

Title	Demonstrate cable handling and fixing techniques, pre-wire electrical circuits, and join and test TPS cables		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – demonstrate appropriate cable handling and fixing techniques; – pre-wire electrical circuits; and – join and test TPS cables.
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Classification	Electrical Engineering > Core Electrical
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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. However, Outcome 3 may be assessed in a classroom, workshop, or a simulated work environment.
- 2 Unit standard or equivalent prior knowledge and skills recommended:
Unit 32613, Demonstrate knowledge of cords, cables, and cable installation.
- 3 Definitions
Different situations – are situations that have different techniques for running the cables.
Safe and sound practice – as it relates to the installation of electrical equipment is defined in AS/NZS 3000.
TPS – thermoplastic-sheathed cable.
- 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 3008.1.2:2017, *Electrical installations - Selection of cables, Cables for alternating voltages up to and including 0.6/1 kV - Typical New Zealand conditions*;
AS/NZS 4836:2011, *Safe working on or near low-voltage electrical installations and equipment*;
Electricity (Safety) Regulations 2010;
New Zealand Building Code;
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

Demonstrate appropriate cable handling and fixing techniques.

Performance criteria

- 1.1 Use appropriate cable handling techniques to install cables.

Range three different situations;
may include but is not limited to – leaving enough length, observing minimum cable bend radius, protection at sharp corners, labelling cable ends, no damage to cable.

- 1.2 Use suitable fixings to secure cables in place.

Range three different installations;
suitable fixings may include but are not limited to – cable clips, staples, saddles, cable ties.

Outcome 2

Pre-wire electrical circuits.

Performance criteria

2.1 Pre-wire electric circuits in different situations.

Range two different situations;
may include but is not limited to – timber structures, metal structures, concrete structures, in concrete, underground.

2.2 Install cables in structures to comply with the requirements of the NZ Building Code.

Range two different installations.

Outcome 3

Join and test TPS cables.

Range one indoor or interior, one underground or exterior.

Performance criteria

3.1 Select and use an appropriate joining system for TPS cables.

3.2 Carry out subsequent cable tests on jointed cables.

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.