



BSI Standards Publication

## Household and similar electrical appliances — Safety

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Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections

## National foreword

This British Standard is the UK implementation of EN 60335-2-102:2016. It is derived from IEC 60335-2-102:2004, incorporating amendments 1:2008 and 2:2012. It supersedes BS EN 60335-2-102:2006+A1:2010, which is withdrawn.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags **[C]** **[C]**.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by **[A1]** **[A1]**.

The UK participation in its preparation was entrusted to Technical Committee CPL/61, Safety of household and similar electrical appliances.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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EUROPEAN STANDARD

**EN 60335-2-102**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2016

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Supersedes EN 60335-2-102:2006

English Version

**Household and similar electrical appliances - Safety -  
Part 2-102: Particular requirements for gas, oil and solid-fuel  
burning appliances having electrical connections  
(IEC 60335-2-102:2004 , modified + A1:2008 , modified  
+ A2:2012 , modified)**

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-102: Règles particulières pour les appareils à  
combustion au gaz, au mazout et à combustible solide  
comportant des raccordements électriques  
(IEC 60335-2-102:2004 , modifiée + A1:2008 , modifiée  
+ A2:2012 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 2-102: Besondere Anforderungen  
für Gas-, Öl- und Festbrennstoffgeräte mit elektrischen  
Anschlüssen  
(IEC 60335-2-102:2004 , modifiziert + A1:2008 , modifiziert  
+ A2:2012 , modifiziert)

This European Standard was approved by CENELEC on 2015-08-24. 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 CEN-CENELEC Management Centre or to any CENELEC member.

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

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## European foreword

This document (EN 60335-2-102:2016) consists of the text of IEC 60335-2-102:2004 + A1:2008 + A2:2012 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 the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-07-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-22

This document supersedes EN 60335-2-102:2006.

This Part 2 has to be used in conjunction with EN 60335-1, *Household and similar electrical appliances – Safety – Part 1: General requirements*, and with IEC 60335-2-102, Edition 1.2, 2012-11<sup>1)</sup>, *Household and similar electrical appliances – Safety – Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections*.

When this standard states "addition", "modification" or "replacement", the relevant text of the IEC 60335-2-102 is to be adapted; if the subclause is not mentioned in IEC 60335-2-102, the corresponding subclause of Part 1 is to be adapted accordingly.

This standard is intended to be used in addition to the standards for non-electrical appliances and to any Part 2 of EN 60335, if applicable.

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.;
- subclauses, notes, tables and annexes that are additional to those in the IEC standards 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.

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1) IEC 60335-2-102, Edition 1.2, 2012-11 is the consolidated edition of IEC 60335-2-102:2004 + A1:2008 + A2:2012.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

There are no national deviations causing a deviation from this European Standard, other than those listed in Annex ZB to EN 60335-1.

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 standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for use within Certain Voltage Limits (LVD - 2006/95/EC).

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.

## **Endorsement notice**

The text of the International Standard IEC 60335-2-102:2004 + A1:2008 + A2:2012 was approved by CENELEC as a European Standard with agreed common modifications.

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## INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

**A1** When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards. **A1**

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

**C** The principal objectives of the Low Voltage Directive, 2006/95/EC, are covered by this standard. The Essential Health and Safety Requirements (EHSR) (except 1.7.4.2 u) of the Directive 2006/42/EC, which can be applicable to some of the appliances covered by this standard, have also been taken into account. **C**

## HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

### Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections

#### 1 Scope

This clause of Part 1 is replaced by the following.

☐ This European Standard deals with the safety of gas, oil and solid-fuel burning appliances having electrical connections, their rated voltage being not more than 250 V for single-phase appliances and 480 V for other appliances.

This standard covers the electrical safety and some other safety aspects of these appliances. All safety aspects of these appliances, including those relevant to the noise emitted, are only covered when the appliance also complies with the relevant product standard for the fuel-burning appliance.

If the appliance incorporates electric heating sources, it also has to comply with the relevant Part 2 of EN 60335.

Additional requirements for appliances and machines with moving parts and intended for commercial use are given in Annex ZE. ☐

NOTE 101 Examples of appliances within the scope of this standard are

- central heating boilers;
- commercial catering equipment;
- cooking appliances;
- laundry and cleaning appliances;
- room heaters;
- warm air heaters;
- water heaters.

☐ NOTE Z1 Examples of appliance for household environment are appliances for typical housekeeping functions used in the household environment and appliances for typical housekeeping functions used by non-expert users:

- 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. ☐

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account

- ☐ – persons (including children) whose
  - physical, sensory or mental capabilities; or
  - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance. ☐

Ⓒ This standard has to be applied in conjunction with the relevant standards for appliances and for control devices. Examples are listed in Annexes ZAA and ZBB. Ⓒ

NOTE 102 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 and similar authorities.

NOTE 103 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).

## 2 Normative references

This clause of Part 1 is applicable except as follows.

*Addition:*

Ⓐ<sub>2</sub> IEC 61558-2-3, *Safety of transformers, reactors, power supply units and combinations thereof – Part 2-3: Particular requirements and tests for ignition transformers for gas and oil burners* Ⓐ<sub>2</sub> Ⓐ<sub>2</sub>

Ⓒ EN 298:2012, *Automatic burner control systems for burners and appliances burning gaseous or liquid fuels*

EN 60747-5-2, *Discrete semiconductor devices and integrated circuits – Part 5-2: Optoelectronic devices - Essential ratings and characteristics (IEC 60757-5-2)*

EN 61310-1, *Safety of machinery – Indication, marking and actuation – Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1)*

EN 61810-1, *Electromechanical elementary relays – Part 1: General and safety requirements (IEC 61810-1)* Ⓒ

Ⓐ<sub>1</sub> ISO 3808, *Road vehicles – Unscreened high-voltage ignition cables – General specifications, test methods and requirements* Ⓐ<sub>1</sub>

## Ⓐ<sub>2</sub> 3 Terms and definitions Ⓐ<sub>2</sub>

This clause of Part 1 is applicable except as follows.

### 3.101

#### **spark-ignition circuit**

electrical circuit for producing sparks which ignite gaseous or liquid fuel

Ⓐ<sub>1</sub> *Texts deleted* Ⓐ<sub>1</sub>

### 3.105

#### **shut-down**

de-energization of a control resulting from the action of a limiting device or detection of a fault in the control system, thus stopping the flow of gaseous or liquid fuel