

<b>Title</b>	<b>Demonstrate and apply knowledge of electrotechnology engineering construction and testing skills</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>This unit standard covers the development of practical skills, as well as knowledge and application of safe working practices and safety regulations requirements for an electrotechnology workshop assembly environment.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>- construct an electrotechnology product to a given specification following safe workshop practice; and</li> <li>- test an electrotechnology product to ensure performance is, in accordance with the given specification.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Electrotechnology
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<b>Available grade</b>	Achieved
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**Guidance Information**

- 1 This unit standard is intended for use in engineering courses at diploma level with assessment primarily against laboratory assignments.
- 2 References  
Electricity Act 1992;  
Electricity (Safety) Regulations 2010;  
Hazardous Substances and New Organisms Act 1996;  
Health and Safety at Work Act 2015;  
Health and Safety in Employment Regulations 1995;  
and all subsequent amendments and replacements.
- 3 Definition  
*Industry practice* – practice used and recommended by organisations involved in the electrotechnology industry.
- 4 Evidence for the outcomes of this unit standard must be presented for the following:
  - a electrotechnology product – either a light electrotechnology product, for example, an electronic assembly comprising a printed circuit board, freely mounted components, associated wiring and packaging; or a heavy electrotechnology product, for example, an industrial electric motor or single phase switchboard. Evidence of one product is required;
  - b handtools – screwdrivers, spanners, torque wrench, power drill, rivet gun, soldering iron;

- c electrotechnology equipment and tools – either appropriate to light electrotechnology or heavy electrotechnology applications.
- 5 All measurements are to be expressed in Système International (SI) units, and, where required, converted from Imperial units into SI units.
- 6 All activities must comply with: any policies, procedures, and requirements of the organisations involved; the standards of relevant professional bodies; and any relevant legislative and/or regulatory requirements.
- 7 Range
  - a performance in relation to the outcomes of this unit standard must comply with the Health and Safety at Work Act 2015
  - b laboratory and workshop safety practices are to be observed at all times.

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## Outcomes and performance criteria

### Outcome 1

Construct an electrotechnology product to a given specification following safe workshop practice.

Range electrotechnology product to comprise in the order of twenty components.

#### Performance criteria

- 1.1 Components and materials are selected and stored according to specification requirements in accordance with industry practice.

Range temperature, moisture, electrostatic charge.

- 1.2 Product is constructed following industry and safe working practices and with regard to mechanical, electrical, and operational performance of the product, and product quality and safety.

### Outcome 2

Test an electrotechnology product to ensure performance is in accordance with the given specification.

#### Performance criteria

- 2.1 Tests are conducted in accordance with industry practice to confirm that the product performs to specification in accordance with industry and safe working practice.

Range tests to include but are not limited to – mechanical, electrical, operational, performance, quality, safety.

**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	27 April 2000	31 December 2013
Revision	2	3 April 2001	31 December 2013
Review	3	18 December 2006	31 December 2024
Rollover and Revision	4	15 March 2012	31 December 2024
Revision	5	15 January 2014	31 December 2024
Rollover and Revision	6	25 March 2021	31 December 2024
Review	7	2 March 2023	31 December 2024

<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>.