



Australian Government

MEM10011 Terminate and connect specialist cables

Release: 1

MEM10011 Terminate and connect specialist cables

Modification History

Release 1. Supersedes and is equivalent to MEM10011B Terminate and connect specialist cables

Application

This unit of competency defines the skills and knowledge required to prepare for the termination and connection of specialist cables that require particular techniques and, in some cases, testing.

Most types of these cables are designed to either exclude or minimise the ingress of gas or liquids, or to minimise the danger of flash.

Special fittings must be used for each type of specialist cable and cables requiring the use of bending tools and techniques which do not cause damage.

All testing is undertaken on completed circuits where these are not connected to main supply, using appropriate methods, including continuity and resistance checks.

Where termination and connection of standard electrical wiring/cable is required see unit MEM10002 Terminate and connect electrical wiring.

Where the selection and use of engineering measurement is required see unit MEM12023 Perform engineering measurements.

Where the selection and use of power tools/hand held operations is required see unit MEM18002 Use power tools/hand held operations.

Where termination and connection of signal and data cables is required see unit MEM18063 Terminate signal and data cables.

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: 3

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM10002	Terminate and connect electrical wiring
MEM11011	Undertake manual handling
MEM12002	Perform electrical/electronic measurement
MEM13015	Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

MEM18001 Use hand tools

Competency Field

Installation and commissioning

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 | Prepare for termination and connection of specialist cables | 2.1 Ensure all work is undertaken safely to workplace procedures, applicable regulations and legislative requirements |
| | | 2.2 Select correct cables and materials in accordance with job requirements |
| | | 2.3 Obtain certification documentation, as appropriate |
| | | 2.4 Ensure preparation of work is undertaken or checked/inspected for correct locations and specifications |
| | | |
| 3 | Connect specialist cables | 3.1 Ensure terminations/connections are made to specifications, manufacturers' requirements and to safety and state/territory regulations and legislative requirements |
| | | 3.2 Ensure all entry points are sealed using appropriate |

Elements describe the essential outcomes.

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

compounds, including resins

- 3.3 Install equipment and wiring in a manner that does not reduce the type of protection afforded by the equipment design
- 3.4 Test all cabling, connections and terminations for compliance with specifications
- 3.5 Ensure all cables, wires, conductors and connections are marked/tagged and labelled to specifications
- 3.6 Complete documentation in accordance with relevant specifications and regulatory requirements

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.

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

- mineral insulate cables (MIMS)
- steel wire armoured cables (SWA)
- other sheathed cables, including piloted cables
- composite screened cables
- braided cables
- cable installations requiring specialised glands, fittings and enclosures

Tested includes the following:

- testing of both continuity and insulation resistance to requirements

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM10011B Terminate and connect specialist 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 MEM10011 Terminate and connect specialist 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 and drawings, regulatory and legislative requirements for terminating and connecting specialist cables
- connecting and terminating specialist cables utilising a range of cable installations requiring specialised glands, fittings and enclosures, sealing entry points, as required, and marking/tagging and labelling wiring to specifications
- using test equipment to locate various faults
- inspecting and testing terminated cables to ensure they comply with continuity and insulation resistance and are safely intended for use
- completing all reports and documentation in accordance with SOPs.

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)
- worksite procedures and relevant statutory requirements
- statutory requirements associated with the termination and connection of specialist cables
- manufacturer requirements and 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
- reading and interpreting relevant drawings, instructions and reference documents
- testing methods for specialist cables, including continuity and insulation resistance testing
- marking, tagging and labelling requirements for cables, wires, conductors and connections
- data to be recorded and/or reported and the frequency of recording/reporting
- impact of the site and location variables may have on termination and connection.

Assessment Conditions

- Assessors must:
 - have vocational competency in terminating and connecting specialist 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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