

AS/NZS 61558.2.9:2003  
(IEC 61558-2-9:2002, MOD)

## Australian/New Zealand Standard™

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Safety of power transformers, power supply units and similar products -

Part 2.9: Particular requirements for transformers for class III handlamps for tungsten filament lamps  
(IEC 61558-2-9:2002, MOD)

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/2 - Safety of household and similar electrical appliances and small power transformers. It was approved on behalf of the Council of Standards Australia on 15 April 2003 and by the Council of Standards New Zealand on 8 May 2003. It was published on 30 May 2003.

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The following interests are represented on Committee EL/2

Association of Certification Bodies  
Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Canterbury Manufacturers Association New Zealand  
Consumer Electronic Suppliers Association, Australia  
Electrical regulatory authorities, Australia  
Electrical test laboratories  
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Electricity Supply Association of Australia  
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## STANDARDS AUSTRALIA / STANDARDS NEW ZEALAND

**SAFETY OF POWER TRANSFORMERS, POWER SUPPLY UNITS  
AND SIMILAR PRODUCTS –****Part 2.9: Particular requirements for transformers for class III handlamps  
for tungsten filament lamps**

## 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 3108, Chapter 3, Section 4, two years from publication.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with safety requirements for the design, manufacture and testing of safety isolating transformers for general use which can form the basis for approval by regulatory authorities

This Standard forms the first edition of AS/NZS 61558.2.9 *Safety of power transformers, power supply units and similar products - Part 2.9: Particular requirements for transformers for class III handlamps for tungsten filament lamps*.

This Standard is an adoption with national modifications and contains the full text of the first edition of IEC 61558-2-9:2002, *Safety of power transformers, power supply units and similar products - Part 2-9: Particular requirements for transformers for class III handlamps for tungsten filament lamps* 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 61558.1 and its amendments. It was established on the basis of the first edition (2001) of that standard.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 61558.1 so as to convert it into the Australian/New Zealand Standard: *Safety requirements for transformers for class III handlamps for tungsten filament lamps*.

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.

Annex ZZ is for information only.

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 3.

The numbering of clauses, subclauses, notes, tables, figures and annexes follows that of IEC 61558-2-9:2002. 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.

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".
- (c) A full point substitutes for a comma when referring to a decimal marker.

Variations to IEC 61558-2-9:2002 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 61558-2-9:2002 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

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### SAFETY OF POWER TRANSFORMERS, POWER SUPPLY UNITS AND SIMILAR PRODUCTS –

#### Part 2.9: Particular requirements for transformers for class III handlamps for tungsten filament lamps

## 1 Scope

### *Replacement:*

This International Standard covers such aspects of safety as electrical, thermal and mechanical.

This Part 2-9 of IEC 61558 applies to stationary or portable single-phase air-cooled (natural or forced) **associated safety isolating transformers for class III handlamps for tungsten filament lamps**, having a **rated supply voltage** not exceeding 1 000 V a.c., a **rated frequency** not exceeding 500 Hz and a **rated output** not exceeding 10 kVA.

#### **Transformers for class III handlamps for tungsten filament lamps**

- have a **no-load output voltage** and a **rated output voltage** not exceeding 50 V a.c. or 120 V ripple-free d.c.;
- are used where **double** or **reinforced insulation** between circuits is required by the installation rules or by the appliance specification;
- have a low variation between **no-load** and **rated output voltage**;
- have a limited output voltage.

This standard is applicable to **dry-type transformers**. The windings may be encapsulated or non-encapsulated.

NOTE 1 For **transformers** filled with liquid dielectric or pulverised material, such as sand, additional requirements are under consideration.

NOTE 2 Attention is drawn to the fact that

- for **transformers** intended to be used in vehicles, on board ships and aircraft, additional requirements (from other applicable standards, national rules, etc.) may be necessary;
- ~~for **transformers** intended for use in tropical areas, measures to protect the enclosure and the components inside the enclosure against external influences like fungus, vermin and termites should also be considered;~~
- in locations where special environmental conditions prevail, additional requirements (from other applicable standards, national rules, etc.) may be necessary.

This standard also applies to **transformers** incorporating electronic circuits. This standard does not apply to external circuits and their components intended to be connected to the input and output terminals or socket-outlets of the **transformer**.