

Title	Install electrical equipment in damp situations and install earthing and lighting		
Level	4	Credits	9

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – install and test earthing and equipotential bonding; – install electrical fittings and equipment in damp situations; and – install lighting.
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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 standard or equivalent prior knowledge and skills recommended:
 - Unit 32620 *Demonstrate knowledge of electrical plans, switching circuits, and lighting systems;*
 - Unit 32622 *Demonstrate knowledge of the national supply grid, MEN system, and earthing;*
 - Unit 32625 *Demonstrate knowledge of damp situations, SELV and PELV, and single-phase transformers.*
- 3 Definitions
 - Earthing system* – includes an earth electrode, main earthing conductor, neutral and earth busbars, MEN link, and equipotential bonding conductors. Some variation in the components of the earthing system is acceptable if an alternative system is installed.
 - Electrical equipment* – electrical apparatus or fixed wired appliance.
 - Electrical fittings* – electrical accessories and light fittings.
 - IP rating* – ingress protection rating.
 - MEN* – multiple earth neutral
 - 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 4836:2011, *Safe working on or near low-voltage electrical installations and equipment;*
 - New Zealand Building Code;

New Zealand Electrical Codes of Practice (NZECP) as cited by the Electricity (Safety) Regulations, available at <https://www.worksafe.govt.nz>; 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.

Outcomes and performance criteria

Outcome 1

Install and test earthing and equipotential bonding.

Performance criteria

- 1.1 Install and test an electrical installation earthing system.
- 1.2 Install and test the equipotential bonding of an electrical installation.

Outcome 2

Install electrical fittings and equipment in damp situations.

Range six fittings and two pieces of electrical equipment required across two or more installations.

Performance criteria

- 2.1 Plan the placement of fittings and equipment in damp zones.

2.2 Select appropriate types of electrical protection and IP ratings for fittings and equipment to be used in damp situations.

2.3 Install fittings and equipment in damp situations.

Outcome 3

Install lighting.

Performance criteria

3.1 Install lighting.

Range three different installations, each with more than three light fittings.

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.