



Australian Government

**Assessment Requirements for UEECD0045
Solve problems in multiple path extra-low
voltage (ELV) a.c. circuits**

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 relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including
 - using risk control measures
- checking and isolating circuits
- identifying and assessing sources of materials required for work
- obtaining and checking tools, equipment and testing devices for correct operation and safety using sustainable energy practices
- obtaining scope of circuit/s from documentation and/or work supervisor
- preparing to work on multiple path extra-low voltage (ELV) alternating current (a.c.) electrical circuits
- seeking advice from the work supervisor
- solving a.c. circuits problems from measuring and calculating values
- testing and measuring live circuits
- dealing with unplanned situations safely and with the approval of relevant person/s
- workplace documenting, including:
 - justifications solution
 - work completion.

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:

- problem-solving techniques
- relevant capacitance in a.c. circuits
- relevant impedance
- relevant inductance in a.c. circuits
- relevant isolation of circuits

- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications and operating instructions
- relevant materials, tools, equipment and testing devices
- relevant methods to measure and calculate values
- relevant phasors
- relevant power and power factor
- relevant resistance in a.c. circuits
- relevant resonance
- relevant sinusoidal alternating voltage and current
- relevant test and measure live work procedures
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- sustainable energy principles.

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 simulated suitable 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 and equipment used in industry
- resources that reflect current industry practices in relation to solving problems in multiple path ELV a.c. circuits
- 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>