



Australian Government

Department of Education, Employment and Workplace Relations

MEM09004B Perform electrical/electronic detail drafting

Release: 1

MEM09004B Perform electrical/electronic detail drafting

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers producing electrical/electronic drawings under supervision.
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Application of the Unit

Application of the unit	This unit applies to the production of drawings under supervision, in accordance with instructions and specifications to Australian Standard 1102 or equivalent using predetermined design specifications. This unit applies to all electrical/electronic areas. Manual drafting or drawing equipment is used or where a CAD system is used, Unit MEM09009C (Create 2D drawings using computer aided design system) and/or Unit MEM09010C (Create 3D models using computer aided design system) should also be considered. Band: B Unit Weight: 8
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM09002B	Interpret technical drawing
	MEM09003B	Prepare basic engineering drawing

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare/make changes to electrical/electronic schematics and drawings	1.1. Schematic is drawn to indicate the relative positioning of electrical/electronic components. 1.2. Electrical/electronic drawings are produced to include all relevant specifications. 1.3. Schematic/drawing is completed to Australian Standard 1102 or equivalent.
2. Determine component and/or material requirement	2.1. Components and/or materials are selected from supplier/manufacturers' catalogues using design specifications.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- drawing electrical/electronic schematics correctly and indicating the relative position of the components
- producing electrical/electronic drawings with all relevant specifications
- producing electrical/electronic schematics/drawings in conformance with AS1102 or equivalent
- obtaining the circuit/component specifications
- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable documents
- planning and sequencing operations
- checking and clarifying task related information
- undertaking numerical operations, geometry and calculations/formulae within the scope of this unit

Required knowledge

Look for evidence that confirms knowledge of:

- relative position of electrical/electronic components
- symbols used in electrical/electronic schematics and drawings
- specifications of all components

REQUIRED SKILLS AND KNOWLEDGE

- circuit specifications
- requirements of AS1102 or equivalent with respect to electrical/electronic schematics/drawings
- design specifications of the circuit/components
- appropriate components and materials from supplier/manufacturers' catalogues
- reasons for selecting the chosen components and/or materials
- hazards and control measure associated with performing electrical/electronic detail drafting, including housekeeping
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to perform electrical/electronic detail drafting. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing electrical/electronic detail drafting or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

EVIDENCE GUIDE**Guidance information for assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Drawings

Include plans, schematics, layouts, circuit diagrams and charts

Unit Sector(s)**Unit sector****Co-requisite units****Co-requisite units**

Competency field

Competency field	Drawing, drafting and design
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