

Title	Commission special hazards fire detection and alarm systems		
Level	4	Credits	20

Purpose	<p>This unit standard is for the training of fire alarm technicians and covers commissioning of special hazards fire detection and alarm systems in accordance with standard NZS 4512:2010 and other relevant and accepted standards.</p> <p>People credited with this unit standard are able to: prepare for commissioning of special hazards fire detection and alarm systems; conduct examination and tests for special hazards fire detection and alarm systems; and complete documentation and handover for special hazards fire detection and alarm systems.</p>
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Classification	Mechanical Engineering > Fire Detection and Alarm Systems
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Available grade	Achieved
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Guidance Information

- Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

Building Act 2004,
Electricity Act 1992,
Electricity (Safety) Regulations 2010,
Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*,
New Zealand Building Code,
AS ISO 14520.1-2009, *Gaseous fire-extinguishing systems – Physical properties and system design*,
AS/NZS 3000:2018, *Electrical Installations* (known as the Australian/New Zealand Wiring Rules),
NZS 4512:2021, *Fire Detection and Alarm Systems in Buildings*.
- Definitions**

Commissioning is the process by which the newly installed components and systems are tested to verify if it functions according to its design objectives and/or specifications and brought into operation.

Equipment specifications refer to manufacturer's specifications for installation, operation, and performance of their equipment.

Fire detection and alarm system refers to an installation of apparatus, which performs specified fire related functions in response to the operation of a detector, manual call point, or other input. It includes – manual call points, detectors, control and indication equipment, alerting devices, interconnections, fittings, labels, energy sources, and remote signalling devices and may include emergency warning and intercommunication systems (EWIS) where applicable.

Installation specifications refer to the specifications for all details of a particular installation. Typically, this includes installation drawings, installation procedures, parts and cabling schedules, test and commissioning procedures, and verbal instructions.

Special hazards fire detection and alarm system refers to fire detection and alarm systems which apply electrical actuation to operate mechanical extinguishing systems. It includes water based, chemical, and clean agent gas flood installations.

Standards refer to AS ISO 14520.1-2009, NZS 4512:2021, and AS/NZS 3000:2018.

Workplace procedures refer to the documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, charging of time and materials, management of drawings and documentation, procedures to comply with legislative and local body requirements.

3 Assessment

- a. All activities must comply with relevant legislative and/or regulatory requirements and recognised codes of practice.
- b. All activities must be completed and reported within agreed timeframes.
- c. All installation work must comply with the Building Code, and standards AS/NZS 3000:2018 and NZS 4512:2021
- d. All activities must be done in accordance with applicable standards and workplace procedures.

4 Range

For assessment purposes, competence must be demonstrated on at least three systems.

5 Recommended skills and knowledge:

Unit 28816, *Demonstrate knowledge of special hazards fire detection and alarm systems and installation practices*; and unit 28817, *Demonstrate knowledge of commissioning tests and procedures for special hazards fire detection and alarm systems*; or demonstrate equivalent knowledge and skills.

Outcomes and performance criteria

Outcome 1

Plan and prepare for commissioning of special hazards fire detection and alarm systems.

Performance criteria

- 1.1 Site access and timing of the commissioning works are agreed with site managers or customers.

- 1.2 Site occupational safety and health implications for self and others are identified and control measures are put in place.
- 1.3 Installation specifications and documentation are reviewed to determine scope and detail of the commissioning works required, and to identify key personnel.
- 1.4 All equipment required for commissioning is identified and available.

Outcome 2

Conduct examination and tests for special hazards fire detection and alarm systems.

Performance criteria

- 2.1 Visual examinations are conducted.
- 2.2 Tests on electrical equipment are conducted in accordance with standards and equipment specifications.
- 2.3 Operational tests are conducted in accordance with standards and equipment specifications, and any default system password changed.
- 2.4 Compliance with the Electricity Regulations 2010 is confirmed with authorised personnel.

Outcome 3

Complete documentation and handover for special hazards fire detection and alarm systems.

Performance criteria

- 3.1 Documentation is completed and assembled to comply with standards and workplace procedures.
- 3.2 Site manager is advised of completion of commissioning.
- 3.3 Documentation is distributed to appropriate personnel.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 October 2015	31 December 2026
Review	2	27 June 2024	N/A

Consent and Moderation Requirements (CMR) reference	0013
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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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.