

Title	Select, install, and commission a variable frequency drive		
Level	4	Credits	2

Purpose	<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"> – establish and report on the suitability of selected variable frequency drive to meet job requirements; and – install, test, and commission a variable frequency drive.
----------------	--

Classification	Electrical Engineering > Electrical Installation and Maintenance
-----------------------	--

Available grade	Achieved
------------------------	----------

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 2027
Review	2	24 March 2022	31 December 2027
Rollover and Revision	3	25 May 2023	31 December 2027

Consent and Moderation Requirements (CMR) reference

0003

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