



Australian Government

UEEEEC0041 Install fire detection and warning system apparatus

Release: 1

UEEEEC0041 Install fire detection and warning system apparatus

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to install fire detection and warning system apparatus.

It includes installing electronic fire detection and warning systems in buildings and premises. It also includes working safely and to industry standards, following oral and written instructions and workplace procedures, and securely placing and connecting fire detection system and warning components.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

Competency Field

Electronics and Communications

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to assemble fire

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Work health and safety (WHS)/occupational health and

detection and warning apparatus		safety (OHS) requirements and workplace procedures for a given work area are identified and applied
	1.2	WHS/OHS risk control measures are followed in preparation for work
	1.3	Safety hazards that have not previously been identified are reported and advice on risk control measures sought from the work supervisor
	1.4	Nature and location of the work is obtained from work supervisor or appropriate person/s to determine the scope of work to be undertaken
	1.5	Advice is sought from work supervisor or other relevant person/s to ensure the work is coordinated effectively with others
	1.6	Sources of materials required for work activities are determined in accordance with workplace procedures
	1.7	Tools, equipment and testing devices needed to carry out work activities are obtained and checked for correct operation and safety
2 Assemble and set up fire detection and warning system	2.1	WHS/OHS risk control measures for carrying out the work are followed
	2.2	Circuits/machines/plant are checked and isolated in accordance with WHS/OHS requirements and workplace procedures
	2.3	Fire protection controller and detection and warning devices are located for optimum performance in accordance with customer requirements, industry standards and regulations
	2.4	Accessories are installed straight and square in the required locations and within acceptable tolerances
	2.5	Cables and conductors are terminated at accessories in accordance with manufacturer specifications and regulatory requirements
	2.6	Unplanned situations are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment

	2.7	Fire protection installation is carried out efficiently without waste of materials or damage to apparatus, circuits or the surrounding environment using sustainable energy practices
3 Complete fire detection and warning system apparatus installation	3.1	WHS/OHS work completion risk control measures and workplace procedures are followed
	3.2	Worksite is cleaned and made safe in accordance with established procedures
	3.3	Fire protection system is documented in accordance with regulatory requirements and workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Installing fire detection and warning system apparatus must include at least the following:

- two fire alarms and warning systems, including:
 - one fire alarm system with at least one control and indicating panel, 50 input devices, five output devices and two system interface controls on at least one of the following:
 - analogue addressable system
 - addressable system
 - conventional system
 - one fire warning system with at least one control and indicating panel, 50 speakers, five interface communication devices and two warning indicators on at least one of the following:
 - analogue addressable system
 - addressable system

- conventional system

Unit Mapping Information

This unit replaces and is equivalent to UEENEEH161A Install fire detection and warning system apparatus.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEEEC0041 Install fire detection and warning system apparatus

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- apply sustainable energy principles and practices
- applying industry standards and codes of practice for fire protection systems and equipment
- applying relevant work health and safety (WHS)/occupational health and safety (WHS/OHS) requirements, including using of risk control measures
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- documenting installation
- maintaining fire integrity
- placing and securing devices and accessories accurately
- reading and interpreting relevant documents with apparatus/device locations and connection arrangements
- terminating cable and conductors correctly.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- common operation and interface connections to other systems
- common operation and types of field data gathering equipment
- common operational requirements and types of control and indicating equipment
- effective and ineffective locations for fire detection devices and common causes of false alarms
- fire protection and warning system installations regulations
- fire protection technologies, fire detection and warning systems, technical industry standards and regulations
- hazards associated with low voltage (LV), extra-low voltage (ELV) and high currents
- input devices, including conventional alarm zones, analogue or analogue addressable fire detectors, flow switch connections or switch connections

- interface communication devices, including warden in communication phones and remote public address (PA) inputs
- operating principles and characteristic of the various warning system components
- operating principles and characteristic of types of fire alarm detectors
- output devices, including shutdown signal, door or system release controls and solenoid valve controls
- purpose and interface requirements of smoke hazard management system
- purpose and operating principles of fire detection and warning systems
- purpose of fire alarm and warning systems
- relevant job safety assessments or risk mitigation processes, including:
 - relevant risk control measures used for dealing with the hazards related to fire protection systems
 - risks and control measures associated with fire protection equipment
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures, including:
 - interface procedures to isolate control functions between different fire protection building service systems
 - procedures for isolating/reinstating fire protection systems to inhibit back-to-base signals to monitoring station
 - procedures for isolating/reinstating fire protection systems to inhibit alarms operating fire protection suppression equipment
 - procedures for isolating/reinstating sections or parts of a fire protection system to inhibit alarms during building maintenance or system testing
 - relevant workplace procedures for isolating/reinstating and disconnection and reconnection of supplies in excess of ELV
- system interface controls, including communication signals to remote control and indicating equipment, building monitoring systems, paging system and colour graphics
- warning devices and their operating parameters
- warning indicators, including flashing lights for hearing impaired persons and fire brigade building indication.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to positioning and terminating fire detection and warning system apparatus
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>