Majapidamis- ja muud taolised elektriseadmed. Ohutus. Osa 2-109: Erinõuded ultraviolettkiiritus-veekäsitlusseadmetele

Household and similar electrical appliances - Safety - Part 2-109: Particular requirements for UV radiation water treatment appliances

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60335-2-109:2010 sisaldab Euroopa standardi EN 60335-2-109:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 60335-2-109:2010 consists of the English text of the European standard EN 60335-2-109:2010.
Standard on kinnitatud Eesti Standardikeskuse 31.08.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.08.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 18.06.2010.	Date of Availability of the European standard text 18.06.2010.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 13.120, 97.030

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60335-2-109

June 2010

ICS 13.120; 97.030

English version

Household and similar electrical appliances - Safety - Part 2-109: Particular requirements for UV radiation water treatment appliances

(IEC 60335-2-109:2010)

Appareils électrodomestiques et analogues - Sécurité - Partie 2-109: Règles particulières pour les appareils de traitement de l'eau par rayonnements ultraviolets (CEI 60335-2-109:2010)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-109: Besondere Anforderungen für Geräte zur Wasserbehandlung durch UV-Strahlung (IEC 60335-2-109:2010)

This European Standard was approved by CENELEC on 2010-06-01. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 60335-2-109:2010 E

Foreword

The text of document 61/3973/FDIS, future edition 1 of IEC 60335-2-109, prepared by the IEC Technical Committee 61, Safety of household and similar electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-109 on 2010-06-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2011-03-01

- date on which national standards conflicting with the EN have to be withdrawn (dow) 2013-06-01

This Part 2 has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements. It was established on the basis of the 2002 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of Part 1.

This Part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for UV radiation water treatment appliances.

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

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 and annexes that are additional to those in the IEC standard 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.

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 from this European Standard, other than those listed in Annex ZB to EN 60335-1.

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

Introduction

p Add:

An investigation by CENELEC TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 2006/95/EC. For products having mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 2006/42/EC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

Endorsement notice

The text of the International Standard IEC 60335-2-109:2010 was approved by CENELEC as a European Standard without any modification.

Bibliography

p Add the following notes to the standards mentioned:

IEC 60335-2-41	NOTE Harmonized as EN 60335-2-41.
IEC 60598-2-11	NOTE Harmonized as EN 60598-2-11.
IEC 60598-2-18	NOTE Harmonized as EN 60598-2-18.
ISO 13732-1	NOTE Harmonized as EN ISO 13732-1.

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p Add:

Annex ZC
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

Addition:

Publication	Year	Title	EN/HD	Year
ISO 4892-2 + A1	2006 2009	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	-	-
ISO 4892-4	2004	Plastics - Methods of exposure to laboratory light sources - Part 4: Open-flame carbon-arc lamps	-	-

CONTENTS

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.

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.

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 which 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.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-109: Particular requirements for UV radiation water treatment appliances

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of **UV radiation water treatment appliances** for household and similar purposes, their **rated voltage** being not more than 250 V.

Appliances not intended for normal household use but that nevertheless may be a source of danger to the public, such as appliances intended to be used by laymen in shops and in light industry and farms, are within the scope of this standard.

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 knowledge

  prevents them from using the appliance safely without supervision or instruction;
– children playing with the appliance.

NOTE 101 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 102 This standard does not apply to

– pumps (IEC 60335-2-41);
– luminaires for aquariums (IEC 60598-2-11);
– luminaires for swimming pools and similar applications (IEC 60598-2-18);
– appliances intended exclusively for professional use;
– 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:

ISO 4892-2:2006, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*
Amendment 1 (2009)

ISO 4892-4:2004, *Plastics – Methods of exposure to laboratory light sources – Part 4: Open-flame carbon-arc lamps*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1.9 *Replacement:*

normal operation
operation of the appliance with water at the most onerous temperature specified in the instructions

3.101
UV-C emitter
radiating source constructed to emit non-ionizing electromagnetic energy at wavelengths of 100 nm to 280 nm

3.102
UV radiation water treatment appliance
appliance that treats water using electromagnetic energy at wavelengths in the ultraviolet band using **UV-C emitters**

4 General requirement

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable except as follows.

5.101 UV radiation water treatment appliances are tested as **motor-operated appliances**.

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 *Addition:*

UV radiation water treatment appliances shall be **class I**, **class II** or **class III**.

Appliances immersed in water shall be c**lass III** with a **rated voltage** not exceeding 12 V or c**lass I**.

UV radiation water treatment appliances for use in swimming pools, when persons are in the pool, shall be **class III** with a **rated voltage** not exceeding 12 V.

6.2 *Addition:*

Appliances for use in water shall be IPX8.

Appliances for use above water shall be at least IPX7 unless they are intended to be fixed, in which case they shall be at least IPX1.