

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

**Part 3.2: Limits—Limits for harmonic
current emissions (equipment input
current ≤ 16 A per phase)
(IEC 61000-3-2, Ed. 3.0 (2005) MOD)**



AS/NZS 61000.3.2:2007

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The following are represented on Committee EL-034:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Energy Market Commission
Australian Information Industry Association
Bureau of Steel Manufacturers of Australia
Consumers' Federation of Australia
Electrical Regulatory Authorities Council
Electricity Engineers Association (New Zealand)
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-034, Power Quality, to supersede AS/NZS 61000.3.2:2003.

This Standard incorporates Amendment No. 1 (August 2009). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide manufacturers and suppliers of electricity and users of electrical equipment intended for connection to an electrical network with limits for voltage disturbances and harmonics produced by that equipment and the methods for ascertaining compliance to them in order to maintain electromagnetic compatibility within the electrical network.

This Standard is an adoption with national modifications and has been reproduced from IEC 61000-3-2, Ed. 3.0 (2005), *Electromagnetic compatibility (EMC)—Part 3.2: Limits—Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*, and has been varied as indicated to take account of Australian/New Zealand conditions.

Variations to IEC 61000-3-2, Ed. 3.0 (2005) are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian/New Zealand Standard, are deleted. Where text, tables or figures 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.

Limits to harmonic emission from equipment are covered by three Standards depending on the equipment current rating and they are—

- (a) AS/NZS 61000.3.2, for equipment with rated current less than or equal to 16 A per phase;
- (b) AS/NZS 61000.3.12, for equipment with rated current greater than 16 A per phase and less than or equal to 75 A per phase; and
- (c) AS/NZS 61000.3.4, for equipment with rated current greater than 75 A per phase.

An informative note, as replicated below, has been added in Clause 7.3(b).

'NOTE - Widespread use of devices meeting this criterion can cause interference in networks, particularly networks using ripple control signalling.'

It is intended to delete this second criterion from October 2010 subject to the outcome of a review to be carried out on the effect of the mass introduction of these lamps.'

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 only on the cover and title page.
- b) In the source text 'IEC 61000-3-2' should read 'AS/NZS 61000.3.2'.
- c) A full point should be substituted for a comma when referring to a decimal marker.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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INTRODUCTION

IEC 61000 is published in separate parts, according to the following structure:

Part 1: General

General considerations (introduction, fundamental principles)
Definitions, terminology

Part 2: Environment

Description levels
Classification of the environment
Compatibility levels

Part 3: Limits

Emission limits
Immunity limits (in so far as they do not fall under the responsibility of the product committees)

Part 4: Testing and measurement techniques

Measurement techniques
Testing techniques

Part 5: Installation and mitigation guidelines

Installation guidelines
Mitigation methods and devices

Part 6: Generic standards

Part 9: Miscellaneous

Each part is further subdivided into sections which are to be published either as international standards, technical specifications, or as technical reports.

These standards and reports will be published in chronological order and numbered accordingly (for example, 61000-6-1).

This part is an international standard which gives emission limits for harmonic currents from equipment having an input current up to and including 16 A per phase.

This part is a Product Family Standard.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Electromagnetic compatibility (EMC)****Part 3.2: Limits—Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) (IEC 61000-3-2, Ed. 3.0 (2005) MOD)**

Any table, figure or text of the International Standard that is struck through is not part of this Standard. Any Australian/New Zealand table, figure or text that is added is part of this Standard and is identified by shading.

1 Scope

This part of IEC 61000 deals with the limitation of harmonic currents injected into the public supply system.

It specifies limits of harmonic components of the input current which may be produced by equipment tested under specified conditions.

Harmonic components are measured according to Annexes A and B.

This part of IEC 61000 is applicable to electrical and electronic equipment having an input current up to and including 16 A per phase, and intended to be connected to public low-voltage distribution systems.

Arc welding equipment which is not professional equipment, with input current up to and including 16 A per phase, is included in this standard.

Arc welding equipment intended for professional use, as specified in IEC 60974-1, is excluded from this standard and may be subject to installation restrictions as indicated in IEC 61000-3-4 or IEC 61000-3-12.

The tests according to this standard are type tests. Test conditions for particular equipment are given in Annex C.

For systems with nominal voltages less than 220 V (line-to-neutral), the limits have not yet been considered.

NOTE The words apparatus, appliance, device and equipment are used throughout this standard. They have the same meaning for the purpose of this standard.

2 Normative references

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.

References to International Standards that are struck through in this Clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.