

<b>STN</b>	<b>Elektrické spotrebiče pre domácnosť a na podobné účely</b> <b>Bezpečnosť</b> <b>Časť 2-96: Osobitné požiadavky na ohybné plošné ohrievacie prvky na vykurovanie miestností</b>	<b>STN</b> <b>EN IEC 60335-2-96</b>  36 1055
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Household and similar electrical appliances - Safety - Part 2-96: Particular requirements for flexible sheet heating elements for room heating

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/22

Obsahuje: EN IEC 60335-2-96:2021, IEC 60335-2-96:2019

Oznámením tejto normy sa od 20.09.2024 ruší  
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EUROPEAN STANDARD

**EN IEC 60335-2-96**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2021

ICS 97.100.10; 13.120

Supersedes EN 60335-2-96:2002 and all of its  
amendments and corrigenda (if any)

English Version

**Household and similar electrical appliances - Safety - Part 2-96:  
Particular requirements for flexible sheet heating elements for  
room heating  
(IEC 60335-2-96:2019)**

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-96: Exigences et particulières pour les films  
souples chauffants pour le chauffage des locaux  
(IEC 60335-2-96:2019)

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 2-96: Besondere Anforderungen an  
Flächenheizelemente  
(IEC 60335-2-96:2019)

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 60335-2-96:2021 (E)****European foreword**

This document EN IEC 60335-2-96:2021 consists of the text of IEC 60335-2-96:2019 prepared by IEC/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) 2022-09-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-09-20

This document supersedes EN 60335-2-96:2002 and all of its amendments and corrigenda (if any).

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This document is read in conjunction with EN IEC 60335-2-96:2021/A11:2021.

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For relationship with EU Directive(s) / Regulation(s), see informative Annex ZZA, which is an integral part of EN IEC 60335-2-96:2021/A11:2021.

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# IEC 60335-2-96

Edition 2.0 2019-05

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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

**Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-96: Exigences particulières pour les films souples chauffants pour le  
chauffage des locaux**



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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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IEC 60335-2-96

Edition 2.0 2019-05

# INTERNATIONAL STANDARD

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Partie 2-96: Exigences particulières pour les films souples chauffants pour le  
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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
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## CONTENTS

FOREWORD .....	4
INTRODUCTION .....	7
1 Scope .....	8
2 Normative references .....	8
3 Terms and definitions .....	9
4 General requirement.....	10
5 General conditions for the tests .....	10
6 Classification .....	11
7 Marking and instructions.....	11
8 Protection against access to live parts .....	16
9 Starting of motor-operated appliances .....	16
10 Power input and current.....	16
11 Heating.....	17
12 Void.....	21
13 Leakage current and electric strength at operating temperature.....	21
14 Transient overvoltages .....	21
15 Moisture resistance .....	22
16 Leakage current and electric strength.....	22
17 Overload protection of transformers and associated circuits .....	23
18 Endurance .....	23
19 Abnormal operation .....	25
20 Stability and mechanical hazards.....	26
21 Mechanical strength .....	26
22 Construction .....	28
23 Internal wiring.....	30
24 Components .....	30
25 Supply connection and external flexible cords .....	30
26 Terminals for external conductors .....	31
27 Provision for earthing .....	31
28 Screws and connections .....	31
29 Clearances, creepage distances and solid insulation .....	31
30 Resistance to heat and fire .....	32
31 Resistance to rusting .....	32
32 Radiation, toxicity and similar hazards.....	32
Annexes .....	46
Annex AA (informative) Summary of installation instructions .....	47
Bibliography.....	49
Figure 101 – Arrangement for testing heating units in timber ceilings.....	33
Figure 102 – Arrangement for testing modular heating units .....	34
Figure 103 – Arrangement for testing heating units in timber floors .....	35



Figure 104 – Arrangement for testing heating units below concrete.....	36
Figure 105 – Arrangement for testing heating units in timber floors and ceilings in combination .....	37
Figure 106 – Jig for locating the contact needle .....	38
Figure 107 – Arrangement for testing heating units above timber floors .....	39
Figure 108 – Arrangement for testing heating units above concrete floors.....	40
Figure 109 – Arrangement for measuring capacitive currents .....	41
Figure 110 – Arrangement for testing heating units in timber walls.....	42
Figure 111 – Arrangement for testing heating units in both sides of timber wall applications .....	43
Figure 112 – Arrangement for testing heating units intended to be installed in a wall of concrete or similar material.....	44
Figure 113 – Arrangement for testing heating units against wall of concrete or similar material .....	45
Table 101 – Temperature rise limits for surfaces.....	21
Table AA.1 – Summary of installation instructions.....	47

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –****Part 2-96: Particular requirements for flexible  
sheet heating elements for room heating**

## FOREWORD

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International Standard IEC 60335-2-96 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 2002, Amendment 1:2003 and Amendment 2:2008. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the first edition:

- aligns the text with IEC 60335-1:2010, and its Amendments 1 and 2;
- some notes have been converted to normative text or deleted (5.6, 7.12.1, 10.1, 11.2.103, 13.1, 13.2, 16.2, 16.3, 18.101, 18.102.5, 21.1, 22.103, 22.105, 22.106);
- the strength test for heating units incorporating insulated wires intended to be installed in floors has been modified a (21.103);

- the scope and specific requirements have been added for heating units installed in walls below a height of 1,2 m (6.2, 7.1, 7.12.1, 7.12.6, 7.101, 11.2, 19.2, 22.106, 24.102, Annex AA).

The text of this International Standard is based on the following documents:

FDIS	Report on voting
61/5789/FDIS	61/5806/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, can be found on the IEC website.

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 fifth edition (2010) 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: Particular requirements for flexible sheet heating elements for room heating.

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 in 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 the associated noun are also in bold.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

The following additional differences exist in the countries indicated below.

- 1: Flexible sheet heating elements that are cut on site are not allowed (France).
- 1: The intended installation is not to include walls (USA).
- 7.1: The intended installation is not to include walls (USA).
- 7.12.1 c): The instructions in timber floors shall state that the heating unit is to be covered with additional insulation, be supplied through an isolating transformer, or be class II (Sweden).
- 7.12.1 c): The instructions need not refer to residual current devices (USA).
- Clause 18: The tests are different (USA).
- 22.102: The test is different (USA).
- 22.103: The test is different (USA).
- 25.3: Heating units are not allowed to incorporate supply cords (USA).

## 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 2-96: Particular requirements for flexible sheet heating elements for room heating

### 1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of **flexible sheet heating elements** intended to be incorporated into floors and walls below 1,2 m and above 2,3 m and in ceilings, their **rated voltage** being not more than 250 V for single-phase installations and 480 V for other installations.

**Flexible sheet heating elements** are converted into **heating units** that are incorporated in the building in accordance with the instructions after which the required level of protection against hazards is achieved.

NOTE 101 Attention is drawn to the fact that

- in many countries, different wiring rules apply;
- for **heating units** intended to be used in vehicles or on board ships or aircraft, additional requirements can be necessary;
- in many countries, additional requirements are specified by the national authorities for fire protection, the national authorities for building regulations, the national health authorities, the national authorities responsible for the protection of labour and similar authorities.

NOTE 102 This standard does not apply to

- **heating units** intended exclusively for industrial purposes;
- **heating units** intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- blankets, pads, clothing and similar flexible heating appliances (IEC 60335-2-17);
- foot warmers and heating mats (IEC 60335-2-81);
- heated carpets and for heating units for room heating installed under removable floor coverings (IEC 60335-2-106);
- **flexible sheet heating elements** incorporated in other appliances.

### 2 Normative references

This clause of Part 1 is applicable except as follows.

*Addition:*

IEC 60364-7-701:2006, *Low-voltage electrical installations – Part 7-701: Requirements for special installations or locations – Locations containing a bath or shower*

IEC 60884-1:2002, *Plugs and socket-outlets for household and similar purposes – Part 1: General requirements*

IEC 60884-1:2002/AMD1:2006

IEC 60884-1:2002/AMD2:2013<sup>1</sup>

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<sup>1</sup> There exists a consolidated edition 3.2:2013 that includes edition 3:2002, its Amendment 1:2006 and Amendment 2:2013.

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– 9 –

ISO 3864-1, *Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**