

Australian/New Zealand Standard™

Electrical installations—Generating sets



AS/NZS 3010:2017

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-001, Wiring Rules. It was approved on behalf of the Council of Standards Australia on 13 March 2017 and by the New Zealand Standards Approval Board on 5 April 2017.

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The following are represented on Committee EL-001:

Australian Building Codes Board
Australian Industry Group
Communications, Electrical and Plumbing Union—Electrical Division
Consumers Federation of Australia
Electrical Contractors Association of New Zealand
Electrical Regulatory Authorities Council
Electrical Safety Organisation, New Zealand
ElectroComms and Energy Utilities Industries Skills Council
Energy Networks Association
Engineers Australia
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This Standard was issued in draft form for comment as DR AS/NZS 3010:2015.

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PREFACE

This Standard was prepared by the joint Standards Australia/Standards New Zealand Committee EL-001, Wiring Rules, to supersede AS/NZS 3010:2005 and AS 2790—1989.

The objective of this Standard is to set out the minimum safety requirements related to the use of generating sets for the supply of electricity at voltages normally exceeding 50 V a.c. or 120 V d.c.

This Standard differs from AS/NZS 3010:2005 as follows:

- (a) Inclusion of several new figures showing a variety of generator connection methods which are acceptable and conform with the requirements of this Standard.
- (b) The modification of existing figures to show clearly the intent of the associated clauses, especially in relation to main switches.
- (c) The inclusion of some updated provisions of AS 2790 as a normative Appendix of this document (see Appendix D).
- (d) Inclusion of an exception in relation to the mechanical interlock requirements of the changeover device.
- (e) Inclusion of additional definitions, e.g. safety services and essential services.
- (f) General reinforcement of the MEN connection requirements.
- (g) Clarification of when switching of the neutral conductor is or is not permitted.
- (h) Clauses added in relation to carrying out additions, alterations and repairs in line with AS/NZS 3000.
- (i) Clauses added to clarify the use of three and four pole changeover devices.
- (j) Requirements of AS/NZS 3000 where not amended or changed by this Standard included within the Figures, e.g. mechanical maintenance isolating devices.

Any requirements that may be applicable in Australia only or New Zealand only are indicated in the text and by a symbol in the right margin as follows:

‘In Australia.....’



‘In New Zealand.....’



Statements expressed in mandatory terms in notes to Figures and Tables are deemed to be requirements of this Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendices to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out the minimum safety requirements related to the use of generating sets for the supply of electricity at low voltage, that is, not exceeding 1000 V a.c or 1500 V d.c.

The Standard applies to electricity generating sets that are driven by internal combustion engines, and forms any of the following:

- (a) Normal supply source for electrical installations.
- (b) Alternative supply source for electrical installations.
- (c) Electrical supply source for the connection of electrical appliances and portable tools.
- (d) Supply sources that operate in parallel with the normal supply in the electrical installation.

This Standard does not—

- (i) apply to uninterruptible power supplies; or
- (ii) apply to other renewable energy generation systems, such as, the following:
 - (A) Inverters.
 - (B) Photovoltaic arrays.
 - (C) Water or wind driven turbines.

NOTE: While intended to be applied to low voltage generating sets driven by internal combustion engines, the electrical principles could be applied to other types of energy sources.

1.2 APPLICATION

In addition to being in accordance with the requirements of AS/NZS 3000 and the additional requirements of this Standard, the generating set installation may be required to comply with requirements of electricity distributors and other relevant regulatory authorities. It is, therefore, recommended that these authorities be consulted prior to the installation of equipment.

Section 2 outlines general requirements for the installation of generating sets to an electrical installation. Sections 3 and 4 introduce additional requirements for permanently connected and plug and socket outlet connected generating sets respectively.

Appendix A specifies the fault current path when the generating set is fixed wired to an electrical installation.

Appendix B specifies a New-Zealand-only guidance for the connection of portable generating sets when directly supplying portable tools connected to the generating set by plugs and sockets. NZ

Appendix C specifies a New Zealand-only provision for the connection of a dedicated wiring system within an electrical installation. NZ