



Australian Government

Department of Education, Employment and Workplace Relations

MEM18063B Terminate signal and data cables

Release: 1

MEM18063B Terminate signal and data cables

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers terminating signal and data cables. This unit also covers fixing, securing, identifying and marking conductors and cables.
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Application of the Unit

Application of the unit	This unit applies to installing all types of signal and data cables, excluding specialist cables. All specifications and procedures are obtained from circuit drawings, data sheets and instructions. If termination of cables is undertaken to pre-determined specifications and procedures, the competency is covered by Unit MEM03004B (Perform electronic/electrical assembly [production]). Where hand held power tools are used, Unit MEM18002B (Use power tool/hand held operations) should also be selected. Where higher levels of electrical/electronic measures are required, Unit MEM12004B (Perform precision electrical/electronic measurement) should be selected. For termination and connection of specialist cables, see Unit MEM10011B (Terminate and connect specialist cables). For termination and connection of other cables, see Unit MEM10002B (Terminate and connect electrical wiring). Band: A Unit Weight: 4
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM05001B	Manual soldering/desoldering - electrical/electronic components
	MEM09002B	Interpret technical drawing
	MEM12002B	Perform electrical/electronic measurement
	MEM12023A	Perform engineering measurements
	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. Identify and mark conductors/cables	1.1. Cables and conductors are identified using appropriate test equipment and techniques. 1.2. Cables and conductors are labelled in accordance with standard operating procedures, legislative requirements and statutory regulations to specifications.
2. Prepare cable	2.1. Termination requirements and specifications are obtained and understood. 2.2. Cable ends are prepared to specifications, legislative requirements and statutory regulations utilising appropriate tools and techniques.
3. Terminate cables	3.1. Cables are terminated to specifications utilising appropriate tools and techniques. 3.2. Terminations are tested/examined for compliance with specifications, legislative requirements and statutory regulations utilising appropriate test equipment and techniques.
4. Fix/secure cables	4.1. Cables are fixed/secured in accordance with standard operating procedures, specifications, legislative requirements and statutory regulations, utilising appropriate fixing/securing techniques.

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:

- identifying cables and conductors
- labelling cables and conductors
- obtaining relevant instructions, specifications and data sheets
- preparing cable ends for termination
- following specifications
- testing completed terminations for compliance to specifications
- fixing/securing cables

REQUIRED SKILLS AND KNOWLEDGE**Required knowledge**

Look for evidence that confirms knowledge of:

- legislative requirements and statutory regulations including ACA Technical Standards AS/ACIF008, AS/ACIF009, SAA Communications Cabling Manual (Open), AS/NZS 3000, Telecommunications Act 1997
- the test equipment and techniques to be used to identify cables and conductors
- procedures to be followed when identifying cables and conductors
- labelling requirements of cables and conductors
- procedures for labelling cables and conductors
- termination requirements and specifications
- procedures, tools and techniques for preparing and terminating cables
- procedures for testing cables and terminations
- factors that influence selection of fixing/securing techniques
- 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 terminate signal and data cables. 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 signal and data 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 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.

Legislative requirements and statutory regulations

- ACA Technical Standards AS/ACIF008, AS/ACIF009
- SAA Communications Cabling Manual (Open)
- AS/NZS 3000
- Telecommunications Act 1997

Types of cables

- Thermocouple/compensator cables including MIMS
- Transmission cables
- Thermoplastic/elastomer insulated/sheathed
- Compensating cables
- Coaxial
- Telephone
- Category 5
- Optical fibre
- Extra low voltage control cables

Terminations

Crimp, wire wrap, (non-insulated and pre-insulated), solder, connectors, multi-terminal plugs and sockets, fibre optics, coaxial, terminal blocks

Fixing and securing

The use of clamps, cable ties, bolting, screwing

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Maintenance and diagnostics
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