

Title	Plan circuit protection, and install and test distribution boards		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – plan circuit protection co-ordination for an electrical installation; – install and wire a distribution board and connect sub circuits; and – perform installation testing.
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Classification	Electrical Engineering > Electrical Installation and Maintenance
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Available grade	Achieved
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Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job.
- 2 Unit standards or equivalent prior knowledge and skills recommended:
Unit 32623, *Demonstrate knowledge of circuit protection and distribution board wiring*;
Unit 32624, *Demonstrate knowledge of electrical installation testing, fault finding, and rectification of discovered faults*.
- 3 Definition
Safe and sound practice – as it relates to the installation of electrical equipment is defined in AS/NZS 3000.
- 4 References
AS/NZS 3000 (version as cited in the Electricity (Safety) Regulations), *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*;
AS/NZS 3017:2007, *Electrical installations - Verification guidelines*;
AS/NZS 4836:2011, *Safe working on or near low-voltage electrical installations and equipment*;
Electricity (Safety) Regulations 2010;
or any current subsequent amended or replacement versions.
- 5 This unit standard can be used together with other relevant unit standards, additional learning and workplace training to meet the requirements of the Electrical Workers Registration Board (EWRB) core competencies, available at <https://www.ewrb.govt.nz>.
- 6 This unit standard applies to installations and equipment rated above extra-low voltage unless specifically stated.

- 7 Range
- a Candidates may refer to current legislation and Standards during assessment.
 - b Demonstration of safe working practices and installation in accordance with *safe and sound practice* are essential components of assessment of this unit standard.
 - c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
 - i legislation;
 - ii policies and procedures;
 - iii ethical codes;
 - iv Standards – may include but are not limited to those listed in Schedule 2 of the Electricity (Safety) Regulations 2010;
 - v applicable site, enterprise, and industry practice; and,
 - vi where appropriate, manufacturers' instructions, specifications, and data sheets.
- 8 Candidates are expected to locate and reference the relevant clauses in the Standards that relate to the electrical work being undertaken.
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Outcomes and performance criteria

Outcome 1

Plan circuit protection co-ordination for an electrical installation.

Performance criteria

- 1.1 Plan circuit protection arrangements to achieve co-ordination for an electrical installation.

Range may include but is not limited to – co-ordination of circuit protection between mains supply protection, submain cable and final sub-circuits.

Outcome 2

Install and wire a distribution board and connect sub-circuits.

Performance criteria

- 2.1 Install and wire a distribution board and connect sub-circuits.

Range evidence is required of a minimum of six sub-circuits.

Outcome 3

Perform installation testing.

Range testing to AS/NZS 3000 and with reference to AS/NZS 3017.

Performance criteria

- 3.1 Perform testing for the installation of a distribution board with sub-circuits and document the results.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 March 2022	N/A

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihanga.nz if you wish to suggest changes to the content of this unit standard.