



**Australian Government**

**Assessment Requirements for UEEIC0024  
Plan the electrical installation of integrated  
systems**

**Release: 1**

# Assessment Requirements for UEEIC0024 Plan the electrical installation of integrated systems

## Modification History

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

## 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:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including implementing risk control measures
- arranging an integrated system using an acceptable topology
- complying with a given budget
- complying with manufacturer instructions/specifications
- considering other control methods in planning the integrated system
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- determining customer requirements for integrated system
- determining scenario specifications including number and types of control systems
- developing a connection chart/diagram
- developing appropriate topology for integrated system
- documenting integrated system plan
- identifying integrated system scenario
- implementing an integrated system installation
- planning installations of integrated system
- planning integrated system to comply with bus system and supply voltage parameters

## 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:

- acceptable and unacceptable topologies for a single network
- bus system parameters, including:
  - how bus systems work
  - network topology
  - voltage and current limits

- cable type and length limits
- network impedance
- network and device status indication
- low voltage (LV) supply, voltage parameters and quality
- supply sources such as uninterruptible power supplies (UPS) and inverters may adversely effect voltage parameters and waveform
- cabling, including:
  - insulation resistance testing precautions and prohibitions
  - LV cable terminations and conductor size
  - bus cable polarity and pairing, termination requirements and techniques
  - field and enclosure segregation requirements related to related to relevant industry standards
- supply and load protection, including:
  - conductors and protection device coordination
  - protection on supply and load side of system devices
  - use of residual current devices (RCDs)
- output devices, including:
  - relay connections for extra-low voltage (ELV) and LV loads
  - dimmer types
  - supply and load connections for the various dimmer types
- installation requirements for input devices, including:
  - passive infrared detectors
  - light level control
  - key inputs
  - touch screens
- acceptable and unacceptable topologies for a single network
- connection chart/diagrams
- devices and connections for other control methods, including:
  - distributed signalling interface (DSI) and gateway dimming and control
  - devices and connections digital addressable lighting interface (DALI) dimming and control
  - zero to 10 volts analogue control
- installation requirements for input devices
- installations of integrated systems for input devices, including passive infrared detectors, light level control, key inputs, and touch screens
- job specifications and customer requirements
- LV supply, voltage parameters and quality, including supply sources such as UPS and inverters which may adversely affect voltage parameters and waveforms
- manufacturer documentation
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation

processes

- relevant cabling industry standards, including:
  - cable type and length limits, including network impedance
  - how bus systems work and network topology
  - voltage and current limits
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- risk control measures
- supply and load protection
- acceptable and unacceptable topology requirements for a single network.

## 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 workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in 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 other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- 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>