

Title	Demonstrate knowledge of wiring support systems and cable installation		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to demonstrate knowledge of: <ul style="list-style-type: none"> – wiring support systems; and – cable installation.
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Classification	Electrical Engineering > Core Electrical
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Available grade	Achieved
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Guidance Information

- 1 Unit standards or equivalent prior knowledge and skills recommended:
Unit 32615, *Demonstrate cable handling and fixing techniques, pre-wire electrical circuits, and join and test TPS cables*;
Unit 32616, *Apply knowledge of common cords, cables, and electrical fittings*.
- 2 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*;
New Zealand Building Code;
or any current subsequent amendments and replacements.
- 3 Definitions
TPS – tough plastic sheath or thermo-plastic sheathed.
XLPE – is the recognized abbreviation for cross-linked polyethylene.
- 4 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>.
- 5 Candidates are expected to locate and reference the relevant clauses in the Standards relating to this unit standard.
- 6 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 wiring support systems.

Performance criteria

- 1.1 Outline the selection and installation requirements of common cable support systems.
- Range three support systems; may include but is not limited to – steel, rigid and flexible PVC conduit, trunking/trough/ducting, cable ladder/tray, underground systems, catenary support systems, pendant type accessory systems, trailing cables.
- 1.2 Outline the general principles of moisture and fire barrier ratings for cable penetrations in installations.
- Range installing cables, maintaining existing ratings when adding cables.
- 1.3 Explain and calculate the effects on cord and cable current carrying capacity.
- Range must include but is not limited to – grouping, length, cross sectional area, ambient temperature.

Outcome 2

Demonstrate knowledge of cable installation.

Performance criteria

- 2.1 Identify suitable applications and any specific installation considerations or requirements for cable types.
- Range two cable types; may include but is not limited to – TPS, elastomer sheathed (rubber), XLPE, neutral screen, high temperature cables.
- 2.2 Identify and describe the appropriate types of connections required when jointing and terminating conductors.
- Range two different conductors; may include but is not limited to – copper conductors, aluminium conductors, earthing conductors, aerial conductors.

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

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihanga 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.