



**THE ELECTRICAL WIRING REGULATIONS 1976, AMENDMENT
NO. 7**

PAUL REEVES, Governor-General

ORDER IN COUNCIL

At Wellington this 1st day of October 1990

Present:

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to the Electricity Act 1968, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following regulations.

ANALYSIS

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| <ol style="list-style-type: none"> 1. Title and commencement 2. Interpretation 3. Application 4. Marking on apparatus and material 5. Marking of cables 6. Apparatus and materials submitted for opinion 7. Submission of unsatisfactory apparatus 8. Construction of switchboards 9. Relative ratings of conductor and protective devices 10. Minimum size of conductor 11. Identification of conductors 12. Wood casing | <ol style="list-style-type: none"> 13. Additional requirements for flexible cables and flexible cords 14. Aerial lines of medium, low, and extra-low voltage 15. Current rating of apparatus 16. Flammable or explosive conditions 17. Ceiling roses 18. Lampholders 19. Plugs, plug sockets, and cord-extension sockets 20. Portable appliances 21. Heating and cooking appliances 22. Appliances for heating water and other liquids 23. Control of motors and motor circuits |
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| <p>24. Use of auto-transformers, choke coils, and resistors</p> <p>25. Additional requirements for extra-low-voltage electric bells, buzzers, and signalling circuits</p> <p>26. Additional requirements for electric toys</p> <p>27. Additional requirements for portable handlamps</p> | <p>28. Additional requirements for radio, visual-reproduction, and sound reproduction apparatus</p> <p>29. Additional requirements for high-voltage and extra-high-voltage installations</p> <p>30. Additional requirements for radio-interference suppression devices</p> <p>31. Earthing prohibited</p> |
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REGULATIONS

1. Title and commencement—(1) These regulations may be cited as the Electrical Wiring Regulations 1976, Amendment No. 7, and shall be read together with and deemed part of the Electrical Wiring Regulations 1976* (hereinafter referred to as the principal regulations).

(2) These regulations shall come into force on the 28th day after the date of their notification in the *Gazette*.

2. Interpretation—(1) Regulation 2 of the principal regulations (as substituted by regulation 2 of the Electrical Wiring Regulations 1976, Amendment No. 6) is hereby amended by inserting, in their appropriate alphabetical order, the following definitions:

“‘Generating system’ means the total means of generation in a system:

“‘Safety-extra low voltage’ means a voltage which does not exceed 32V a.c. r.m.s. or 50V $\sqrt{2}$ unsmoothed d.c. between conductors or between any conductor and earth in a circuit that is isolated from the supply mains by means such as a safety isolating transformer.”

(2) Regulation 2 of the principal regulations (as so substituted) is hereby further amended by revoking subclause (2), and substituting the following subclause:

“(2) All other terms used in these regulations shall, unless the context otherwise requires, have the meaning given to them in International Electrotechnical Commission IEC 50: International Electrotechnical Vocabulary.”

3. Application—Regulation 3 (3) of the principal regulations is hereby amended by revoking paragraph (h), and substituting the following paragraph:

“(h) Any electric fishing machine within the meaning of the Freshwater Fisheries Regulations 1983.”

4. Marking on apparatus and material—The principal regulations are hereby amended by revoking regulation 20 (as amended by regulation 4 of the Electrical Wiring Regulations 1976, Amendment No. 1 and regulation 5 of the Electrical Wiring Regulations 1976, Amendment No. 6).

5. Marking of cables—Regulation 21 of the principal regulations is hereby revoked.

*S.R. 1976/88

Amendment No. 1: S.R. 1979/184
 Amendment No. 2: S.R. 1981/90
 Amendment No. 3: S.R. 1981/178
 Amendment No. 4: S.R. 1981/391
 Amendment No. 5: S.R. 1988/273
 Amendment No. 6: S.R. 1989/180

6. Apparatus and materials submitted for opinion—(1) The principal regulations are hereby amended by revoking regulation 22 (as amended by regulation 2 of the Electrical Wiring Regulations 1976, Amendment No. 3).

(2) The Electrical Wiring Regulations 1976, Amendment No. 3 are hereby consequentially amended by revoking regulation 2.

7. Submission of unsatisfactory apparatus—The principal regulations are hereby amended by revoking regulation 23.

8. Construction of switchboards—The principal regulations are hereby amended by revoking regulation 42, and substituting the following regulation:

“42. Switchboards shall be constructed wholly of durable materials having adequate mechanical strength and, where insulating panels are used, these shall comply with the requirements of an approved standard.”

9. Relative ratings of conductor and protective devices—(1) Regulation 48 of the principal regulations (as amended by regulation 4 of the Electrical Wiring Regulations 1976, Amendment No. 4) is hereby amended by revoking subclause (1), and substituting the following subclause:

“(1) Every conductor in an installation, unless exempted under the provisions of subclause (2) of this regulation, shall be protected against excess current by a protective device fitted at the origin of the circuit of which it forms a part. The current rating of every circuit protective device used for this purpose shall not exceed that of the lowest-rated conductor in the circuit.”

(2) Regulation 48 (2) of the principal regulations (as so amended) is hereby amended by revoking paragraph (f), and substituting the following paragraph:

“(f) The protective device fitted at the origin of the circuit may have a rating of up to 5 times that of the lowest-rated conductor in the circuit where—

“(i) The conductors of the circuit are contained entirely in a 1.5hr fire rated compartment; and

“(ii) The load at the remote end of the circuit has a rating no greater than that of the lowest-rated conductor in the circuit; and

“(iii) Evidence is documented and certified by a Registered Electrical Engineer, that to the best of his or her knowledge and belief thermal, transient or mechanical damage to the conductors will not eventuate; and

“(iv) In no case the conductor is less than 2.5 mm².”

(3) Regulation 48 (2) of the principal regulations (as so amended) is hereby further amended by revoking paragraph (i).

(4) Regulation 48 of the principal regulations is hereby further amended by adding the following subclause:

“(3) For the purposes of subclause (2) (f) of this regulation—

“(a) Subparagraphs (i) and (iii) need not be complied with where the rating of protective devices at the origin of the subcircuit is not greater than twice that of the lowest-rated conductor in the circuit:

“(b) The load referred to shall be determined from the lesser of—

“(i) The sum of the values of the protective devices fitted at the remote end of the circuit of which the conductor forms part:

“(ii) The sum of the connected loads:

“(iii) The maximum demand of the circuit as determined by table 3 of these regulations.”

(5) The Electrical Wiring Regulations 1976, Amendment No. 4 are hereby consequentially amended by revoking regulation 4.

10. Minimum size of conductor—Regulation 58 of the principal regulations is hereby amended by revoking paragraph (b).

11. Identification of conductors—Regulation 62 (1) (c) of the principal regulations is hereby amended by omitting the words “the appropriate New Zealand standard”, and substituting the words “an approved standard”.

12. Wood casing—The principal regulations are hereby amended by revoking regulation 81.

13. Additional requirements for flexible cables and flexible cords—Regulation 83 (d) of the principal regulations (as amended by regulation 10 of the Electrical Wiring Regulations 1976, Amendment No. 1) is hereby amended by omitting the words “the appropriate New Zealand standard”, and substituting the words “an approved standard”.

14. Aerial lines of medium, low, and extra-low voltage—(1) Subclauses (12) and (13) of regulation 84 of the principal regulations (as amended by regulation 11 (b) of the Electrical Wiring Regulations 1976, Amendment No. 1) are hereby amended by omitting the words “New Zealand Standard 6401”, and substituting in each place the words “an approved standard”.

(2) The Electrical Wiring Regulations 1976, Amendment No. 1 are hereby consequentially amended by revoking regulation 11 (b).

15. Current rating of apparatus—Regulation 90 of the principal regulations is hereby amended by inserting, after the words “All apparatus”, the words “forming part of an installation”.

16. Flammable or explosive conditions—(1) The principal regulations (as amended by regulation 12 of the Electrical Wiring Regulations 1976, Amendment No. 1) are hereby amended by revoking regulation 94, and substituting the following regulation:

“94. (1) Electrical apparatus installed or used where there is an explosion hazard shall be of a type approved by a competent certifying authority as regards safety in respect to flammable gas, vapour, or combustible dust and shall bear appropriate markings.

“(2) All apparatus approved by the certifying authority shall be installed, used, and maintained so as to comply with the conditions of the approval.

“(3) The enclosure of apparatus shall not be opened so as to expose live conductors to hazardous atmosphere at any time.

“(4) Apparatus containing remote control or electrical interlock circuits, when associated with plug and socket couplings, shall be designed so that the said circuits are intrinsically safe.

“(5) Where a plug and socket coupling is used without an electrical interlock, the plug shall not be capable of being withdrawn from the socket

while the circuit is live and the circuit shall not be capable of being made live while the plug and the socket are disengaged.

“(6) Portable testing units shall be intrinsically safe.

“(7) For the purposes of this regulation, the Secretary shall name the competent certifying authorities.”

(2) The Electrical Wiring Regulations 1976, Amendment No. 1 are hereby consequentially amended by revoking regulation 12.

17. Ceiling roses—The principal regulations are hereby amended by revoking regulation 96.

18. Lampholders—(1) Regulation 97 of the principal regulations is hereby amended by revoking subclauses (1) and (3).

(2) Regulation 97 (4) of the principal regulations is hereby amended by omitting the words “in domestic installations”.

19. Plugs, plug sockets, and cord-extension sockets—Regulation 100 of the principal regulations is hereby amended by revoking subclause (3).

20. Portable appliances—Regulation 103 (5)(d) of the principal regulations (as amended by regulation 10 (3) of the Electrical Wiring Regulations 1976, Amendment No. 4) is hereby amended by omitting the words “paragraph (g) or”, and substituting the words “paragraph (g). Alternatively”.

21. Heating and cooking appliances—Regulation 106 of the principal regulations is hereby amended by revoking subclauses (1), (3), and (4).

22. Appliances for heating water and other liquids—The principal regulations are hereby amended by revoking regulation 107.

23. Control of motors and motor circuits—(1) Regulation 108 (3) of the principal regulations is hereby amended by inserting, after subclause (3), the following subclause:

“(3A) For the purposes of subclause (3) the means of isolation shall be—

“(a) Installed directly in the motor supply circuit or in the control circuit of the motor starter provided the motor starter controller or cabinet is lockable; and

“(b) Under manual control only; and

“(c) Not capable of being overridden or bypassed by programmable control systems and the like; and

“(d) Of a type which affords isolation by the mechanical disconnection in a fail safe manner of the motor supply circuit.”

(2) Regulation 108 of the principal regulations is hereby further amended by revoking subclause (4), and substituting the following subclause:

“(4) Every electric motor having an output rating exceeding 750 watts, that is installed on or after the 1st day of November 1990, shall be provided with effective automatic overload protection which if not wholly an integral part of the motor shall be so arranged that it operates in all live conductors of the motor, and where overload protection is achieved using other than a mechanical disconnection the motor terminal chamber shall be so labelled internally ‘Warning Electronic Overload’.”

(3) Regulation 108 of the principal regulations is hereby further amended by revoking subclauses (5) and (8).

24. Use of auto-transformers, choke coils, and resistors—Regulation 110 of the principal regulations is hereby amended by adding the following subclause:

“(6) A circuit tapped from a stator winding of a single phase motor is not permitted.”

25. Additional requirements for extra-low-voltage electric bells, buzzers, and signalling circuits—The principal regulations are hereby amended by revoking regulation 113.

26. Additional requirements for electric toys—The principal regulations are hereby amended by revoking regulation 114.

27. Additional requirements for portable handlamps—(1) The principal regulations are hereby amended by revoking regulation 115 (as amended by regulation 16 of the Electrical Wiring Regulations 1976, Amendment No. 1).

(2) The Electrical Wiring Regulations 1976, Amendment No. 1 are hereby consequentially amended by revoking regulation 16.

28. Additional requirements for radio, visual-reproduction, and sound reproduction apparatus—(1) The principal regulations are hereby amended by revoking regulation 116 (as amended by regulation 16 of the Electrical Wiring Regulations 1976, Amendment No. 6).

(2) The Electrical Wiring Regulations 1976, Amendment No. 6 are hereby consequentially amended by revoking regulation 16.

29. Additional requirements for high-voltage and extra-high-voltage installations—Regulation 122 (5) of the principal regulations is hereby amended by revoking paragraph (b).

30. Additional requirements for radio-interference suppression devices—(1) The principal regulations are hereby amended by revoking regulation 126 (as amended by regulation 20 of the Electrical Wiring Regulations 1976, Amendment No. 6).

(2) The Electrical Wiring Regulations 1976, Amendment No. 6 are hereby consequentially amended by revoking regulation 20.

31. Earthing prohibited—(1) Regulation 150 (1) of the principal regulations (as amended by regulation 22 of the Electrical Wiring Regulations 1976, Amendment No. 1) is hereby amended by revoking paragraph (a).

(2) The Electrical Wiring Regulations 1976, Amendment No. 1 are hereby consequentially amended by revoking regulation 22.

MARIE SHROFF,
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 28 days after the date of their notification in the *Gazette*, amend the Electrical Wiring Regulations 1976.

Regulation 2 amends the interpretation provisions in regulation 2 of the principal regulations.

Regulation 3 substitutes a reference to the Freshwater Fisheries Regulations 1983 in regulation 3 of the principal regulations.

Regulations 4 to 7 revoke regulations 20, 21, 22, and 23 of the principal regulations. These matters are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 8 amends regulation 42 of the principal regulations by removing the reference to a specific standard.

Regulation 9 amends regulation 48 of the principal regulations to clarify the meaning of the regulation.

Regulation 10 revokes regulation 58 of the principal regulations. These requirements are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 11 amends regulation 62 of the principal regulations by removing the reference to a specific standard.

Regulation 12 revokes regulation 81 of the principal regulations. Modern materials are now available for this type of work.

Regulation 13 amends regulation 83 (d) of the principal regulations by removing the reference to a specific standard.

Regulation 14 amends subclauses (12) and (13) of regulation 84 of the principal regulations by removing the reference to a specific standard.

Regulation 15 amends regulation 90 of the principal regulations by clarifying the intent of the regulation.

Regulation 16 substitutes a new regulation 94 of the principal regulations to bring the requirements for hazardous area equipment in line with international procedures and practices.

Regulation 17 revokes regulation 96 of the principal regulations. These requirements are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 18 amends regulation 97 of the principal regulations. It applies the specific height for lampholders to all installations and not only domestic installations.

Regulation 19 revokes subclause (3) of regulation 100 of the principal regulations. Plugs and sockets used in an installation are now required to comply with an approved standard.

Regulation 20 makes a grammatical change to regulation 103 of the principal regulations.

Regulation 21 amends subclauses (1), (3), and (4) of regulation 106 of the principal regulations. The requirements of subclauses (1) and (3) are covered by approved standards, and the requirements of subclause (4) are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 22 revokes regulation 107 of the principal regulations. These requirements are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 23 revokes subclauses (5) and (8), and amends subclauses (3) and (4) of regulation 108 of the principal regulations. Subclauses (3) and (4) allow for electronic motor control systems, and the requirements of subclause (8) are now contained in regulation 48.

Regulation 24 amends regulation 110 of the principal regulations by adding a new subclause which states that circuits tapped from a stator of a single phase motor are not permitted.

Regulation 25 revokes regulation 113 of the principal regulations. The requirements for transformers used in this type of installation must now comply with an approved standard.

Regulation 26 revokes regulation 114 of the principal regulations. These matters are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 27 revokes regulation 115 of the principal regulations. The requirements for handlamps are now contained in the appropriate approved standards.

Regulation 28 revokes regulation 116 of the principal regulations. The requirements for radio, visual-reproduction, and sound reproduction apparatus are now contained in the appropriate approved standard.

Regulation 29 revokes subclause (5) (b) of regulation 122 of the principal regulations. The radiation protection regulations are no longer in force.

Regulation 30 revokes regulation 126 of the principal regulations. These matters are now contained in code of practice ECP:3 Electrical Safety of Apparatus and Materials.

Regulation 31 revokes subclause (1) (a) of regulation 150 of the principal regulations. These matters are now contained in the appropriate approved standards.

Issued under the authority of the Acts and Regulations Publication Act 1989.

Date of notification in *Gazette*: 4 October 1990.

These regulations are administered in the Ministry of Energy.