

Australian/New Zealand Standard™

**Safety of household and similar
electrical appliances**

**Part 2.40: Particular requirements for
electrical heat pumps, air-conditioners
and dehumidifiers
(IEC 60335-2-40:1995, MOD)**



AS/NZS 3350.2.40:2001

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-002, Safety of Household and Similar Electrical Appliances and Small Power Transformers. It was approved on behalf of the Council of Standards Australia on 2 October 2001 and on behalf of the Council of Standards New Zealand on 12 October 2001.

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The following are represented on Committee EL-002:

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Australian Electrical and Electronic Manufacturers Association
Canterbury Manufacturers Association New Zealand
Consumer Electronic Suppliers Association, Australia
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Australian/New Zealand Standard™

Safety of household and similar electrical appliances

Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers (IEC 60335-2-40:1995, MOD)

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-002 - Safety of Household and Similar Electrical Appliances and Small Power Transformers, to supersede AS/NZS 3350.2.40:1997 and its amendment 1 (1998) on publication.

This Standard incorporates Amendment No. 1 (May 2007). The changes required by the amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected. Where an application date other than immediate is applicable to an amendment the date of application (DOA) is indicated by the marginal bar against the part affected or by a footnote relating to the part affected.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with minimum safety requirements designed to give user protection against hazards that might occur during normal operation and abnormal operation of the appliance and which may be used as the basis for approval for sale or for connection to the electricity supply mains in Australia and New Zealand.

This Standard was revised to incorporate Amendment No. 1 and to effect changes to Clauses 1, 2, 7.1, 11.2, 11.8, 15, 19 and 22.111, and Annex ZZ that were issued in draft form for comment as document DR 01915. It forms the second edition of AS/NZS 3350.2.40 *Safety of household and similar electrical appliances, Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers*.

This Standard is an adoption with national modifications and contains the full text of the third edition of IEC 60335-2-40:1995, *Safety of household and similar electrical appliances, Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers* including its amendment 1 and has been varied as indicated to take account of Australian and New Zealand conditions. It is to be used in conjunction with the latest edition of AS/NZS 3350.1, *Safety of household and similar electrical appliances, Part 1: General requirements* and its Amendments. It was established on the basis of AS/NZS 3350.1:2002.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 3350.1 (referred to as part 1 in this part 2) so as to convert it into the Australian/New Zealand Standard: Safety of electrical heat pumps, air-conditioners and dehumidifiers.

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 in part 1 is to be adapted accordingly.

NOTE 1 Subclauses, notes, tables and figures which are additional to those in part 1 are numbered starting from 101. Annexes, which are additional to those in part 1 are lettered AA, BB, etc.

NOTE 2 In this Standard the following print types are used:

- requirements: in arial type;
- *test specifications: in italic type;*
- notes: in small arial type;

Words in **bold** in the text are defined in clause 2. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in bold.

The numbering of clauses, subclauses, notes, tables, figures and annexes follows that of IEC 60335-2-40:1995. To allow for the introduction of additional material by the IEC, the numbers 101 to 200 have been reserved. To allow for additional material to be introduced by Australia and New Zealand, the numbers 201 to 300 are used to number further clauses, subclauses, notes, tables and figures in part 1. The numbers 301 to 400 are used to number further clauses, subclauses, notes, tables and figures in this part 2. Additional annexes are lettered ZA, ZB and so on.

This scheme has been introduced to reduce the likelihood of the IEC and Australia and New Zealand using the same identifier for different purposes.

The use of the word VOID indicates that the IEC text is not used in Australia or New Zealand. The use of this word also avoids the need to renumber, clauses, notes, tables and figure if an earlier clause, note, table or figure is not used.

Annex A has been reformatted to indicate the Australia/New Zealand standard that is equivalent to the IEC standard or ISO standard to which normative reference is made.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown on the cover and title page only.
- (b) In the source text "this International Standard" should read "this Australian/New Zealand Standard".

A full point substitutes for a comma when referring to a decimal marker.

Variations to IEC 60335-2-40:1995 are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand standard are deleted. Where Australian/New Zealand tables, figures or passages of text are added, each is set in its proper place and identified by shading (~~example~~). Added figures are not themselves shaded, but are identified by a shaded border.

Variations made to IEC 60335-2-40:1995 form the Australian variations for the purposes of the IECEE scheme for recognition of testing to standards for safety of electrical equipment (the CB scheme). These variations have been incorporated in the body of the standard. They are listed in Annex ZZ for easy reference.

AUSTRALIA/NEW ZEALAND STANDARD

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –

Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers (IEC 60335-2-40:1995, MOD)

1 Scope

This clause of part 1 is replaced by:

This part of IEC 60335 AS/NZS 3350.1 applies to the safety of electric **heat pumps**, including **sanitary hot water heat pumps**, **air-conditioners**, and **dehumidifiers** incorporating sealed motor-compressors and room **fan coils**, their maximum **rated voltages** being not more than 250 V for single phase appliances and 600 V for all other appliances.

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

The appliances referenced above may consist of one or more factory made assemblies. If provided in more than one assembly, the separate assemblies are to be used together, and the requirements are based on the use of matched assemblies.

NOTE 1 A definition of "sealed motor-compressor" is given in IEC 60335-2-34.

NOTE 2 Requirements for refrigeration safety are covered by ISO 5149, and requirements for containers intended for storage of the heated water included in **sanitary hot water heat pumps** are, in addition, covered by IEC 60335-2-21.

NOTE 3 For appliances using flammable refrigerants, additional requirements are under consideration.

Supplementary heaters, or a provision for their separate installation, are within the scope of this standard, but only heaters which are designed as a part of the appliance package, the controls being incorporated in the appliance.

NOTE 4 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;
- ~~– for appliances intended to be used in tropical countries special requirements may be necessary;~~
- for the purposes of this standard, Australia and New Zealand are not considered to be tropical;
- for appliances subjected to pressure, 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, the national water supply authorities and similar authorities. In the case of appliances for permanent connection to the water supply system, all relevant requirements need to be observed.

NOTE 5 This standard does not apply to

- humidifiers intended for use with heating and cooling equipment (IEC 60335-2-88);
- appliances designed exclusively for industrial processing;
- 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).