

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

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, for interconnected control and fire detection and alarm systems, able to: prepare for inspection and testing; inspect and test; and complete documentation for inspection and testing.</p>
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Classification	Mechanical Engineering > Fire Protection Systems Technology
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Available grade	Achieved
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Entry information	
Recommended skills and knowledge	Unit 17714, <i>Demonstrate knowledge of inspection and testing of interconnected control and fire detection and alarm systems</i> , or demonstrate equivalent knowledge and skills.

Explanatory notes

- References

Building Act 2004
 Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*. Available at <http://www.dbh.govt.nz/AS/VM-documents>
 New Zealand Building Code
 AS/NZS 3000:2007, *Electrical installations* (known as the Australian/New Zealand Wiring Rules)
 NZS 4512:2010, *Fire detection and alarm systems in buildings*
 NZS 4541:2013, *Automatic fire sprinkler systems*
 AS 1851:2012, *Routine service of fire protection systems and equipment*.
- 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.

Enterprise 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.

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 4512:2010 and the relevant fire safety precaution standards, including log book, 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 4512:2010.

3 Range

- 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.

4 Assessment

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

Outcomes and evidence requirements

Outcome 1

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

Evidence requirements

- 1.1 The systems to be inspected are described in accordance with systems documentation and enterprise procedures.
- 1.2 The inspection and testing procedures for the systems are identified in accordance with systems documentation and enterprise procedures.

- 1.3 Safety requirements for the systems to be inspected and tested are identified and referenced to the systems documentation in accordance with enterprise procedures
- 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 in accordance with systems documentation and enterprise procedures.

Outcome 2

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

Evidence requirements

- 2.1 The systems are inspected and tested and results are established in accordance with systems documentation, plans, and enterprise procedures.
- 2.3 Safety requirements are complied with during the inspection and testing in accordance with systems documentation and enterprise procedures.
- 2.4 Systems are restored to normal operating conditions in accordance with systems documentation, plans, and enterprise procedures.

Outcome 3

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

Evidence requirements

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

Planned review date	31 December 2020
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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	N/A

Consent and Moderation Requirements (CMR) reference

0013

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 (CMRs). 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 Competenz at qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.