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Compliance Document for New Zealand Building Code Clause G9 Electricity

Prepared by the Department of Building and Housing

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Status of Compliance Documents

Compliance Documents are prepared by the Department of Building and Housing in accordance with section 22 of the Building Act 2004. A Compliance Document is for use in establishing compliance with the New Zealand Building Code.

A person who complies with a Compliance Document will be treated as having complied with the provisions of the Building Code to which the Compliance Document relates. However, a Compliance Document is only one method of complying with the Building Code. There may be alternative ways to comply.

Users should make themselves familiar with the preface to the New Zealand Building Code Handbook, which describes the status of Compliance Documents and explains alternative methods of achieving compliance.

Defined words (italicised in the text) and classified uses are explained in Clauses A1 and A2 of the Building Code and in the Definitions at the start of this Compliance Document.

G9: Document History			
	Date	Alterations	
First published	July 1992		
Amendment 1	September 1993	p. vi, References p. 1, 1.0.1	p. 3, 1.0.1 p. 4, Index
Amendment 2	1 December 1995	pp. i and ii, Document History p. vi, References	p. 1, 1.0.1
Amendment 3	1 July 2001	p. 2, Document History, Status p. 9, Definitions	
Amendment 4	23 June 2007	p. 2, Document History, Status p. 7, References p. 9, Definitions	p. 11 VM1 p. 13 AS1, 1.0.1, 2.0.1
Amendment 5	Published 30 June 2010 Effective from 30 September 2010	p. 2, Document History, Status p. 3, Code Clause G9 p. 7, References	
Reprinted incorporating Amendments 1–5	30 September 2010		
Note: Page numbers relate to the document at the time of Amendment and may not match page numbers in current document.			

Document Status

The most recent version of this document, as detailed in the Document History, is approved by the Chief Executive of the Department of Building and Housing. It is effective from 30 September 2010 and supersedes all previous versions of this document.

People using this Compliance Document should check for amendments on a regular basis. The Department of Building and Housing may amend any part of any Compliance Document at any time. Up-to-date versions of Compliance Documents are available from www.dbh.govt.nz

New Zealand Building Code

Clause G9 Electricity

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This Clause is extracted from the New Zealand Building Code contained in the First Schedule of the Building Regulations 1992.

66	<i>Building Regulations 1992</i>	1992/150
FIRST SCHEDULE—continued		
Clause G9—ELECTRICITY		
Provisions	Limits on application	
<p>OBJECTIVE G9.1 The objective of this provision is to ensure that:</p> <ul style="list-style-type: none"> (a) In <i>buildings</i> supplied with electricity, the <i>electrical installation</i> has safeguards against outbreak of <i>fire</i> and personal injury, and (b) <i>People with disabilities</i> are able to carry out normal activities and processes within <i>buildings</i>. <p>FUNCTIONAL REQUIREMENT G9.2 Where provided in a <i>building</i>, <i>electrical installations</i> shall be safe for their <i>intended use</i>.</p> <p>PERFORMANCE G9.3.1 The <i>electrical installation</i> shall incorporate systems to:</p> <ul style="list-style-type: none"> (a) protect people from contact with parts of the installation which are live during normal operation, and to prevent parts of the installation or other <i>building elements</i> becoming live during fault conditions, (b) permit the safe isolation of the installation and of electrical fittings and appliances, (c) safeguard people from excessive temperatures resulting from either normal operation of electrical equipment, or from currents which could exceed the installation rating, (d) safeguard people from injury which may result from electromechanical stress in electrical components caused by currents in excess of the installation rating, 	<p>Objective G9.1(b) shall apply only to those <i>buildings</i> to which section 47A of the Act applies.</p>	

Amend 5
Sep 2010

See Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

1992/150

Building Regulations 1992

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FIRST SCHEDULE—continued**Provisions**

- (e) Protect *building elements* from risk of ignition, impairment of their physical or mechanical properties, or function, due to temperature increases resulting from heat transfer or electric arc,
- (f) Operate safely in its intended environment, and
- (g) Safeguard against ignition of the surrounding atmosphere where it is potentially flammable or explosive.

G9.3.2 An *electrical installation* supplying an *essential service* shall:

- (a) Maintain the supply for a time appropriate to that service, and
- (b) Be capable of being isolated from the supply system, independently of the remainder of the installation.

G9.3.3 An *electrical installation* connected to an *electrical supply* system, shall contain safeguards which protect the safety features of the external supply.

G9.3.4 In *buildings* intended for use by *people with disabilities*, light switches and plug socket outlets shall be *accessible* and usable.

Limits on application

Performance G9.3.4 shall not apply to *Housing*, *Outbuildings*, *Ancillary Buildings*, and to *Industrial Buildings* where no more than 10 people are employed.

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References

For the purposes of New Zealand Building Code compliance, the acceptable New Zealand and other Standards, and other documents referred to in this Compliance Document (primary reference documents) shall be the editions, along with their specific amendments, listed below. Where the primary reference documents refer to other Standards or other documents (secondary reference documents), which in turn may also refer to other Standards or other documents, and so on (lower order reference documents), then the applicable version of these secondary and lower order reference documents shall be the version in effect at the date this Compliance Document was published.

Amend 4
Jun 2007

Standards New Zealand

AS/NZS 3000: 2007 Electrical installations

Amend: 1

Publications by New Zealand Ministry of Economic Development

NZECP 34: 2001 Electrical safety distances

NZECP 36: 1993 Harmonic levels

NZECP 51: 2004 Homeowner/occupier's electrical wiring work in domestic installations

NZECP 54: 2001 Installation of recessed luminaires and auxiliary equipment

Where quoted

VM1 1.0.1,

AS1 2.0.1

VM1 1.0.1

VM1 1.0.1

AS1 1.0.1

VM1 1.0.1

Amend 5
Sep 2010

Amend 4
Jun 2007

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Definitions

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This is an abbreviated list of definitions for words or terms particularly relevant to this Compliance Document. The definitions for any other italicised words may be found in the New Zealand Building Code Handbook.

Amend 4
Jun 2007

Accessible Having features to permit use by a *person with a disability*.

Building has the meaning ascribed to it by Sections 8 and 9 of the Building Act 2004.

Building element Any structural and non-structural component or assembly incorporated into or associated with a *building*. Included are *fixtures*, services, *drains*, permanent mechanical installations for access, glazing, partitions, ceilings and temporary supports.

Electrical installation Any electrical fixed appliances, and components used in the reticulation of electricity, which are intended to remain permanently attached to and form part of the *building*.

Electrical supply system The source of electricity external to the *electrical installation*.

Essential service In the context of an *electrical installation* means emergency lighting, firemen's lifts, alarms, water pumps, sprinklers, detectors, ventilation systems and public address systems necessary for the safety of people in *buildings*.

Intended use in relation to a *building*:

- a) includes any or all of the following:
 - i) Any reasonably foreseeable occasional other use that is not incompatible with the *intended use*; and
 - ii) Normal maintenance; and
 - iii) Activities taken in response to *fire* or any other reasonably foreseeable emergency
- b) but does not include any other maintenance and repairs or rebuilding.

Amend 4
Jun 2007

Person with a disability means a *person* who has an impairment, or a combination of impairments, that limits the extent to which the person can engage in the activities, pursuits and processes of everyday life, including, without limitation, any of the following:

- a) a physical, sensory, neurological, intellectual impairment or
- b) a mental illness.

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Verification Method G9/VM1

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1.0 Electrical Installations

1.0.1 The following documents shall be accepted as a method of verifying compliance with the relevant Performances of NZBC G9:

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AS/NZS 3000, NZECP 34, NZECP 36, and NZECP 54.

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Acceptable Solution G9/AS1

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1.0 Electrical Installations within Domestic DwellingsAmend 4
Jun 2007

1.0.1 NZECP 51 is an Acceptable Solution for *electrical installations* within domestic dwellings.

Amend 1
Sep 1993**2.0 Light Switches and Plug Sockets for use by a Person with a Disability**Amend 4
Jun 2007

2.0.1 In *buildings* intended for use by *persons with disabilities*, light switches and *socket outlets* shall comply with the following requirements:

- a) All light switches shall be horizontally aligned with door handles.
- b) The toggle, rocker, push pad, or push button control of light switches shall project clear of the switch plate.

COMMENT:

It is recommended that the width of any push pad or button be no less than 20 mm.

- c) *Socket outlets* in *accessible accommodation* units shall be fixed between 500 mm and 1200 mm above the finished floor level and at least 500 mm from corners. At least one room light shall have a bedside switch.

Paragraph 2.0.1 shall not apply in damp situations where the location of the light switch and plug sockets conflicts with

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AS/NZS 3000.

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Index G9/VM1 & AS1

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All references to Verification Methods and Acceptable Solutions are preceded by **VM** or **AS** respectively.

	Domestic buildings	AS1 1.0
Amend 1 Sep 1993	Electrical codes of practice	VM1 1.0.1, AS1 1.0.1
	Electrical installations	VM1 1.0
Amend 1 Sep 1993	Light switches	AS1 2.0.1 a) b)
	People with disabilities	AS1 2.0
	Socket outlets	AS1 2.0.1 c)

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