

COMMITTEE: EL-002

Safety of Household and Similar Electrical Appliances and Small Power Transformers

DR 25006 CP

DRAFT

COMBINED POSTAL BALLOT/ AUSTRALIAN / NEW ZEALAND STANDARD FOR COMMENT

LIABLE TO ALTERATION DO NOT USE AS A STANDARD

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AS/NZS 60335.2.40:202x

**Household and similar electrical appliances –
Safety**

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



COMBINED DRAFT FOR COMMENT/POSTAL BALLOT
STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Committee EL-002, *Safety of household and similar electrical appliances and small power transformers*

DRAFT**Australian/New Zealand standard****Household and similar electrical appliances – Safety****Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers**

Please note that this document is currently being voted on by the committee and the results of the postal ballot will be contingent on public comments received.

Comments on the proposal are invited from persons and organisations concerned with this subject.

Attention is drawn to the fact that this document is a draft only and is liable to alteration in the light of comments received. It is not to be regarded as an Australian/New Zealand standard until it is issued as such by Standards Australia and Standards New Zealand.

NOTES OF THE SECRETARY:

THE INTRODUCTION OF ANY NATIONAL VARIATIONS TO BE INCLUDED IN THIS STANDARD WILL OCCUR AFTER PUBLIC COMMENTS HAVE BEEN CONSIDERED AND PRIOR TO THE PUBLICATION OF THE STANDARD.

THIS DOCUMENT MUST BE READ IN CONJUNCTION WITH IEC 60335-2-40, ED. 8.0, COPIES OF WHICH MAY BE VIEWED BY CONTACTING enquiries@standards.govt.nz.

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 Standards Australia's Standards Development and Accreditation Committee on xxxxxxxx and by the New Zealand Standards Approval Board on xxxxxxxx.

It was published on xxxxxxxx.

The following interests are represented on Committee EL-002:

Association of Accredited Certification Bodies

Australian Industry Group

Australian Retailers Association

Building Commission NSW

Business New Zealand

Consumer Electronic Suppliers Association, Australia

Consumers' Federation of Australia

Electrical consultants

Electrical Regulatory Authorities, Australia

Engineers Australia

International Accreditation New Zealand

JAS-ANZ

National Retailers Association (Australia)

New Zealand Electric Fence Energizer Manufacturers' Standards Group

WorkSafe, New Zealand

Keeping standards up-to-date

Standards are living documents, which reflect progress in science, technology and systems. To maintain their currency, all standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current standard, which should include any amendments which may have been published since the standard was purchased.

For more information about joint standards, visit www.standards.govt.nz or www.standards.org.au. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national standards organisation.

We also welcome suggestions for improvement in our standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comment to either the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the title page.

This standard was issued in draft form for comment as DR 25006.

Australian/New Zealand Standard

Household and similar electrical appliances – Safety

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

Superseding AS/NZS 60335.2.40:2023 on xx xxxx xxxx

Originated in Australia as AS C179–1970.

Originated in New Zealand as NZS/AS 3179–1986.

Jointly revised and designated AS/NZS 3179–1993.

Revised and designated AS/NZS 3350.2.40:1997.

Second edition AS/NZS 3350.2.40:2001.

Jointly revised and redesignated AS/NZS 60335.2.40:2006.

Jointly revised and redesignated AS/NZS 60335.2.40:2015.

Jointly revised and redesignated AS/NZS 60335.2.40:2019.

Jointly revised and redesignated AS/NZS 60335.2.40:2023.

Jointly revised and redesignated AS/NZS 60335.2.40:202x.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

AS/NZS 60335.2.40:202x
HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY**Part 2.40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers****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 60335.2.40:2023 3 years from the date of publication of this standard. During this period, AS/NZS 60335.2.40:2023 and its amendments will remain current. Regulatory authorities that reference this standard in regulation may apply these requirements at a different time. Users of this standard should consult these authorities to confirm their requirements.

The objective of this standard is to provide manufacturers, designers, regulatory authorities, testing laboratories, and similar organisations 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. 8.0, 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.

The principal changes in this edition as compared with the 2023 edition of AS/NZS 60335.2.40 are as follows (minor changes are not listed):

- (a) Alignment with AS/NZS 60335.1:2022;
- (b) Clause 12: Part 1, clause 12 has been made applicable;
- (c) Clause 19: requirement added for double-wall heat exchangers to be resistant against freezing;
- (d) Clause 20: requirement modified for when to apply test probe 18;
- (e) Clause 21: requirement added for double-wall heat exchangers to be resistant against the pressure of the refrigerant if one of the walls fails;
- (f) Clause 22: requirement modified to reflect that appliances can operate continuously and can be operated remotely without giving rise to a hazard, and requirement added for double-wall heat exchangers to be constructed to avoid refrigerant leaking into the secondary circuit;
- (g) Annex LL has been deleted and replaced by a reference to IEC TS 63542:2024.

This standard is an adoption with national modifications of the eighth 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, unless that edition precludes it. In that case, the latest edition that does not preclude it is used. It was established on the basis of AS/NZS 60335.1:2022.

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: 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 AS/NZS 60335.1 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 AS/NZS 60335.1 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 AS/NZS 60335.1;
- unless notes are in a new subclause or involve notes in AS/NZS 60335.1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, and so on;
- 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. When a definition concerns an adjective, the adjective and associated noun are also in bold.

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.

Where national variations listed in AS/NZS 60335.1 (adopting IEC 60335-1) affect IEC 60335-2-40, Ed. 8.0, these, along with the variations listed below, form the Australian and New Zealand national variations for purposes of the IECEE 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. 8.0 was approved as a joint Australian/New Zealand standard, noting the effect of national variations in AS/NZS 60335.1:2022.

AUSTRALIAN NATIONAL VARIATIONS

The following national variations to this Part 2 are additional to those listed in the national variations of AS/NZS 60335.1:2022.

5 General conditions for the tests

5.7 Addition:

- p Add the following text:

The tests and test conditions of clause 13 are carried out under the most severe operating conditions within the operating temperature range specified by the manufacturer.

25 Supply connection and external flexible cords

25.1 Addition:

- p Replace the text of the addition *with* the following variation:

Appliances and parts of appliances intended for outdoor use may be provided with a **supply cord** fitted with a plug.

NEW ZEALAND NATIONAL VARIATIONS

The following national variations to this Part 2 are additional to those listed in the national variations of AS/NZS 60335.1:2022.

5 General conditions for the tests

5.7 Addition:

- p Add the following text:

The tests and test conditions of clause 13 are carried out under the most severe operating conditions within the operating temperature range specified by the manufacturer.

25 Supply connection and external flexible cords

25.1 Addition:

- p Replace the text of the addition *with* the following variation:

Appliances and parts of appliances intended for outdoor use may be provided with a **supply cord** fitted with a plug.

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 publication 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. Where there is no equivalent international publication listed, then the Australian/New Zealand publication applies.

Publication	Year	Title	AS/NZS	Year
IEC 60068-2-52		<i>Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)</i>		
IEC 60079-0 (MOD)		<i>Explosive atmospheres – Part 0: General requirements</i>	60079-0	2019
IEC 60079-7 IEC 60079-7/AMD1	2015 2017	<i>Explosive atmospheres – Part 7: equipment protection by increased safety “e”</i>	60079-7	2016
IEC 60079-14 (MOD)		<i>Explosive atmospheres – Part 14: Electrical installations design, selection and erection</i>	60079.14	2022
IEC 60079-15	2017	<i>Explosive atmospheres – Part 15: Equipment protection by type of protection “n”</i>	60079.15	2020
IEC 60335-2-34	2021	<i>Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors</i>	60335.2.34	2021
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	
IEC 60695-1-10		<i>Fire hazard testing – Part 1-10: Guidance for assessing the fire hazard of electrotechnical products – General guidelines</i>		
IEC 60695-10-2	2014	<i>Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test method</i>		
IEC 60730-2-6		<i>Automatic electrical controls – Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements</i>		
IEC 62471	2006	<i>Photobiological safety of lamps and lamp systems</i>	62471	2011
IEC TS 63542	2024	<i>Refrigerant detection systems for flammable refrigerants</i>		

ISO 527-3		<i>Plastics – Determination of tensile properties – Part 3: Test conditions for films and sheets</i>		
ISO 817		<i>Refrigerants – Designation and safety classification</i>	817	
ISO 1302 ¹	2002	<i>Geometrical Product Specifications (GPS) – Indication of surface texture in technical product documentation</i>		
ISO 2578		<i>Plastics – Determination of time-temperature limits after prolonged exposure to heat</i>		
ISO 5149-1 (MOD) ISO 5149-1/AMD1 ISO 5149-1/AMD2	2014 2015 2021	<i>Refrigerating systems and heat pumps – Safety and environmental requirements – Part 1: Definitions, classification and selection criteria</i>	5149.1	2016
ISO 5149-2 (MOD) ISO 5149-2/AMD1	2014 2020	<i>Refrigerating systems and heat pumps – Safety and environmental requirements – Part 2: Design, construction, testing, marking and documentation</i>	5149.2	2016
ISO 5149-3 (MOD) ISO 5149-3/AMD1	2014 2021	<i>Refrigerating systems and heat pumps – Safety and environmental requirements – Part 3: Installation site</i>	5149.3	2016
ISO 5151		<i>Non-ducted air conditioners and heat pumps – Testing and rating for performance</i>		
ISO 7010	2019	<i>Graphic symbols – Safety colours and safety signs – Registered safety signs</i>		
ISO 13253		<i>Ducted air-conditioners and air-to-air heat pumps – Testing and rating for performance</i>		
ISO 13256 (all parts)		<i>Water-source heat pumps – Testing and rating for performance</i>		
ISO 13355		<i>Packaging – Complete, filled transport packages and unit loads – Vertical random vibration test</i>		
ISO 14903		<i>Refrigerating systems and heat pumps – Qualification of tightness of components and joints</i>		
ISO 15042		<i>Multiple split-system air-conditioners and air-to-air heat pumps – Testing and rating for performance</i>		

¹ Withdrawn.