



# SLOVENSKI STANDARD

## SIST EN 60335-2-21:2003/A1:2005

01-april-2005

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**Gospodinjiski in podobni električni aparati - Varnost - 2-21. del: Posebne zahteve za akumulacijske grelnike vode (IEC 60335-2-21:2002/A1:2004)**

Household and similar electrical appliances - Safety -- Part 2-21: Particular requirements for storage water heaters

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-21: Besondere Anforderungen für Wasserewärmer (Warmwasserspeicher und Warmwasserboiler)

(standards.iteh.ai)

Appareils électrodomestiques et analogues - Sécurité -- Partie 2-21: Règles particulières pour les chauffe-eau à accumulation

<https://standards.iteh.ai/catalog/standards/sist/e67532c5-b841-4556-a609-8a2ed856db98/sist-en-60335-2-21-2003-a1-2005>

**Ta slovenski standard je istoveten z: EN 60335-2-21:2003/A1:2005**

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**ICS:**

13.120	Varnost na domu	Domestic safety
91.140.65	Oprema za ogrevanje vode	Water heating equipment

**SIST EN 60335-2-21:2003/A1:2005**      en

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EUROPEAN STANDARD

**EN 60335-2-21/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2005

ICS 13.120; 91.150.65

English version

**Household and similar electrical appliances –  
Safety  
Part 2-21: Particular requirements for storage water heaters  
(IEC 60335-2-21:2002/A1:2004)**

Appareils électrodomestiques et  
analogues –  
Sécurité  
Partie 2-21: Règles particulières  
pour les chauffe-eau à accumulation  
(CEI 60335-2-21:2002/A1:2004)

Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke  
Teil 2-21: Besondere Anforderungen für  
Wassererwärmer (Warmwasserspeicher  
und Warmwasserboiler)  
(IEC 60335-2-21:2002/A1:2004)

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This amendment A1 modifies the European Standard EN 60335-2-21:2003; it was approved by CENELEC on 2004-11-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 text of document 61/2683/FDIS, future amendment 1 to IEC 60335-2-21:2002, 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 amendment A1 to EN 60335-2-21:2003 on 2004-11-01.

The following dates are applicable:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2005-08-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2007-11-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-21:2003.

As a consequence of endorsing amendment 1:2004 to IEC 60335-2-21:2002, the common modifications in EN 60335-2-21:2003 concerning Subclauses 24.102 and 24.102.2 are replaced by IEC text and therefore withdrawn.

Additional special national conditions are listed in annex ZA.

There are no national deviations from this amendment.

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

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## Endorsement notice

The text of amendment 1:2004 to the International Standard IEC 60335-2-21:2002 was approved by CENELEC as an amendment to the European Standard without any modification.

- p *Add:*

### Annex ZA (normative)

#### Special national conditions

*Addition:*

<u>Clause</u>	<u>Special national condition</u>
22.101	<b>Denmark, Finland, Norway and Sweden</b>

For closed water heaters, the minimum rated pressure is 1,0 MPa.

**NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD**

**CEI  
IEC**

**60335-2-21**

2002

AMENDEMENT 1  
AMENDMENT 1  
2004-08

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Amendement 1

**Appareils électrodomestiques et analogues –  
Sécurité –**

**Partie 2-21:  
Règles particulières pour les chauffe-eau  
à accumulation**

<https://standards.iteh.ai/catalog/standards/sist/e67532c5-b841-4556-a609-8a2cd836db98/sist-en-60335-2-21-2003-a1-2005>

Amendment 1

**Household and similar electrical appliances –  
Safety –**

**Part 2-21:  
Particular requirements for storage  
water heaters**

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
PRICE CODE

**C**

*Pour prix, voir catalogue en vigueur  
For price, see current catalogue*

## FOREWORD

This amendment has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

The text of this amendment is based on the following documents:

FDIS	Report on voting
61/2683/FDIS	61/2719/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

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[SIST EN 60335-2-21:2003/A1:2005](https://standards.iteh.ai/catalog/standards/sist/e67532c5-b841-4556-a609-8a2ed856db98/sist-en-60335-2-21-2003-a1-2005)

INTRODUCTION <https://standards.iteh.ai/catalog/standards/sist/e67532c5-b841-4556-a609-8a2ed856db98/sist-en-60335-2-21-2003-a1-2005>

*Replace the second sentence of the second paragraph by the following:*

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.

## 24 Components

**24.102** *Replace the existing text by the following:*

The operating temperature of the **thermal cut-out** of a **closed water heater** shall ensure that the water temperature cannot exceed 99 °C or that the **thermal cut-out** operates before its temperature exceeds 110 °C.

*Compliance is checked by the test of 24.102.1 for water temperatures not exceeding 99 °C or by the test of 24.102.2 for **thermal cut-outs** having an operating temperature up to 110 °C.*

**24.102.2** *Replace the existing text by the following:*

*The operating temperature of the **thermal cut-out** is measured by means of a thermocouple positioned on its sensing element or as close as possible to it.*

*The water temperature for appliances having vertically oriented metallic water containers is measured by a thermocouple attached to the outer surface of the upper dome. If the water container is horizontally oriented, two thermocouples are attached to the outer surface. The position of the thermocouple is shown in Figure 102a.*

*The water temperature for appliances having non-metallic water containers is measured by a thermocouple positioned 50 mm below the upper inner surface of the container, as shown in one of the diagrams of Figure 102b. This method may also be used to measure the water temperature of appliances having vertically oriented metallic water containers.*

*The appliance is operated at 1,15 times **rated power** input under **normal operation** with the outlet valve closed and **thermostats** short-circuited. The test is continued until the **thermal cut-out** operates.*

*The **thermal cut-out** shall operate before its temperature exceeds 110 °C. The water temperature shall not exceed 20 K of the maximum permitted operating temperature of the **thermal cut-out**.*

### Figure 102a

Replace the existing title by the following:

**Figure 102a – Position of thermocouples for metallic water containers**

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### Figure 102b

[SIST EN 60335-2-21:2003/A1:2005](https://standards.iteh.ai/catalog/standards/sist/e67532c5-b841-4556-a609-8a2ed856db98/sist-en-60335-2-21-2003-a1-2005)

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[8a2ed856db98/sist-en-60335-2-21-2003-a1-2005](https://standards.iteh.ai/catalog/standards/sist/e67532c5-b841-4556-a609-8a2ed856db98/sist-en-60335-2-21-2003-a1-2005)

Replace the existing title by the following:

**Figure 102b – Position of thermocouples for vertically oriented water containers**

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