed in CENELEC Report ROBT-005:2001 are allowed.

Spain

For appliances for household use, only the following plugs are allowed:

- according to UNE 20315: ESC 10-1b, C2b, C4, C6 or ESB 25-5b;
- according to UNE-EN 50075.

Switzerland

Supply cords of portable household and similar electrical appliances having a rated current not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:

SEV 6532-2.1991	Plug Type 15	3P + N + PE	250/400 V, 10A
SEV 6533-2.1991	Plug Type 11	L + N	250 V, 10A
SEV 6534-2.1991	Plug Type 12	L + N + PE	250 V, 10A

NOTE 16 A plugs do not exist in the Swiss domestic system.

United Kingdom

Only plugs according to standard sheets B2 and C5 are allowed (see also Annex ZB).

25.8**Ireland and United Kingdom**

In the table, replace the line for 10 A and 16 A by:

> 10 and ≤ 13	1,25
> 13 and ≤ 16	1,5.