

AS/NZS 61558.2.16:2022  
IEC 61558-2-16:2021  
(Incorporating Amendment No. 1)



Australian/New Zealand Standard™

# Safety of transformers, reactors, power supply units and combinations thereof

**Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units for general applications**



AS/NZS 61558.2.16:2022

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 and Power Supplies. It was approved on behalf of the Council of Standards Australia on 8 June 2022 and by the New Zealand Standards Approval Board on 1 June 2022.

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The following are represented on Committee EL-002:

- Association of Accredited Certification Bodies
- Australian Industry Group
- Australian Retailers Association
- Better Regulation Division (Fair Trading, Safework NSW, TestSafe)
- Business New Zealand
- Consumer Electronic Suppliers Association, Australia
- Consumers' Federation of Australia
- Electrical Regulatory Authorities Council, Australia
- Electrical consultants
- Engineers Australia
- JAS-ANZ
- New Zealand Electric Fence Energizer Manufacturers' Standards Group
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This Standard was issued in draft form for comment as DR AS/NZS 61558.2.16:2021.

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## **Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units for general applications**

First edition AS/NZS 61558.2.16:2010.  
Jointly revised and redesignated AS/NZS 61558.2.16:2022.  
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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**AS/NZS 61558.2.16:2022****Safety of transformers, reactors, power supply units and combinations thereof –****Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units for general applications**

## 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 61558.2.16:2010 three years from the date of publication of this Standard. During this period AS/NZS 61558.2.16:2010 and its amendments will also remain current. Regulatory authorities that reference this Standard in regulation may apply these requirements at a different time. Users of this Standard should consult with these authorities to confirm their requirements.

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 61558-2-16 Ed 2, prepared by IEC Technical Subcommittee TC 96, 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 2010 edition of AS/NZS 61558.2.16 are as follows (minor changes are not listed):

- a) adjustment of structure and references in accordance with AS/NZS 61558.1:2018;
- b) definitions of different voltage characteristics;
- c) partial discharge and description of constructions moved to AS/NZS 61558.1:2018;
- d) alternative method for dimensioning of clearances;
- e) removal of requirements for homogeneous field conditions.

A1 | This Standard incorporates a correction (November 2023) that applies to Clause 27 of the IEC text in the “including IEC text” version only. The change is not indicated by a marginal bar.

This Standard is an adoption with national modifications of the second edition of IEC 61558-2-16, *Safety of transformers, reactors, power supply units and combinations thereof – Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units for general applications*. 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 61558.1 *Safety of transformers, reactors, power supply units and combinations thereof – Part 1 General requirements and tests*, 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 61558.1:2018.

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 and tests for switch mode power supply units and transformers for switch mode power supply units for general applications.

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 3820<sup>1</sup> that could be applicable to requirements for switch mode power supply units and transformers for switch mode power supply units for general applications are covered by this standard.

The national variations to IEC 61558-2-16 Ed 2 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).

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

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