

# ILNAS

Institut luxembourgeois de la normalisation  
de l'accréditation, de la sécurité et qualité  
des produits et services

**ILNAS-EN 60335-1:2012**

## **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: Exigences  
générales

**01/2012**



## National Foreword

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60335-1**

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Supersedes EN 60335-1:2002 + corr. Jul.2009 + corr. May.2010 + A1:2004 + A2:2006 + A11:2004 + A12:2006 + A13:2008 + A14:2010 + A15:2011 + corr. Jan.2007 + corr. Feb.2007

English version

**Household and similar electrical appliances -  
Safety -  
Part 1: General requirements  
(IEC 60335-1:2010, modified)**

Appareils électrodomestiques et analogues -  
Sécurité -  
Partie 1: Exigences générales  
(CEI 60335-1:2010, modifiée)

Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke -  
Teil 1: Allgemeine Anforderungen  
(IEC 60335-1:2010, modifiziert)

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**CENELEC**

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

This document (EN 60335-1:2012) consists of the text of IEC 60335-1:2010 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", together with the common modifications 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) 2012-11-21
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2014-11-21

This document supersedes EN 60335-1:2002 + corr. Jul.2009 + corr. May.2010 + A1:2004 + A2:2006 + A11:2004 + A12:2006 + A13:2008 + A14:2010 + A15:2011 + corr. Jan.2007 + corr. Feb.2007.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60335-1:2010 are prefixed "Z".

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(s) see informative Annex ZZ, which is an integral part of this document.

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

- |           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| – Annex E | Needle flame test             | EN 60695-11-5               |
| – Annex F | Capacitors                    | EN 60384-14                 |
| – Annex G | Safety isolating transformers | EN 61558-1 and EN 61558-2-6 |
| – Annex H | Switches                      | EN 61058-1                  |
| – Annex J | Coated printed circuit boards | EN 60664-3                  |
| – Annex N | Proof tracking test           | EN 60112                    |

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 associated noun are also in bold.

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.

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.

### **Endorsement notice**

The text of the International Standard IEC 60335-1:2010 was approved by CENELEC as a European Standard with common modifications.

## COMMON MODIFICATIONS

**Introduction**

*Add after NOTE 1 the following sentence:*

For appliances not covered by a particular Part 2 of EN 60335 additional consideration may need to be given to particular categories of likely users, including vulnerable people and children and to related specific risks (e.g. access to live parts, or to hot surfaces or to moving parts) that may be covered by a particular Part 2 considered to be closest to the product under examination.

*Add:*

The principal objectives of the Low Voltage Directive, 2006/95/EC, 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:

- 2006/42/EC – Machinery directive;
- 89/106/EEC – Construction products directive;
- 97/23/EC – Pressure equipment directive.

The Essential Health and Safety Requirements (EHSR) of the Directive 2006/42/EC are covered by Annex ZE. The application of EN 60335-1 alone does not give presumption of conformity for a product. This is achieved by complying with the requirements of EN 60335-1 and the relevant Part 2, when this Part 2 is also listed in the OJ under the Directive.

**1 Scope**

*Replace the scope with the following:*

This European Standard deals with the safety of electrical appliances for household environment and commercial purposes, their **rated voltage** being not more than 250 V for single-phase and 480 V for others. .

NOTE 1 Battery-operated appliances and other d.c. supplied appliances are within the scope of this standard.

NOTE Z1 Examples of appliance for household environment are appliances for typical housekeeping functions used in the household environment that may also be used by non expert users for typical housekeeping functions:

- in shops, offices and other similar working environments;
- in farm houses;
- by clients in hotels, motels and other residential type environments;
- in bed and breakfast type environments.

NOTE Z2 Household environment includes the dwelling and its associated buildings, the garden, etc.

Appliances and machines intended to be used by expert or trained users in shops, in light industry and on farms, and appliances and machines which are declared to be for commercial use by lay persons are within the scope of this standard.

Additional requirements for such appliances are given in Annex ZE.

NOTE 2 Text deleted.

NOTE Z3 Examples of such appliances and machines are catering equipment, cleaning machines for commercial use, and appliances for hairdressers.

NOTE Z4 Criteria applied for the allocation of products covered by standards in the EN 60335 series under either the Low Voltage Directive (LVD) or the Machinery Directive (MD) are given for information in Annex ZF.

This standard deals with the reasonably foreseeable hazards presented by appliances and machines that are encountered by all persons.

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 3 Attention is drawn to the fact that

- for appliances 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, the national water supply authorities and similar authorities.

NOTE 4 This standard does not apply to

- appliances intended exclusively for industrial purposes;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- audio, video and similar electronic apparatus (IEC 60065);
- appliances for medical purposes (IEC 60601);
- hand-held motor-operated electric tools (IEC 60745);
- personal computers and similar equipment (IEC 60950-1);
- transportable motor-operated electric tools (IEC 61029).

## 2 Normative references

Add the following reference:

IEC/TR 60083:2009, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

**Add the following references:**

EN 50366:2003, *Household and similar electrical appliances - Electromagnetic fields - Methods for evaluation and measurement*

CLC/TR 50417, *Safety of household and similar electrical appliances – Interpretations related to European Standards within the scope of CENELEC/TC 61*

EN 62233, *Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure* (IEC 62233)

**Add the following references:**

EN 41003, *Particular safety requirements for equipment to be connected to telecommunication networks and/or a cable distribution system*

**Remove the following reference :**

IEC 62151, *Safety of equipment electrically connected to a telecommunication network*

### 3 Terms and definitions

#### 3.1 Add as a first paragraph:

When the term “appliance” is used, it is intended to cover appliances and/or machines for household use and appliances and/or machines for commercial use.

#### 3.6.3 accessible part

*Modification:*

Insert “and probe 18” after “test probe B”.

*Add the following new definitions:*

#### 3.Z.1 children

young persons comprising **very young children**, **young children** and **older children**

#### 3.Z.2 very young children

young persons aged from 0 up to and including 3 years

#### 3.Z.3

##### young children

young persons older than 3 years and younger than 8 years

#### 3.Z.4

##### older children

young persons aged from 8 years up to and including 14 years

#### 3.Z.5

##### vulnerable people

persons having reduced physical, sensory or mental capabilities (e.g. partially disabled, elderly having some reduction in their physical and mental capabilities), or lack of experience and knowledge (e.g. older children)

#### 3.Z.6

##### very vulnerable people

persons having very extensive and complex disabilities

#### 3.Z.7

##### use of the appliance

all actions required to have the appliance perform its intended function, such as plugging in, switching on, using, regulating, cleaning the appliance or performing **user maintenance**

NOTE Z1 Children are not expected to perform cleaning or user maintenance of the appliance, very young children are not expected to use appliances, young children are not expected to use appliances safely unless continuous supervision is



given, older children and vulnerable people can use appliances safely after they have been given appropriate supervision or instruction concerning use of the appliance.

NOTE Z2 Very vulnerable people are not expected to use appliances safely unless continuous supervision is given or appliances are adapted accordingly with arrangements beyond the scope of this standard.

## 4 General requirement

*Add at the end:*

*The interpretations included in CLC/TR 50417 shall be taken into consideration together with the relevant requirements in the standards listed therein.*

## 6 Classification

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

## 7 Marking and instructions

**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.

**7.10** *Add the following before the compliance paragraph:*

Devices used to start/stop operational functions of the appliance, if any, shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position, etc.

An indication that the device has been operated shall be given by:

- A tactile feedback or
- An audible and visual feedback.

NOTE Z1 The sound of the motor or sound of an actuator switching ON/OFF is regarded as audible feedback. The stopping of the typical function (e.g. stopping of the vibration on the body of the appliance or of a part of it) is regarded as tactile means.

NOTE Z2 Devices used to start/stop operational functions mean devices that are operated by the user to start/stop the intended function of the appliance.

A selector switch with an off-position clearly identifiable is allowed.

An ON/OFF switch, if any, is considered a suitable device to stop operational functions. A plug is not considered a suitable device to stop operational functions, as it can be difficult to be reached by vulnerable persons.

**7.12** *Replace the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> paragraph by the following:*

The instructions shall include the substance of the following:

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall