



Australian Government

Assessment Requirements for MEM09205 Produce electrical schematic drawings

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM09206A Produce drawings for mechanical services.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- determining purpose and scope for drawing requirements relevant to the project utilising all available information
- determining the function and purpose of circuit and its discrete components and assemblies and confirming through consultation with appropriate personnel
- preparing layout of drawings
- producing detailed electrical schematic drawings in accordance with relevant Australian and international standards, including cable run and riser diagrams and switchboards on at least two occasions
- drawing electrical circuits and connections between devices, including power and signal connections on at least two occasions
- preparing an engineering parts list according to customer requirements
- verifying parameters of the design brief with appropriate personnel
- consulting with appropriate support services and presenting and explaining drawing.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- different approaches to drawing
- copyright and intellectual property issues and legislation in relation to drawing
- requirements of Australian and international standards, with respect to electrical/electronic schematics/drawings
- sources of information
- quality assurance procedures
- organisational standards for computer-aided drawing (CAD)

- order of drawing process
- organisational checking procedures for drawings
- layout and presentation
- standards applicable to the work to be undertaken
- process of checking the completed drawing
- process of storing paper drawings and electronic drawing files
- International System of Units (SI)
- terminology associated with the preparation of electrical diagrams and drawings
- basic components used in electrical installations
- wiring types used in electrical installations
- functions of components including resistors and capacitors.

Assessment Conditions

- Assessors must:
 - have vocational competency in producing electrical schematic drawings at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the Standards for Registered Training Organisations 2015 or its replacement and comply with the National Vocational Education and Training Regulator Act 2011, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- 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.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>