



Australian Government

Assessment Requirements for UEERA0012

Commission complex refrigeration/air conditioning control systems

Release: 1

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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 one occasion and include:

- identifying system operating parameters
- measuring and adjusting system components and controls to provide optimum system performance
- ensuring system operates within regulatory requirements
- documenting adjustment settings with established procedures
- dealing with unplanned events
- applying relevant legislation, industry standards, codes of practice and regulations
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - applying safe working practices
 - applying sustainable energy principles and practices
 - hazard identification and reporting
 - implementing risk control measures
- commissioning complex control systems for refrigeration/air conditioning
- completing and reporting commissioning activities
- determining need to test or measure live work
- isolating circuits
- preparing to commission complex control systems for refrigeration and air conditioning
- using relevant tools, equipment, testing and measuring devices.

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:

- complex refrigeration/heating, ventilation and air conditioning (HVAC) control system commissioning, safe working practices and relevant standards, codes and regulations, including:

- commissioning fundamentals:
 - building specifications/requirements/responsibilities
 - design and 'as-installed' drawings
 - building codes
 - local government regulations
 - design conditions
 - pre-commissioning checks
 - calibration of instruments
 - commissioning procedures
 - data collection, recording and, documentation
 - reporting procedures
- control fundamentals:
 - control terminology
 - refrigeration system characteristics
 - HVAC system characteristics
 - control system characteristics
 - control system components
 - control system diagrams and symbols
 - product knowledge
- commissioning various types of control equipment:
 - electrical:
 - sensors
 - controllers
 - flow control devices
 - control systems diagrams
 - electronic:
 - sensors
 - controllers
 - control system diagrams
- digital control systems:
 - system diagrams
 - control diagrams
 - configuration
 - programming
 - initialisation
 - EMS and BMS
 - supervisory control and data acquisition (SCADA) system
 - lan and Bacnet
- relevant manufacturer specifications

- relevant plant and equipment
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant tools, equipment and testing devices
- relevant WHS/OHS legislated requirements, including:
 - environmental and sustainable energy principles and practices
 - risk control measures
- relevant workplace documentation
- relevant workplace policies and procedures
- system operating parameters.

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>