

Title	Response check, calibrate, and maintain fixed gas detection apparatus in hazardous areas		
Level	4	Credits	1

Purpose	<p>This unit standard is for electricians or technicians responsible for maintenance of electrical apparatus in explosive atmospheres.</p> <p>People credited with this unit standard are able to: response check, calibrate, and maintain fixed gas detection apparatus in hazardous areas.</p>
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Classification	Explosive Atmospheres > Electrical Apparatus in Explosive Atmospheres - Operations
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Available grade	Achieved
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Guidance Information

- 1 This unit standard has been designed for training and assessment on-job or off-job in a simulated environment. It is recommended candidates achieve Unit 26742, *Demonstrate underpinning knowledge of permanently installed gas detection apparatus in explosive atmospheres*; Unit 17058, *Maintain electrical equipment in explosive atmospheres*; and Unit 24976, *Use and maintain the integrity of portable gas detection devices*, or demonstrate equivalent knowledge and skills, prior to enrolment in this unit standard.
- 2 This unit standard is intended to be assessed against in conjunction with other work skills related to operation, installation, maintenance, or servicing of plant or machinery in explosive atmospheres.
- 3 Competence is to be demonstrated in relation to any classified hazardous areas and explosion-protection techniques. Competencies can be demonstrated for circuits operating at extra low voltage. Where the competency is demonstrated on wiring/cabling and apparatus that operate at extra low voltage and low voltage, registration with the Electrical Workers Registration Board is required. For work on wiring and apparatus operating above 1000 V AC or 1500 V DC, competency in high voltage work must be held. A copy of a candidate's current practicing license must be presented at the time of assessment.

4 References

- AS/NZS 1826:2008, *Electrical equipment for explosive gas atmospheres – Special protection – Type of protection 's'*
- AS/NZS 3000 (version as cited in the Electricity (Safety) Regulations), *Electrical installations (known as the Australian/New Zealand Wiring Rules)*
- AS/NZS 4641:2018, *Electrical apparatus for detection of oxygen and other gases and vapours at toxic levels – General requirements and test methods*
- AS/NZS 4761.1 (version as cited in the Electricity (Safety) Regulations), *Competencies for working with electrical equipment for hazardous areas (EEHA) - Competency Standards*
- AS/NZS 60079.0 (version as cited in the Electricity (Safety) Regulations), *Explosive atmospheres – Part 0: Equipment – General requirements*
- AS/NZS 60079.1:2015, *Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures 'd'*
- AS/NZS IEC 60079.10.1:2022, *Explosive atmospheres – Part 10.1: Classification of areas – Explosive gas atmospheres*
- AS/NZS 60079.11 (version as cited in the Electricity (Safety) Regulations), *Explosive atmospheres – Part 11: Equipment protection by intrinsic safety 'i'*
- AS/NZS 60079.14 (version as cited in the Electricity (Safety) Regulations), *Explosive atmospheres – Part 14: Electrical installations design, selection and erection*
- AS/NZS 60079.17 (version as cited in the Electricity (Safety) Regulations), *Explosive atmospheres – Part 17: Electrical installations inspection and maintenance*
- AS/NZS 60079.20:2012, *Explosive atmospheres – Part 20.1: Material characteristics for gas and vapour classification - Test methods and data*
- AS/NZS 60079.29.1:2017, *Explosive atmospheres – Part 29.1: Gas detectors – Performance requirements of detectors for flammable gases*
- AS/NZS 60079.29.2 (version as cited in the Electricity (Safety) Regulations), *Explosive atmospheres – Gas detectors – Selection, installation, use and maintenance of detectors for flammable gases and oxygen*
- Electricity Act 1992
- Electricity (Safety) Regulations 2010
- Workplace Exposure Standards and Biological Exposure Indices Edition 13*, available from WorkSafe New Zealand www.worksafe.govt.nz, and associated regulations
- Health and Safety at Work Act 2015, and associated regulations and their subsequent amendments and replacements.

5 Definition

Verification dossier – a set of documents showing the complete compliance history of electrical apparatus and installations within hazardous areas, as defined in Standards.

6 Range

- a Assessment is to take account of variations between the industry sectors and enterprises. For example, apparatus used in dust-explosive atmospheres will be different in some respects from that used in a petrochemical plant.
- b Health and safety policies and procedures may include but are not limited to – work permits and clearances, hazard monitoring, evacuation procedures, plant and electrical isolation.

- c Established maintenance procedures must be followed.
- d All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with safe working principles and practices, legislation, workplace policies and procedures, Standards, safe and sound practice, and industry practice; and, where appropriate, manufacturers' instructions, specifications, and data sheets.

Outcomes and performance criteria

Outcome 1

Response check, calibrate, and maintain fixed gas detection apparatus in hazardous areas.

Range local site, remote site.

Performance criteria

- 1.1 Check and calibrate gas detection in accordance with the apparatus manufacturers' documentation, established site requirements, and instrument accuracy in a manner that does not reduce the integrity afforded by the apparatus design.
- 1.2 Document the installation and maintenance of gas detection in accordance with requirements and forward it to personnel responsible for compiling and maintaining verification dossier.

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 May 2011	31 December 2025
Review	2	2 March 2023	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>.

Comments on this unit standard

Please contact the Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@WaihangaAraRau.nz if you wish to suggest changes to the content of this unit standard.