

# INTERNATIONAL STANDARD

**IEC**  
**60335-2-26**

Fourth edition  
2002-10

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

### **Part 2-26: Particular requirements for clocks**

*Appareils électrodomestiques et analogues –  
Sécurité –*

*Partie 2-26:  
Règles particulières pour les horloges*



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International Electrotechnical Commission  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –  
SAFETY –**
**Part 2-26: Particular requirements for clocks**

## 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.
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- 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 IEC technical committee 61: Safety of household and similar electrical appliances.

This fourth edition cancels and replaces the third edition published in 1994. It constitutes a technical revision.

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

FDIS	Report on voting
61/2203/FDIS	61/2284/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 electric clocks.

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 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.

- 20.1: The requirement only applies to floor-standing clocks, which are tested at an angle of 8° (USA).
- 21.1: The impact tests are different (USA).
- 25.7: Lighter types of power supply cords are allowed (USA).

A bilingual version of this publication may be issued at a later date.

## 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 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 2-26: Particular requirements for clocks

### 1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric clocks having a **rated voltage** not more than 250 V.

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

- alarm clocks;
- spring-driven clocks with an electrically operated winding mechanism;
- clocks incorporating driving means other than motors.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

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.

NOTE 103 This standard does not apply to

- battery-operated clocks;
- appliances intended 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);
- clocks having other functions, whether or not in combination with time indication, such as master control clocks and timers for cooking ranges, washing machines and similar appliances;
- clocks for "clocking-in" purposes;
- clocks incorporating electronic circuits only (IEC 60065).

### 2 Normative references

This clause of Part 1 is applicable.

### 3 Definitions

This clause of Part 1 is applicable except as follows.



### **3.1.9 Replacement:**

#### **normal operation**

operation of the clock under the following conditions

Spring-driven clocks having an electrically operated winding mechanism are operated as in normal use.

Other clocks are operated with the rotor locked.

## **4 General requirement**

This clause of Part 1 is applicable.

## **5 General conditions for the tests**

This clause of Part 1 is applicable.

## **6 Classification**

This clause of Part 1 is applicable.

## **7 Marking and instructions**

This clause of Part 1 is applicable.

## **8 Protection against access to live parts**

This clause of Part 1 is applicable.

## **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.

## **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.

##### **19.7 Addition:**

*Spring-driven clocks, having an electrically operated winding mechanism incorporating capacitors or resistors to reduce the motor voltage, are operated with the rotor locked, capacitors or resistors being short-circuited one at a time.*

#### **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 reduced to 0,20 J.*

*The blows are not applied to spindles for hands.*

*The blows are only applied to dial glasses if the clock fails to comply with the requirements of 8.1 with the dial glass removed.*

## 22 Construction

This clause of Part 1 is applicable except as follows.

### 22.35 *Addition:*

NOTE 101 Hands are not considered as being actuated in normal use, unless they have to be touched to alter the time setting.

## 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 *Modification:*

The connection to fixed wiring may be made before the clock has been fixed to its support unless the clock is classified at least IPX1.

### 25.5 *Addition:*

**Type Z attachment** is allowed.

### 25.7 *Addition:*

The **supply cords** may be flat non-sheathed cords (code designation 60227 IEC 42).

### 25.19 *Modification:*

Polyvinyl chloride insulated cord is allowed to be tied into a simple overhand knot around a smooth pin.

## 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.

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- purchasing agent
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- testing engineer
- marketing specialist
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- (3) average,
- (4) above average,
- (5) exceptional,
- (6) not applicable

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**Q8** I read/use the: (tick one)

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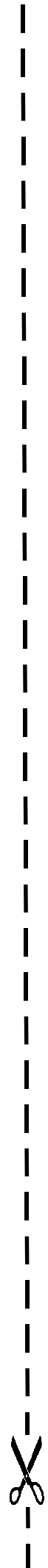
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