

AS/NZS 3108:1994

Australian/New Zealand Standard

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**Approval and test specification—  
Particular requirements for isolating  
transformers and safety isolating  
transformers**

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## AS/NZS 3108:1994

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/2, Electrical Approvals Standards. It was approved on behalf of the Council of Standards Australia on 14 April 1994 and on behalf of the Council of Standards New Zealand on 22 June 1994. It was published on 18 July 1994.

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The following interests are represented on Committee EL/2:

Association of Certification Bodies  
Association of New Zealand Electrical Appliance Distributors  
Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Consumer Electronics Suppliers Association  
Electrical regulatory authorities  
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Electricity Supply Association, New Zealand  
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Metal Trades Industry Association of Australia  
Ministry of Commerce, New Zealand  
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Suggestions for improvements to Joint Standards, addressed to the head office of either Standards Australia or Standards New Zealand, are welcomed. Notification of any inaccuracy or ambiguity found in a Joint Australian/New Zealand Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

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# Approval and test specification— Particular requirements for isolating transformers and safety isolating transformers

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/2 on Electrical Approvals Standards, to supersede AS 3108—1990 in Australia and NZS/AS 3108:1990 in New Zealand. It was prepared to align Australian approval and test specifications and New Zealand Standards progressively with International Electrotechnical Commission (IEC) Standards for isolating and safety isolating transformers.

This Standard is issued as a Joint Standard under the terms of the Active Cooperation Agreement between Standards Australia and Standards New Zealand.

This Standard closely follows IEC 742:1983, *Isolating transformers and safety isolating transformers* including Amendment No.1.

This Standard is in three Chapters as follows:

- (a) Chapter 1 gives general requirements for all isolating transformers and safety isolating transformers, whatever their use. These requirements are supplemented (indicated by 'ADDITION') or modified (indicated by 'REPLACEMENT') as outlined in Chapters 2 and 3.
- (b) Chapter 2 gives supplementary requirements applicable to isolating transformers used as shaver transformers.
- (c) Chapter 3 gives supplementary requirements applicable to safety isolating transformers. It is divided into Sections applicable to various types of transformers as follows:
  - (i) Section 1—Safety isolating transformers for general use.
  - (ii) Section 2—Transformers for toys.
  - (iii) Section 3—Bell transformers.
  - (iv) Section 4—Transformers for Class III luminaires incorporating incandescent lamps.

Each Section is independent of the other Sections and the additions or replacements which are indicated refer back to the general requirements of Chapter 1.

A number of variations have been made in this Standard to the requirements of IEC 742:1983. These variations are necessary, to take into account the national requirements for isolating transformers and safety isolating transformers that apply in both Australia and New Zealand. The variations are indicated throughout the text of this Standard by marginal bars, located against the changed text or Figure. The majority are technical. Other variations to Notes, explanatory matter, Figures and references to Australian and New Zealand Standards and Specifications are also included for completeness.

Descriptions of these variations are to be found in Annex B to this Standard, given in the order found within the body of this Standard. These variations also form the Australian national variations for purposes of the IEC scheme for recognition of results of testing to Standards for safety of electrical equipment (the CB scheme).

The numbering of Clauses and Figures closely follows that of IEC 742:1983. To allow for the introduction of additional material by the IEC, the numbers 1 to 100 have been reserved. Clauses numbered from 101 are used by the IEC to add to the body of the Standard by the Chapters. To allow additional material to be introduced by Australia or New Zealand, the numbers 201 to 300 are used. This scheme has been introduced to reduce the likelihood of the IEC and Australia or New Zealand using the same Clause or Figure number for differing requirements. The use of the word VOID indicates that the IEC requirement is not used in Australia or New Zealand. The word is also used where

the deletion of a particular requirement such as a Table would lead to the consequential renumbering of references within the body of the Standard and succeeding tables. Where Australia and New Zealand have added a requirement or made a change to a particular Clause of IEC 742:1983 that Clause number remains unchanged.

In the text of this Standard, the following print types are used:

- (i) Requirements, compliance with which can be tested and definitions: . . . . . in large roman type.
- (ii) Explanations, advice, introductions, general statements, exceptions and references . . . . . in smaller roman type.
- (iii) Headings of sub-clauses and test specifications . . . . . *in italic type*.

In Australia this Standard supersedes AS 3108—1990 from date of publication. In New Zealand this Standard supersedes NZS/AS 3108:1990 from date of publication.

This Standard incorporates Amendment Nos. 1, 2 and 3 to the 1990 edition and contains changes which more closely align it with IEC 742:1983. Chapter 2, containing supplementary requirements for isolating transformers for general use and shaver transformers does not contain requirements for shaver supply units. These are contained in AS/NZS 3194 Approval and test specification—Electric shaver supply units.

This Standard requires reference to the following documents:

#### STANDARDS

##### AS

|          |   |
|----------|---|
| 1042     | Direct-acting indicating electrical measuring instruments and their accessories                           |
| 1099     | Basic environmental testing procedures for electrotechnology  |
| 1099.2   | Part 2: Tests   |
| 1099.2Bd | Test Bd—Dry heat test for heat-dissipating specimens with gradual change of temperature                   |
| 1621     | Pressure-sensitive adhesive electrical tapes  |
| 1621.1   | Part 1: General requirements  |
| 1852     | International Electrotechnical Vocabulary   |
| 1939     | Degrees of protection provided by enclosures for electrical equipment (IP Code)                           |
| 2005     | Low voltage fuses—Fuses with enclosed fuse-links  |
| 2420     | Fire test methods for solid insulating materials and non-metallic enclosures used in electrical equipment |
| 2768     | Electrical insulating materials—Evaluation and classification based on thermal endurance                  |
| 3000     | Electrical installations—Buildings, structures and premises (known as the SAA Wiring Rules)               |

#### APPROVAL AND TEST SPECIFICATIONS

##### AS

|                    |   |
|--------------------|---|
| 3109               | Appliance couplers for household and similar general purposes         |
| 3109.1             | General requirements  |
| 3123               | Plugs, socket-outlets and couplers for general industrial application |
| 3191 (NZS/AS 3191) | Electric flexible cords   |

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