



Australian Government

MEM10004 Enter and change programmable controller operational parameters

Release: 1

MEM10004 Enter and change programmable controller operational parameters

Modification History

Release 1. Supersedes and is equivalent to MEM10004B Enter and change programmable controller operational parameters

Application

This unit of competency defines the skills and knowledge required to enter and change programmable controller operational parameters.

Work is generally undertaken at location of programmable controllers including, programmable logic controller (PLC) and distributed control system (DCS) or similar devices but could be undertaken with data link offsite.

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

Where routine downloading of PLC, robot, computer numerically controlled (CNC) or numerically controlled (NC) programs from disk, tape or direct means not requiring program or data adjustment or checks against specification is required see unit MEM16008 Interact with computing technology.

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

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM09002	Interpret technical drawing
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.

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|---|---|-----|--|
| 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 | Install program | 2.1 | Download software, as required |
| | | 2.2 | Undertake appropriate checks during and after downloading to ensure data transfer is accurate and complete |
| | | | |
| 3 | Verify machine/system/ process operation | 3.1 | Undertake appropriate checks after downloading to ensure machine operation or process output is accurate to specification |
| | | 3.2 | Ensure specific problems in machine operation or process output being controlled by the programmable controller are identified in accordance with SOPs |
| | | 3.3 | Ensure specific changes required to operating parameters within the software program are derived in accordance with manufacturers' specifications and procedures |
| | | 3.4 | Make adjustments/changes to operating parameters in accordance with manufacturers' specifications |
| | | 3.5 | Take final check of machine operation and/or process output to ensure that they are in accordance with specifications |
| | | 3.6 | Report changes and adjustments in accordance with SOPs |

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.

Verify includes the following:

- verification of machine/process/system operation, including interpreting the program, excluding multi-loop and control sequencing programs

Operating parameters include one (1) or more of the following:

- timer settings
- counter settings
- set point settings
- specifications and procedures gained from:
 - a range of circuit drawings
 - engineering data sheets
 - step print out
 - manufacturers' procedure
 - data books

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM10004B Enter and change programmable controller operational parameters

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 MEM10004 Enter and change programmable controller operational parameters

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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 for downloading software programs for a programmable logic controller (PLC) and/or distributed control system (DCS), and undertaking appropriate checks ensuring data transfer is accurate and completed according to specifications
- verifying system operation and making adjustments to the operating parameters, as required
- completing final check of machine operation and/or processing for compliance to specifications
- reporting all changes and adjustments according to standard operating 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
- appropriate and correct program loading techniques and reasons for selecting the chosen program loading technique
- checks to be undertaken during and after downloading
- reasons for checking that the data transfer is accurate and complete
- action to be taken if data transfer is inaccurate and/or incomplete
- specifications relating to the transferred data
- correct operation of the machine or process
- specific machine operations or process outputs being controlled by the programmable controller
- specific problems in accordance with SOPs
- operating parameters within the software program

- SOPs, including industry standards, production schedules, safety data sheets (SDS), work notes and plans, product labels, manufacturers' specifications, operator manuals, enterprise policies and procedures, supervisors' oral and written instructions, current state/territory work health and safety (WHS) legislation, standards and codes of practice
- specification to be met and functions to be controlled and machine operation or process output
- reporting process
- procedures to change parameters and their implications.

Assessment Conditions

- Assessors must:
 - have vocational competency in entering and changing programmable controller operational parameters 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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