

Specification for

Safety of household and similar electrical appliances

Part 2. Particular requirements

Section 2.30 Room heaters

The European Standard EN 60335-2-30 : 1992, together with amendments A51 : 1995 and A52 : 1997, has the status of a British Standard

ICS 97.100

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

This British Standard, having been prepared under the direction of the Light Electrical Engineering Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 April 1993

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Amendments issued since publication

Amd. No.	Date	Text affected
9081	September 1996	Indicated by a sideline in the margin
9524	August 1997	Deletion from annex ZY, indicated by a sideline

Summary of pages

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National foreword

This British Standard has been prepared under the direction of the Light Electrical Engineering Standards Policy Committee and is the English language version of EN 60335-2-30 : 1992, *Safety of household and similar electrical appliances Part 2 : Particular requirements for room heaters, including amendments A51 : 1995 and A52 : 1997* published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived by CENELEC from IEC 335-2-30 : 1990 (second edition) together with Amendment No 1 : 1990 published by the International Electrotechnical Commission (IEC). Text introduced or deleted by Amendment No. 1 to IEC 335-2-30 : 1990 (second edition) is indicated by a sideline in the margin on original pages.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by a double side line in the margin on original pages. Parts of the original IEC text that have been modified by CENELEC have been quoted in national annex NA.

This British Standard is to be read in conjunction with BS 3456 : Part 201 : 1990 *General requirements*, plus Amendment No. 1 (1990) and Amendment No. 2 (1990), which it supplements and modifies. The many references to Part 1 should be read as references to BS 3456 : Part 201, which is the English language version of EN 60335-1 which was derived from the 1983 reprint of IEC Publication 335-1 (1976), second edition, as modified by Amendment No. 1 (1977), Amendment No. 2 (1979) and Amendment No. 3 (1982). IEC Publication 335-1 has subsequently been modified by three further Amendments, Amendment No. 4 (1984), Amendment No. 5 (1986) and Amendment No. 6 (1988). Amendment No. 4, Amendment No. 5 and Amendment No. 6 to IEC 335-1 have been implemented, with additions and modifications, by CENELEC Amendment 2, Amendment 5 and Amendment 6, respectively, to EN 60335-1. In addition, EN 60335-1 has been modified by four CENELEC Amendments, Amendment A51 (1991), Amendment A52 (1992), Amendment A53 (1992) and Amendment A54 (1992). All seven Amendments have been implemented as Amendments to BS 3456 : Part 201 : 1990. The interrelationships of the Amendments to IEC 335-1 : 1976, EN 60335-1 : 1988 and BS 3456 : Part 201 : 1990 are as follows:

Amendment to BS 3456 : Part 201 : 1990	Amendment to EN 60335-1 : 1988	Amendment to IEC 335-1 : 1976
Amendment No. 1 : 1990	Amendment 2 : 1988 ¹⁾	Amendment No. 4 : 1984
Amendment No. 2 : 1990	Amendment 5 : 1989 ¹⁾	Amendment No. 5 : 1986
Amendment No. 3 : 1990	Amendment 6 : 1989 ¹⁾	Amendment No. 6 : 1988
Amendment No. 4 : 1992	Amendment A51 : 1991	—
Amendment No. 5 : 1992	Amendment A52 : 1992	—
Amendment No. 6 : 1992	Amendment A53 : 1992	—
Amendment No. 7 : 1993	Amendment A54 : 1992	—
¹⁾ These amendments to EN 60335-1 implement, with additions and modifications, the corresponding amendments to IEC 335-1.		

Until 1 January 1991, the Parts of EN 60335 published as British Standards were dual numbered and appeared as Sections of BS 3456. From 1 January 1991, Parts of EN 60335 have been appearing as Sections of BS EN 60335.

The foreword of EN 60335-2-30 makes reference to the 'date of withdrawal', of the relevant national standard. In this case, the relevant national standard is BS 3456 : Part 102 : Section 102.30 : 1988, which will be withdrawn on 1 October 1996. Certificates and marks will not be awarded after this date with respect to the withdrawn British Standard. However, such certificates and marks already awarded may continue to apply to production until 1 October 2001.

The following information, taken from the IEC Preface including Amendment 1, should be noted when using this standard.

'The following differences exist in some countries:

A different value is specified in the national wiring rules for the minimum height for mounting at high level (2.2.104).

Provision for fully tightening the fixing screws in key-hole slots after mounting the heater is not considered sufficient to prevent it from being inadvertently lifted off the wall (4.101).

Stationary heaters have to be marked with the letter H if, during the test of clause 11, the temperature rise of surfaces accessible to the test probe shown in figure 3 exceeds 125 K (7.1).

All heaters have to be marked with a warning against covering (7.1).

The warning with respect to guards may be on a label (7.1).

Some of the instructions specified have to be marked on the heater (7.12).

Circular and similar heaters are placed in the test corner but with a higher permissible temperature rise for the walls (11.2).

In France, the temperature rise of air-outlet grilles of fixed appliances other than those for mounting at high level is limited to 115 K (11.8).

In Canada and the USA, the temperature rise of air-outlet grilles is not measured (11.8).

In the USA, the covering test is conducted in a different manner and compliance is determined by checking that cheesecloth does not flame or glow (19.103).

In Canada, the test criteria are as follows:

- portable heaters: no glowing or flaming of cheesecloth material;
- baseboard air heaters: 125 K max temperature rise of the covering materials with a 25 K overshoot during the first two hours of abnormal operation;
- for all other heaters except ceiling and high-mounted heaters: no charring of the covering materials (19.103).

In the United Kingdom, this test is not carried out on radiant heaters which incorporate a fuel effect and which are intended to be placed in the hearth or against a wall to simulate a hearth (19.110).

Class 0 and Class 01 heaters are not allowed (22.1).

The base of the heater is not required to retain molten or flaming material (22.101).

In the United Kingdom and the USA, if an appliance incorporates switches controlling visibly glowing elements, live parts of which become accessible after removal of a fireguard, at least one of the switches shall provide all pole disconnection and be connected so as to disconnect all such live parts (24.3).

A knot in the power supply cord is permitted for type Y attachment (25.11).

Product approval. Attention is drawn to the fact that products conforming to this British Standard may be approved by the British Electrotechnical Approvals Board for the purposes of participation in the CENELEC Certification Agreement and in the CB Scheme of the IECEE. (Details of the BEAB Approval Scheme are given on the inside back cover.)

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Descriptors: Household electrical appliances, heaters, convectors, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

Safety of household and similar electrical appliances Part 2: Particular requirements for room heaters

(includes amendments A51 : 1995 + A52 : 1997)

(IEC 335-2-30 1990 + Amendment 1 : 1990, modified)

Sécurité des appareils électrodomestiques et
analogues

Deuxième partie: Règles particulières pour les
appareils de chauffage des locaux (inclut les
amendements A51 : 1995 + A52 : 1997)
(CEI 335-2-3 : 1990 + Amendement 1 : 1990,
modifiées)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke

Teil 2: Besondere Anforderungen für
Raumheizgeräte (enthält Änderungen
A51 : 1995 + A52 : 1997)
(IEC 335-2-3 : 1990 + Änderung 1 : 1990,
modifiziert)

This European Standard was approved by CENELEC on 9 December 1992, amendment A51 was approved by CENELEC on 1995-02-15. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B-1050 Brussels

Foreword

The proposal to endorse the second edition of IEC 335-2-30, document CLC/TC 61 (SEC) 733, was circulated under the enquiry procedure in March 1990. This proposal was discussed during the Athens meeting in November 1990 and the Baden meeting in May 1991, when it was decided to submit a draft for EN 60335-2-30, including amendment 1 to the IEC standard, to the voting procedure. This draft was circulated in November 1991 and rediscussed during the Pettenasco meeting in September 1992.

A proposal to amend prEN 60335-2-30:1991, document CLC/TC 61 (SEC) 377, was discussed during the Brussels meeting in November 1991, when it was decided to submit a draft for an amendment to the Unique Acceptance Procedure (UAP). This draft was circulated as prAA in April 1992.

Both drafts were combined and ratified by CENELEC as EN 60335-2-30 on 9 December 1992.

This European Standard has been prepared by the secretariat of CENELEC technical committee TC 61.

The following dates are applicable:

- latest date of publication of an identical national standard (dop) 1993-10-01
- date of withdrawal of conflicting national standards (dow) 1996-10-01

This European Standard replaces HD 278 S1:1987 and its amendments.

For products which have complied with HD 278 S1:1987 and its amendments before 1996-10-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2001-10-01.

This standard has to be used in conjunction with EN 60335-1:1988, Safety of household and similar electrical appliances, Part 1: General requirements, including its amendments A2:1988, A5:1989, A6:1989, A51:1991, A52:1992, A53:1992 and A54:1992.

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

Subclauses and figures which are in addition to those in Part 1 are numbered starting with 101. Additional appendices are lettered AA, BB, etc.

Subclauses which are in addition to those in IEC 335-2-30 are numbered starting with 601.

There are no special national conditions (snc) causing a deviation from this European Standard other than those listed in annex ZX to EN 60335-1.

National deviations from this European Standard are listed in annex ZY and are in addition to those in EN 60335-1.

Other publications quoted in this standard:

EN 60309-1:1992	Plugs, socket outlets and couplers for industrial purposes — Part 1: General requirements
EN 60335-2-43:1989	Safety of household and similar electrical appliances Part 2: Particular requirements for clothes dryers and towel rails
EN 60335-2-53:1991	Safety of household and similar electrical appliances Part 2: Particular requirements for electric sauna heating appliances
IEC 335-2-61:1992	Safety of household and similar electrical appliances Part 2: Particular requirements for thermal storage room heaters
IEC 800:1984	Heating cables with a rated voltage of 300/500 V for comfort heating and prevention of ice formation

The following print types are used:

- requirements: in roman type;
- test specifications: *in italic type*;
- explanations: in small roman type.

Foreword to amendment A51

A proposal to amend EN 60335-2-30 : 1992, document CLC/TC 61 (GB) 440, was discussed during the El Campello meeting in October 1993, when it was decided to submit a draft for an amendment to the Unique Acceptance Procedure (UAP).

This draft was circulated as prAB in June 1994 and was ratified by CENELEC as amendment A51 on 1995-02-15.

A proposal to amend EN 60335-2-30 : 1992, document CLC/TC 61 (FR) 239, was discussed during the Oslo meeting in April 1994, when it was decided to submit a draft for an amendment to the Unique Acceptance Procedure (UAP).

This draft was circulated as prAC in February 1995 and was ratified by CENELEC on 1995-09-20 for incorporation into amendment A51.

This amendment has been prepared by the secretariat of CENELEC Technical Committee TC 61.

The following dates are applicable:

- latest date of publication of an identical national standard (dop) 1995-12-01
- date of withdrawal of conflicting national standards (dow) 1995-12-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-30 : 1992.

There are no special national conditions causing a deviation from this amendment.

There are no national deviations from this amendment.

NOTE. Amendment numbers commencing A1 refer to the endorsement of IEC amendments, while those commencing A51 originate in CENELEC.

Foreword to amendment A52 : 1997

At the request of the Swedish electrotechnical committee, a draft for an amendment to EN 60335-2-30 : 1992 was submitted to the CENELEC members for acceptance in October 1996.

The text of the draft was accepted by CENELEC as amendment A52 to EN 60335-2-30 : 1992 on 1996-12-24.

The following dates were fixed:

- latest date by which the existence of the amendment has to be announced at national level (doa) 1997-03-24
- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1997-06-24

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SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

Part 2: Particular requirements for room heaters

1 Scope

This clause of Part 1 is applicable except as follows:

1.1 *Replacement:*

This standard applies to room heaters for household and similar purposes.

NOTES

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

2 This standard does not take into account the special hazards which exist in nurseries and other places where there are young children or aged or infirm persons without supervision; in such cases, additional requirements may be necessary.

3 Examples of room heaters that are within the scope of this standard are:

- radiant heaters;
- panel heaters;
- liquid-filled radiators;
- fan heaters;
- convector heaters;
- tubular heaters.

4 Room heaters incorporating lighting units or ventilating units are also within the scope of this standard.

5 This standard does not apply to:

- thermal storage room heaters (IEC 335-2-61);
- clothes dryers and towel rails (EN 60335-2-43);
- heaters for saunas (EN 60335-2-53);
- heating appliances for keeping and breeding animals;

- thin sheet flexible heating elements;
- heating cables (IEC 800);
- heating wallpaper;
- heating carpets and similar flexible heating units;
- room heaters intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas). Barns are an example of such locations.

6 For heaters intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary.

7 For heaters intended to be used in tropical countries, special requirements may be necessary.

8 Attention is drawn to the fact that in many countries additional requirements are specified by the national authorities responsible for health and for the protection of labour.

2 Definitions

This clause of Part 1 is applicable except as follows:

2.2.29 *Replacement:*

Conditions of adequate heat discharge denote that the heater is operated as in normal use in still air, heaters designed to contain liquid being filled as in normal use.

Additional definitions:

2.2.101 *Visibly glowing radiant heater* denotes a heater intended to dissipate heat principally by radiation and incorporating one or more heating elements, a part or all of which can be seen from the outside of the heater when it is assembled ready for use. These heating elements attain a temperature of at least 650 °C when steady conditions are established, the heater being operated in accordance with conditions of adequate heat discharge at rated input and at an ambient temperature of 20 °C.

2.2.102 *Convective heater* denotes a heater provided with one or more outlets through which hot air is discharged by natural convection.

2.2.103 *Fan heater* denotes a heater in which the movement of the air is caused by mechanical means.

2.2.104 *Mounting at high level* denotes mounting at a height of at least 1.8 m above the floor.

2.2.105 *Fireguard* denotes that part of the enclosure of a visibly glowing radiant heater through which the heating element is normally visible and which is intended to guard against direct access to the heating element.

2.2.106 *Immediate surround of an air-outlet grille or fireguard* denotes any surface which is within a distance of 25 mm from the boundary of the air-outlet grille or within 50 mm of the fireguard.

Note. — Details of the way in which this distance is determined are shown in figure 101.

2.2.107 *Back-box* denotes a box or enclosure which is supplied with a heater for building-in and is intended to be built into the wall or other mounting surface, and into which the heater assembly is mounted.

NOTE - A back-box is also known as a roughing-in box.

3 General requirement

This clause of Part 1 is applicable.

4 General notes on tests

This clause of Part 1 is applicable except as follows:

4.2 *Addition:*

NOTE - For heaters intended to be installed adjacent to each other, a sufficient number of samples is required to determine the effects of the adjacent heaters on the heater to be tested.

4.3 *Replacement:*

The tests are carried out in the order of the clauses of Part 1, except that the test of 22.26 is made after the tests of clause 29.

NOTE - Before testing is started the appliance is operated at rated voltage in order to verify that it is in working order.

4.4 *Addition:*

Unless otherwise specified, the heater is operated in accordance with the manufacturer's instructions.

4.9 *Addition:*

Thermostats sensitive to the room air temperature, such as those where the sensing element is located in the air intake to the heater, are short-circuited. However, if the thermostat can be set so that it does not cycle, it is not short-circuited unless otherwise specified.

Note. — For electronic controls it may be necessary to render the sensing element inoperative instead of short-circuiting the thermostat.