

Title	Demonstrate knowledge of inspection and testing of interconnected control and fire alarm systems		
Level	4	Credits	4

Purpose	<p>This unit standard is for personnel employed in the fire protection industry, and covers the knowledge of inspection and testing of interconnected control and fire alarm systems.</p> <p>People credited with this unit standard are, for interconnected control and fire alarm systems, able to: demonstrate knowledge of testing requirements and procedures; demonstrate knowledge of inspection requirements and procedures; identify and state the purpose of documentation required for inspection and testing; explain how to prepare for inspection and testing; and demonstrate knowledge of documentation required and complete documentation for reporting after the inspection and testing of interconnected control and fire 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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Entry information	
Recommended skills and knowledge	Unit 17713, <i>Demonstrate knowledge 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>
 - National Fire Protection Association 72:2013, *National Fire Alarm Code*[®] (NFPA 72)
 - 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

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.

Fire alarm systems in this unit standard include emergency warning systems, sprinkler systems, fire detection and alarm systems designed and installed to NZ Standard 4512:2010, and special hazards actuation systems,

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, and lighting systems.

Systems documentation refers to the documentation required to be maintained by NZS 4512:2010, 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.

3 Range

Use of standards listed in the references by candidates during assessment is encouraged.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of testing requirements and procedures for interconnected control and fire alarm systems.

Evidence requirements

- 1.1 Testing requirements and procedures for the systems are identified in accordance with systems documentation, NZS 4512:2010, NFPA 72, and the compliance documents.
- 1.2 Testing requirements and procedures are described in accordance with systems documentation and enterprise procedures.
- 1.3 Safety requirements for the systems are identified and referenced to the systems documentation in accordance with enterprise procedures.

Outcome 2

Demonstrate knowledge of inspection requirements and procedures for interconnected control and fire alarm systems.

Evidence requirements

- 2.1 Inspection requirements and procedures for the systems are identified in accordance with systems documentation, NZS 4512:2010, NFPA 72, and the compliance documents.
- 2.2 Inspection requirements and procedures are described in accordance with systems documentation, NZS 4512:2010, and enterprise procedures.
- 2.3 Safety requirements for the inspection of the systems are identified and explained in accordance with systems documentation and enterprise procedures.

Outcome 3

Identify and state the purpose of documentation required for inspection and testing of interconnected control and fire alarm systems.

Evidence requirements

- 3.1 Documentation required to be used during and after inspection and testing of systems is identified and described in accordance with the NZS 4512:2010, NFPA 72, the compliance documents, and enterprise procedures.
- 3.2 The purpose of each document is identified and an example of each document is completed.

Outcome 4

Explain how to prepare for inspection and testing of interconnected control and fire alarm systems.

Evidence requirements

- 4.1 Steps in the preparation for inspection and testing of a system are explained in accordance with systems documentation and enterprise procedures.

Range contract agreements and specifications, inspection and testing requirements, system operation and interfaces with other systems, safety requirements for the systems, appointments, personnel notification, time requirements.
- 4.2 Plans for the inspection and testing of the system are prepared from given examples and all factors to be taken into account during the preparation for and the testing of systems are included.

Range systems documentation, enterprise procedures.

Outcome 5

Demonstrate knowledge of documentation required and complete documentation for reporting after the inspection and testing of interconnected control and fire alarm systems.

Evidence requirements

- 5.1 Documentation required for reporting is described in accordance with NZS 4512:2010 and alarm transport service requirements, and recipients are identified.

Range systems documentation, enterprise procedures.

- 5.2 Descriptions of each document are provided and an example of each is completed in accordance with systems documentation, NZS 4512:2010, and enterprise procedures.

- 5.3 The requirements for reinstatement of systems to operational standard on completion of inspection or testing are identified and described in accordance with plans, systems documentation, 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
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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.