



Australian Government

Department of Education, Employment and Workplace Relations

MEM10011B Terminate and connect specialist cables

Release: 1

MEM10011B Terminate and connect specialist cables

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing for the termination and connection of specialist cables.
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Application of the Unit

Application of the unit	<p>This unit applies to the connection of specialist cables including, but not confined to:</p> <ul style="list-style-type: none"> • mineral insulate cables (MIMS) • steel wire armoured cables (SWA) • other sheathed cables such as piloted cables, composite screened cables, braided cables • cable installations requiring specialised glands, fittings and enclosures <p>Termination and connection requires particular techniques, and, in some cases testing.</p> <p>All testing is undertaken on completed circuits where not connected to main supply using appropriate methods e.g. continuity and resistance checks.</p> <p>Special fittings must be used for each type of specialist cable. Cables may require the use of bending tools and techniques which do not cause damage. Compounds such as resins may be required for sealing purposes.</p> <p>Most types of specialist cables are designed to either exclude or minimise the ingress of gas or liquids, or to minimise the danger of flash.</p> <p>For termination and connection of signal and data cables, Unit MEM18063B (Terminate signal and data cables) should be selected.</p> <p>For termination and connection of standard electrical wiring/cable, refer to Unit MEM10002B (Terminate and connect electrical wiring)</p> <p>Band: A</p> <p>Unit Weight: 3</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM09002B	Interpret technical drawing
	MEM10002B	Terminate and connect electrical wiring
	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 termination and connection of specialist cables	<p>1.1. All work is undertaken safely and to workplace procedures, applicable regulations and legislative requirements.</p> <p>1.2. Correct cables and materials are selected in accordance with job requirements.</p> <p>1.3. Certification documentation is obtained where appropriate.</p> <p>1.4. Preparation of work is undertaken or checked/inspected for correct locations and specifications.</p>
2. Connect specialist cables	<p>2.1. Terminations/connections are made to specifications, manufacturers' requirements and to safety and State/Territory regulations and legislative requirements.</p> <p>2.2. Equipment and wiring are installed in a manner that does not reduce the type of protection afforded by the equipment design.</p> <p>2.3. All cabling, connections and terminations are tested for compliance with specifications.</p> <p>2.4. All cables, wires, conductors and connections are marked/tagged and labelled to specifications.</p> <p>2.5. Documentation is completed correctly in accordance with relevant specifications and regulatory requirements.</p>

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 cables and materials for condition and conformance to specifications
- obtaining and interpreting appropriate documentation
- making terminations/connections to specification, manufacturer and regulatory requirements
- testing cabling, connections and terminations

REQUIRED SKILLS AND KNOWLEDGE

- marking, tagging and labelling cables, wires, conductors and connections
- entering information onto documentation related to termination and connection of specialist cables
- applying measurement skills needed to meet the requirements of this unit

Required knowledge

Look for evidence that confirms knowledge of:

- work site procedures and relevant statutory requirements
- safety hazards associated with the termination and connection of cables, and the work environment
- statutory requirements associated with the termination and connection of specialist cables
- specifications for specialist cables and materials
- requirements for approval to work
- wiring support and/or protection requirements
- specifications of wiring support and/or protection requirements
- applicable statutory requirements
- reading and interpreting relevant drawings, instructions and reference documents
- manufacturer requirements
- testing methods for specialist cables including continuity and resistance testing
- marking, tagging and labelling requirements for cables, wires, conductors and connections
- data to be recorded/reported and the frequency of recording/reporting.
- the impact of the site and location variables may have on termination and connection
- use and application of personal protective equipment

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 specialist cables including, but not confined to: mineral insulate cables (MIMS); steel wire armoured cables (SWA); other sheathed cables such as piloted cables; composite screened cables, braided cables; and cable installations requiring specialised glands, fittings and enclosures.

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 specialist cables 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

EVIDENCE GUIDE	
	documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
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.	
Documentation	Short record of termination or test results
Tested	Continuity and resistance testing

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Installation and commissioning
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