



Australian Government

**Assessment Requirements for UEEEL0037
Design electrical installations with a low
voltage demand greater than 400 A per
phase**

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:

- developing outlines of alternative designs
- developing the design within the safety and functional requirements and budget limitations
- documenting and presenting design effectively
- successfully negotiating design alteration requests
- obtaining approval for final design
- dealing with unplanned events
- applying performance standards, compliance methods and lighting equipment to installation design
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- consulting with relevant person/s in planning design work
- identifying the scope of the installation design brief
- monitoring quality of work
- planning to meet scheduled timelines
- preparing to design electrical installations.

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:

- low voltage (LV) electrical installations with a demand greater than 400 ampere (A) per phase and advanced methods of cable and protection selection, including:
 - electrical installations, determination of demand encompassing:
 - acceptable methods for determining demand in mains and sub-mains
 - applying calculation and assessment methods of determining demand in mains and sub-mains

- electrical installations, over-current protection encompassing:
 - application of acceptable methods for determining prospective fault current
 - relationship between prospective fault current and characteristics of protective devices
 - relationship between over-current protections at various points in an electrical distribution system
- electrical installations, over-voltage and under-voltage protection encompassing:
 - application of acceptable methods for determining the need for over-voltage and under-voltage protection
 - methods and devices providing over-voltage and under-voltage protection
- problem-solving techniques
- relevant manufacturer specifications and operating instructions
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace quality, instructions, policies and procedures.

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 currently used in industry
- resources that reflect current industry practices in relation to designing electrical installations with a LV demand greater than 400 A per phase.
- 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>