



Australian Government

MEM18106 Terminate communication and data cables

Release: 2

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Modification History

Release 2. Prerequisite units updated

Release 1. New unit

Application

This unit has been developed for Engineering Tradesperson – industrial electrician apprenticeship training and the recognition of trade-level skills in terminating all types of communication and data cables in accordance with the relevant legislative requirements and statutory regulations.

Some jurisdictions 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

Path 1	MEM05001	Perform manual soldering/desoldering – electrical/electronic components
	MEM12023	Perform engineering measurements
	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, including appropriate risk control measures

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	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 Maintain the minimum bend radius of the cable in accordance with specifications when cutting cable to required length 3.3 Prepare cable ends to specifications, legislative requirements and statutory regulations utilising appropriate tools and techniques 3.4 Terminate cables according to specifications using appropriate tools and techniques 3.5 Test/examine terminations for compliance with specifications
4. Fix/secure cables	4.1 Fix/secure cables utilising appropriate fixing/securing techniques 4.2 Use the proper cable management hardware to support the in-place cables and relieve tension

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 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 or more of the following:

- thermocouple/compensator cables, including mineral-insulated metal sheath (MIMS)
- transmission cables
- thermoplastic/elastomer insulated/sheathed
- compensating cables
- coaxial
- telephone
- category 5
- optical fibre
- extra-low voltage (ELV) control cables

Minimum bend radius includes:

Bend radius according to manufacturer specifications, including:

- 4 times the cable diameter for unshielded twisted pair (UTP) and screened twisted pair (ScTP) cables
- 10 times the cable diameter for optical fibre cable

Tools include one 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 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
- punch-down connections

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>