



Australian Government

MEM10005 Commission programmable controller programs

Release: 1

MEM10005 Commission programmable controller programs

Modification History

Release 1. Supersedes and is equivalent to MEM10005B Commission programmable controller programs

Application

This unit of competency defines the skills and knowledge required to adjust and commission the programmable controller program to specification. It applies to all programmable controller programs include single and multi-loop programs and control sequencing of processes.

Work is undertaken on location and it is assumed that this unit will normally be accessed in conjunction with units of skill that relate to the operational processes controlled by the programmable controllers, including programmable logic controller (PLC) and distributed control system (DCS) or similar devices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM10004	Enter and change programmable controller operational parameters
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM16008	Interact with computing technology

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.
---	---

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 | Identify job requirements from specifications, drawings, job sheets or work instructions |
| | | | |
| 2 | Commission programmable controller program | 2.1 | Determine and understand program format and operational intent |
| | | 2.2 | Check program instructions for compliance with specifications using appropriate techniques |
| | | 2.3 | Set software timers and counters to specifications, where required |
| | | 2.4 | Ensure program is stepped through manually and outputs are checked and measured for compliance with specifications |
| | | 2.5 | Edit program to meet specifications, where applicable |
| | | 2.6 | Check external inputs for compliance with specifications utilising correct and appropriate techniques |
| | | 2.7 | Run program and check total operation for compliance with specifications, where applicable |
| | | 2.8 | Undertake final adjustments to meet operational specifications using procedures, where applicable |

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.

- Specifications include one (1) or more of the following:**
- circuit drawings
 - ladder diagrams
 - engineering data sheets
 - program print-out manufacturers' procedures
 - data books

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM10005B Commission programmable controller programs

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 MEM10005 Commission programmable controller programs

Modification History

Release 1. Supersedes and is equivalent to MEM10005B Commission programmable controller programs

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 for commissioning programmable controller programs for compliance using appropriate checks
- commissioning single and multi-loop programs and control sequencing of processes for compliance with specifications using appropriate techniques
- editing program and making final adjustments to meet operational specification, as required.

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
- format and specifications of the program
- procedures for checking that program instructions comply with specifications and procedures for dealing with any non-conformances with specifications and techniques used
- procedures for manually stepping through the program
- function of software timers and counters and procedures for setting them
- techniques and checks to be used in checking program outputs
- measurements to be taken during the checking of program outputs
- instruments to be used to take measurements
- checks to be made to ensure that the external inputs comply with specifications
- techniques and equipment to be used in checking external inputs
- specifications and operational processes controlled by the programmable logic controller
- techniques and equipment to be used to check the operational process
- procedures for running and editing programs
- procedures to be followed when adjusting programs
- adjustments that can be made to the program

- effects of adjustments on the operational processes controlled by the program.

Assessment Conditions

- Assessors must:
 - have vocational competency in commissioning programmable controller programs 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.

Links

Companion Volume implementation guides are found in VETNet -

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