

INTERNATIONAL STANDARD

IEC
60335-2-71

Second edition
2002-03

Household and similar electrical appliances – Safety –

Part 2-71: Particular requirements for electrical heating appliances for breeding and rearing animals

*Appareils électrodomestiques et analogues –
Sécurité –*

*Partie 2-71:
Règles particulières pour les appareils de chauffage électrique
destinés à la reproduction et à l'élevage des animaux*



Reference number
IEC 60335-2-71:2002(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Further information on IEC publications

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site** (www.iec.ch)
- **Catalogue of IEC publications**
The on-line catalogue on the IEC web site (www.iec.ch/catlg-e.htm) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.
- **IEC Just Published**
This summary of recently issued publications (www.iec.ch/JP.htm) is also available by email. Please contact the Customer Service Centre (see below) for further information.
- **Customer Service Centre**
If you have any questions regarding this publication or need further assistance, please contact the Customer Service Centre:

Email: custserv@iec.ch
Tel: +41 22 919 02 11
Fax: +41 22 919 03 00

INTERNATIONAL STANDARD

IEC 60335-2-71

Second edition
2002-03

Household and similar electrical appliances – Safety –

Part 2-71: Particular requirements for electrical heating appliances for breeding and rearing animals

*Appareils électrodomestiques et analogues –
Sécurité –*

*Partie 2-71:
Règles particulières pour les appareils de chauffage électrique
destinés à la reproduction et à l'élevage des animaux*

© IEC 2002 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

J

For price, see current catalogue

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Definitions	6
4 General requirement.....	7
5 General conditions for the tests	7
6 Classification.....	8
7 Marking and instructions.....	8
8 Protection against access to live parts.....	10
9 Starting of motor-operated appliances	10
10 Power input and current.....	10
11 Heating.....	10
12 Void	11
13 Leakage current and electric strength at operating temperature.....	11
14 Transient overvoltages	11
15 Moisture resistance	11
16 Leakage current and electric strength.....	11
17 Overload protection of transformers and associated circuits	11
18 Endurance.....	11
19 Abnormal operation	11
20 Stability and mechanical hazards.....	12
21 Mechanical strength	12
22 Construction	13
23 Internal wiring.....	15
24 Components	15
25 Supply connection and external flexible cords	15
26 Terminals for external conductors.....	15
27 Provision for earthing	15
28 Screws and connections.....	15
29 Clearances, creepage distances and solid insulation	16
30 Resistance to heat, and fire.....	16
31 Resistance to rusting.....	16
32 Radiation, toxicity and similar hazards.....	16
Annexes	17
Bibliography.....	17

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –**
**Part 2-71: Particular requirements for electrical heating appliances
for breeding and rearing animals**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by subcommittee 61H: Safety of electrically-operated farm appliances, of IEC technical committee 61: Safety of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 1993 and its amendments 1 (1996) and 2 (1999). It constitutes a technical revision.

The text of this part of IEC 60335 is based on the following documents:

FDIS	Report on Voting
61H/166/FDIS	61H/171/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fourth edition (2001) of that standard.

Note 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for electrical heating appliances for breeding and rearing animals.

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 2 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.

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 associated noun are also in bold.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

The following differences exist in the countries indicated below:

- 6.1: Class II appliances to be used on the floor are allowed (Australia).
- 21: Additional tests are made (Australia).
- 25.7: Ordinary PVC sheathed supply cords are permitted (Australia, New Zealand).

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.

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.

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.

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 2-71: Particular requirements for electrical heating appliances for breeding and rearing animals

1 Scope

This clause of Part 1 is replaced by the following.

This standard deals with the safety of all kinds of electrical heating appliances used for livestock rearing and breeding, such as: **heat-radiating appliances, electrical sitting-hens, incubators, chicken breeding units** and **heating plates for animals**, the **rated voltage** of the appliances being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 101 This standard applies to **heating appliances** used for livestock rearing and breeding, that include an electrical motor.

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, the national water supply authorities and similar authorities.

NOTE 103 This standard does not apply to:

- appliances designed 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);
- heating units embedded in the floor;
- flexible sheet heating elements for room heating (IEC 60335-2-96);
- room heaters (IEC 60335-2-30).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60068-2-11:1981, *Environmental testing – Part 2: Tests. Test Ka: Salt mist*

IEC 61184: *Bayonet lampholders*

3 Definitions

This clause of Part 1 is applicable except as follows.

3.1.9 *Replacement:*

normal operation

operation of the appliance as in normal use, in still air

3.101

heat-radiating appliance

electrical heating appliance that conveys the effective heat mainly by radiation

NOTE Appliances of this type that when operated under conditions of **normal operation**, have a temperature rise not exceeding 95 K, measured at the hottest point on the radiator, are considered to be **heating plates for animals** and not **heat-radiating appliances**.

3.102

heating plate for animals

appliance mainly intended to be fixed in stables or in **chicken breeding units** or intended to be laid on the floor

3.103

electrical sitting-hen

appliance placed on the floor that has feet or hiding-holes enabling chickens to hide under it, the chickens being warmed by an overhead **heating plate**

3.104

chicken breeding units

appliance for the breeding of chickens on several superposed levels

NOTE It is usually equipped with **heating plates** above the chickens.

3.105

incubator

appliance designed for egg hatching

NOTE It is usually equipped with heating elements for air warming and water evaporation, ventilators for air circulation and motors for agitating the eggs on the shelves.

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.

5.2 *Addition:*

*Up to two additional samples of the means of suspension of **portable heat radiating appliances** that are not operated on the floor in normal use shall be provided for the tests of 22.104.*

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 Replacement:

Appliances shall be of **class I**, **class II** or **class III** with respect to protection against electric shock.

Appliances that in normal use are used on the floor, except those intended to be built into the floor and permanently connected to the fixed wiring, shall be **class III appliances** and shall have a **rated voltage** not exceeding 24 V.

Compliance is checked by inspection and by the relevant tests.

6.2 Addition:

Heating appliances that are operated at floor level in normal use or are intended to be operated less than 500 mm above the floor shall be IPX7.

Other appliances shall be at least IPX4.

7 Marking and instructions

This clause of Part 1 is applicable except as follows.

7.1 Addition:

Heat-radiating appliances shall be marked with the substance of the following:

- WARNING: Fire risk;
- heat-radiating appliance for animals;
- the appliance shall be securely fixed in position;
- the screen shall not be removed;

They shall also be marked with

- maximum rating of replaceable radiators: ... W;
- the minimum distance between the radiator and animals or inflammable material in the direction of the radiation;
- “Do not cover” or with symbol 5641 of IEC 60417;
- “Read the instructions” or with symbol 1641 of ISO 7000.

Chicken breeding units and **electrical sitting-hens** shall be marked “Do not cover” or with symbol 5641 of IEC 60417.

Heating appliances for animals with **rated voltage** up to 24 V shall be marked with the substance of the following:

heating appliance for animals.

Heating appliances for animals with **rated voltage** over 24 V, and that are fixed at a distance less than 500 mm from animals or inflammable material, shall be marked with:

- heating appliance for animals;
- the appliance must be securely fixed in position.

They shall also be marked with

- the minimum fixing distance from animals and inflammable material;
- “Read the instructions” or with symbol 1641 of ISO 7000.

7.6 Addition:



[symbol 5641 of IEC 60417]

do not cover

7.12 Addition:

If symbol 1641 of ISO 7000 or symbol 5641 of IEC 60417 are marked on the appliance, its meaning shall be explained in the instructions.

Instructions shall contain the substance of the following:

- for **heat-radiating appliances** with replaceable radiators, the radiator types applicable to the appliance together with an instruction stating that only the specified types are to be used when renewing the radiators;
- an explanation as to why **portable heat radiating appliances** that are not operated on the floor in normal use, are not to be hung lower than is indicated on the appliance;
- an instruction stating that **supply cords** shall be placed or protected so as not to be accessible to animals;
- instructions for cleaning the appliance, stating especially that the heating element or radiator is to be kept clear of dust or other dirt particles and that the appliance is to be disconnected from the power supply during cleaning;
- an instruction stating that damaged appliances shall not be used;

7.12.1 Addition:

Instructions shall contain the substance of the following:

- for **portable heat-radiating appliances** that are not operated on the floor in normal use, instructions for fixing the appliance by its means of suspension;
- a statement that **heat-radiating appliances** shall not be mounted less than 500 mm, or a greater distance if specified by the manufacturer, from animals or inflammable material;
- an instruction stating that repairs shall be carried out only by a suitably qualified person.

7.15 Addition:

Markings required by the addition to 7.1 shall have a height not less than:

- 5 mm for headlines;
- 3 mm for other lettering.

Symbol 5641 of IEC 60417 shall have a height of at least 15 mm.

The marking concerning covering shall be visible after the heater has been installed.

8 Protection against access to live parts

This clause of Part 1 is applicable except as follows.

8.1 Addition:

This requirement does not apply to **live parts** of screw-type or bayonet-type lampholders incorporated in **heat-radiating appliances** that are accessible only when the radiator is extracted.

9 Starting of motor-operated appliances

This clause of Part 1 is not applicable.

10 Power input and current

This clause of Part 1 is applicable.

11 Heating

This clause of Part 1 is applicable except as follows.

11.2 Addition:

Portable heat-radiating appliances that are not intended to be operated on the floor in normal use shall be freely hung, in still air, above a support of dull black-painted plywood having a thickness of approximately 20 mm. The distance between the appliance and the plywood support shall be that marked on the appliance.

Heating appliances for animals, that are placed on the floor in normal use, shall be laid on a support of dull black-painted plywood having a thickness of approximately 20 mm and be completely covered with thermal insulation having a thermal resistance of approximately 3,2 m² K/W.

11.7 Replacement:

Appliances are operated until steady conditions are established.

11.8 Modification:

Replace the entry in Table 3 concerning wood by:

Part	Temperature rise K
– Wooden supports, walls, ceiling and floor of the test corner and wooden cabinets ⁹	60

Addition:

The temperature rise of other parts shall not exceed the values given in Table 101.

Table 101 – Temperature rises of other parts

Parts	Temperature rise K
<i>For surfaces of heating appliances that, according to the instructions, can be used at a distance of less than 500 mm from animals or inflammable material:</i>	
– <i>all surfaces that are curved with a radius not exceeding 10 mm or that are inclined at greater than 60° to the horizontal and that, in addition, are not accessible to a stiff test pin of 3 mm diameter and 300 mm long;</i>	95
– <i>all other surfaces.</i>	60
<i>Surfaces of heating appliances that are intended to be fixed at a minimum distance of not less than 500 mm from animals or inflammable material.</i>	95
<i>Surfaces of heating appliances for animals that are placed on the floor in normal use.</i>	60
<i>Lampholders (E39, E40):</i>	
– <i>without T-marking;</i>	200
– <i>with T-marking.</i>	T-25

12 Void**13 Leakage current and electric strength at operating temperature**

This clause of Part 1 is applicable.

14 Transient overvoltages

This clause of Part 1 is applicable.

15 Moisture resistance

This clause of Part 1 is applicable.

16 Leakage current and electric strength

This clause of Part 1 is applicable.

17 Overload protection of transformers and associated circuits

This clause of Part 1 is applicable.

18 Endurance

This clause of Part 1 is not applicable.

19 Abnormal operation

This clause of Part 1 is applicable except as follows.

19.2 Addition:

Appliances that are suspended in normal use, are placed on the floor of the test corner in the most unfavourable position.

NOTE 101 This requirement may be met, for example by the use of distance knobs, a bow, hoop, shielding grid or fender so constructed that the appliance capsizes when it is laid on its base or the floor.

19.4 Addition:

The appliances are operated as follows under the conditions given in Clause 11:

- *in appliances with **thermostats** but without built-in fans, this test shall be carried out with an input as obtained under the test conditions specified in Clause 11;*
- *in appliances without **thermostats** but with built-in fans, the latter shall be stalled according to 19.7;*
- *appliances with **thermostats** and built-in fans are tested at first with short-circuited thermostats and running fans and then with stalled fans according to 19.7 and operating **thermostats**.*

19.13 Addition to Table 9:

Parts	Temperature rise K
<i>Terminals for external conductors</i>	150
<i>Parts of phenolic moulding compound</i>	175
<i>Parts of paper, cardboard, wood, and synthetic resin-bonded paper</i>	150
<i>Surfaces of heating appliances for animals that are placed on the floor in normal use</i>	100
<i>Support or fixing surface</i>	150
<i>Floor or walls of test corner for the tests of 19.2 and 19.3</i>	100

Modification to Table 9:

Replace the entry referring to "walls, ceiling and floor of the test corner" with the following:

<i>Walls, ceilings and floor of the test corner other than support or fixing surfaces ^a</i>	150
<i>Floor or walls of the test corner for tests other than those of 19.2 and 19.3 ^a</i>	150

20 Stability and mechanical hazards

This clause of Part 1 is applicable.

21 Mechanical strength

This clause of Part 1 is applicable except as follows.

Modification:

The impact energy is increased to 1 ± 0,1 J.

Addition:

Blows are not applied to radiators of the infra-red lamp type.

The grid shall show no lasting deformation exceeding 10 mm.

21.101 Appliances shall be capable of withstanding mechanical shock that is likely to be experienced in normal use.

Compliance is checked by a drop test, as follows:

- *Appliances designed for suspension are dropped from their normal operating position, without their **supply cord** and without their suspension device, five times, from a height of 1 m measured from the bottom edge of the appliance to a hard wood support whose thickness is at least 50 mm.*
- *Appliances not designed for suspension are subjected to tests Eha or Ehc of IEC 60068-2-75 as appropriate. The impact energy is 5 J. One impact is applied on each point that is likely to be exposed to an impact in normal use.*

After these tests no damage shall occur that would impair the safety of the appliance.

NOTE The fracturing of replaceable radiators with glass bulbs is neglected.

22 Construction

This clause of Part 1 is applicable except as follows.

22.39 *Addition:*

For the connection of replaceable radiators in **heat-radiating appliances**, the use of edison screw lampholders or bayonet lampholders, whose insulating parts are ceramic, is permitted.

The lampholders shall have been tested and shown to comply with

- IEC 60238 for edison screw lampholders;
- IEC 61184 for bayonet lampholders.

22.101 In **heat-radiating appliances**, the radiators shall not be provided with open-coil heating elements.

Compliance is checked by inspection.

22.102 Replacing of radiators shall be possible without complete removal of the protective grid. The locking means of the protective grid shall not be detachable, and accidental opening of the lock shall not be possible.

Compliance is checked by inspection and by manual test.

22.103 **Heat-radiating appliances** shall be protected on top and laterally by a protective screen, and in the radiating direction by a protective grid. Both shall be mechanically rigid and corrosion proof.

For protective screens, the width of mesh shall not exceed 25 mm and shall not be less than 10 mm.

Compliance is checked by inspection, measurement, a manual test and the salt mist test described in IEC 60068-2-11, test Ka, which is made with the grid kept in the test chamber for 7 days (168 h).

A 50 mm square probe shall not penetrate with its whole cross-section into the protective grid when a force of 20 N is applied.

22.104 Portable heat-radiating appliances that are not operated on the floor in normal use shall be provided with a means of suspension that allows the height of suspension to be varied.

The means of suspension shall be so designed that loosening or accidental altering of the setting cannot occur.

NOTE Alterations in setting or the dropping down of the appliance can be prevented, for instance, by closed hooks (spring safety hooks) or eyes. Hooks whose projection on to a plane surface shows a closed circle are considered closed (worm hooks).

The means of suspension shall:

- be delivered complete, including the fixing means for mounting the appliance at the place of use, including ceiling hooks and the like;
- not be the **supply cord**;
- be so designed and dimensioned, that it is able to support a mass five times the mass of the appliance, or 20 kg, whichever is larger;
- be at least 2 m long;
- be of a material that is resistant to corrosion and fire.

Compliance is checked by inspection, measurement and by the following tests.

*The **heat-radiating appliance** is fixed by its means of suspension in accordance with the manufacturer's instructions. A load is applied to the body of the appliance so that the load on the means of suspension is five times the mass of the appliance or 20 kg, whichever is larger. The load is applied gradually and maintained for 1 min, after which it is removed.*

The suspension system shall not break.

One of the additional samples of the means of suspension is subjected to the salt mist test described in IEC 60068-2-11, test Ka, which is made with the means of suspension mounted as in normal use; it is kept in the test chamber for 7 days (168 h).

After the test, the means of suspension shall show no sign of deterioration that could affect compliance with this standard, and its coating, if any, shall not have loosened from the metal surface and shall not have been pieced.

The other additional sample of the means of suspension, if of non-metallic material, shall be subjected to the glow-wire test of IEC 60695-2-11 which is carried out at 850 °C.

During the application and after the removal of the glow-wire tip, there shall be no ignition of the means of suspension.

22.105 The **clearance** between the windings of tubular heating elements, that for example, may be spirally coiled, shall not be less than 10 mm.

Compliance is checked by inspection and measurement.

22.106 Heat-radiating appliances shall not concentrate heat at any point more than 500 mm from the element.

Compliance is checked by inspection and measurement.

Temperatures measured at distances greater than 500 mm from the element shall not exceed the values measured at a distance of 500 mm from the element.

22.107 Thermal cut-outs that operate during the test of 19.4 shall be **non-self-resetting thermal cut-outs**. If the **thermal cut-out** is of the manual resetting type, then it shall have a trip-free operation.

Compliance is checked by inspection and by manual test.

23 Internal wiring

This clause of Part 1 is applicable.

24 Components

This clause of Part 1 is applicable

25 Supply connection and external flexible cords

This clause of Part 1 is applicable except as follows.

25.3 Addition:

Appliances for installation in the floor shall be permanently connected to the fixed wiring.

25.7 Replacement:

Supply cords shall not be lighter than ordinary polychloroprene sheathed cord (code designation 60245 IEC 57).

Compliance is checked by inspection.

26 Terminals for external conductors

This clause of Part 1 is applicable.

27 Provision for earthing

This clause of Part 1 is applicable.

28 Screws and connections

This clause of Part 1 is applicable.

29 Clearances, creepage distances and solid insulation

This clause of Part 1 is applicable.

30 Resistance to heat, and fire

This clause of Part 1 is applicable except as follows.

30.2.2 Not applicable

31 Resistance to rusting

This clause of Part 1 is applicable.

32 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable.

Annexes

The annexes of Part 1 are applicable.

Bibliography

The bibliography of Part 1 is applicable except as follows:

Addition:

IEC 60335-2-30, *Household and similar electrical appliances – Safety – Part 2-30: Particular requirements for room heaters*

IEC 60335-2-96, *Household and similar electrical appliances – Safety – Part 2-96: Particular requirements for flexible sheet heating elements for room heating*



Standards Survey

The IEC would like to offer you the best quality standards possible. To make sure that we continue to meet your needs, your feedback is essential. Would you please take a minute to answer the questions overleaf and fax them to us at +41 22 919 03 00 or mail them to the address below. Thank you!

Customer Service Centre (CSC)

International Electrotechnical Commission

3, rue de Varembé

1211 Genève 20

Switzerland

or

Fax to: **IEC/CSC** at +41 22 919 03 00

Thank you for your contribution to the standards-making process.

A Prioritaire

Nicht frankieren
Ne pas affranchir



Non affrancare
No stamp required

RÉPONSE PAYÉE

SUISSE

Customer Service Centre (CSC)

International Electrotechnical Commission

3, rue de Varembé

1211 GENEVA 20

Switzerland



Q1 Please report on **ONE STANDARD** and **ONE STANDARD ONLY**. Enter the exact number of the standard: (e.g. 60601-1-1)

.....

Q2 Please tell us in what capacity(ies) you bought the standard (tick all that apply). I am the/a:

- purchasing agent
- librarian
- researcher
- design engineer
- safety engineer
- testing engineer
- marketing specialist
- other.....

Q3 I work for/in/as a: (tick all that apply)

- manufacturing
- consultant
- government
- test/certification facility
- public utility
- education
- military
- other.....

Q4 This standard will be used for: (tick all that apply)

- general reference
- product research
- product design/development
- specifications
- tenders
- quality assessment
- certification
- technical documentation
- thesis
- manufacturing
- other.....

Q5 This standard meets my needs: (tick one)

- not at all
- nearly
- fairly well
- exactly

Q6 If you ticked NOT AT ALL in Question 5 the reason is: (tick all that apply)

- standard is out of date
- standard is incomplete
- standard is too academic
- standard is too superficial
- title is misleading
- I made the wrong choice
- other

Q7 Please assess the standard in the following categories, using the numbers:

- (1) unacceptable,
- (2) below average,
- (3) average,
- (4) above average,
- (5) exceptional,
- (6) not applicable

- timeliness.....
- quality of writing.....
- technical contents.....
- logic of arrangement of contents
- tables, charts, graphs, figures.....
- other

Q8 I read/use the: (tick one)

- French text only
- English text only
- both English and French texts

Q9 Please share any comment on any aspect of the IEC that you would like us to know:

.....

.....

.....

.....

.....

.....

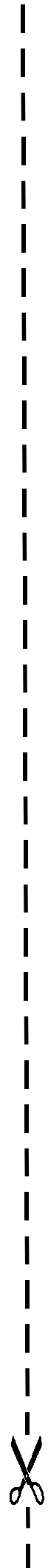
.....

.....

.....

.....

.....



ISBN 2-8318-6262-0



9 782831 862620

ICS 65.020.30; 97.100.10

Typeset and printed by the IEC Central Office
GENEVA, SWITZERLAND