# Electricity (Safety) Amendment Regulations 2011

Jerry Mateparae, Governor-General

## Order in Council

At Wellington this 10th day of October 2011

Present:
His Excellency the Governor-General in Council

Pursuant to sections 169, 169A, and 169B of the Electricity Act 1992, His Excellency the Governor-General, acting on the advice and with the consent of the Executive Council, makes the following regulations.

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## Regulations

### 1 Title

These regulations are the Electricity (Safety) Amendment Regulations 2011.

### 2 Commencement

These regulations come into force on 10 November 2011.

### 3 Principal regulations amended

These regulations amend the Electricity (Safety) Regulations 2010.

### 4 Interpretation

(1) The definition of **accredited auditor** in regulation 4(1) is revoked and the following definition substituted:

**accredited auditor** means any of the following bodies:

(a) a body accredited by either of the following to assess an organisation's compliance with these regulations and safety management systems generally:

(i) the Joint Accreditation System of Australia and New Zealand:

(ii) a signatory to the International Accreditation Forum multilateral recognition arrangement for management systems:

(b) a body approved, by or under an international agreement between New Zealand and another country that does not have a national accreditation body that is a signatory to the International Accreditation Forum multilateral recognition arrangement for management systems, to assess an

organisation's compliance with these regulations and safety management systems generally

(2) The definition of **declaration of conformity** in regulation 4(1) is amended by revoking paragraph (b) and substituting the following paragraph:

(b) a declaration of conformity relating to a revenue meter (*see* regulation 58(3)); or

(3) The definition of **main earthing system** in regulation 4(1) is amended by revoking paragraph (b) and substituting the following paragraph:

(b) incorporates an earth electrode, an earthing conductor that is connected at that earth electrode, and a removable link within a MEN switchboard

(4) Regulation 4(1) is amended by revoking the definition of **mains work** and substituting the following definition:

**mains work**—

(a) means any of the following:

(i) work on mains (including connecting the conductors of mains at a MEN switchboard):

(ii) work on main earthing systems (including connecting the conductors of main earthing systems at a MEN switchboard):

(iii) work on the connection between earth and neutral made by the removable link within the MEN switchboard closest to the point of supply; but

(b) does not include—

(i) work on fittings that are used or intended for use by any person in, or in connection with, the generation of electricity for that person's use and not for supply to any other person; or

(ii) work that is limited to removing or replacing the removable link within a MEN switchboard for the purposes of testing

(5) The definition of **supplier declaration of conformity** in regulation 4(1) is amended by inserting "or extra-low voltage" after "low voltage".

(6) Regulation 4(1) is amended by inserting the following definition in its appropriate alphabetic order:

**SWER system** means a single wire earth return system

## 5 Meanings of electrically safe and electrically unsafe

(1) The definition of **electrically safe** in regulation 5 is amended by inserting ", directly or indirectly," after "arising".

(2) The definition of **electrically unsafe** in regulation 5 is amended by inserting ", directly or indirectly," after "arising".

### 6 New regulation 8 substituted

Regulation 8 is revoked and the following regulation substituted:

### 8 IEC shock current standards

(1) Works not covered by audited safety management systems are deemed to be electrically unsafe if the magnitude and duration of electric shock currents resulting from the step, touch, and transferred voltages created by an earth fault exceed curve c2 of Fig 20 of IEC/TS 60479-1.

(2) A low voltage installation is deemed to be electrically unsafe if the magnitude and duration of electric shock currents resulting from direct or indirect contact with the live parts of the installation exceed—

(a) curve b of Fig 20 of IEC/TS 60479-1; or

(b) curve b of Fig 22 of IEC/TS 60479-1.

(3) A high voltage installation that is not provided with protection from supplying works is deemed to be electrically unsafe if the magnitude and duration of electric shock currents resulting from step, touch, and transferred voltages created by an earth fault exceed curve c1 of Fig 20 of IEC/TS 60479-1.

(4) A high voltage installation that is provided with protection from supplying works is deemed to be electrically unsafe if the magnitude and duration of electric shock currents resulting from step, touch, and transferred voltages created by an earth fault exceed curve c2 of Fig 20 of IEC/TS 60479-1.

### 7 New regulation 17 substituted

Regulation 17 is revoked and the following regulation substituted:

### 17 Maintaining safe distances

(1) A person who carries out any construction, building, excavation, or other work on or near an electric line must maintain safe distances—

(a) in accordance with ECP 34; or

(b) in relation to work on or near overhead rail electrification lines, in accordance with either—

(i) ECP 34; or

(ii) IEC 62128-1 and sections 5 and 9 of ECP 34.

(2) However,—

(a) the minimum distances required by table 7 and clause 6.4 of ECP 34, to the extent that they apply to a telecommunication line near electricity conductors, do not apply if—

(i) the telecommunication line is an all-dielectric self-supporting fibre optic cable (a **fibre optic cable**); and

(ii) the fibre optic cable is designed, manufactured, and tested to IEEE 1222; and

(iii) the fibre optic cable and the electricity conductors have shared supports or shared spans; and

(iv) in the case of a fibre optic cable erected on poles or other supports, the design and installation of the fibre optic cable is in accordance with AS/NZS 7000; and

(b) a person who carries out work upgrading or altering an electric line that was in existence immediately before 1 April 2010 must comply with ECP 34 only in relation to those parts of the line that are being upgraded or altered.

(3) Each of the following persons commits a grade A offence if safe distances are not maintained as required by subclause (1):

(a) a person who carries out the work described in subclause (1):

(b) a person who controls the work described in subclause (1):

(c) a person who owns or controls any line, works, fittings, building, structures, equipment, or machinery that is the subject of, or involved in, the work described in subclause (1).

(4) A person commits a grade A offence if the person places thermal insulating material on or around fittings in an installation in such a way that the safety of the installation is compromised.

Compare: SR 1997/60 r 93

### 8 Electrically unsafe works and installations

Regulation 20(1)(b) is amended by omitting "disconnection" and substituting "interruption".

### 9 Regulation 21 revoked

Regulation 21 is revoked.

### 10 Electrically unsafe appliances

Regulation 23(1) is amended by adding "; or" and also by adding the following paragraph:

(e) the appliance is a single phase domestic or similar appliance (other than an appliance intended for permanent connection to an installation) fitted with a plug that does not comply with whichever official standard listed in Schedule 4 applies to the appliance.

### 11 Electrically unsafe RCDs

(1) Regulation 24(3)(a) is amended by omitting "disconnect" and substituting "interrupt the current in".

(2) Regulation 24(3)(b) is amended by omitting "disconnects" and substituting "interrupts the current in".

(3) Regulation 24 is amended by revoking subclause (4) and substituting the following subclause:

(4) An RCD installed as part of an installation for the protection of property is deemed to be electrically unsafe if—

(a) it has a maximum operating time of—

(i) more than 0.5 seconds at its rated residual current; or

(ii) more than 0.15 seconds at 5 times its rated residual current; or

(b) it has a rated residual current exceeding 300 milliamperes.

(4) Regulation 24(5)(b)(i) is amended by omitting "disconnect" and substituting "interrupt the current in".

(5) Regulation 24(5)(b)(ii) is amended by omitting "disconnects" and substituting "interrupts the current in".

(6) Regulation 24(6) is amended by inserting "from the risk of electric shock from direct contact" after "children".

(7) Regulation 24(6)(b)(i) is amended by omitting "disconnect" and substituting "interrupt the current in".

(8) Regulation 24(6)(b)(ii) is amended by omitting "disconnects" and substituting "interrupts the current in".

### 12 Specific installations, fittings, and appliances deemed to be electrically safe

Regulation 25(a) is amended by omitting "NZS 3003.1,".

### 13 New regulation 26 substituted

Regulation 26 is revoked and the following regulation substituted:

### 26 When fittings and appliances in use deemed to be electrically safe

(1) This regulation applies to a fitting or appliance, other than an electrical medical device, that is in use, or available for use,—

(a) by an employee or contractor of the owner of the fitting or appliance; or

(b) by a hirer or lessee under a hire or lease agreement with the owner of the fitting or appliance; or

(c) by the occupier of premises that are rented or leased from the owner of the fitting or appliance.

(2) A fitting or appliance described in subclause (1)(a) is deemed to be electrically safe if it has a current tag issued in accordance with AS/NZS 3760.

(3) A fitting or appliance described in subclause (1)(b) or (c) is deemed to be electrically safe—

(a) if it has a current tag issued in accordance with AS/NZS 3760; or

(b) if, at the time it is first made available for use by the hirer, lessee, or occupier, it is supplied with electricity through a portable RCD, or through a circuit protected by an electrically safe RCD, that provides protection from electric shock.

Compare: SR 1997/60 r 76

### 14 Frequency of electricity supplied

Regulation 29 is amended by revoking subclause (2) and substituting the following subclause:

(2) The requirement in subclause (1) may be varied for supplies at other than standard low voltage if the supplier and the person receiving the supply agree.

### 15 Requirements relating to quality of supply

Regulation 31 is amended by revoking subclause (4) and substituting the following subclause:

(4) A person commits a grade B offence if the person, knowingly or recklessly,—

(a) uses a fitting or appliance that breaches, or results in the breach of, subclause (1); or

(b) sells or offers to sell a fitting or appliance that breaches, or results in the breach of, subclause (1).

### 16 Requirements relating to construction of, or work in vicinity of, telecommunications equipment

Regulation 33 is amended by revoking subclause (5).

### 17 New regulation 33A inserted

The following regulation is inserted after regulation 33:

### 33A Limits of operation of SWER systems in relation to telecommunications

(1) This regulation applies to an AC SWER system, other than an AC electrified railway traction system, that has high voltage operational voltage to earth.

(2) During normal operation, the SWER system must not impress on a telecommunication line—

(a) a transverse noise voltage, measured at the user's end of the telecommunication line, greater than 0.5mV; or

(b) an induced voltage greater than 35 $V_{rms}$.

(3) During any normal or fault-related operation, the SWER system must not cause earth potential rises coupled to the neutral conductor of a MEN system, or voltages impressed on a telecommunication line, that exceed the maximum voltages in the voltage limit tables of the ITU-T Directives Vol VI:2008.

(4) In this regulation,—

**ITU-T Directives Vol VI:2008** means the ITU-T Directives concerning the protection of telecommunication lines against harmful effects from electric power and electrified railway lines—Vol VI: Danger, damage and disturbance, published in 2008 by the International Telecommunication Union

**ITU-T Recommendation K68** means the ITU-T Recommendation K68: Operator responsibilities in the management of electromagnetic interference by power systems on telecommunication systems, published in 2008 by the International Telecommunication Union

**psophometric frequency weighted value** means the calculated value of an induced voltage resulting from the application to the measured value of the voltage of a factor that recognises that the human ear responds to sounds within the speech frequency range in accordance with weighting factors defined by the psophometric weighting factor table in Appendix 1 of ITU-T Recommendation K68. The psophometrically weighted value of a voltage comprising fundamental and harmonic components is given by the following expression:

$$W_p = \frac{\sqrt{(\sum(X_f.P_f)^2)}}{P_{800}}$$

where—

$X_f$ is the measured value of the voltage component at frequency f

$P_f$ is the psophometric weighting factor at frequency f

$P_{800}$ is the psophometric weighting factor at frequency 800 Hz

**transverse noise voltage** means the psophometrically weighted value of the voltage in a telecommunication circuit, measured across a 600-ohm resistor terminating the line when the other end of the line is terminated on a standard telephone line termination, that results when a voltage is impressed on the telecommunication circuit by an electric line.

## 18 New regulation 37A inserted

The following regulation is inserted after regulation 37:

### 37A Trolley bus supply systems must be treated as works

(1) A trolley bus supply system that complies, or is intended to comply, with this Part (which is about works) must be treated for all purposes as if it were works to which this Part applies.

(2) Subclause (1) applies whether or not the trolley bus supply system is an installation to which Part 5 (which is about installations) would otherwise apply.

(3) In this regulation, **trolley bus supply system** means a system for the supply of electricity to trolley buses that comprises—

(a) a contact line system (as defined in BS EN 50119); and

(b) fittings that have the sole purpose of supplying electricity to trolley buses.

### 19 Safety checks of works

(1) Regulation 40(1) is amended by inserting "electrical" after "regularly checking the".

(2) Regulation 40(2) is amended by revoking paragraph (b) and substituting the following paragraph:

(b) provide for periodic checking of the works—

(i) at reasonable intervals; and

(ii) by a person who is suitably qualified and has the necessary competencies and experience to carry out the check; and

### 20 Isolation fittings for works

Regulation 43(2) is amended by omitting "disconnect" and substituting "isolate".

### 21 Cancellation of audit certificate

Regulation 54(1)(b) is amended by omitting "audit" and substituting "audited".

### 22 Offences by accredited auditors

Regulation 56 is amended by omitting "he or she" and substituting "that auditor".

### 23 Low voltage and extra-low voltage installations to comply with AS/NZS 3000

Regulation 57(3) is amended by omitting "the declaration of conformity" and substituting "each declaration of conformity".

### 24 New regulation 58 substituted

Regulation 58 is revoked and the following regulation substituted:

### 58 Declarations of conformity for low voltage installations

(1) A declaration of conformity for a low voltage installation must—

(a) identify the design; and

(b) confirm, in the case of an installation under Part 1 of AS/NZS 3000, that the design complies with regulation 59; and

(c) identify the supply system with which the installation is compatible; and

(d) be signed by the designer of the installation (who may be the installer); and

(e) comply with ISO/IEC 17050-1.

(2) Despite subclause (1), a declaration of conformity for a revenue meter may be made under subclause (3), instead of subclause (1), if the installation of the revenue meter involves work that—

(a) does not affect the integrity of the neutral; and

(b) cannot result in a transposition involving the neutral.

(3) A declaration of conformity for a revenue meter, if made under this subclause, must—

(a) identify the method of installation to be used; and

(b) confirm that the method complies with Part 1 of AS/NZS 3000; and

(c) identify the supply system with which the installation is compatible; and

(d) be signed by the designer of the method (who may be the installer); and

(e) comply with ISO/IEC 17050-1; and

(f) confirm that the work of installing the revenue meter—

(i) does not affect the integrity of the neutral; and

(ii) cannot result in a transposition involving the neutral.

(4) A declaration of conformity signed by a person other than the installer may be treated by the installer as evidence that the design complies with Part 1 or 2 (as appropriate) of AS/NZS 3000.

(5) A person commits a grade A offence if he or she signs a declaration of conformity that is wrong in a material respect.

### 25 Signs when carrying out work on installations

Regulation 63 is amended by revoking subclause (1) and substituting the following subclause:

(1) While a person is carrying out prescribed electrical work on an installation, the person must, if there is a reasonable risk associated with the work of injury to any person from electric shock, erect or affix the sign referred to in subclause (2) at each access point to the area in which the work is carried out.

### 26 Certification following prescribed electrical work

(1) Regulation 66(1) is amended by omitting "to a low voltage installation" and substituting "to any low voltage or high voltage installation".

(2) Regulation 66(3) is amended by revoking paragraph (e) and substituting the following paragraph:

(e) the installation or relocation of a revenue meter for which there is a declaration of conformity that complies with regulation 58(3).

### 27 Certificate of compliance

Regulation 67(5) is amended by omitting "is safe to connect to a power supply" and substituting "is electrically safe".

### 28 Inspection of prescribed electrical work

Regulation 71(1)(a) is amended by omitting "connected to a power supply" and substituting "enlivened".

### 29 Verifying safety before connecting installations

(1) Regulation 73(1) is amended by omitting "when an installation, or any part of it, is being connected to" and substituting "when a person intends to connect an installation, or any part of it, to".

(2) Regulation 73(2) is amended by omitting "connecting a low voltage installation to a power supply, the person doing the connection" and substituting "a person connects a low voltage installation to a power supply, the person".

(3) Regulation 73(2)(a)(v)(A) is amended by omitting ", signed by the installer" and substituting "that complies with regulation 58".

(4) Regulation 73(2)(b)(ii) is amended by omitting "the proposed connection" and substituting "the installation is connected".

(5) Regulation 73(2)(c)(ii) is amended by omitting "the proposed connection" and substituting "the installation is connected".

(6) Regulation 73 is amended by revoking subclause (3) and substituting the following subclause:

(3) Before a person connects an extra-low voltage installation to a power supply, the person must test the installation for operational safety and be satisfied that the installation is not electrically unsafe.

(7) Regulation 73(4) is amended by omitting "connecting a high voltage installation to a power supply, the person doing the connection" and substituting "a person connects a high voltage installation to a power supply, the person".

(8) Regulation 73(5) is amended by inserting "referred to in subclause (2)(a) or (3)" after "done the testing".

### 30 New regulation 74 substituted

Regulation 74 is revoked and the following regulation substituted:

#### 74 Reconnecting or restoring supply to certain low voltage installations

(1) This regulation applies to a low voltage installation—

(a) that has been disconnected or isolated from a power supply; and

(b) on which no prescribed electrical work has been done since the last disconnection or isolation.

(2) If the period since the last disconnection or isolation is 6 months or less, regulation 73 does not apply and a person may reconnect or restore supply to the installation without doing the things referred to in regulation 73(2) or (5).

(3) If the period since the last disconnection or isolation is more than 6 months, regulation 73 does not apply, but the person proposing to reconnect or restore

supply must, before doing so, give or sight a certificate issued in accordance with section 3 of AS/NZS 3019 that—

(a) was issued no earlier than 6 months before the date of reconnection or restoration of supply; and

(b) certifies that the installation is suitable for continued use; and

(c) is given by a person authorised to certify mains work.

(4) For the purposes of subclause (1)(b), a person doing a reconnection or restoration of supply is entitled (if acting in good faith) to rely on a written confirmation by the owner of the installation that no prescribed electrical work has been done on the installation since it was last disconnected or isolated.

(5) A person who reconnects or restores supply to an installation to which this regulation applies commits a grade A offence if he or she fails to comply with subclause (3).

Compare: SR 1997/60 r 43A

### 31 Periodic assessments of certain installations

(1) Regulation 75(1)(e) is amended by inserting ", other than domestic installations," after "low voltage installations".

(2) Regulation 75(1)(f)(ii) is amended by omitting "NZS 3003.1" and substituting "AS/NZS 3003".

### 32 Issue of warrants of electrical fitness for connectable installations

Regulation 78(2) is amended by adding "; and" and also by adding the following paragraph:

(c) that has been imported must be issued in accordance with AS/NZS 3001, but only after an assessment for compliance with Part 1 of AS/NZS 3000.

### 33 Evidence of compliance with standards

Regulation 81(1) is amended by omitting "that shows how that a low voltage" and substituting "that shows that a low voltage or extra-low voltage".

### 34 Supplier declaration of conformity required before sale of declared medium risk articles

(1) Regulation 83(1) is amended by omitting "low voltage" in each place where it appears and substituting in each case "low voltage or extra-low voltage".

(2) Regulation 83(3) is amended by revoking paragraph (c).

(3) Regulation 83 is amended by revoking subclause (4) and substituting the following subclause:

(4) A person who sells or offers for sale a declared medium risk article commits a grade A offence—

(a) if, at the time of sale or offer to sell, a supplier declaration of conformity for the article has not been made; or

(b) if, within 10 days after being asked by the Secretary to provide a test report or other document that shows how the article complies with the relevant standard, the person fails to provide a copy of that report or document; or

(c) if, within 10 days after being asked by the Secretary or a purchaser or potential purchaser to provide a copy of the supplier declaration, the person fails to provide a copy of the declaration.

### 35 Declared high risk articles not to be sold unless approved

Regulation 84(1) is amended by omitting "low voltage" in each place where it appears and substituting in each case "low voltage or extra-low voltage".

### 36 Use of hand-held appliances in damp, etc, conditions

(1) Regulation 89(2)(c) is amended by—

(a) omitting "disconnected" in the first place where it appears and substituting "interrupted"; and

(b) omitting "disconnected" in the second place where it appears and substituting "detached".

(2) Regulation 89 is amended by revoking subclause (3) and substituting the following subclause:

(3) A person commits a grade A offence if the person—

(a) uses a hand-held appliance in breach of subclause (1) or (2); or

(b) allows another person to use a hand-held appliance in a manner that breaches subclause (1) or (2); or

(c) supervises the use of a hand-held appliance and that use breaches the requirements of subclause (1) or (2).

### 37 Testing appliances after certain work done on them

Regulation 90(2)(a) is amended by inserting "electrically" after "confirm that it is".

### 38 Approved persons

(1) Regulation 96(1) is amended by omitting "of people who" and substituting "of persons who".

(2) Regulation 96(1) is amended by omitting paragraph (a) and substituting the following paragraph:

(a) are accredited auditors; and

### 39 New regulation 104 substituted

Regulation 104 is revoked and the following regulation substituted:

### 104 Work on isolated high voltage fittings

(1) This regulation applies while a person is working on high voltage fittings that are—

(a) isolated from a supply of electricity; or

(b) disconnected from a supply of electricity, if there is a significant risk that the person may suffer serious harm from an electric shock in the event of the fittings becoming live other than by way of reconnection of the supply of electricity.

(2) The person doing the work must ensure that the fittings are earthed before the work is commenced and that they remain earthed until the work is completed.

(3) The person doing the work need not comply with subclause (2) if—

(a) the person carries out the work using the procedures approved by the person's employer (if any); and

(b) the person uses appropriate associated equipment.

(4) The fittings must be sufficiently earthed to protect any person working on them from exposure to a significant risk of electric shock or other injury.

(5) A temporary earthing device applied to a fitting must be adequate to carry any short circuit current that may flow.

(6) A person may remove an earthing device to test a fitting, but must take all practicable steps to ensure his or her own safety and the safety of others in the vicinity.

Compare: SR 1997/60 r 32

### 40 Work stringing additional conductors between poles or other supports

Regulation 105 is amended by revoking subclause (3) and substituting the following subclause:

(3) No person may be on any cross-arm, pole, or other support that carries conductors, other than a tower or similar structure, while additional conductors are being pulled up and tensioned.

### 41 New regulation 106 substituted

Regulation 106 is revoked and the following regulation substituted:

### 106 Notices when working on works and installations

(1) A person carrying out work on works or installations that are isolated from a power supply must, if there is a risk of unintentional enlivening of the works or installations, ensure that suitable notices warning against enlivening are fixed at a point where the power supply may be connected or restored.

(2) If works or installations have a locking facility for isolating them from the power supply, then any person isolating the works or installations must use that facility to lock the isolation.

Compare: SR 1997/60 r 34(1), (2)

### 42 Secretary's power to exempt from requirements

Regulation 109(2)(b) is amended by inserting ", including electrical safety," after "safety".

### 43 New regulation 113 substituted

Regulation 113 is revoked and the following regulation substituted:

**113 Existing and in-process works, installations, fittings, and appliances**

(1) This regulation applies to works, installations, fittings, and appliances that, on 1 April 2010, were—

(a) installed, for sale, or in use in New Zealand; or

(b) under construction or being installed in New Zealand; or

(c) in transit to New Zealand; or

(d) the subject of an irrevocable purchasing order by a person in New Zealand.

(2) Despite anything to the contrary in these regulations, the works, installations, fittings, and appliances—

(a) may continue to be constructed, installed, sold, or used provided that—

(i) they are not electrically unsafe; and

(ii) they complied immediately before 1 April 2010 with the requirements of the Electricity Regulations 1997; and

(iii) they continue to comply, as a minimum, with the requirements of the Electricity Regulations 1997 as in force immediately before their revocation by these regulations; and

(b) may, until 1 April 2012, be tested, certified, or inspected in accordance with—

(i) the Electricity Regulations 1997 as in force immediately before 1 April 2010; or

(ii) these regulations.

Compare: SR 1997/60 r 68

### 44 New heading and regulation 118A inserted

The following heading and regulation are inserted after regulation 118:

*Transitional provision relating to 2011 amendments*

### 118A Transitional provision relating to Electricity (Safety) Amendment Regulations 2011

(1) In this regulation, **amendment date** means 10 November 2011 (which is the date on which the Electricity (Safety) Amendment Regulations 2011 come into force).

*Existing works, installations, fittings, and appliances*

(2) Subclause (3) applies to works, installations, fittings, and appliances that, immediately before the amendment date, are—

- (a) installed, for sale, or in use in New Zealand; or
- (b) under construction or being installed in New Zealand; or
- (c) in transit to New Zealand; or
- (d) the subject of an irrevocable purchasing order by a person in New Zealand.

(3) Despite anything to the contrary in these regulations, the works, installations, fittings, and appliances may continue to be constructed, installed, sold, or used provided that—

- (a) they are not electrically unsafe; and
- (b) they complied immediately before the amendment date, and continue to comply, with the requirements of these regulations as in force immediately before the amendment date.

*Existing declarations of conformity*

(4) Subclause (5) applies to a declaration of conformity that—

- (a) is made before the amendment date; and
- (b) complies with regulation 83 as in force immediately before the amendment date.

(5) The declaration of conformity must be treated as if it complies with regulation 83 as amended by the Electricity (Safety) Amendment Regulations 2011.

*Six-month transition period for compliance with Amendment A of AS/NZS 3000*

(6) Despite regulation 4(4), until the close of the date that is 6 months after the amendment date, any reference in these regulations to AS/NZS 3000 must be treated as if it is a reference to—

- (a) AS/NZS 3000:2007: Electrical installations (known as the Australian/New Zealand Wiring Rules): including Amendment 1; or
- (b) AS/NZS 3000:2007: Electrical installations (known as the Australian/New Zealand Wiring Rules): including Amendment 1 and Amendment A.

### 45 Schedule 1 amended

(1) Clause 1(a) of Schedule 1 is amended by inserting ", connection," after "installation".

(2) Clause 1 of Schedule 1 is amended by revoking paragraph (b) and substituting the following paragraph:

> (b) the installation, connection, or maintenance of fittings where the fittings are connected, or intended to be connected, to conductors used in works or installations:

(3) Clause 1 of Schedule 1 is amended by revoking paragraph (e) and substituting the following paragraph:

> (e) the testing of work described in paragraphs (a) to (d) that—
>
> (i) is not work described in clause (2); and
>
> (ii) is required by these regulations; and
>
> (iii) is carried out for the purpose of compliance with these regulations:

(4) Clause 1 of Schedule 1 is amended by revoking paragraph (g) and substituting the following paragraph:

> (g) the inspection of work described in paragraphs (a) to (d) that—
>
> (i) is not work described in clause (2); and
>
> (ii) is required by these regulations; and
>
> (iii) is carried out for the purpose of compliance with these regulations:

(5) Clause 2(e) of Schedule 1 is amended by adding ", including the loading, removal, or replacement of fuse links".

(6) Clause 2(f) of Schedule 1 is amended by omitting "connecting or disconnecting" and substituting "applying or removing".

(7) Clause 2(g) of Schedule 1 is amended by omitting "connected to" and substituting "installed on".

(8) Clause 2(m) of Schedule 1 is amended by—

(a) omitting "experimental testing" and substituting "experimental, testing"; and

(b) omitting "electrical test room" and substituting "electrical test facility".

(9) Clause 2(r) of Schedule 1 is amended by omitting "connecting or disconnecting" and substituting "applying or removing".

### 46 New Schedule 2 substituted

Schedule 2 is revoked and the Schedule 2 set out in Schedule 1 of these regulations substituted.

### 47 New Schedule 4 substituted

Schedule 4 is revoked and the Schedule 4 set out in Schedule 2 of these regulations substituted.

# Schedule 1
# New Schedule 2 substituted

r 46

# Schedule 2
# Electrical codes of practice and official standards cited in these regulations

r 4(4)

## Electrical codes of practice referred to in regulations

| Abbreviation used in regulations | Full title |
|---|---|
| ECP 34 | New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001) approved on 21 December 2001 |
| ECP 35 | New Zealand Electrical Code of Practice for Power Systems Earthing (NZECP 35:1993) approved on 18 March 1993 |
| ECP 36 | New Zealand Electrical Code of Practice for Harmonic Levels (NZECP 36:1993) approved on 18 March 1993 |
| ECP 46 | New Zealand Electrical Code of Practice for High Voltage Live Line Work (NZECP 46.2003) approved on 19 March 2003 |
| ECP 50 | New Zealand Electrical Code of Practice for Repair and Maintenance of Domestic Electrical Appliances by the Owner of the Appliance (NZECP 50:2004) approved on 27 July 2004 |
| ECP 51 | New Zealand Electrical Code of Practice for Homeowner/Occupier's Electrical Wiring Work in Domestic Installations (NZECP 51:2004) approved on 27 July 2004 |
| ECP 60 | New Zealand Electrical Code of Practice for Inspection, Testing and Certification of Low Voltage A.C. Railway Signalling Control Circuits (NZECP 60:1997) approved on 11 March 1998 |

## Official standards referred to in regulations

| Abbreviation used in regulations | Full title |
|---|---|
| AS 4777.1 | AS 4777.1:2005: Grid connection of energy systems via inverters—Part 1: Installation requirements |
| AS/NZS 1677.2 | AS/NZS 1677.2:1998: Refrigerating systems—Part 2: Safety requirements for fixed applications: including Amendments 1 and 2 |
| AS/NZS 2500 | AS/NZS 2500:2004: Guide to the safe use of electricity in patient care |
| AS/NZS 3000 | AS/NZS 3000:2007: Electrical installations (known as the Australian/New Zealand Wiring Rules): including Amendment 1 and Amendment A |
| AS/NZS 3001 | AS/NZS 3001:2008: Electrical installations—Transportable structures and vehicles including their site supplies: including Amendment A |
| AS/NZS 3002 | AS/NZS 3002:2008: Electrical installations—Shows and carnivals, subject to the variation that references to AS/NZS 3439.4 must be read as references to AS/NZS 3439.4:2009 |
| AS/NZS 3003 | AS/NZS 3003:2011: Electrical installations—Patient areas |

| Abbreviation used in regulations | Full title |
|---|---|
| AS/NZS 3004.1 | AS/NZS 3004.1:2008: Electrical installations—Marinas and recreational boats—Part 1: Marinas |
| AS/NZS 3004.2 | AS/NZS 3004.2:2008: Electrical installations—Marinas and recreational boats—Part 2: Recreational boats installations |
| AS/NZS 3009 | AS/NZS 3009:1998: Electric installations—Emergency power supplies in hospitals |
| AS/NZS 3010 | AS/NZS 3010:2005: Electrical installations—Generating sets |
| AS/NZS 3012 | AS/NZS 3012:2010: Electrical installations—Construction and demolition sites |
| AS/NZS 3014 | AS/NZS 3014:2003: Electrical installations—Electric fences: including Amendment 1 |
| AS/NZS 3016 | AS/NZS 3016:2002: Electrical installations—Electric security fences: including Amendment 1 |
| AS/NZS 3019 | AS/NZS 3019:2007: Electrical installations—Periodic verification |
| AS/NZS 3112 | AS/NZS 3112:2011: Approval and test specification—Plugs and socket-outlets |
| AS/NZS 3190 | AS/NZS 3190:2011: Approval and test specification—Residual current devices (current-operated earth-leakage devices) |
| AS/NZS 3439 | AS/NZS 3439.4.2009: Low-voltage switchgear and controlgear assemblies—Part 4: Particular requirements for assemblies for construction sites (ACS) |
| AS/NZS 3551 | AS/NZS 3551:2004: Technical management programs for medical devices: including Amendment 1 |
| AS/NZS 3760 | AS/NZS 3760:2010: In-service safety inspection and testing of electrical equipment: including Amendment 1 |
| AS/NZS 3820 | AS/NZS 3820:2009: Essential safety requirements for electrical equipment |
| AS/NZS 3832 | AS/NZS 3832:1998: Electrical installations—Cold-cathode illumination systems |
| AS/NZS 4249 | AS/NZS 4249:1994: Electrical safety practices—Film, video and television sites |
| AS/NZS 4509.1 | AS/NZS 4509.1:2009: Stand-alone power systems—Part 1: Safety and installation |
| AS/NZS 4701 | AS/NZS 4701:2000: Requirements for domestic electrical appliances and equipment for reconditioning or parts recycling |
| AS/NZS 5033 | AS/NZS 5033:2005: Installation of photovoltaic (PV) arrays: including Amendment 1 |
| AS/NZS 5761 | AS/NZS 5761:2011: In-service safety inspection and testing—Second-hand electrical equipment prior to sale |
| AS/NZS 5762 | AS/NZS 5762:2011: In-service safety inspection and testing—Repaired electrical equipment |
| AS/NZ 7000 | AS/NZS 7000:2010 Overhead line design—Detailed procedures |
| AS/NZS 60079.14 | AS/NZS 60079.14:2009: Explosive atmospheres—Part 14: Electrical installations design, selection and erection: including Amendment 1 |
| AS/NZS 60079.17 | AS/NZS 60079.17:2009: Explosive atmospheres—Part 17: Electrical installations inspection and maintenance: including Amendment 1 |
| AS/NZS 60950.1 | AS/NZS 60950.1:2011: Information technology equipment—Safety—Part 1: General requirements |

| Abbreviation used in regulations | Full title |
|---|---|
| AS/NZS 61000.3.2 | AS/NZS 61000.3.2:2007: Electromagnetic compatibility (EMC)—Part 3.2: Limits—Limits for harmonic current emissions (equipment input current ≤16A per phase): including Amendment 1 |
| BS EN 50119 | BS EN 50119:2009: Railway applications—Fixed installations—Electric traction overhead contact lines |
| IEC 60050 | IEC 60050-826 Ed 2: International electrotechnical vocabulary—Part 826: Electrical installations |
| IEC/TS 60479-1 | IEC/TS 60479-1 Ed 4.0:2005: Effects of current on human beings and livestock—Part 1: General aspects |
| IEC 61000-3-2 | IEC 61000-3-2 Ed 3.2:2009: Electromagnetic compatibility (EMC)—Part 3-2: Limits—Limits for harmonic current emissions (equipment input current ≤16 A per phase): as amended by the deviation in AS/NZS 61000.3.2:2007: including Amendment 1 |
| IEC 61000-3-3 | IEC 61000-3-3 Ed 2.0:2008: Electromagnetic compatibility (EMC)—Part 3-3: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection |
| IEC 61000-3-4 | IEC 61000-3-4 Ed 1.0:1998: Electromagnetic compatibility (EMC)—Part 3-4: Limits—Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16 A |
| IEC/TS 61000-3-5 | IEC/TS 61000-3-5 Ed 2.0:2009: Electromagnetic compatibility (EMC)—Part 3-5: Limits—Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 75 A |
| IEC 61000-3-11 | IEC 61000-3-11 Ed 1.0:2000: Electromagnetic compatibility (EMC)—Part 3-11: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems—Equipment with rated current ≤75 A and subject to conditional connection |
| IEC 61000-3-12 | IEC 61000-3-12 Ed 2.0:2011: Electromagnetic compatibility (EMC)—Part 3-12: Limits—Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase |
| IEC 62128-1 | IEC 62128-1 Ed 1.0:2003: Railway applications—Fixed installations—Part 1: Protective provisions relating to electrical safety and earthing |
| IEEE 1222 | IEEE 1222-2011: IEEE standard for testing and performance for all-dielectric self-supporting (ADSS) fiber optic cable for use on electric utility power lines |
| ISO/IEC 17050-1 | ISO/IEC 17050-1 Ed 1.0:2004: Conformity assessment—Supplier's declaration of conformity—Part 1: General requirements |
| NZS 6115 | NZS 6115:2006: Electrical installations—Mobile medical facilities: including Amendment 1 |
| NZS 6116 | NZS 6116:2006: Safe application of electricity in the meat processing industry |
| NZS 7901 | NZS 7901:2008: Electricity and gas industries—Safety management systems for public safety |

# Schedule 2
# New Schedule 4 substituted

r 47

## Schedule 4
## Standards applicable to fittings and appliances

rr 23(1), 80, 81, 83

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### 1 Household and similar electrical appliances

(1) In subclause (2),—

**standard A** means IEC 60335-1 Ed 4.2 as modified by Annex ZZ of AS/NZS 60335.1:2002, including Amendments 1 to 4

**standard B** means IEC 60335-1 Ed 5.0 as modified by AS/NZS 60335.1:2011

**standard C** means AS/NZS 60335.1:2002, including Amendments 1 to 4

**standard D** means AS/NZS 3350.1:2002, including Amendments 1 to 4.

(2) Standards apply to household and similar electrical appliances as set out in the following table:

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Air-cleaning appliances | Standard A, or standard B, in conjunction with IEC 60335-2-65 Ed 2.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.65:1997, including Amendments 1 to 3 |
| Amusement machines and personal service machines | Standard A, or standard B, in conjunction with IEC 60335-2-82 Ed 2.1 as modified by Annex ZZ of AS/NZS 60335.2.82:2006, including Amendment 1<br>***or***<br>Until 20/10/2013, standard D in conjunction with AS/NZS 3350.2.82:2000, including Amendments 1 and 2 |
| Appliances for heating liquids | Standard A, or standard B, in conjunction with IEC 60335-2-15 Ed 5.2 as modified by Annex ZZ of AS/NZS 60335.2.15:2002, including Amendments 1 to 4 |
| Appliances for skin exposure to ultraviolet and infrared radiation | Standard A, or standard B, in conjunction with IEC 60335-2-27 Ed 5.0 as modified by AS/NZS 60335.2.27:2010<br>***or***<br>Until 29/10/2013, standard C in conjunction with IEC 60335-2-27 Ed 4.2 |
| Appliances for skin or hair care | Standard A, or standard B, in conjunction with IEC 60335-2-23 Ed 5.1 as modified by Annex ZZ of AS/NZS 60335.2.23:2004, including Amendment 1 |
| Appliances to recover and/or recycle refrigerant from air conditioning and refrigeration equipment | Standard A, or standard B, in conjunction with IEC 60335-2-104 Ed 1.0 |
| Automatic machines for floor treatment for commercial and industrial use | Standard A, or standard B, in conjunction with IEC 60335-2-72 Ed 2.0 |
| Battery chargers | Standard A, or standard B, in conjunction with IEC 60335-2-29 Ed 4.2 as modified by Annex ZZ of AS/NZS 60335.2.29:2004, including Amendments 1 and 2 |
| Blankets, pads, clothing, and similar flexible heating appliances | Standard A, or standard B, in conjunction with IEC 60335-2-17 Ed 2.2 as modified by Annex ZZ of AS/NZS 60335.2.17:2004, including Amendments 1 and 2 |
| Clocks | Standard A, or standard B, in conjunction with IEC 60335-2-26 Ed 4.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.26:1996, including Amendments 1 to 3 |
| Clothes dryers and towel rails | Standard A, or standard B, in conjunction with IEC 60335-2-43 Ed 3.2<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.43:2001, including Amendments 1 and 2 |

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Commercial dispensing appliances and vending machines | Standard A, or standard B, in conjunction with IEC 60335-2-75 Ed 2.2 as modified by Annex ZZ of AS/NZS 60335.2.75:2005, including Amendment 1<br>***or***<br>Until 22/11/2012, standard D in conjunction with AS/NZS 3350.2.75:2001, including Amendment 1 |
| Commercial electric appliances for keeping food and crockery warm | Standard A, or standard B, in conjunction with IEC 60335-2-49 Ed 4.1 |
| Commercial electric bains-marie | Standard A, or standard B, in conjunction with IEC 60335-2-50 Ed 4.1 |
| Commercial electric boiling pans | Standard A, or standard B, in conjunction with IEC 60335-2-47 Ed 4.1 |
| Commercial electric cooking ranges, ovens, hobs, and hob elements | Standard A, or standard B, in conjunction with IEC 60335-2-36 Ed 5.2 |
| Commercial electric deep fat fryers | Standard A, or standard B, in conjunction with IEC 60335-2-37 Ed 5.1, including Amendment 2 |
| Commercial electric dishwashing machines | Standard A, or standard B, in conjunction with IEC 60335-2-58 Ed 3.1 |
| Commercial electric forced convection ovens, steam cookers, and steam-convection ovens | Standard A, or standard B, in conjunction with IEC 60335-2-42 Ed 5.1 |
| Commercial electric griddles and griddle grills | Standard A, or standard B, in conjunction with IEC 60335-2-38 Ed 5.1 |
| Commercial electric grillers and toasters | Standard A, or standard B, in conjunction with IEC 60335-2-48 Ed 4.1 |
| Commercial electric hoods | Standard A, or standard B, in conjunction with IEC 60335-2-99 Ed 1.0 |
| Commercial electric kitchen machines | Standard A, or standard B, in conjunction with IEC 60335-2-64 Ed 3.1 |
| Commercial electric multi-purpose cooking pans | Standard A, or standard B, in conjunction with IEC 60335-2-39 Ed 5.2 |
| Commercial electric rinsing sinks | Standard A, or standard B, in conjunction with IEC 60335-2-62 Ed 3.1 |
| Commercial microwave ovens | Standard A, or standard B, in conjunction with IEC 60335-2-90 Ed 3.1<br>***or***<br>Until 29/04/2013, standard C in conjunction with IEC 60335-2-90 Ed 3.0 |
| Commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor | Standard A, or standard B, in conjunction with IEC 60335-2-89 Ed 2.0 as modified by AS/NZS 60335.2.89:2010<br>***or***<br>Until 29/10/2013, standard C in conjunction with IEC 60335-2-89 Ed 1.2 |
| Deep fat fryers, frying pans, and similar appliances | Standard A, or standard B, in conjunction with IEC 60335-2-13 Ed 6.0<br>***or***<br>Until 29/10/2013, standard C in conjunction with IEC 60335-2-13 Ed 5.2 |

| **Household and similar electrical appliances** | **Applicable standard** |
|---|---|
| Dishwashers | Standard A, or standard B, in conjunction with IEC 60335-2-5 Ed 5.2 as modified by Annex ZZ of AS/NZS 60335.2.5:2002, including Amendments 1 to 3 |
| Drives for gates, doors, and windows | Standard A, or standard B, in conjunction with IEC 60335-2-103 Ed 2.1 |
| Drives for rolling shutters, awnings, blinds, and similar equipment | Standard A, or standard B, in conjunction with IEC 60335-2-97 Ed 2.2<br>***or***<br>Until 20/05/2014, standard D in conjunction with AS/NZS 3350.2.97:2000, including Amendments 1 and 2 |
| Drives for vertically moving garage doors for residential use | Standard A, or standard B, in conjunction with IEC 60335-2-95 Ed 2.2<br>***or***<br>Until 25/11/2012, standard D in conjunction with AS/NZS 3350.2.95:2000, including Amendments 1 and 2 |
| Electric fence energisers | Standard A, or standard B, in conjunction with IEC 60335-2-76 Ed 2.1 as modified by Annex ZZ of AS/NZS 60335.2.76:2003, including Amendments 1 and 2 |
| Electric fishing machines | Standard A, or standard B, in conjunction with IEC 60335-2-86 Ed 2.1 as modified by Annex ZZ of AS/NZS 60335.2.86:2002, including Amendments 1 to 3 |
| Electric irons | Standard A, or standard B, in conjunction with IEC 60335-2-3 Ed 5.2 |
| Electrical animal-stunning equipment | Standard A, or standard B, in conjunction with IEC 60335-2-87 Ed 2.1 |
| Electrical appliances for use with aquariums and garden ponds | Standard A, or standard B, in conjunction with IEC 60335-2-55 Ed 3.1 as modified by Annex ZZ of AS/NZS 60335.2.55:2011<br>***or***<br>Until 06/07/2013, standard C in conjunction with IEC 60335-2-55 Ed 3.1 as modified by Annex ZZ of AS/NZS 60335.2.55:2004, including Amendments 1 to 3 |
| Electrical heat pumps, air conditioners, and dehumidifiers | Standard A, or standard B, in conjunction with IEC 60335-2-40 Ed 4.2<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.40:2001, including Amendment 1 |
| Electrolysers | Standard A, or standard B, in conjunction with IEC 60335-2-108 Ed 1.0 as modified by Annex ZZ of AS/NZS 60335.2.108:2008 |
| Fabric steamers | Standard A, or standard B, in conjunction with IEC 60335-2-85 Ed 2.1<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.85:1998, including Amendments 1 and 2 |

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Fans | Standard A, or standard B, in conjunction with IEC 60335-2-80 Ed 2.2 as modified by Annex ZZ of AS/NZS 60335.2.80:2004, including Amendment 1 |
| Fixed immersion heaters | Standard A, or standard B, in conjunction with IEC 60335-2-73 Ed 2.2<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.73:1996, including Amendments 1 to 3 |
| Flexible sheet heating elements for room heating | Standard A, or standard B, in conjunction with IEC 60335-2-96 Ed 1.2 |
| Floor treatment and floor cleaning machines, for industrial and commercial use | Standard A, or standard B, in conjunction with IEC 60335-2-67 Ed 3.1 |
| Floor treatment machines and wet scrubbing machines | Standard A, or standard B, in conjunction with IEC 60335-2-10 Ed 5.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.10:1996, including Amendments 1 to 3 |
| Food waste disposers | Standard A, or standard B, in conjunction with IEC 60335-2-16 Ed 5.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.16:1996, including Amendments 1 to 3 |
| Foot warmers and heating mats | Standard A, or standard B, in conjunction with IEC 60335-2-81 Ed 2.1<br>***or***<br>Until 20/10/2013, standard D in conjunction with AS/NZS 3350.2.81:1998, including Amendments 1 and 2 |
| Gas, oil, and solid-fuel burning appliances with electrical connections | Standard A, or standard B, in conjunction with IEC 60335-2-102 Ed 1.1 as modified by Annex ZZ of AS/NZS 60335.2.102:2004, including Amendments 1 and 2 |
| Grills, toasters, and similar portable cooking appliances | Standard A, or standard B, in conjunction with IEC 60335-2-9 Ed 6.0 as modified by Annex ZZ of AS/NZS 60335.2.9:2009 |
| Hand-held mains-operated garden blowers, vacuums, and blower vacuums | Standard A, or standard B, in conjunction with IEC 60335-2-100 Ed 1.0 as modified by Annex ZZ of AS/NZS 60335.2.100:2003 |
| Heated carpets and underfloor heating appliances | Standard A, or standard B, in conjunction with IEC 60335-2-106 Ed 1.0 |
| Heated gullies for roof drainage | Standard A, or standard B, in conjunction with IEC 60335-2-83 Ed 1.1 |
| Heating appliances for breeding and rearing animals | Standard A, or standard B, in conjunction with IEC 60335-2-71 Ed 2.1 |
| High pressure cleaners and steam cleaners | Standard A, or standard B, in conjunction with IEC 60335-2-79 Ed 2.2 |

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Humidifiers | Standard A, or standard B, in conjunction with IEC 60335-2-98 Ed 2.2<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.98:1998, including Amendments 1 and 2 |
| Humidifiers intended for use with heating, ventilation, or air-conditioning systems | Standard A, or standard B, in conjunction with IEC 60335-2-88 Ed 2.0 |
| Insect killers | Standard A, or standard B, in conjunction with IEC 60335-2-59 Ed 3.2 as modified by Annex ZZ of AS/NZS 60335.2.59:2005, including Amendments 1 to 3<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.59:1999, including Amendments 1 to 3 |
| Instantaneous water heaters | Standard A, or standard B, in conjunction with IEC 60335-2-35 Ed 4.2 |
| Ironers | Standard A, or standard B, in conjunction with IEC 60335-2-44 Ed 3.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.44:1999, including Amendment 1 |
| Kitchen machines | Standard A, or standard B, in conjunction with IEC 60335-2-14 Ed 5.1 as modified by Annex ZZ of AS/NZS 60335.2.14:2007, including Amendment 1 |
| Massage appliances | Standard A, or standard B, in conjunction with IEC 60335-2-32 Ed 4.1 |
| Microwave ovens, including combination microwave ovens | Standard A, or standard B, in conjunction with IEC 60335-2-25 Ed 6.0<br>***or***<br>Until 29/04/2014, standard C in conjunction with IEC 60335-2-25 Ed 5.2 |
| Milking machines | Standard A, or standard B, in conjunction with IEC 60335-2-70 Ed 2.1 |
| Motor-compressors | Standard A, or standard B, in conjunction with IEC 60335-2-34 Ed 4.2 |
| Multifunctional shower cabinets | Standard A, or standard B, in conjunction with IEC 60335-2-105 Ed 1.1 |
| Oral hygiene appliances | Standard A, or standard B, in conjunction with IEC 60335-2-52 Ed 3.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.52:1996, including Amendments 1 to 3 |
| Outdoor barbecues | Standard A, or standard B, in conjunction with IEC 60335-2-78 Ed 2.1 as modified by Annex ZZ of AS/NZS 60335.2.78:2005, including Amendments 1 and 2<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.78:1996, including Amendments 1 to 3 |

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Pedestrian-controlled mains-operated lawn scarifiers and aerators | Standard A, or standard B, in conjunction with IEC 60335-2-92 Ed 2.0 |
| Pedestrian-controlled mains-operated lawnmowers | Standard A, or standard B, in conjunction with IEC 60335-2-77 Ed 2.0 |
| Portable heating tools and similar appliances | Standard A, or standard B, in conjunction with IEC 60335-2-45 Ed 3.1 |
| Portable immersion heaters | Standard A, or standard B, in conjunction with IEC 60335-2-74 Ed 2.2<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.74:2001, including Amendment 1 |
| Projectors and similar appliances | Standard A, or standard B, in conjunction with IEC 60335-2-56 Ed 3.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.56:1998, including Amendments 1 to 3 |
| Pumps | Standard A, or standard B, in conjunction with IEC 60335-2-41 Ed 3.2 as modified by Annex ZZ of AS/NZS 60335.2.41:2004, including Amendment 1 |
| Range hoods and other cooking fume extractors | Standard A, or standard B, in conjunction with IEC 60335-2-31 Ed 4.2 as modified by Annex ZZ of AS/NZS 60335.2.31:2004, including Amendments 1 to 4 |
| Refrigerating appliances, ice-cream appliances, and ice-makers | Standard A, or standard B, in conjunction with IEC 60335-2-24 Ed 7.0 as modified by AS/NZS 60335.2.24:2010<br>***or***<br>Until 29/10/2013, standard C in conjunction with IEC 60335-2-24 Ed 6.2 as modified by Annex ZZ of AS/NZS 60335.2.24:2003, including Amendments 1 to 3 |
| Room heaters | Standard A, or standard B, in conjunction with IEC 60335-2-30 Ed 4.2 as modified by Annex ZZ of AS/NZS 60335.2.30:2009, including Amendment 1 |
| Sauna heating appliances and infra-red cabins | Standard A, or standard B, in conjunction with IEC 60335-2-53 Ed 4.0<br>***or***<br>Until 28/10/2013, standard C in conjunction with IEC 60335-2-53 Ed 3.1<br>***or***<br>Until 20/10/2013, standard D in conjunction with AS/NZS 3350.2.53:1998, including Amendments 1 and 2 |
| Scissors type grass shears | Standard A, or standard B, in conjunction with IEC 60335-2-94 Ed 3.0 |
| Sewing machines | Standard A, or standard B, in conjunction with IEC 60335-2-28 Ed 4.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.28:1996, including Amendments 1 to 3 |
| Shavers, hair clippers, and similar appliances | Standard A, or standard B, in conjunction with IEC 60335-2-8 Ed 5.2 |

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Spin extractors | Standard A, or standard B, in conjunction with IEC 60335-2-4 Ed 6.0<br>***or***<br>Until 28/05/2013, standard C in conjunction with IEC 60335-2-4 Ed 5.2 as modified by Annex ZZ of AS/NZS 60335.2.4:2002, including Amendments 1 and 2 |
| Spray extraction appliances, for industrial and commercial use | Standard A, or standard B, in conjunction with IEC 60335-2-68 Ed 3.2 |
| Stationary circulation pumps for heating and service water installations | Standard A, or standard B, in conjunction with IEC 60335-2-51 Ed 3.1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.51:1998, including Amendments 1 to 3 |
| Stationary cooking ranges, hobs, ovens, and similar appliances | Standard A, or standard B, in conjunction with IEC 60335-2-6 Ed 5.2 as modified by Annex ZZ of AS/NZS 60335.2.6:2008, including Amendments 1 and 3 |
| Storage water heaters | Standard A, or standard B, in conjunction with IEC 60335-2-21 Ed 5.2 as modified by Annex ZZ of AS/NZS 60335.2.21:2002, including Amendments 1 to 3 |
| Surface-cleaning appliances for household use employing liquids or steam | Standard A, or standard B, in conjunction with IEC 60335-2-54 Ed 4.0<br>***or***<br>Until 28/05/2013, standard C in conjunction with IEC 60335-2-54 Ed 3.2 |
| Thermal storage room heaters | Standard A, or standard B, in conjunction with IEC 60335-2-61 Ed 2.2<br>***or***<br>Until 17/06/2012, standard D in conjunction with AS/NZS 3350.2.61:2001, including Amendment 1 |
| Toilets | Standard A, or standard B, in conjunction with IEC 60335-2-84 Ed 2.1<br>***or***<br>Until 20/10/2013, standard D in conjunction with AS/NZS 3350.2.84:2000, including Amendments 1 and 2 |
| Tumble dryers | Standard A, or standard B, in conjunction with IEC 60335-2-11 Ed 7.0 as modified by Annex ZZ of AS/NZS 60335.2.11:2009, including Amendment 1 |
| UV radiation water treatment appliances | Standard A, or standard B, in conjunction with IEC 60335-2-109 Ed 1.0 |
| Vacuum cleaners and water-suction cleaning devices | Standard A, or standard B, in conjunction with IEC 60335-2-2 Ed 6.0 as modified by AS/NZS 60335.2.2:2010<br>***or***<br>Until 29/10/2013, standard C in conjunction with IEC 60335-2-2 Ed 5.2 as modified by Annex ZZ of AS/NZS 60335.2.2:2002, including Amendments 1 and 2 |
| Vaporisers | Standard A, or standard B, in conjunction with IEC 60335-2-101 Ed 1.1 |
| Walk-behind and hand-held lawn trimmers and lawn edge trimmers | Standard A, or standard B, in conjunction with IEC 60335-2-91 Ed 3.0 as modified by Annex ZZ of AS/NZS 60335.2.91:2008, including Amendment 1 |

| Household and similar electrical appliances | Applicable standard |
|---|---|
| Warming plates and similar appliances | Standard A, or standard B, in conjunction with IEC 60335-2-12 Ed 5.1 |
| Washing machines | Standard A, or standard B, in conjunction with IEC 60335-2-7 Ed 7.0 |
| Water-bed heaters | Standard A, or standard B, in conjunction with IEC 60335-2-66 Ed 2.1 |
| Wet and dry vacuum cleaners, including power brush, for industrial and commercial use | Standard A, or standard B, in conjunction with IEC 60335-2-69 Ed 3.2 as modified by Annex ZZ of AS/NZS 60335.2.69:2003, including Amendments 1 to 3 |
| Whirlpool baths and whirlpool spas | Standard A, or standard B, in conjunction with IEC 60335-2-60 Ed 3.2 as modified by Annex ZZ of AS/NZS 60335.2.60:2006, including Amendment 1<br>***or***<br>Until 23/06/2013, standard D in conjunction with AS/NZS 3350.2.60:2000, including Amendments 1 to 4 |

## 2 Other electrical appliances

Standards apply to other electrical appliances as set out in the following table:

| Other electrical appliances | Applicable standard |
|---|---|
| Electric duct heaters | AS/NZS 3102:2002, including Amendments 1 and 2 |
| Electric toys | IEC 62115 Ed 1.2 |
| Portable inverters | AS/NZS 4763:2011 |
| Smoke detectors | AS/NZS 3100:2009, including Amendment 1 |

## 3 Low voltage electrical apparatus

Standards apply to low voltage electrical apparatus as set out in the following table:

| Low voltage electrical apparatus | Applicable standard |
|---|---|
| Air-break switches | AS/NZS 3133:2008, including Amendment 1 |
| Appliance couplers for household and similar general purposes | AS/NZS 60320.1:2004<br>***or***<br>IEC 60320-1 Ed 2.1 |
| Bayonet lampholder adaptors | AS 3119:1994 |
| Bayonet lampholders | AS/NZS 61184:2007<br>***or***<br>IEC 61184 Ed 3.0, including Amendment 1, as modified by AS/NZS 61184:2007<br>***or***<br>Until 30/12/2016, AS/NZS 3117:2007 |
| Ceiling roses | AS/NZS 3113:2005 |
| Cord extension sets | AS/NZS 3199:2007 |
| Cord extension sockets | AS/NZS 3120:1999 |
| Cord-line switches | AS/NZS 3127:2005<br>***or***<br>IEC 61058-2-1 Ed 2.0 |

| Low voltage electrical apparatus | Applicable standard |
|---|---|
| Edison screw lampholders | AS/NZS 60238:2007<br>***or***<br>IEC 60238 Ed 8.2 as modified by AS/NZS 60238:2007<br>***or***<br>Until 30/12/2016, AS/NZS 3140:2007 |
| Electric shaver supply units | AS/NZS 3194:1993, including Amendment 1 |
| Electrical equipment for spa and swimming pools | AS/NZS 3136:2001, including Amendments 1 and 2 |
| Electrical equipment of machines | IEC 60204-1 Ed 5.1 |
| Electrical portable outlet devices | AS/NZS 3105:2007, including Amendment 1 |
| Interconnection couplers for household and similar equipment | AS/NZS 60320.2.2:2004<br>***or***<br>IEC 60320-2-2 Ed 2.0 |
| Plugs and socket-outlets | AS/NZS 3112:2011 |
| Plugs and socket-outlets for stationary appliances | AS/NZS 3131:2001 |
| Plugs, socket-outlets, and couplers for general industrial application | AS/NZS 3123:2005 |
| Plugs, socket-outlets, and couplers for industrial purposes—general requirements | IEC 60309-1 Ed 4.1 |
| Plugs, socket-outlets, and couplers for industrial purposes—dimensional interchangeability requirements for pin and contact-tube accessories | IEC 60309-2 Ed 4.1 |
| Plugs, socket-outlets, and couplers for industrial purposes—switched socket-outlets and connectors with or without interlock | IEC 60309-4 Ed 1.0 |
| Plugs, socket-outlets, vehicle couplers, and vehicle inlets—conductive charging of electric vehicles | IEC 62196-1 Ed 1.0 |
| Portable electrical control or conditioning devices | AS/NZS 3197:2005, including Amendment 1 |
| Sewing machine couplers | AS/NZS 60320.2.1:2004<br>***or***<br>IEC 60320-2-1 Ed 2.0 |
| Socket-outlet adaptors | AS/NZS 3122:2005 |
| Temperature sensing controls | IEC 60730-2-9 Ed 3.1 |

## 4 Electric wires and cables

Standards apply to electric wires and cables as set out in the following table:

| Electric wires and cables | Applicable standard |
|---|---|
| Cables for high voltage luminous discharge tube installations | AS/NZS 3166:1993 |
| Electric cables—polymeric insulated—for distribution and service applications | AS/NZS 4961:2003 |

| Electric wires and cables | Applicable standard |
|---|---|
| Electric cables—polymeric insulated—for working voltages up to and including 0.6/1 (1.2) kV | AS/NZS 5000.1:2005, including Amendment 1 |
| Electric cables—polymeric insulated—for working voltages up to and including 450/750 V | AS/NZS 5000.2:2006 |
| Electric cables—polymeric insulated—multicore control cables | AS/NZS 5000.3:2003 |
| Electric flexible cords | AS/NZS 3191:2008<br>***or***<br>IEC 60227 and IEC 60245 series |
| Heating cables with a rated voltage of 300/500 V for comfort heating and prevention of ice formation | IEC 60800 Ed 3.0<br>***or***<br>Until 29/10/2013, IEC 60800 Ed 2.0 |
| Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V—flexible cables (cords) | AS/NZS 60227.5:2003, including Amendment 1<br>***or***<br>IEC 60227-5 Ed 2.2 |
| Rubber insulated cables—rated voltage up to and including 450/750 V—cords and flexible cables | AS/NZS 60245.4:2003, including Amendment 1<br>***or***<br>IEC 60245-4 Ed 2.2 |
| Rubber insulated cables—rated voltages up to and including 450/750 V—cords for applications requiring high flexibility | IEC 60245-8 Ed 1.1 |
| Rubber insulated cables—rated voltages up to and including 450/750 V—heat resistant silicone insulated cables | IEC 60245-3 Ed 2.0, including Amendment 1 |

## 5 Switches for circuits, installation protective devices, and connection devices

Standards apply to switches for circuits, installation protective devices, and connection devices as set out in the following table:

| Switches for circuits, installation protective devices, and connection devices | Applicable standard |
|---|---|
| Assemblies for power distribution in public networks | AS/NZS 3439.5:2001<br>***or***<br>IEC 61439-5 Ed 1.0 |
| Circuit-breakers for overcurrent protection for household and similar installations—circuit-breakers for AC operation | AS/NZS 60898.1:2004<br>***or***<br>IEC 60898-1 Ed 1.2 as modified by AS/NZS 60898.1:2004<br>***or***<br>AS/NZS 3111:2009 |
| Circuit-breakers for overcurrent protection for household and similar installations—circuit-breakers for AC and DC operation | AS/NZS 60898.2:2004<br>***or***<br>IEC 60898-2 Ed 1.1 as modified by AS/NZS 60898.2:2004 |

| **Switches for circuits, installation protective devices, and connection devices** | **Applicable standard** |
|---|---|
| Contactors and motor-starters—AC semiconductor controllers and contactors for non-motor loads | AS/NZS 3947.4.3:2000<br>***or***<br>IEC 60947-4-3 Ed 1.2 |
| Control circuit devices and switching elements—DC interface for proximity sensors and switching amplifiers (NAMUR) | AS/NZS 3947.5.6:2000<br>***or***<br>IEC 60947-5-6 Ed 1.0 |
| Control circuit devices and switching elements—electrical emergency stop device with mechanical latching function | AS/NZS 3947.5.5:2000<br>***or***<br>IEC 60947-5-5 Ed 1.1 |
| Control circuit devices and switching elements—proximity devices with defined behaviour under fault conditions | AS/NZS 3947.5.3:2000<br>***or***<br>IEC 60947-5-3 Ed 1.1 |
| Electromagnetic remote-control switches (RCS) | IEC 60669-1 Ed 3.2 in conjunction with IEC 60669-2-2 Ed 3.0 |
| Electronic switches | IEC 60669-1 Ed 3.2 in conjunction with IEC 60669-2-1 Ed 4.1 |
| Installation couplers intended for permanent connection in fixed installations | IEC 61535 Ed 1.0 |
| Isolating switches | IEC 60669-1 Ed 3.2 in conjunction with IEC 60669-2-4, Ed 1.0 |
| Low-voltage assemblies intended to be installed in places where unskilled persons have access for their use | AS/NZS 3439.3:2002<br>***or***<br>IEC 60439-3 Ed 1.2 as modified by AS/NZS 3439.3:2002 |
| Low-voltage fuses for use by authorised persons | IEC 60269-1 Ed 4.1 in conjunction with IEC 60269-2 Ed 4.0 |
| Low-voltage fuses for use by unskilled persons | IEC 60269-1 Ed 4.1 in conjunction with IEC 60269-3 Ed 4.0 |
| Low-voltage switchgear and controlgears assemblies for construction sites (ACS) | AS/NZS 3439.4:2009<br>***or***<br>IEC 60439-4 Ed 2.0 |
| Multiple function equipment—automatic transfer switching equipment | AS/NZS 3947.6.1:2001<br>***or***<br>IEC 60947-6-1 Ed 2.0 |
| Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) | AS/NZS 61009.1:2004, including Amendment 1<br>***or***<br>IEC 61009-1 Ed 3.0 as modified by AS/NZS 61009.1:2004, including Amendment 1<br>***or***<br>AS/NZS 3190:2011 |
| Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) | AS/NZS 61008.1:2004<br>***or***<br>IEC 61008-1 Ed 3.0 as modified by AS/NZS 61008.1:2004<br>***or***<br>AS/NZS 3190:2011 |

| **Switches for circuits, installation protective devices, and connection devices** | **Applicable standard** |
|---|---|
| Switches, disconnectors, switch-disconnectors, and fuse-combination units | AS/NZS 3947.3:2001<br>***or***<br>IEC 60947-3 Ed 3.0 |
| Time-delay switches (TDS) | IEC 60669-1 Ed 3.2 in conjunction with IEC 60669-2-3 Ed 3.0 |
| Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses | IEC 62423 Ed 2.0 |
| Type-tested and partially type-tested assemblies | AS/NZS 3439.1:2002<br>***or***<br>IEC 61439-1 Ed 2.0 |

## 6 Hand-held motor-operated electric tools

(1) In subclause (2),—

**standard E** means IEC 60745-1 Ed 4.0 as modified by AS/NZS 60745.1:2009

**standard F** means AS/NZS 60745.1:2003, including Amendments 1 to 3.

(2) Standards apply to hand-held motor-operated electric tools as set out in the following table:

| **Hand-held motor-operated electric tools** | **Applicable standard** |
|---|---|
| Band saws | Standard E in conjunction with IEC 60745-2-20 Ed 1.1 |
| Chain saws | Standard E in conjunction with IEC 60745-2-13 Ed 2.1<br>***or***<br>Until 28/05/2012, standard F in conjunction with AS/NZS 60745.2.13:2006 |
| Circular saws | Standard E in conjunction with IEC 60745-2-5 Ed 5.0<br>***or***<br>Until 29/04/2013, standard F in conjunction with AS/NZS 60745.2.5:2007, including Amendment 1 |
| Concrete vibrators | Standard E in conjunction with IEC 60745-2-12 Ed 2.1 as modified by Annex ZZ of AS/NZS 60745.2.12:2009 |
| Cut-off machines | Standard E in conjunction with IEC 60745-2-22 Ed 1.0 as modified by AS/NZS 60745.2.22:2011 |
| Drain cleaners | Standard E in conjunction with IEC 60745-2-21 Ed 1.1 |
| Drills and impact drills | Standard E in conjunction with IEC 60745-2-1 Ed 2.1 |
| Grinders, polishers, and disc-type sanders | Standard E in conjunction with IEC 60745-2-3 Ed 2.1 as modified by Annex ZZ of AS/NZS 60745.2.3:2011<br>***or***<br>Until 20/04/2012, standard F in conjunction with AS/NZS 60745.2.3:2006 |
| Hammers | Standard E in conjunction with IEC 60745-2-6 Ed 2.2 as modified by Annex ZZ of AS/NZS 60745.2.6:2009 |
| Hedge trimmers | Standard E in conjunction with IEC 60745-2-15 Ed 2.1<br>***or***<br>Until 28/05/2012, standard F in conjunction with AS/NZS 60745.2.15:2006 |

| **Hand-held motor-operated electric tools** | **Applicable standard** |
|---|---|
| Jointers | Standard E in conjunction with IEC 60745-2-19 Ed 1.1<br>***or***<br>Until 29/04/2014, standard F in conjunction with AS/NZS 60745.2.19:2005 |
| Other hand-held motor-operated electric tools | AS/NZS 3160:2009 |
| Planers | Standard E in conjunction with IEC 60745-2-14 Ed 2.2<br>***or***<br>Until 29/04/2013, standard F in conjunction with AS/NZS 60745.2.14:2003, including Amendment 1 |
| Reciprocating saws (jig and sabre saws) | Standard E in conjunction with IEC 60745-2-11 Ed 2.1 |
| Routers and trimmers | Standard E in conjunction with IEC 60745-2-17 Ed 3.0<br>***or***<br>Until 29/04/2014, standard F in conjunction with AS/NZS 60745.2.17:2003 |
| Sanders and polishers other than disc type | Standard E in conjunction with IEC 60745-2-4 Ed 2.1 |
| Screwdrivers and impact wrenches | Standard E in conjunction with IEC 60745-2-2 Ed 2.1 |
| Shears and nibblers | Standard E in conjunction with IEC 60745-2-8 Ed 2.1 as modified by Annex ZZ of AS/NZS 60745.2.8:2009 |
| Spray guns for non-flammable liquids | AS/NZS 3160:2009 |
| Strapping tools | Standard E in conjunction with IEC 60745-2-18 Ed 1.1 |
| Tackers | Standard E in conjunction with IEC 60745-2-16 Ed 2.0<br>***or***<br>Until 29/05/2012, AS/NZS 3160:2009 |
| Tappers | Standard E in conjunction with IEC 60745-2-9 Ed 2.1 |

## 7 Electric welding machines

Standards apply to electric welding machines as set out in the following table:

| **Electric welding machines** | **Applicable standard** |
|---|---|
| Limited duty, portable AC arc welding machines | IEC 60974-6 Ed 2.0<br>***or***<br>IEC 60974-6 Ed 1.0 as modified by AS 60974.6:2006 |

## 8 Audio and video products

Standards apply to audio and video products as set out in the following table:

| **Audio and video products** | **Applicable standard** |
|---|---|
| Audio, video, and similar electronic apparatus | AS/NZS 60065:2003, including Amendment 1<br>***or***<br>IEC 60065 Ed 7.2 as modified by Annex ZZ of AS/NZS 60065:2003, including Amendment 1 |
| Power supplies for AV equipment | AS/NZS 60065:2003, including Amendment 1<br>***or***<br>IEC 60065 Ed 7.2 as modified by Annex ZZ of AS/NZS 60065:2003, including Amendment 1 |

## 9 Information technology equipment

Standards apply to information technology equipment as set out in the following table:

| Information technology equipment | Applicable standard |
|---|---|
| Information technology equipment | AS/NZS 60950.1:2011<br>***or***<br>IEC 60950-1 Ed 2.0, including Amendment 1, as modified by Annex ZZ of AS/NZS 60950.1:2003, including Amendments 1 to 3<br>***or***<br>Until 08/02/2013, AS/NZS 60950.1:2003, including Amendments 1 to 3 |
| Power supplies for IT equipment | AS/NZS 60950.1:2011<br>***or***<br>IEC 60950-1 Ed 2.0, including Amendment 1, as modified by Annex ZZ of AS/NZS 60950.1:2003, including Amendments 1 to 3<br>***or***<br>Until 08/02/2013, AS/NZS 60950.1:2003, including Amendments 1 to 3 |

## 10 Electrical medical devices

(1) In subclause (2),—

**standard G** means IEC 60601-1 Ed 2.0, including Amendments 1 and 2, as modified by AS/NZS 3200.1.0:1998

**standard H** means AS/NZS 3200.1.0:1998 and AS/NZS 3200.1.1:1995, including Amendment 1.

(2) Standards apply to electrical medical devices as set out in the following table:

| Electrical medical devices | Applicable standard |
|---|---|
| Alarm systems in medical electrical equipment and medical electrical systems | Standard G in conjunction with IEC 60601-1-8 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.1.8:2005 |
| Ambulatory electrocardiographic systems | Standard G in conjunction with IEC 60601-2-47 Ed 1.0 |
| Anaesthetic systems | Standard G in conjunction with IEC 60601-2-13 Ed 3.1<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.13:2005 |
| Associated equipment of X-ray equipment | Standard G in conjunction with IEC 60601-2-32 Ed 1.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.32:1994 |
| Automatic cycling non-invasive blood pressure monitoring equipment | Standard G in conjunction with IEC 60601-2-30 Ed 2.0 as modified by AS/NZS 3200.2.30:2001<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.30:2001 |

| Electrical medical devices | Applicable standard |
|---|---|
| Blankets, pads, and mattresses intended for heating in medical use | Standard G in conjunction with IEC 60601-2-35 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.35:1999 |
| Capacitor discharge X-ray generators | Standard H in conjunction with AS/NZS 3200.2.15:1994 |
| Cardiac defibrillators | Standard G in conjunction with IEC 60601-2-4 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.4:2006 |
| Clinical thermometers for body temperature measurement | ISO 80601-2-56 |
| Collateral standard—usability | Standard G in conjunction with IEC 60601-1-6 Ed 3.0 |
| Critical care ventilators | Standard G in conjunction with IEC 60601-2-12 Ed 2.0 |
| Dento-maxillofacial X-ray equipment | Standard H in conjunction with AS/NZS 3200.2.201:2000, including Amendment 1 |
| Diagnostic and therapeutic laser equipment | Standard G in conjunction with IEC 60601-2-22 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.22:1997 |
| Direct blood-pressure monitoring equipment | Standard G in conjunction with IEC 60601-2-34 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.34:1996 |
| Electrically operated hospital beds | Standard H in conjunction with AS/NZS 3200.2.38:2007 |
| Electrocardiographic monitoring equipment | Standard G in conjunction with IEC 60601-2-27 Ed 1.0 as modified by AS/NZS 3200.2.27:1996<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.27:1996 |
| Electrocardiographs | IEC 60601-2-25 Ed 1.0, including Amendment 1<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.25:1993 |
| Electroencephalographs | Standard G in conjunction with IEC 60601-2-26 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.26:2005 |
| Electromyographs and evoked response equipment | Standard G in conjunction with IEC 60601-2-40 Ed 1.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.40:1999 |
| Electron accelerators in the range of 1 MeV to 50 MeV | Standard G in conjunction with IEC 60601-2-1 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.1:1999 |
| Endoscopic equipment | Standard G in conjunction with IEC 60601-2-18 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.18:1997 |

| Electrical medical devices | Applicable standard |
|---|---|
| External cardiac pacemakers with internal power source | Standard G in conjunction with IEC 60601-2-31 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.31:1996, including Amendment 1 |
| Extracorporeally induced lithotripsy | Standard G in conjunction with IEC 60601-2-36 Ed 1.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.36:1998 |
| Gamma beam therapy equipment | Standard G in conjunction with IEC 60601-2-11 Ed 2.0, including Amendment 1<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.11:1999 |
| Haemodialysis, haemodiafiltration, and haemofiltration equipment | Standard G in conjunction with IEC 60601-2-16 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.16:1999 |
| High frequency surgical equipment | Standard G in conjunction with IEC 60601-2-2 Ed 3.0 as modified by AS/NZS 3200.2.2:1999<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.2:1999 |
| High voltage generators of diagnostic X-ray generators | Standard G in conjunction with IEC 60601-2-7 Ed 2.0 as modified by AS/NZS 3200.2.7:1999<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.7:1999 |
| Infant apnoea monitors for domestic use | Standard G in conjunction with AS/NZS 3200.2.202:1996 |
| Infant incubators | Standard G in conjunction with IEC 60601-2-19 Ed 2.0 |
| Infant phototherapy equipment | Standard G in conjunction with IEC 60601-2-50 Ed 2.0 |
| Infant radiant warmers | Standard G in conjunction with IEC 60601-2-21 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.21:1994, including Amendment 1 |
| Infant transport incubators | Standard G in conjunction with IEC 60601-2-20 Ed 2.0 |
| Infusion pumps and controllers | Standard G in conjunction with IEC 60601-2-24 Ed 1.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.24:1999 |
| Lens removal devices and vitrectomy devices for ophthalmic surgery | Standard G in conjunction with IEC 80601-2-58 Ed 1.0 |
| Magnetic resonance equipment for medical diagnosis | Standard G in conjunction with IEC 60601-2-33 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.33:2005 |
| Mammographic X-ray equipment and mammographic stereotactic devices | Standard G in conjunction with IEC 60601-2-45 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.45:1999 |
| Medical beds | Standard G in conjunction with IEC 60601-2-52 Ed 1.0 |
| Medical electrical equipment and medical electrical systems used in the home healthcare environment | Standard G in conjunction with IEC 60601-1-11 Ed 1.0 |

| Electrical medical devices | Applicable standard |
|---|---|
| Medical electrical systems | Standard G in conjunction with IEC 60601-1-1 Ed 1.0, including Amendment 1, as modified by AS/NZS 3200.1.1:1995<br>***or***<br>Standard H in conjunction with AS/NZS 3200.1.1:1995 |
| Microwave therapy equipment | Standard G in conjunction with IEC 60601-2-6 Ed 1.0 as modified by AS/NZS 3200.2.6:2005<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.6:2005 |
| Multifunction patient monitoring equipment | Standard G in conjunction with IEC 60601-2-49 Ed 2.0 |
| Nerve and muscle stimulators | Standard G in conjunction with IEC 60601-2-10 Ed 1.0, including Amendment 1 |
| Non-laser light source equipment intended for therapeutic, diagnostic, monitoring and cosmetic/aesthetic use | Standard G in conjunction with IEC 60601-2-57 Ed 1.0 |
| Operating tables | Standard G in conjunction with IEC 60601-2-46 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.46:2003 |
| Oxygen concentrators for individual patient use | Standard H in conjunction with AS/NZS 3200.2.200:2005<br>***or***<br>ISO 8359:1996 |
| Patient contact dosemeters used in radiotherapy with electrically connected detectors | Standard H in conjunction with AS/NZS 3200.2.9:1997 |
| Peritoneal dialysis equipment | Standard G in conjunction with IEC 60601-2-39 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.39:2001 |
| Physiologic closed-loop controllers | Standard G in conjunction with IEC 60601-1-10 Ed 1.0 |
| Programmable electrical medical systems | Standard G in conjunction with IEC 60601-1-4 Ed 1.1<br>***or***<br>Standard H in conjunction with AS/NZS 3200.1.4:1997 |
| Radiotherapy simulators | Standard G in conjunction with IEC 60601-2-29 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.29:2000 |
| Radiation protection in diagnostic X-ray equipment | Standard G in conjunction with IEC 60601-1-3 Ed 1.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.1.3:1996 |
| Recording and analysing single channel and multichannel electrocardiographs | Standard G in conjunction with IEC 60601-2-51 Ed 1.0 |
| Remote-controlled automatically driven gamma-ray afterloading equipment | Standard G in conjunction with IEC 60601-2-17 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.17:1994, including Amendment 1 |
| Requirements and tests for electromagnetic compatibility | Standard G in conjunction with IEC 60601-1-2 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.1.2:2005 |

| Electrical medical devices | Applicable standard |
|---|---|
| Screening thermographs for human febrile temperature screening | Standard G in conjunction with IEC 80601-2-59 Ed 1.0 |
| Short-wave therapy equipment | Standard G in conjunction with IEC 60601-2-3 Ed 2.0, including Amendment 1 |
| Surgical luminaires and luminaires for diagnosis | Standard G in conjunction with IEC 60601-2-41 Ed 1.0 as modified by AS/NZS 3200.2.41:2002<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.41:2002 |
| Therapeutic X-ray generators | Standard G in conjunction with IEC 60601-2-8 Ed 1.1<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.8:1994, including Amendment 1 |
| Transcutaneous oxygen and carbon dioxide partial pressure monitoring equipment | Standard G in conjunction with IEC 60601-3-1 Ed 1.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.3.1:1998 |
| Transcutaneous partial pressure monitoring equipment | Standard G in conjunction with IEC 60601-2-23 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.23:2001 |
| Ultrasonic medical diagnostic and monitoring equipment | Standard G in conjunction with IEC 60601-2-37 Ed 2.0 |
| Ultrasonic physiotherapy equipment | Standard G in conjunction with IEC 60601-2-5 Ed 2.0 as modified by AS/NZS 3200.2.5:2002<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.5:2002 |
| X-ray equipment for interventional procedures | Standard G in conjunction with IEC 60601-2-43 Ed 1.0 as modified by 3200.2.43:2002<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.43:2002 |
| X-ray equipment for computed tomography | Standard G in conjunction with IEC 60601-2-44 Ed 3.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.44:2005 |
| X-ray equipment for radiography and radioscopy | Standard G in conjunction with IEC 60601-2-54 Ed 1.0 |
| X-ray source assemblies and X-ray tube assemblies for medical diagnosis generators | Standard G in conjunction with IEC 60601-2-28 Ed 2.0<br>***or***<br>Standard H in conjunction with AS/NZS 3200.2.28:1994 |

## 11 Lighting fittings

(1) In subclause (2),—

**standard J** means IEC 60598-1 Ed 7.0 as modified by Annex ZZ of AS/NZS 60598.1:2003

**standard K** means AS/NZS 60598.1:2003.

(2) Standards apply to lighting fittings as set out in the following table:

| Lighting fittings | Applicable standard |
|---|---|
| Air handling luminaires | Standard J in conjunction with IEC 60598-2-19 Ed 1.0, including Amendments 1 and 2<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.19:2001 |
| Aquarium luminaires | Standard J in conjunction with IEC 60598-2-11 Ed 1.0 |
| Extra low voltage lighting systems for filament lamps | Standard J in conjunction with IEC 60598-2-23 Ed 1.1 as modified by AS/NZS 60598.2.23:2002<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.23:2002 |
| Fixed general purpose luminaires | Standard J in conjunction with IEC 60598-2-1 Ed 1.0, including Amendment 1 (Annex ZZ of AS/NZS 60598.1:2003 is not applicable)<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.1:1998 |
| Floodlights | Standard J in conjunction with IEC 60598-2-5 Ed 2.0 as modified by AS/NZS 60598.2.5:2002<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.5:2002 |
| Ground recessed luminaires | Standard J in conjunction with IEC 60598-2-13 Ed 1.0 |
| Handlamps | Standard J in conjunction with IEC 60598-2-8 Ed 2.2<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.8:2002 |
| Lighting chains | Standard J in conjunction with IEC 60598-2-20 Ed 3.0 as modified by AS/NZS 60598.2.20:2002<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.20:2002 |
| Luminaires for cold cathode tubular discharge lamps (neon tubes) and similar equipment | Standard J in conjunction with IEC 60598-2-14 Ed 1.0 |
| Luminaires for emergency lighting | Standard J in conjunction with IEC 60598-2-22 Ed 3.2 as modified by Compliance Document for New Zealand Building Code Clause F6<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.22:2005 as modified by Compliance Document for New Zealand Building Code Clause F6 |
| Luminaires for stage lighting, television, film, and photographic studios (outdoor and indoor) | Standard J in conjunction with IEC 60598-2-17 Ed 1.2<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.17:2006 |
| Luminaires for swimming pools and similar applications | Standard J in conjunction with IEC 60598-2-18 Ed 2.0 as modified by Annex ZZ of AS/NZS 60598.2.18:1998<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.18:1998 |
| Luminaires for road and street lighting | Standard J in conjunction with IEC 60598-2-3 Ed 3.0 |

| Lighting fittings | Applicable standard |
|---|---|
| Luminaires for use in clinical areas of hospitals and health care buildings | Standard J in conjunction with IEC 60598-2-25 Ed 1.0, including Amendment 1<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.25:2001 |
| Luminaires with built-in transformers or convertors for filament lamps | Standard J in conjunction with IEC 60598-2-6 Ed 2.0, including Amendment 1<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.6:1998 |
| Luminaires with limited surface temperatures | Standard J in conjunction with IEC 60598-2-24 Ed 1.0 |
| Mains socket-outlet mounted nightlights | Standard J in conjunction with IEC 60598-2-12 Ed 1.0 in conjunction with Annex J of AS/NZS 3112:2011 |
| Photo and film luminaires (non-professional) | Standard J in conjunction with IEC 60598-2-9 Ed 2.0, including Amendment 1<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.9:2006 |
| Portable general purpose luminaires | Standard J in conjunction with IEC 60598-2-4 Ed 2.0 as modified by AS/NZS 60598.2.4:2005, including Amendment 1<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.4:2005, including Amendment 1 |
| Portable luminaires for children | Standard J in conjunction with IEC 60598-2-10 Ed 2.0 as modified by Annex ZZ of AS/NZS 60598.2.10:1998 |
| Portable luminaires for garden use | Standard J in conjunction with IEC 60598-2-7 Ed 1.0, including Amendments 1 and 2<br>***or***<br>Standard K in conjunction with AS/NZS 60598.2.7:2005 |
| Recessed luminaires | Standard J in conjunction with IEC 60598-2-2 Ed 2.1 as modified by AS/NZS 60598.2.2:2001, including Amendment A<br>***or***<br>Until 28/07/2012, standard K in conjunction with AS/NZS 60598.2.2:2001 |

## 12 Lamp control gear

(1) In subclause (2),—

**standard L** means AS/NZS 61347.1:2002

**standard M** means IEC 61347-1 Ed 2.1 as modified by AS/NZS 61347.1:2002.

(2) Standards apply to lamp control gear as set out in the following table:

| Lamp control gear | Applicable standard |
|---|---|
| AC supplied electronic ballasts for fluorescent lamps | Standard L in conjunction with AS/NZS 61347.2.3:2004<br>***or***<br>Standard M in conjunction with IEC 61347-2-3 Ed 1.1, including Amendment 2<br>***or***<br>IEC 61347-2-3 Ed 2.0 |
| Ballasts for discharge lamps (excluding fluorescent lamps) | Standard L in conjunction with AS/NZS 61347.2.9:2004<br>***or***<br>Standard M in conjunction with IEC 61347-2-9 Ed 1.2 |
| Ballasts for fluorescent lamps | Standard L in conjunction with AS/NZS 61347.2.8:2003<br>***or***<br>Standard M in conjunction with IEC 61347-2-8 Ed 1.1 |
| DC or AC supplied electronic ballasts for discharge lamps (excluding fluorescent lamps) | Standard M in conjunction with IEC 61347-2-12 Ed 1.1 |
| DC or AC supplied electronic controlgear for LED modules | Standard L in conjunction with IEC 61347-2-13 Ed 1.0 |
| DC or AC supplied electronic step-down convertors for filament lamps | Standard L in conjunction with AS/NZS 61347.2.2:2007<br>***or***<br>Standard M in conjunction with IEC 61347-2-2 Ed 1.2 as modified by AS/NZS 61347.2.2:2007 |
| DC supplied electronic ballasts for aircraft lighting | Standard L in conjunction with AS/NZS 61347.2.6:2002<br>***or***<br>Standard M in conjunction with IEC 61347-2-6 Ed 1.0<br>***or***<br>IEC 61347-2-3 Ed 2.0 |
| DC supplied electronic ballasts for emergency lighting | Standard M in conjunction with IEC 61347-2-7 Ed 2.0 |
| DC supplied electronic ballasts for general lighting | Standard L in conjunction with AS/NZS 61347.2.4:2002<br>***or***<br>Standard M in conjunction with IEC 61347-2-4 Ed 1.0<br>***or***<br>IEC 61347-2-3 Ed 2.0 |
| DC supplied electronic ballasts for public transport | Standard L in conjunction with AS/NZS 61347.2.5:2002<br>***or***<br>Standard M in conjunction with IEC 61347-2-5 Ed 1.0<br>***or***<br>IEC 61347-2-3 Ed 2.0 |
| Electronic inverters and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes) | Standard L in conjunction with AS/NZS 61347.2.10:2004<br>***or***<br>Standard M in conjunction with IEC 61347-2-10 Ed 1.1 |

| Lamp control gear | Applicable standard |
|---|---|
| Glow-starters for fluorescent lamps | AS/NZS 60155:2000, including Amendments 1 and 2<br>***or***<br>IEC 60155 Ed 4.0, including Amendments 1 and 2, as modified by AS/NZS 60155:2000, including Amendments 1 and 2 |
| Miscellaneous electronic circuits used with luminaires | Standard L in conjunction with AS/NZS 61347.2.11:2003<br>***or***<br>Standard M in conjunction with IEC 61347-2-11 Ed 1.0 |
| Starting devices (other than glow starters) | Standard L in conjunction with AS/NZS 61347.2.1:2002<br>***or***<br>Standard M in conjunction with IEC 61347-2-1 Ed 1.1 |

## 13 Lamps

Standards apply to lamps as set out in the following table:

| Lamps | Applicable standard |
|---|---|
| Tungsten filament lamps for domestic and similar general lighting purposes | AS/NZS 60432.1:2007<br>***or***<br>IEC 60432-1 Ed 2.1 |
| Tungsten-halogen lamps for domestic and similar general lighting purposes | AS/NZS 60432.2:2007<br>***or***<br>IEC 60432-2 Ed 2.1 |
| Tungsten-halogen lamps (non-vehicle) | AS/NZS 60432.3:2007<br>***or***<br>IEC 60432-3 Ed 1.2 |
| Self-ballasted lamps for general lighting services | AS/NZS 60968:2001<br>***or***<br>IEC 60968 Ed 1.2 |

## 14 Power transformers, power supplies, reactors, and similar products

(1) In subclause (2),—

**standard N** means IEC 61558-1 Ed 2.1 as modified by Annex ZZ of AS/NZS 61558.1:2008, including Amendment 1

**standard O** means AS/NZS 61558.1:2000, including Amendments 1 to 8

**standard P** means IEC 61558-1 Ed 1.1 as modified by Annex ZZ of AS/NZS 61558.1:2000, including Amendments 1 to 8.

(2) Standards apply to power transformers, power supplies, reactors, and similar products as set out in the following table:

| Power transformers, power supplies, reactors, and similar products | Applicable standard |
|---|---|
| Auto transformers and power supply units incorporating auto transformers | Standard N in conjunction with IEC 61558-2-13 Ed 2.0 |

| **Power transformers, power supplies, reactors, and similar products** | **Applicable standard** |
|---|---|
| Bell and chime transformers and power supply units | Standard N in conjunction with IEC 61558-2-8 Ed 2.0<br>***or***<br>Until 29/04/2013, standard O in conjunction with AS/NZS 61558.2.8:2001 |
| Constant voltage transformers and power supply units | Standard P in conjunction with IEC 61558-2-12 Ed 2.0 |
| Control transformers and power supplies incorporating control transformers | Standard N in conjunction with IEC 61558-2-2 Ed 2.0 |
| Ignition transformers for gas and oil burners | Standard N in conjunction with IEC 61558-2-3 Ed 2.0<br>***or***<br>Until 29/05/2014, standard O in conjunction with AS/NZS 61558.2.3:2001 |
| Isolating transformers and power supply units for isolating transformers for general use | Standard N in conjunction with IEC 61558-2-4 Ed 2.0 |
| Isolating transformers for the supply of medical locations | Standard O in conjunction with AS/NZS 61558.2.15:2001 |
| Safety isolating transformers and power supply units for isolating transformers for general use | Standard N in conjunction with IEC 61558-2-6 Ed 2.0 as modified by AS/NZS 61558.2.6:2009<br>***or***<br>Until 30/10/2012, standard O in conjunction with AS/NZS 61558.2.6:2001, including Amendment 1 |
| Separating transformers and power supplies incorporating separating transformers for general applications | Standard N in conjunction with IEC 61558-2-1 Ed 2.0 |
| Shaver transformers | Standard N in conjunction with IEC 61558-2-5 Ed 2.0 as modified by AS/NZS 61558.2.5:2011<br>***or***<br>Until 28/10/2014, standard O in conjunction with AS/NZS 61558.2.5:2003 |
| Small reactors | Standard N in conjunction with IEC 61558-2-20 Ed 2.0<br>***or***<br>Until 29/04/2014, standard P in conjunction with IEC 61558-2-20 Ed 1.0 |
| Switch mode power supply units and transformers for switch mode power supply units | Standard N in conjunction with IEC 61558-2-16 Ed 1.0 |
| Transformers and power supplies for toys | Standard N in conjunction with IEC 61558-2-7 Ed 2.0 |
| Transformers and power supply units for construction sites | Standard N in conjunction with IEC 61558-2-23 Ed 2.0<br>***or***<br>Until 29/04/2013, standard O in conjunction with AS/NZS 61558.2.23:2001 |
| Transformers for class III handlamps for tungsten filament lamps | Standard N in conjunction with IEC 61558-2-9 Ed 2.0<br>***or***<br>Until 29/04/2013, standard O in conjunction with AS/NZS 61558.2.9:2003 |
| Transformers for switch mode power supplies | Until 28/05/2012, standard O in conjunction with AS/NZS 61558.2.17:2001 |

Rebecca Kitteridge,
Clerk of the Executive Council.

# Explanatory note

*This note is not part of the regulations, but is intended to indicate their general effect.*

These regulations, which come into force on 10 November 2011, amend the Electricity (Safety) Regulations 2010. The amendments—

- update references to standards so that they remain current and enable those in the industry to use the latest practices, technology, and products:
- modify safety requirements as they apply to broadband technology:
- make a number of minor and technical changes to improve the clarity and usability of the regulations.

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