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| Title | Inspect and test interconnected control and fire detection and alarm systems | | |
| Level | 4 | Credits | 30 |

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| Purpose | <p>This unit standard is for personnel employed in the fire protection industry and covers inspection and testing of interconnected control and fire detection and alarm systems.</p> <p>People credited with this unit standard are able to: prepare for the inspection and testing of interconnected control and fire detection and alarm systems; inspect and test interconnected control and fire detection and alarm systems; complete documentation for the inspection and testing of the interconnected control and fire detection and alarm systems.</p> |
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| Classification | Mechanical Engineering > Fire Protection Systems Technology |
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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,
 Building (Forms) Regulations 2004,
 Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*,
 MBIE New Zealand Building Code Handbook,
 AS 1851:2012, *Routine service of fire protection systems and equipment*,
 AS/NZS 3000:2018, *Electrical installations (known as the Australian/New Zealand Wiring Rules)*,
 NZS 4512:2021, *Fire detection and alarm systems in buildings*,
 NZS 4541:2020, *Automatic fire sprinkler systems*.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- Definitions

Ancillary services refer to a variety of operations beyond fire detection and alarm systems that are required to maintain a life-safety application such as air handling and mechanical extraction systems, emergency power and lighting systems, lifts and escalators, smoke and fire doors, smoke curtains, and access control.

Inspection refers to an organised examination of characteristics of fire protection systems against established standards.

Interconnected control systems, in this unit standard, refer to systems that are interconnected with fire detection and alarm systems including, but not limited to: the control panels and wiring for sprinkler systems, mechanical extraction systems, air-handling systems, emergency power, lifts, moving walkways, and lighting systems.

Fire detection and alarm systems refer to installations of apparatus, which perform 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.

Plan in this unit standard means the procedures developed to enable the work to be carried out in a logical and safe manner.

Systems documentation refers to the documentation required to be maintained by NZS 4512:2021 and the relevant fire safety precaution standards, including logbook, test reports, equipment details and drawings, specifications, contract agreement, software configurations and versions, additions and alterations, fire reports, building consents standards, codes of practice, installation instructions, test and commissioning procedures, and test and maintenance records.

Tests refer to the carrying out of operations, measurements, or functions to confirm correct function or performance of components and systems in accordance with NZS 4512:2021.

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 Information

- a. All activities must comply with relevant legislative and/or regulatory requirements and recognised codes of practice.
- b. All activities must demonstrate safe working practices.
- c. All activities must be completed and reported within agreed timeframes.
- d. All activities must be done in accordance with applicable plans, systems documentation, and workplace procedures.

4 Range

For assessment purposes, competence must be demonstrated on at least five different interfaced systems with a variety of associated ancillary services.

5 Recommended skills and knowledge

Unit 17714, *Demonstrate knowledge of inspection and testing of interconnected control and fire alarm systems*, or demonstrate equivalent knowledge and skills.

Outcomes and performance criteria

Outcome 1

Prepare for the inspection and testing of interconnected control and fire detection and alarm systems.

Performance criteria

- 1.1 The systems to be inspected are described.
- 1.2 The inspection and testing procedures for the systems are identified.
- 1.3 Safety requirements for the systems to be inspected and tested are identified and referenced to the systems documentation.
- 1.4 Interface function requirements are explained in accordance with the fire reports.
- 1.5 Plans for the inspection and testing of the systems are prepared.

Outcome 2

Inspect and test interconnected control and fire detection and alarm systems.

Performance criteria

- 2.1 The systems are inspected and tested and the results are established.
- 2.2 Safety requirements are complied with during the inspection and testing.
- 2.3 Systems are restored to normal operating conditions.

Outcome 3

Complete documentation for the inspection and testing of the interconnected control and fire detection and alarm systems.

Performance criteria

- 3.1 The inspection and testing of the systems are recorded.
- 3.2 Non-conforming results are documented and reported.
- 3.3 Documentation is completed and distributed to the customer and other parties.

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| 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 | 31 December 2000 | 31 December 2017 |
| Review | 2 | 26 March 2007 | 31 December 2017 |
| Revision | 3 | 23 April 2008 | 31 December 2017 |
| Review | 4 | 15 October 2015 | 31 December 2026 |
| Review | 5 | 27 June 2024 | N/A |

Consent and Moderation Requirements (CMR) reference

0013

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.