

Title	Demonstrate and apply knowledge to assemble switchboards		
Level	4	Credits	13

Purpose	<p>This unit standard is for people engaged in the manufacture of switchboards in the electrotechnology industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – prepare components for assembly of switchboards; – assemble switchboard enclosures; – fit switchgear components; – communicate switchboard fabrication difficulties; and – verify the suitability of switchboard assembly.
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Classification	Electrical Engineering > Electric Switchboards
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Available grade	Achieved
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Explanatory notes

- 1 This unit standard may be used for learning and assessment on-job.
- 2 References

Accident Compensation Act 2001;
 AS/NZS 3000:2007 *Electrical installations (known as the Australian/New Zealand Wiring Rules)*;
 AS/NZS 3439.4:2009, *Low-voltage switchgear and control gear assemblies – Particular requirements for assemblies for construction sites (ACS)*;
 Electricity Act 1992;
 Electricity (Safety) Regulations 2010;
 Health and Safety at Work Act 2015;
 The New Zealand Electrical Codes of Practice, available from [WorkSafe New Zealand](#);
 and all subsequent amendments and replacements.
- 3 Definitions

Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.
Safe and sound practice – this relates to the installation of electrical equipment and is defined in AS/NZS 3000:2007.
- 4 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 evidence presented for assessment against 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.

Outcomes and evidence requirements

Outcome 1

Prepare components for assembly of switchboards.

Evidence requirements

- 1.1 Confirm quality, quantity, and type of supplied components against assembly specifications.
- 1.2 Carry out processes to return and replace damaged stock and/or order parts to cover shortfall.

Outcome 2

Assemble switchboard enclosures.

Range may include but is not limited to – cabinets, cubicles, frameworks.

Evidence requirements

- 2.1 Safely assemble enclosures in accordance with specifications and industry practices.
- 2.2 Select and safely assemble components in a manner that optimises production efficiency and meets specification.

Outcome 3

Fit switchgear components.

Evidence requirements

- 3.1 Fit components to the enclosure ensuring ease of access for current and subsequent access and termination.
- 3.2 Use fixings and techniques to optimise production efficiency in accordance with specifications.
- 3.3 Secure components in the positions defined by the drawings and/or within the tolerances specified in the manufacturers' instructions.

Outcome 4

Communicate switchboard fabrication difficulties.

Evidence requirements

- 4.1 Explain in detail impractical fabrication requirements on drawings to the appropriate person.
- 4.2 Explain fabrication options to overcome a perceived fabrication difficulty.
- 4.3 Communicate fabrication difficulty affecting safety and/or function in a manner that permits investigation and remedy.
- 4.4 Obtain authority for variation to specifications.

Outcome 5

Verify the suitability of switchboard assembly.

Evidence requirements

- 5.1 Confirm and install all components in accordance with drawings, specifications, and any authorised variations.
- 5.2 Confirm switchboard dimensions are in accordance with specifications.
- 5.3 Mark electrical connections on the assembly and provide connection and installation instructions.
- 5.4 Confirm and install shipping breaks in accordance with specifications.

Replacement information	This unit standard replaced unit standard 14972.
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Planned review date	31 December 2021
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 November 2016	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>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses

of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.