



**Australian Government**

# **Assessment Requirements for UEEAS0007 Assemble, mount and connect control gear and switchgear**

**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 two separate occasions and include:

- applying labelling and numbering to cables and using terminal numbering in accordance with relevant industry standards and workplace procedures
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices, including:
  - hazards associated with switchgear and control gear assembly and installation
  - using risk control measures
- applying sustainable energy principles and practices
- assembling, mounting and connecting control gear and switchgear, including:
  - checking circuits are isolated
  - making connection without damaging switchgear/control
  - making interconnections
  - mounting and wiring switchgear and control gear
  - selecting and placing switchgear and control gear in accordance with industry standards, wiring and schematic diagrams
- checking tools, equipment and testing devices for correct operation and safety
- completing workplace documentation
- dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- inspecting and checking installation of assembled control gear and switchgear
- using problem-solving techniques when determining the nature of a fault in accordance with workplace procedures.

## **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:

- assembly instructions, including industry standards, wiring and schematic diagrams

- cable labelling and numbering, including:
  - cable labelling/identification
  - component labelling/identification
  - use of terminal strips to assist fault finding
- choice of switchgear and control gear, including:
  - current ratings
  - overload and fuse settings
  - voltage ratings
- other considerations, including:
  - earthing
  - size of power and control circuit conductors
  - equipment layout methods and accessories
- component layout, including:
  - interconnecting plugs and sockets
  - placement/layout of control circuit devices and components
  - placement/layout of power circuit devices and components
  - segregation of cables at different voltages
  - wiring and schematic diagrams
- equipment layout, methods and accessories
- problem-solving techniques including quality checks
- relevant electrical and WHS/OHS regulations and legislation requirements
- relevant manufacturer specifications
- relevant workplace documentation
- relevant workplace policies and procedures
- risk mitigation processes include safety issues associated with switchgear and control gear assembly and installation
- sustainable energy principles and practices
- switchgear and control gear mounting and wiring techniques, including switchboard testing
- techniques to check if circuits are isolated
- tools, equipment and measuring devices
- types of switchgear and other equipment, including:
  - air-break
  - bus bars and cleats
  - bus ties
  - circuit breakers
  - contactors
  - fuses
  - interlock devices
  - load break switches
  - motor starters

- oil type
- relays
- switch fuses
- transformers
- variable speed drives (VSDs).

## 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 (including control panels) and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, industry standards, 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>