

Title	Use and maintain test instruments used in the high voltage electricity supply industry		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to, in the high voltage electricity supply industry: interpret technical specifications for test equipment and explain the principles of equipment operation; carry out calibration checks and apply correction factors; use test equipment to carry out tests; and maintain and handle test equipment used.
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Classification	Electricity Supply > Electricity Supply - Testing
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Available grade	Achieved
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Guidance Information

- Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.
- Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015; and any subsequent amendments and replacements; Electricity Act 1992; Electricity (Safety) Regulations 2010; Electricity supply industry codes of practice and documented enterprise procedures, including *Safety Manual – Electricity Industry* (SM-EI) (2015) Wellington: Electricity Engineers' Association, available at www.eea.co.nz.
- Definitions
Asset owner refers to a participant who owns or operates assets used for generating or conveying electricity.
Industry requirements include all asset owner requirements; manufacturers' specifications; and enterprise requirements which may include the documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.
- Test equipment may include – ohmmeters, voltmeters, capacitance meters, current meters, multimeters, multi-input event recorders, oscilloscopes, timers, ductor testers, high voltage test sets, variable voltage transformers.
- It is recommended people achieve Unit 10507, *Use personal protective equipment in an electricity supply environment*; and Unit 14700, *Apply and remove safety measures in an electricity supply environment* or demonstrate equivalent skills and knowledge, before being assessed against this unit standard.

Outcomes and performance criteria

Outcome 1

Interpret technical specifications for test equipment used in the high voltage electricity supply industry and explain the principles of equipment operation.

Range evidence for three different types of test equipment is required.

Performance criteria

1.1 Technical specification for test equipment is interpreted.

Range may include but is not limited to – information from manufacturer's data and manuals, client standard test procedures, calibration certificates.

1.2 Operation and functions of test equipment are explained.

1.3 Scale ranges that apply for each item of equipment are described.

Range may include but is not limited to – application of correct range for test application, application of multipliers, polarity, reading correction factors.

Outcome 2

Carry out calibration checks of test equipment used in the high voltage electricity supply industry and apply correction factors.

Performance criteria

2.1 The accuracy and calibration standard for the range of test equipment is identified.

2.2 Correction factors are applied to test results.

Range may include but is not limited to – calculating and providing corrected results.

2.3 Safety implications associated with using test equipment are identified and safety measures are applied.

Range may include but is not limited to – barriers around test area, signs, warning lights, provision of de-energising earths for after-test discharge.

Outcome 3

Use test equipment to carry out tests in the high voltage electricity supply industry.

Performance criteria

3.1 Test equipment is used in accordance with the manufacturers' instructions.

Range may include but is not limited to – storage, handling, connection, use.

3.2 Results from the tests are documented.

Range may include but is not limited to – value, range multipliers, ambient conditions, equipment temperature.

3.3 The documented results are adjusted for correction and analysed for compliance with the required standard.

Range may include but is not limited to – manufacturer's specifications, client requirements.

Outcome 4

Maintain and handle test equipment used in the high voltage electricity supply industry.

Performance criteria

4.1 Equipment is handled carefully without jarring.

4.2 Equipment is set up in accordance with safety procedures.

4.3 Equipment is securely stored in dust-free and dry storage.

4.4 Equipment is sent for calibration and accuracy checks as required by standard procedures.

Range may include but is not limited to – calibration certificates, register of calibration.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 April 1998	31 December 2012
Revision	2	11 February 2004	31 December 2012
Review	3	19 May 2006	31 December 2012
Review	4	8 December 2011	31 December 2022
Review	5	27 February 2020	N/A

Consent and Moderation Requirements (CMR) reference	0120
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Connexis – Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.