

<b>Title</b>	<b>Select, install, and commission a variable frequency drive</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	<p>This unit standard covers selection and installation of a variable frequency drive. It is intended for people wishing to qualify as electricians.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– establish and report on the suitability of selected variable frequency drive to meet job requirements; and</li> <li>– install, test, and commission a variable frequency drive.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Electrical Installation and Maintenance
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job.
- 2 Definitions
 

*EMC* – electromagnetic compatibility.

*Safe and sound practice* – as it relates to the installation of electrical equipment is defined in AS/NZS 3000:2007, *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*.
- 3 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.
- 4 Recommended skills and knowledge: Unit 5926, *Demonstrate knowledge of programmable logic controllers (PLCs)*, or demonstrate equivalent knowledge and skills.

## Outcomes and performance criteria

### Outcome 1

Establish and report on the suitability of selected variable frequency drive to meet job requirements.

#### Performance criteria

- 1.1 Ensure the selected variable frequency drive meets the electrical and environmental requirements based on specifications and client requirements and prepare a report on the suitability of the selected variable frequency drive in terms of motor requirements.

### Outcome 2

Install, test, and commission a variable frequency drive.

#### Performance criteria

- 2.1 Install the variable frequency drive giving consideration to ventilation and distance from other devices and existing power and data cabling.
- 2.2 Install EMC compliant cabling, earthing, and other components in accordance with drawings where available, and manufacturers' instructions.
- 2.3 Establish and set variable frequency drive parameters.
- 2.4 Establish expected test results before connection.
- 2.5 Connect and carry out functional and safety tests and prepare a test report.
- 2.6 Commission the variable frequency drive.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 July 2016	31 December 2025
Review	2	24 March 2022	31 December 2025

<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>.