

<b>Title</b>	<b>Demonstrate and apply knowledge of theory and practice for registration of electrical workers (stage 2)</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	<p>This unit standard is for people who are completing an electrical licence and want to become registered and licensed with the Electrical Workers Registration Board.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– demonstrate and apply health and safety practices in an electrical workplace</li> <li>– demonstrate and apply knowledge of extension leads for industrial applications</li> <li>– test an electrical appliance</li> <li>– demonstrate and apply knowledge of residual current devices (RCDs)</li> <li>– install, wire, and test a given electrical project.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Electrical Standards and Statutes
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<b>Available grade</b>	Achieved
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<b>Prerequisites</b>	Unit 29749, <i>Demonstrate and apply knowledge of theory and practice for registration of electrical workers (stage 1)</i> , or demonstrate equivalent knowledge and skills.
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### Guidance Information

- 1 This unit standard may be used for learning and assessment off-job.
- 2 Under the Electricity Act 1992 the Electrical Workers Registration Board (EWRB) has a responsibility to set registration criteria for electrical workers and ensure that all persons applying for electrical registration are competent.
- 3 As part of the process to be eligible for registration as electrical workers, candidates must complete and pass a Stage 2 EWRB approved assessment which is based on the requirements of the EWRB *Teaching Guidelines*. Electricians, Electrical Engineers, Electrical Installers must also pass the EWRB Regulations examination.

The EWRB Stage 2 examination is the assessment tool for this unit standard, and credit for this unit standard may only be granted on evidence of passing this examination.

However, in terms of meeting the above requirement, candidates who have been awarded recognition of equivalent knowledge and skills from another Regulatory Body may gain exemption from the EWRB Stage 2 examination.

#### 4 References

AS/NZS 3000 (version as cited in the Electricity (Safety) Regulations), *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*

Electricity Act 1992

Electricity (Safety) Regulations 2010

EWRB *Teaching Guidelines* available at [Teaching guidelines and resources | Electrical Workers Registration Board \(ewrb.govt.nz\)](https://www.ewrb.govt.nz/teaching-guidelines-and-resources/) The New Zealand Electrical Codes of Practice, available from [WorkSafe New Zealand](https://www.worksafe.govt.nz/) and all subsequent amendments and replacements.

#### 5 Definitions

*Industry practice* – those practices that competent practitioners within the industry recognise as current industry best practice.

*MEN* – Multiple Earth and Neutral system.

*PVC* – Polyvinyl Chloride.

*RCDs* – Residual Current Devices.

#### 6 Range

a Candidates must refer to current legislation and Standards during assessment.

b Material required for EWRB examinations is available at [Teaching guidelines and resources | Electrical Workers Registration Board \(ewrb.govt.nz\)](https://www.ewrb.govt.nz/teaching-guidelines-and-resources/).

c All evidence presented for assessment against 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

vi where appropriate manufacturers; instructions, specifications, and data sheets.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate and apply health and safety practices in an electrical workplace.

#### Performance criteria

1.1 Explain cardiopulmonary resuscitation.

1.2 Apply safe working practices and procedures in an electrical workplace.

### Outcome 2

Demonstrate and apply knowledge of extension leads for industrial applications.

**Performance criteria**

- 2.1 Describe and make two single-phase leads.
- 2.2 Describe and make a three-phase lead.

**Outcome 3**

Test an electrical appliance.

**Performance criteria**

- 3.1 Test a Class I portable electrical appliance.  
range – must include the leakage current method.

**Outcome 4**

Demonstrate and apply knowledge of RCDs.

**Performance criteria**

- 4.1 Explain RCDs.
- 4.2 Install RCDs for personal protection.
- 4.3 Test portable RCDs for compliance.

**Outcome 5**

Install, wire, and test a given electrical project.

**Performance criteria**

- 5.1 Visually check of sub-circuit wiring for compliance.
- 5.2 Test an existing installation main earthing conductor and equipotential bonding and protective earthing conductors for compliance.
- 5.3 Test sub-circuit wiring for polarity and correct connections for compliance.
- 5.4 Test switchboard mounted RCDs affording personal protection for compliance.
- 5.5 Test single-phase and three-phase sub-circuits, using appropriate test instruments, to obtain voltage, current and earth fault loop impedance values.
- 5.6 Design, install, and terminate sub-circuit wiring for single-phase lighting and socket-outlets, and three-phase socket-outlets enclosed in PVC conduit for compliance.

- 5.7 Assemble and wire a MEN switchboard for a domestic installation that incorporates correct components, fittings, layout, wiring, and terminations for compliance.
- 5.8 Design, install and connect electrical appliance control circuits including protective devices for domestic water heating or space heating or similar applications.
- 5.9 Design, install, terminate and protected lighting control circuits suitable for switching lighting banks in commercial and industrial applications. Control circuits are to include light sensing devices, contactors, or relays.

<b>Planned review date</b>	31 December 2028
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 November 2016	31 December 2025
Review	2	28 March 2024	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	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 the Waihanga Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@WaihangaAraRau.nz](mailto:qualifications@WaihangaAraRau.nz) if you wish to suggest changes to the content of this unit standard.