



electrical focus

Supplement

Amendment No. 01 to WA Electrical Requirements

The WA Electrical Requirements document is amended as follows. These amendments were recommended by the WA Electrical Requirements Review Committee and are effective from the date of this Electrical Focus Supplement.

The updated WA Electrical Requirements document which reflects these amendments is available on the Office of Energy Website.

Page 1: "INTRODUCTION"

The number "13" in the second [italicised] paragraph of column 2 of the Introduction is replaced with "12".

Page 4: "DEFINITIONS"

The Figure 2.2 "Diagram explaining some common terms" on page 4 contains a notation "(30 metres maximum)" located below the "Underground Consumers Main" label, in each of the three diagrams.

The notation "30 metres maximum" is deleted from each diagram in Figure 2.2.

Page 5: Section 3.2 "EARTHING SYSTEM"

The third paragraph of Section 3.2 ("For high voltage installations, the combined earthing system shall be adopted") is deleted and replaced with:

"The earthing system for high voltage installations shall comply with Section 7 of the Wiring Rules"

Page 6: Section 3.5.2 "ELECTRICAL EQUIPMENT INRUSH CURRENT"

The entire text of Section 3.5.2 is deleted and replaced with:

"Unless authorised otherwise by the Network Operator, equipment shall be of a type provided with suitable current limiting so that the maximum inrush current complies with the table below.

For the purposes of this rule, inrush current means the total current drawn by the equipment on initial energisation or start-up.

Table 3.1 – Electrical Equipment Inrush Currents

LOCATION RATING	ELECTRICAL INRUSH CURRENT	MAXIMUM
Cities and major towns	Single phase	45 A
Rural and other areas (outside Cities and major towns)	Single phase	18 A
All areas	Three phase –	13 A
	Three phase –	Up to 1.5 kW
	Three phase – Exceeding 6.0 kW	6.5 A per 0.75 kW Between 1.5 and 6.0 kW 33 A plus 2.4 A per 0.75 kW

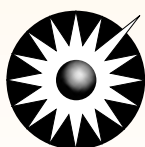
These limits may be exceeded if written approval of the Network Operator has been obtained.

Refer to Section 13 for the maximum inrush current limits for particular locations in Network Operators' areas.

Consumers shall negotiate with the Network Operator regarding the conditions for connection of any installation where the rating of any item of plant exceeds 75 kW."

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Page 7: Section 3.6 “NUMBER OF CONNECTIONS (SERVICES) TO A SINGLE LOT”

The text of the second paragraph is deleted and replaced with:

“If an installation extends over more than one lot, then only one connection will be provided unless the installation is divided into sections by fire rated walls or separate buildings. No part of the electrical installation of one section shall enter the physical area of another section.”

Page 7: Section 3.7.1 “RESIDENTIAL INSTALLATIONS”

The text of Section 3.7.1 is deleted and replaced with:

“For single lots with a gazetted road frontage and an area of up to 2500m², the meter shall be located such that it is no more than 30 metres from the street property boundary. For those “battle-axe” lots which have no street frontage, other than the driveway or part thereof, the meters may be located on the individual dwelling.

For situations which do not meet the above requirements, suitable arrangements must be made with the Network Operator.

For lots with an area exceeding 2500m², refer to the requirements of Sections 6 and 13.”

Page 18: Section 5.5.1 “NETWORK OPERATORS’ “DISTRICT” TYPE SUB-STATIONS”

The amendment of this section recognises the need for design and installation flexibility when locating main switchboards near “district” type substations.

The text of Section 5.5.1 is deleted and replaced with:

“District” type substations are those which incorporate a low voltage interconnection with the supply mains.

In all cases, the main switch for the consumer’s installation shall

comprise either a moulded case or withdrawable air circuit breaker (complete with overcurrent protection).

Where the installation main switchboard is contiguous with the network operator’s substation enclosure, then the consumers mains do not require overcurrent protection.

If the installation main switchboard is not contiguous with the substation enclosure, then consumers mains overcurrent protection must be provided in the substation.”

Page 47: Section 12.3 “PROTECTION AGAINST EARTH LEAKAGE CURRENT”

The text of Section 12.3 is deleted and replaced with:

“Where RCD protection is required in domestic and residential type electrical installations, two or more RCDs shall be provided to ensure that not all final sub-circuits for lighting and socket outlets in the installation are de-energised should one RCD operate.

For *existing* domestic and residential type installations, the following will apply:

(a) Part or full rewiring jobs:

At least two RCDs are mandatory if the electrical work includes replacement of the main switchboard’s control and protective devices.

(b) Addition of one new circuit:

Only the new circuit will require RCD protection (if not already provided).

(c) Addition of more than one new circuit:

A minimum of two RCDs is required.

(d) Where the owner of an existing installation has commissioned the fitting of RCD protection and no other alterations or additions are to be carried out:

One RCD may be installed, although two (or more) are *recommended*.

NOTE: RCD protection is not required for fixed electrical cooking appliances.”

Page 48: Section 12.6 “MINIMUM CROSS SECTIONAL AREA OF CONDUCTORS”

The text of Section 12.6 is deleted and replaced with:

“In domestic installations, conductors for final sub-circuits which supply socket-outlets installed less than 2.3m above the ground, floor or platform shall have a cross-sectional area of not less than 2.5mm².”

IP RATING OF ELECTRICAL EQUIPMENT IN LOCATIONS CONTAINING BATHS AND SHOWERS

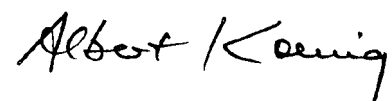
Clause 7.1 of AS/NZS 3000:2000 Australian/New Zealand Wiring Rules specifies that electrical equipment permitted to be installed in the new Zone 3 areas in locations containing baths and showers shall have at least IPX1 protection.

This requirement has been found to be unreasonably restrictive (Standards Australia is currently considering an amendment but it will be some time before that is implemented).

Therefore, the following new Section 12.7 is added to page 48 of the WA Electrical Requirements:

“12.7 SELECTION AND INSTALLATION OF ELECTRICAL EQUIPMENT IN LOCATIONS CONTAINING BATHS, SHOWERS OR OTHER FIXED WATER CONTAINERS

Electrical equipment which is to be installed in Zone 3 (as defined in Section 7 of AS/NZS 3000:2000 Australian/New Zealand Wiring Rules) need not be IPX1 protected provided that it is installed more than 0.3m above the floor.”



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