SVENSK STANDARD SS-EN 60335-2-30



Fastställd 2010-04-26

Utgåva 4 Sida 1 (1+30) Ansvarig kommitté SEK TK 61

© Copyright SEK. Reproduction in any form without permission is prohibited.

Elektriska hushållsapparater och liknande bruksföremål – Säkerhet –

Del 2-30: Särskilda fordringar på rumsuppvärmningsapparater

Household and similar electrical appliances – Safety - Part 2-30: Particular requirements for room heaters

Som svensk standard gäller europastandarden EN 60335-2-30:2009. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60335-2-30:2009*).

Nationellt förord

Europastandarden EN 60335-2-30:2009

består av:

- europastandardens ikraftsättningsdokument, utarbetat inom CENELEC
- IEC 60335-2-30, Fifth edition, 2009 Household and similar electrical appliances Safety -Part 2-30: Particular requirements for room heaters

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60335-1, utgåva 4, 2002.

Tidigare fastställd svensk standard SS-EN 60335-2-30, utgåva 3, 2003, SS-EN 60335-2-30/A1, utgåva 1, 2005 och SS-EN 60335-2-30/A2, utgåva 1, 2007, gäller ej fr o m 2014-12-01.

ICS 13.120; 97.100.10

Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden. Postadress: SEK, Box 1284, 164 29 KISTA *Telefon*: 08 - 444 14 00. *Telefax*: 08 - 444 14 30 *E-post*: sek@elstandard.se. *Internet*: www.elstandard.se

^{*)} Corrigendum, March 2010, till EN 60335-2-30:2009 är inarbetat i standarden.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284 164 29 Kista Tel 08-444 14 00 www.elstandard.se

EUROPEAN STANDARD

EN 60335-2-30

NORME EUROPÉENNE EUROPÄISCHE NORM

December 2009

ICS 13.120; 97.100.10

Supersedes EN 60335-2-30:2003 + A1:2004 + A2:2007 Incorporates corrigendum March 2010

English version

Household and similar electrical appliances - Safety -

Part 2-30: Particular requirements for room heaters

(IEC 60335-2-30:2009)

Appareils électrodomestiques et analogues - Sécurité - Partie 2-30: Règles particulières pour les appareils de chauffage des locaux (CEI 60335-2-30:2009)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -Teil 2-30: Besondere Anforderungen für Raumheizgeräte (IEC 60335-2-30:2009)

This European Standard was approved by CENELEC on 2009-12-01. 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, 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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

© 2009 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Ref. No. EN 60335-2-30:2009 E

Foreword

The text of document 61/3910/FDIS, future edition 5 of IEC 60335-2-30, prepared by IEC TC 61, Safety of household and similar electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-30 on 2009-12-01.

This European Standard supersedes EN 60335-2-30:2003 + A1:2004 + A2:2007.

The principal changes in EN 60335-2-30:2009 as compared with EN 60335-2-30:2003 are as follows (minor changes are not listed):

- some additional instructions are introduced for heaters without a built-in thermostat, or those installed in the floor or in a bathroom (7.12 and 7.12.1);
- a spillage test is introduced for appliances having a grille and that are built into the floor (15.2).

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) 2010-09-01

 latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 2014-12-01

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: Particular requirements for room heaters.

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies. 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.

The contents of the corrigendum of March 2010 have been included in this copy.

SEK Svensk Elstandard

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 60335-2-30:2009 was approved by CENELEC as a European Standard without any modification.

Bibliography

p Add the following notes to the standards mentioned:

IEC 60335-2-40	NOTE	Harmonized as EN 60335-2-40:2003 (modified).
IEC 60335-2-53	NOTE	Harmonized as EN 60335-2-53:2003 (not modified).
IEC 60335-2-61	NOTE	Harmonized as EN 60335-2-61:2003 (not modified).
IEC 60335-2-71	NOTE	Harmonized as EN 60335-2-71:2003 (modified).
IEC 60335-2-81	NOTE	Harmonized as EN 60335-2-81:2003 (not modified).
IEC 60335-2-96	NOTE	Harmonized as EN 60335-2-96:2002 (not modified).
ISO 13732-1	NOTE	Harmonized as EN ISO 13732-1:2008 (not modified).

SEK Svensk Elstandard

p Add:

Annex ZC (normative)

Normative references to international publications with their corresponding European publications

Addition:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60335-2-5 (mod)	2002	Household and similar electrical appliances - Safety -	EN 60335-2-5	2003
À1 A2	2005 2008	Part 2-5: Particular requirements for dishwashers	A1 A2 + A11	2005 2008 2009
IEC 60335-2-43	_1)	Household and similar electrical appliances - Safety - Part 2-43: Particular requirements for clothes dryers and towel rails	EN 60335-2-43	2003 ²⁾
IEC 60335-2-80	_1)	Household and similar electrical appliances - Safety - Part 2-80: Particular requirements for fans	EN 60335-2-80	2003 ²⁾
ISO 2758	_1)	Paper - Determination of bursting strength	EN ISO 2758	2003 ²⁾
ISO 3864-1	_1)	Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs in workplaces and public areas	<i>y</i> -	-

SEK Svensk Elstandard

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

CONTENTS

INI	RODUCTION	6
1	Scope	7
2	Normative references	8
3	Definitions	8
4	General requirement	9
5	General conditions for the tests	9
6	Classification	10
7	Marking and instructions	10
8	Protection against access to live parts	13
9	Starting of motor-operated appliances	14
10	Power input and current	14
11	Heating	14
12	Void	16
13	Leakage current and electric strength at operating temperature	16
14	Transient overvoltages	16
15	Moisture resistance	17
16	Leakage current and electric strength	17
17	Overload protection of transformers and associated circuits	17
18	Endurance	17
19	Abnormal operation	17
20	Stability and mechanical hazards	21
21	Mechanical strength	21
22	Construction	22
23	Internal wiring	24
24	Components	24
25	Supply connection and external flexible cords	25
26	Terminals for external conductors	25
27	Provision for earthing	25
28	Screws and connections	25
29	Clearances, creepage distances and solid insulation	25
30	Resistance to heat and fire	25
31	Resistance to rusting	26
32	Radiation, toxicity and similar hazards	26
Anı	nexes	29
Bib	oliography	30
_	gure 101 – Examples of immediate surrounds of air-outlet grilles	
Fig	gure 102 – Examples of the immediate surrounds of fireguards	28
Tak	ble 101 – Temperature rises for surfaces	16

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 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.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-30: Particular requirements for room heaters

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric room heaters for household and similar purposes, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

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

- convector heaters:
- fan heaters:
- heaters for use in greenhouses;
- liquid-filled radiators;
- panel heaters;
- radiant heaters;
- tubular heaters;
- ceiling mounted heat lamp appliances.

For extraction fans of **ceiling mounted heat lamp appliances**, IEC 60335-2-80 is applicable as far as is reasonable.

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

As far as is practicable, this standard deals with the common hazards presented by appliances which 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 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;
- for appliances intended to be used in the presence of combustible dust, for example in barns or stables, additional requirements may be necessary.

NOTE 103 This standard does not apply to

- appliances intended exclusively for industrial purposes;
- appliances intended to be used where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- heaters that are built into air conditioners (IEC 60335-2-40);
- clothes dryers and towel rails (IEC 60335-2-43);
- heaters for saunas (IEC 60335-2-53);
- thermal-storage room heaters (IEC 60335-2-61);
- heating appliances for breeding and rearing animals (IEC 60335-2-71);
- foot warmers and heating mats (IEC 60335-2-81);
- flexible sheet heating elements for room heating (IEC 60335-2-96);
- heated carpets;
- central heating systems;
- heating cables (IEC 60800).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60335-2-5:2002, Household and similar electrical appliances – Safety – Part 2-5: Particular requirements for dishwashers

Amendment 1 (2005)

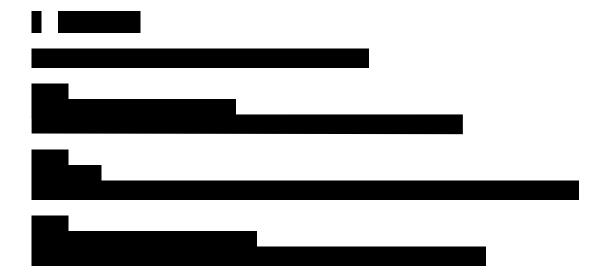
Amendment 2 (2008)1)

IEC 60335-2-43, Household and similar electrical appliances – Safety – Part 2-43: Particular requirements for clothes dryers and towel rails

IEC 60335-2-80, Household and similar electrical appliances – Safety – Part 2-80: Particular requirements for fans

ISO 2758, Paper - Determination of bursting strength

ISO 3864-1, Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs in workplaces and public areas



¹⁾ There exists a consolidated edition 5.2 (2008) that includes edition 5 and its Amendments 1 and 2.