

Title	Demonstrate knowledge of tools, fittings, and plans in the electrical industry		
Level	3	Credits	5

Purpose	<p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> – maintenance and safe use of hand and power tools; – common electrical fittings and/or accessories; and – electrical plans.
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Classification	Electrical Engineering > Core Electrical
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Available grade	Achieved
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Guidance Information

- 1 References

AS/NZS 3000 (version as cited in the Electricity (Safety) Regulations), *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*;
 AS/NZS 3760:2010, *In-service safety inspection and testing of electrical equipment*;
 AS/NZS 4836:2011, *Safe working on or near low-voltage electrical installations and equipment*;
 Health and Safety at Work Act 2015;
 or any current subsequent amendments and replacements.
- 2 Definitions

Common electrical fittings and accessories – refer to items that a new electrical worker should know about, and may include but are not limited to – switch, socket outlet, permanent connection unit, mechanism grid plate, cable (pin) clips, cable ties, earth rod, earth clamp, earth label, circuit breaker, fitting with a specific IP rating, cord grip plug and socket, flush box, surface enclosure, junction box, cable connector, cable gland, line tap.
EWRB – Electrical Workers Registration Board.
PPE – personal protective clothing and equipment includes but are not limited to – overalls, safety footwear, gloves, gauntlets, waterproof gear, eye protectors, head protectors, hearing protectors, breathing apparatus.
- 3 This unit standard can be used together with other relevant unit standards, additional learning and workplace training to meet the requirements of the EWRB core competencies, available at <https://www.ewrb.govt.nz>.
- 4 This unit standard applies to installations and equipment rated above extra-low voltage unless specifically stated.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of maintenance and safe use of hand and power tools.

Performance criteria

- 1.1 Identify hand and power tools used for common electrical jobs and describe the care and the possible dangers associated with their use.
- Range three different hand tools, two different power tools;
hand tools may include but are not limited to — side cutters, pliers, screwdrivers, strippers, spanners;
power tools may include but are not limited to — drills, impact drivers, saws, grinders.
- 1.2 Identify appropriate PPE and electrical safeguards to use with power tools for common electrical jobs.
- Range two power tools.
- 1.3 Describe the purpose of AS/NZS 3760.
- 1.4 Explain the reasons for testing and tagging of electrical equipment.

Outcome 2

Demonstrate knowledge of common electrical fittings and/or accessories.

Performance criteria

- 2.1 Identify common electrical fittings and accessories and/or a suitable application for each.
- Range a total of ten different electrical items.
- 2.2 Identify the ratings and environmental suitability of electrical fittings and/or accessories.
- Range a total of three different electrical items.
- 2.3 Identify fastenings and installation tools suitable to install fittings and/or accessories onto a variety of substrates.
- Range at least three different substrates;
substrates may include but are not limited to — gib/plaster board, hollow structures, masonry and concrete, metal surfaces, fibre cement, glass, tiles.

Outcome 3

Demonstrate knowledge of electrical plans.

Performance criteria

3.1 Describe the function and use of plan legends, plan specifications and scales.

3.2 Identify typical electrical symbols, contact positions and configurations.

Range at least eight in total.

3.3 Identify the function of circuits on entry level electrical construction plans.

Range layout plan, schematic diagram.

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.