

Compliance Document for New Zealand Building Code Clause G9 Electricity

Prepared by the Department of Building and Housing

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ISBN 0-477-01606-5

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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.

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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 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	
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 1 July 2001 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

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— <i>continued</i>		
Clause G9—ELECTRICITY		
Provisions	Limits on application	
OBJECTIVE		
G9.1 The objective of this provision is to ensure that:		
<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>Objective G9.1 (b) shall apply only to those <i>buildings</i> to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.</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> .		
PERFORMANCE		
G9.3.1 The <i>electrical installation</i> shall incorporate systems to:		
<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, 		

1992/150

Building Regulations 1992

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FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>(e) Protect <i>building elements</i> from risk of ignition, impairment of their physical or mechanical properties, or function, due to temperature increases resulting from heat transfer or electric arc,</p> <p>(f) Operate safely in its intended environment, and</p> <p>(g) Safeguard against ignition of the surrounding atmosphere where it is potentially flammable or explosive.</p> <p>G9.3.2 An <i>electrical installation</i> supplying an <i>essential service</i> shall:</p> <p>(a) Maintain the supply for a time appropriate to that service, and</p> <p>(b) Be capable of being isolated from the supply system, independently of the remainder of the installation.</p> <p>G9.3.3 An <i>electrical installation</i> connected to an <i>electrical supply system</i>, shall contain safeguards which protect the safety features of the external supply.</p> <p>G9.3.4 In <i>buildings</i> intended for use by <i>people with disabilities</i>, light switches and plug socket outlets shall be <i>accessible</i> and usable.</p>	<p>Performance G9.3.4 shall not apply to <i>Housing, Outbuildings, Ancillary buildings, and to Industrial buildings</i> where no more than 10 people are employed.</p>

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References

Amend 1
Sep 1993

For the purposes of New Zealand Building Code compliance, acceptable reference documents include only the quoted edition and specific amendments as listed below.

Publications by Government Departments, New Zealand		Where quoted
Ministry of Commerce		
ECP 1: 1993	New Zealand electrical code of practice for electrical installations – caravans and caravan parks	VM1 1.0.1
ECP 2: 1993	New Zealand electrical code of practice for electrical installations in damp situations	VM1 1.0.1
ECP 3: 1993	New Zealand electrical code of practice for electrical safety of apparatus and material	VM1 1.0.1
ECP 4: 1993	New Zealand electrical code of practice for electrical installations – supply by generating systems not exceeding low voltage	VM1 1.0.1
ECP 5: 1993	New Zealand electrical code of practice for electrical installations – cold cathode discharge lighting	VM1 1.0.1
ECP 7: 1993	New Zealand electrical code of practice for extra-low voltage installations	VM1 1.0.1
ECP 11: 1993	New Zealand electrical code of practice for inspection and testing of low voltage installations for certification purposes	VM1 1.0.1
ECP 12: 1993	New Zealand electrical code of practice for electrical installations – the safe use of electricity in medical locations and associated areas	VM1 1.0.1
ECP 19: 1994	New Zealand electrical code of practice for determination of maximum demand in electrical installations	VM1 1.0.1
ECP 21.2: 1993	New Zealand electrical code of practice for electric security fences	VM1 1.0.1
ECP 24: 1993	New Zealand electrical code of practice for the safety of electricity in a hazardous area	VM1 1.0.1
ECP 28: 1993	New Zealand electrical code of practice for selection and installation of cables	VM1 1.0.1
ECP 29: 1993	New Zealand electrical code of practice for electrical installations of boat marinas and pleasure vessels	VM1 1.0.1
ECP 33: 1993	New Zealand electrical code of practice for installations of mineral insulated cables and equipment	VM1 1.0.1
ECP 34: 1993	New Zealand electrical code of practice for electrical safety distances	VM1 1.0.1
ECP 35: 1993	New Zealand electrical code of practice for power systems earthing	VM1 1.0.1
ECP 36: 1993	New Zealand electrical code of practice for harmonic levels	VM1 1.0.1
ECP 41: 1993	New Zealand electrical code of practice for single wire earth return systems	VM1 1.0.1
ECP 50: 1993	New Zealand electrical code of practice for repair of domestic electrical equipment	AS1 1.0.1
ECP 51: 1993	New Zealand electrical code of practice for electrical wiring work in domestic premises	AS1 1.0.1

Amend 2
Dec 1995

Amend 1
Sep 1993

Definitions

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

Accessible Having features to permit use by *people with disabilities*.

Building has the meaning ascribed to it by the Building Act 1991.

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 of a *building* includes:

- a) Any reasonably foreseeable occasional other use that is not incompatible with the *intended use*; and
- b) Normal maintenance; and
- c) Activities taken in response to *fire* or any other reasonably foreseeable emergency – but does not include any other maintenance and repairs or rebuilding.

People with disabilities means any *person* who suffers from physical or mental disability to such a degree that he or she is seriously limited in the extent to which he or she can engage in the activities, pursuits, and the processes of everyday life.

Amend 3
Jul 2001

Verification Method G9/VM1

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:

New Zealand Electrical Codes of Practice numbers ECP 1, ECP 2, ECP 3, ECP 4, ECP 5, ECP 7, ECP 11, ECP 12, ECP 19, ECP 21.2, ECP 24, ECP 28, ECP 29, ECP 33, ECP 34, ECP 35, ECP 36 and ECP 41.

Amend 2
Dec 1995

Amend 1
Sep 1993

Acceptable Solution G9/AS1

1.0 Electrical Installations within Domestic Dwellings

Amend 1
Sep 1993

1.0.1 ECP 50 and ECP 51 are acceptable solutions for *electrical installations* within domestic dwellings.

2.0 Light Switches and Plug Sockets for use by People with Disabilities

2.0.1 In buildings intended for use by *people 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 NZ ECP 2.

Index G9/VM1 & AS1

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)

