

Australian/New Zealand Standard™

**Household and similar electrical
appliances—Safety**

**Part 2.40: Particular requirements for
electrical heat pumps, air-conditioners
and dehumidifiers**



AS/NZS 60335.2.40:2015

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 16 October 2015 and on behalf of the Council of Standards New Zealand on 6 November 2015.

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The following are represented on Committee EL-002:

Australian Industry Group
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Business New Zealand
Consumer Electronic Suppliers Association, Australia
Consumers' Federation of Australia
Electrical Regulatory Authorities, Australia
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This Standard was issued in draft form for comment as DR 15901.

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Household and similar electrical appliances—Safety

Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

AS/NZS 60335.2.40:2015**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and
dehumidifiers****Foreword**

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 60335.2.40:2006 five years from the date of publication. During this period it is anticipated that regulatory authorities will approve electrical heat pumps, air-conditioners and dehumidifiers to either standard.

The principal changes in this edition as compared with the 2006 edition of AS/NZS 60335.2.40 and its amendments are as follows (minor changes are not listed).

- 3.127 and 3.128 – added new definitions;
- 5.10 – length of refrigerant lines now specified for testing;
- 7.1 – changed marking requirements for flammable refrigerants;
- 8.1.5 – added requirement to clarify the placement of installation panels during testing;
- 11.2.1 – clarification of test procedure;
- 19 – (whole clause) – replaced in its entirety;
- 21.2 – added new coverage for vibration considerations during transport;
- 22.46 – added clarification for PEC;
- 22.118 – added coverage for use of mechanical connectors indoors when employing flammable refrigerants;
- 32 – made this section of Part 1 applicable;
- Annex FF2.4 – revised calculation for calculating volume (V);
- Annex FF2.5 – revision of allowable concentration of flammable refrigerant gas;
- Annex GG8 – new coverage added;
- Annex HH – added informative annex.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with safety requirements designed to give the 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

The text of IEC 60335-2-40 Ed 5, prepared by IEC Technical Committee SC 61D, was submitted to the Standards Australia/Standards New Zealand Combined Procedure (dual public comment and committee vote) for adoption of the IEC standard as a Standards Australia/Standards New Zealand joint standard.

This Standard is an adoption with national modifications of the fifth edition of IEC 60335-2-40, *Household and similar electrical appliances – Safety – Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers*. It has been varied as indicated to take account of Australian and New Zealand conditions.

This part 2 has to be used in conjunction with the latest edition of AS/NZS 60335.1 Household and similar electrical appliances – Safety – Part 1: General requirements and its Amendments. It was established on the basis of AS/NZS 60335.1:2011.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 60335.1 so as to convert it into the Australian/New Zealand Standard: Safety requirements for electrical heat pumps, air-conditioners and dehumidifiers.

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 of Part 1 is to be adapted accordingly.

NOTE 1 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.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letters AZ.

NOTE 2 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.

p NOTE 3 In this document, p is used in the margin to indicate instructions for preparing a consolidated version.

The essential safety requirements in AS/NZS 3820¹ that could be applicable to requirements for electrical heat pumps, air-conditioners and dehumidifiers are covered by this standard.

The national variations to IEC 60335-2-40 Ed 5 form the Australian and New Zealand national variations for purposes of the IECCE scheme for recognition of results of testing to standards for safety of electrical equipment (the CB scheme).

¹ AS/NZS 3820 *Essential safety requirements for electrical equipment*

The text of the International Standard IEC 60335-2-40 Ed 5 was approved as a joint Australia/New Zealand Standard with the agreed national variations as given below.

AUSTRALIAN NATIONAL VARIATIONS

There are no national variations to this Part 2 other than those listed in the national variations in AS/NZS 60335.1:2011.

NEW ZEALAND NATIONAL VARIATIONS

There are no national variations to this Part 2 other than those listed in the national variations in AS/NZS 60335.1:2011.

**Annex ANZ
(normative)**
**Normative references to international publications with their corresponding joint
Australia/New Zealand publications**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by national variations the relevant joint Australia/New Zealand publications applies if the national variations are needed to ensure the safety of the appliance for Australia/New Zealand conditions. These international publications are indicated by (mod). If an international publication is not so indicated, then either it or the listed Australia/New Zealand publication may be used.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>AS/NZS</u> | <u>Year</u> |
|--------------------|-------------|---|---------------------------|--------------|
| IEC 60068-2-52 | | <i>Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution)</i> | | |
| IEC 60079-14: | | <i>Explosive atmospheres – Part 14: Electrical installations design, selection and erection</i> | 60079.14 | |
| IEC 60079-15: | 2010 | <i>Explosive atmospheres – Part 15: Equipment protection by type of protection "n"</i> | 60079.15 | 2011 |
| IEC 60335-2-34: | 2012 | <i>Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors</i> | 60335.2.34 Amendment 1 | 2013 2015 |
| IEC 60335-2-51 | | <i>Household and similar electrical appliances – Safety – Part 2-51: Particular requirements for stationary circulation pumps for heating and service water installations</i> | 60335.2.51 | |
| ISO 817: | 2005 | <i>Refrigerants – Designation system</i> | | |
| ISO 5149: | 1993 | <i>Mechanical refrigerating systems used for cooling and heating – Safety requirements</i> | | |
| ISO 7010: | 2011 | <i>Graphic Symbols – Safety colours and safety signs – Registered safety signs</i> | | |
| ISO 14903 | | <i>Refrigerating systems and heat pumps – Qualification of tightness of components and joints</i> | | |
| ANSI/ASHRAE 34: | 2010 | <i>Designation and safety classification of refrigerants</i> | | |
| ASTM D4728-01: | 2010 | <i>Standard Test Method for Random Vibration Testing of Shipping Containers</i> | | |

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