



Australian Government

MEM18063 Terminate signal and data cables

Release: 1

MEM18063 Terminate signal and data cables

Modification History

Release 1. Supersedes and is equivalent to MEM18063B Terminate signal and data cables

Application

This unit of competency defines the skills and knowledge required to terminate signal and data cables and covers fixing, securing, identifying and marking conductors and cables.

Where termination of cables is undertaken to pre-determined specifications and procedures then unit MEM03004 Perform electronic/electrical assembly (production) should also be selected.

Where termination and connection of other cables is required unit MEM10002 Terminate and connect electrical wiring should also be selected.

Where termination and connection of specialist cables is required unit MEM10011 Terminate and connect specialist cables should also be selected.

Where higher levels of electrical/electronic measures are required unit MEM12004 Perform precision electrical/electronic measurement should also be selected.

Where the selection and use of power tools/hand held operations is required unit MEM18002 Use power tools/hand held operations should also be selected.

Some jurisdictions may require the holder of this unit to be licensed or certified and users should check with the relevant authorities.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM05001	Perform manual soldering/desoldering – electrical/electronic components
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12002	Perform electrical/electronic measurement
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

MEM18001 Use hand tools

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Identify and mark conductors/cables	2.1	Identify cables and conductors using appropriate test equipment and techniques
		2.2	Label cables and conductors in accordance with procedures, legislative requirements and statutory regulations to specifications
3	Prepare and terminate cable	3.1	Obtain termination requirements and specifications
		3.2	Prepare cable ends and terminate cables to specifications, legislative requirements and statutory regulations utilising appropriate tools and techniques
		3.3	Test/examine terminations for compliance with specifications
4	Fix/secure cables	4.1	Fix/secure cables utilising appropriate fixing/securing

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.
techniques

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Legislative requirements and statutory regulations include one (1) or more of the following:

- ACA Technical Standards AS/ACIF008, AS/ACIF009
- SAA Communications Cabling Manual (Open)
- AS/NZS 3000:2007 Electrical installations (known as the Australian/New Zealand Wiring Rules)
- Telecommunications Act 1997

Types of cables include one (1) or more of the following:

- thermocouple/compensator cables, including MIMS
- transmission cables
- thermoplastic/elastomer insulated/sheathed
- compensating cables
- coaxial
- telephone
- Category 5
- optical fibre
- extra low voltage control cables

Tools include one (1) or more of the following:

- Krone tool
- cable strippers
- crimping tools, e.g. RJ45 crimping tool
- slitter tool
- pliers

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Terminations include one (1) or more of the following:

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

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18063B Terminate signal and data cables

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM18063 Terminate signal and data cables

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, data sheets, legislative requirements and statutory regulations and obtaining relevant data with respect to terminating signal and data cables
- identifying cables and conductors and label in accordance with requirements, procedures and regulations
- preparing and terminating cables using appropriate tools and techniques to specifications
- testing terminations for compliance with specifications
- fixing/securing cables in accordance with procedures.

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 and use of personal protective equipment (PPE)
- legislative requirements and statutory regulations, including ACA Technical Standards AS/ACIF008, AS/ACIF009, SAA Communications Cabling Manual (Open), AS/NZS 3000:2007 Electrical installations (known as the Australian/New Zealand Wiring Rules and Telecommunications Act 1997
- test equipment, techniques and procedures to be used to identify cables and conductors
- labelling requirements and procedures for labelling cables and conductors
- termination requirements, specifications and procedures, tools and techniques for preparing and terminating cables
- procedures for testing cables and terminations
- factors that influence selection of fixing/securing techniques.

Assessment Conditions

- Assessors must:
 - have vocational competency in terminating signal and data cables 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. This must 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.

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