



Australian Government

Department of Education, Employment and Workplace Relations

MEM10002B Terminate and connect electrical wiring

Release: 1

MEM10002B Terminate and connect electrical wiring

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers terminating, disconnecting or reconnecting electrical wiring and circuits.
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Application of the Unit

Application of the unit	This unit applies to the connection of wiring and includes termination and connection of all types of cords and cables, excluding specialist cables. All testing is undertaken on completed circuits where these are not connected to main supply, using appropriate methods such as continuity and resistance checks. Specifications are obtained from electrical/electronic circuit drawings and data sheets. Soldering/desoldering of electrical/electronic components may also require the selection of Unit MEM05001B (Perform manual soldering/desoldering - electrical/electronic components) or Unit MEM05002B (Perform high reliability soldering and desoldering) as applicable. This unit does not cover the competencies required for energising and testing of the circuit. If these skills are required, the competencies covered in Unit MEM10003B (Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c.) must be satisfied. Termination and connection of specialist cables such as mineral insulated, steel wire, armoured cables etc., is covered in Unit MEM10011B (Terminate and connect specialist cables). Band: A Unit Weight: 3
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM09002B	Interpret technical drawing
	MEM12002B	Perform electrical/electronic measurement
	MEM18001C	Use hand tools

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 for electrical wiring termination and connection	1.1. All work is undertaken safely and to workplace procedures and State/Territory regulations and legislative requirements. 1.2. Materials are checked for correct specifications. 1.3. Preparation of work is undertaken or checked/inspected for correct location and specifications.
2. Connect electrical wiring	2.1. Terminations/connections are made to specifications, manufacturers' requirements and to safety and State/Territory regulations and legislative requirements. 2.2. All brackets, clamps, holders etc. are adjusted and fixed to specifications. 2.3. All cables, wires, conductors and connections etc. are marked/tagged and labelled to specification. 2.4. All completed wiring and connections are tested for compliance with specifications. 2.5. All reports and documentation are completed correctly to required 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:

- checking materials for conformance to specifications
- checking existing and new installation site for correct location and specification
- making terminations/connections to specification, manufacturer and regulatory requirements
- adjusting and fixing wiring supports
- marking, tagging and labelling cables, wires, conductors and connections to specification
- undertaking testing of wiring and connections for conformance to specification
- using language and literacy skills to complete short reports and required

REQUIRED SKILLS AND KNOWLEDGE

documentation

- reading and interpreting routine information on written job instructions, specifications and standard operating procedures May include drawings
- using measurements for checking connections and components

Required knowledge

Look for evidence that confirms knowledge of:

- safety hazards associated with the termination and connection of electrical wiring
- statutory and regulatory requirements associated with the termination and connection of electrical wiring
- wiring support and/or protection requirements and specifications
- relevant manufacturer requirements
- specifications and methods for terminating different materials
- wiring support techniques and alternatives
- marking, tagging and labelling requirements for cables, wires, conductors and connections
- tests for wiring and connections
- data to be recorded/reported and the frequency of recording/reporting
- requirements for approval to work
- use and application of personal protective equipment for terminating and connecting electrical wiring

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 terminate and connect electrical wiring. 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 terminating and connecting electrical wiring 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.

State/Territory regulations and legislative requirements	Applicable acts, regulations, codes of practice, Australian standards, International standards
Correct location and specifications	Cable trays, brackets, trenches
Electrical wiring	Wiring associated with power, lighting, control wiring, machinery, switchboards and other electrical apparatus
Terminations/connections	Utilisation of a range of methods including clamping, crimping, pin connection, soldered joints, plugs, sockets etc., clamping of cables and wires, sealing entry points where required

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

Co-requisite units		

Competency field

Competency field	Installation and commissioning
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