

Serial Number 1938/1.



**THE ELECTRICAL WIRING REGULATIONS 1935,  
AMENDMENT NO. 1.**

GALWAY, Governor-General.

ORDER IN COUNCIL.

At the Government Buildings at Wellington, this 21st day of  
December, 1937.

Present :

THE RIGHT HON. M. J. SAVAGE PRESIDING IN COUNCIL.

**I**N pursuance and exercise of the powers and authorities conferred on him by the Public Works Act, 1928, and of every other power and authority enabling him in that behalf, His Excellency the Governor-General of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, doth hereby make the following regulations.

**REGULATIONS.**

1. These regulations may be cited as the Electrical Wiring Regulations 1935, Amendment No. 1.

2. These regulations shall be read together with and deemed to form part of the Electrical Wiring Regulations 1935\* (hereinafter called "the principal regulations").

3. The Schedule of Regulations Enacted prefixed to the text of the principal regulations is amended by inserting after the line "Part 15.—Permits for Wiring Work" the following line: "Part 16.—Miniature Direct Current Plant".

4. Regulation 12-01 of the principal regulations is amended by adding the following clauses thereto :—

"(3) These regulations shall not apply to any primary battery or installation connected thereto.

"(4) These regulations shall not apply to any self-contained direct current electrical generating set or installation connected thereto (hereinafter collectively referred to as 'plant') in respect of which the following requirements are fulfilled :—

"(a) That the pressure does not exceed 20 volts :

"(b) That the capacity does not exceed 500 watts :

"(c) That no part of the plant is connected to any electrical source of supply exceeding a pressure of 20 volts :

"(d) That the plant is installed for a period not exceeding two months.

\* *Gazette*, 6th September, 1935, Vol. III, page 2539.

“(5) In respect of a plant or installation to which Part 16 hereof applies so long as the provisions of the said Part 16 are complied with Parts 11, 12, 13, 14, and 16 and Regulations 59-01 and 61-11 hereof shall apply, but the other provisions of these regulations shall not apply.”

5. Regulation 12-02 of the principal regulations is amended by adding the following words:—

“Save that the electrical supply authority may grant permission for a temporary connection pending an inspection provided that the tests prescribed by Regulations 62-51 to 62-55 (both inclusive) hereof have (where applicable) been satisfied and that such temporary connection is made for a period not exceeding one month.”

6. The principal regulations are amended by inserting, following Part 15 thereof, the following regulations, to be headed—

“PART 16.—MINIATURE DIRECT CURRENT PLANT.

“16-01. This Part of these regulations applies to every self-contained direct current electrical generating set and every installation connected thereto (hereinafter collectively referred to as ‘plant’) in respect of which the following requirements are fulfilled:—

“(a) That the plant will be used for a period exceeding two months:

“(b) That the pressure does not exceed 20 volts:

“(c) That the capacity does not exceed 500 watts:

“(d) That no part of the plant is connected to any electrical source of supply exceeding a pressure of 20 volts.

“16-02. Every plant to which this Part of these regulations applies shall be installed in accordance with the following requirements:—

“(i) Every such plant shall be provided with a main switchboard having mounted thereon—

A charge and discharge ammeter accurate within 10 per cent.,

An automatic cut-out switch,

A double-pole switch, and

Two single-pole fuse-links.

“(ii) Every such installation shall be provided with a distribution board fixed on a wall as near the centre of the building as circumstances warrant.

“(iii) Every such distribution board shall have mounted thereon two bus-bars. Each bus-bar shall be provided with a cable socket or binding-post of a size suitable for the incoming mains. The bus-bar to which the positive conductor will be connected shall be equipped with a fuse-link for each subcircuit.

“(iv) Except in the case of aerial conductors and flexible cords, all conductors shall be fixed in position and shall consist of cables having a covering of tough rubber compound as prescribed by Regulation 23-71 hereof.

“(v) Every conductor between the generator and/or battery and the distribution board shall have a current-carrying capacity of not less than three-quarters of the connected load of the installation, and in no case shall the size be less than 7/036 inch or its equivalent.

- “ (vi) Every subcircuit conductor from the distribution board shall have a current-carrying capacity of not less than the total load connected thereto, and in no case shall the size be less than 1/044 inch or its equivalent nor shall the size be more than 3/036 inch or its equivalent if the conductors are to be looped-in at accessories.
- “ (vii) For the purposes of calculating the current in a subcircuit every point shall be rated at not less than 40 watts, consuming devices of a larger capacity (if any) being allowed for in full.
- “ (viii) Every flexible cord shall have a current-carrying capacity of not less than the total load connected thereto, and in no case shall the size be less than 23/0076 or its equivalent.
- “ (ix) Flexible cord shall be used only for pendants and the connecting of standard or portable lamps to the fixed wiring and shall be used only within the room in which it is connected to the fixed wiring.
- “ (x) In no case shall the current in any conductor exceed that prescribed by Tables IV and VIII in Division VII hereof.
- “ (xi) The size of conductors shall be so selected that the fall in pressure from the terminals of the generator and/or the battery to any and every point of the installation does not exceed 1 volt when the conductors are carrying the maximum demand under the practical conditions of service.
- “ (xii) Every aerial conductor shall be efficiently supported on insulators and shall be erected and maintained at a height of not less than 9 feet above ground-level except that in any part of the premises used by vehicles the minimum height shall be 12 feet.
- “ (xiii) Every circuit which is taken outside of the building containing the distribution board shall be run as a separate circuit from the distribution board.
- “ (xiv) The tough rubber sheathed cables may be installed without further protection of conduit or casing, provided that—
  - “ (a) Except as provided in paragraphs (c) and (d) hereof, they are secured by clips spaced at intervals not greater than 18 inches.
  - “ (b) Where running parallel with the ceiling joists and not immediately under a floor, they are attached to the side of such joists. Where the direction of the conductor is across the joists at any angle the conductor shall be passed through a hole of sufficient size drilled as close as possible to the ceiling or alternatively the conductor shall be attached to the side of soft-wood strips having a cross-sectional area of not less than 3 square inches with a minimum depth of 1 inch.
  - “ (c) Where under floors and running parallel with the joists, they may be laid flat on the ceiling and need not be secured by clips.
  - “ (d) Where enclosed within a hollow wall they need not be secured by clips: Provided that the support at the top of the wall has a radius not less than six times the external diameter of the sheathing and is made to grip firmly the cable.

“(e) Where liable to mechanical injury under normal conditions, they are protected by wood casing.

“(f) Where passing through party walls or fire-resisting floors, walls, partitions, and/or ceilings, the holes through which they pass are plugged with fire-clay or similar non-ignitable material, no space through which fire might spread being left around the cables.

“(xv) Where twin or other multicore cable is used no looping-in shall be done at any switch unless such switch is a ceiling switch and is mounted on the same block as the ceiling-rose. In all other cases a three-plate ceiling-rose shall be used and the looping-in shall be done at such ceiling-rose.

“(xvi) In no case shall a joint be made in any conductor.

“(xvii) Manholes shall be provided in ceilings to facilitate access to the roof for the purposes of inspection.

“(xviii) All switches, ceiling-roses, cut-outs, lamp-holders, and other accessories shall be of ample capacity and shall comply with the appropriate provisions of the said regulations.”

7. Regulation 23-32 of the principal regulations is amended by revoking clause (3) thereof.

8. Regulation 27-51 of the principal regulations is amended by omitting the words “comply with the appropriate British Standard Specification or its equivalent, and shall”.

9. Regulation 27-73 of the principal regulations is revoked, and the following substituted:—

“27-73. All plugs shall be constructed with provision for relieving any strain on the flexible cord where it is connected to the terminals.”

10. Regulation 27-79 of the principal regulations is amended by revoking clause (4) thereof, and substituting the following:—

“(4) No bayonet type adaptor shall be fitted to any appliance using more than 1.25 amperes and no Edison screw type adaptor shall be fitted to any appliance using more than 2.6 amperes.”

11. Regulation 36-01 of the principal regulations is amended by omitting from paragraph (b) thereof the words “plugs and sockets”, and substituting the word “plug-sockets”.

12. Regulation 43-11 of the principal regulations is amended by omitting from clause (2) thereof the words and figures “0.0048 square inch (19/26 S.W.G. or its equivalent)”, and substituting therefor “0.0042 square inch (1.083 inch, 37/012 inch, or their equivalent)”.

13. Regulation 43-13 of the principal regulations is amended by omitting from subparagraph (i) of paragraph (b) of clause (2) thereof the respective words and figures “(2 to 5 points)” and “(6 points and over)”, and substituting therefor “(2 to 6 points)” and “(7 points and over)” respectively.

14. Regulation 45-01 of the principal regulations is amended by revoking subparagraph (ii) of paragraph (f) thereof, and substituting the following:—

“(ii) Where terminating at any accessory and/or fitting (other than one mounted on a switchboard) screwed thereto, or provided with metal outlet-boxes or approved outlet-flanges or where the conduit is run on the surface, it may terminate in but not pass through a wooden block: Provided that where it is necessary to earth the accessory or fitting an approved earthing bushing shall be used. Where a metal

outlet-box is not provided with the standard length of thread the conduit shall be securely clamped thereto. Where a wooden block is used it shall comply with Regulation 47-81 hereof. All boxes and flanges shall be securely fixed; and”

15. Regulation 48-14 of the principal regulations is revoked, and the following substituted :—

“ 48-14. Where the starting current exceeds twice full-load current, and a double-throw starting switch with a fuse-link on one side in every live conductor is not used, every motor having a rating exceeding  $\frac{1}{2}$  horse-power and not exceeding 3 horse-power shall, in addition to the circuit fuse-links, be provided in each live conductor with—

“(a) A circuit-breaker equipped with a time-lag automatic overload release; or

“(b) A time-lag cut-out.”

16. Regulation 51-03 of the principal regulations is revoked, and the following substituted :—

“ 51-03. Every heating and/or cooking appliance shall be controlled as a whole by a switch in each live conductor mounted within easy reach of such appliance, save that the switch may be omitted in those cases where a plug and socket of a type approved for the purpose are used to connect such appliance to the fixed wiring and the socket is mounted within easy reach of the appliance.”

17. Regulation 54-01 of the principal regulations is amended by inserting after the words “ extra-low pressure ” the following words :  
“ and supply of electrical energy is obtained from some source which has one conductor connected to earth ”.

18. The principal regulations are amended by inserting following Regulation 54-03 the following regulation :—

“ 54-04. (1) No metallic sheathing of any cable, no metal conduit, and no other metal liable to become alive shall be earthed where—

“(a) Supply of electrical energy is obtained from the secondary winding of a double-wound transformer and such winding is not connected with earth and is operated at a voltage not exceeding low pressure; or

“(b) Supply of electrical energy is obtained from the generator of a motor-generator used to supply a medical and/or dental appliance.

“(2) The secondary winding of a double-wound transformer used to supply any medical and/or dental appliance and the generator winding of a motor-generator used to supply such an appliance shall not be connected to earth.”

19. The principal regulations are amended by inserting following Regulation 58-02 the following regulation :—

“ 58-03. No plug-socket shall be installed in any bathroom.”

C. A. JEFFERY,  
Clerk of the Executive Council.