

# INTERNATIONAL STANDARD

# IEC 60335-2-35

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AMENDMENT 1  
2006-10

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Amendment 1

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

**Part 2-35:  
Particular requirements for instantaneous  
water heaters**

*This **English-language** version is derived from the original **bilingual** publication by leaving out all French-language pages. Missing page numbers correspond to the French-language pages.*

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PRICE CODE

**D**

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## 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
61/3088/FDIS	61/3144/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 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- withdrawn;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.

## CONTENTS

*Add the following:*

Figure 103 – Diagram for the leakage current measurement for single-phase bare-element water heaters supplied by a supply cord fitted with a plug

## FOREWORD

*In the differences existing in some countries add India to the first dashed item.*

## INTRODUCTION

*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.

## 7 Marking and instructions

**7.12.1** *Replace the second dashed item of the third paragraph by the following:*

- the appliance must be permanently connected to fixed wiring (not necessary if it complies with the requirements for the connection by a supply cord fitted with a plug specified in 13.2 and 24.101);

## 13 Leakage current and electric strength at operating temperature

### 13.2 Add the following:

For **bare-element water heaters** intended to be connected to the power supply by a **supply cord** fitted with a plug, the leakage current test is repeated. During this test, the leakage current is measured between the earthing terminal of the appliance and the neutral conductor, as shown in Figure 103. The leakage current, measured with the selector switch in each position, shall not exceed 2,75 mA.

## 24 Components

### 24.101 Add the following to the requirement:

For **bare-element water heaters** intended to be connected to the power supply by a **supply cord** fitted with a non-polarized plug, the **thermal cut-out** or other protected device incorporated in the appliance shall provide **all-pole disconnection**.

## 25 Supply connections and external flexible cords

Replace the text by "This clause of Part 1 is applicable."

## 27 Provision for earthing

### 27.1 Replace the first paragraph of the addition by the following:

For **class I appliances**, the sheath of the heating element shall be permanently and reliably connected to the earthing terminal, unless

- the container is provided with inlet and outlet pipes of metal, which are permanently and reliably connected to the earthing terminal, and
- other **accessible metal parts** of the container in contact with the water are permanently and reliably connected to the earthing terminal.

## 30 Resistance to heat and fire

### 30.2.3.1 Replace the text by the following:

*Modification:*

*This test is not applicable to parts of insulating material supporting the heating elements and their connections of **bare-element water heaters**.*

### 30.2.3.2 Replace the text by the following:

*Modification:*

For **bare-element water heaters**, the glow wire test is carried out on parts of insulating material supporting the heating elements and their connections as specified for other connections.