MEM10004B Enter and change programmable controller operational parameters

Release: 1

MEM10004B Enter and change programmable controller operational parameters

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers entering and changing programmable controller operational parameters, including specifications and procedures gained from a range of circuit drawings, engineering data sheets, step print out, manufacturers' procedure and data books.

Application of the Unit

Application of the unit	This unit applies to work undertaken autonomously or as part of team environment using predetermined standards of quality, safety and workplace procedures. Work is generally undertaken at location of programmable controller but could be undertaken with data link offsite. Programmable controllers include PLC and DCS or similar devices. For routine downloading of PLC, robot, CNC or NC programs from disk, tape or direct means not requiring program or data adjustment or checks against specification, see Unit MEM16008A (Interact with computing technology). **Band**: **A** **Unit Weight**: **2**

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM09002B	Interpret technical drawing
	MEM16008A	Interact with computing technology

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Install program	1.1. Software is downloaded as required. 1.2. Appropriate checks are undertaken during and after downloading to ensure data transfer is accurate and complete.
2. Verify machine/system/ process operation	2.1. Appropriate checks are undertaken after downloading to ensure machine operation or process output is accurate to specification. 2.2. Specific problems in machine operation or process output being controlled by the programmable controller are identified in accordance with standard operating procedures. 2.3. Specific changes required to operating parameters within the software program are derived in accordance with standard operating procedures. 2.4. Adjustments/changes are made to operating parameters in accordance with standard operating procedures. 2.5. Final check of machine operation and/or process output are taken to ensure that they are in accordance with specifications.
3. Report on changes	3.1. Changes and adjustments are reported in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
Look for evidence that confirms skills in: • selecting appropriate data transfer device(s)/procedure(s) and transferring the software accurately • verifying machine operation or process output • obtaining specific changes required to operating parameters within the software program • adjusting/changing operational parameters • checking machine operation or process output • reporting

REQUIRED SKILLS AND KNOWLEDGE

- identifying problems
- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- planning and sequencing operations
- checking and clarifying task related information
- checking for conformance to specifications
- undertaking numerical operations, geometry and calculations/formulae within the scope of this unit

Required knowledge

Look for evidence that confirms knowledge of:

- 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 standard operating procedures
- operating parameters within the software program
- standard operating procedures
- specification to be met and functions to be controlled and machine operation or process output
- reporting process
- procedures to change parameters and their implications
- hazard and control measures associated with entering and changing programmable controller operational parameters, including housekeeping
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	A person who demonstrates competency in this unit must be able to enter and change programmable controller operational parameters. Competency in this unit cannot be claimed until all prerequisites have been satisfied.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate. This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with entering and changing programmable controller operational parameters or other units requiring the exercise of the skills and knowledge covered by this unit.
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

EVIDENCE GUIDE	
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Verify	Verification of machine/process/system operation includes interpreting the program, excluding multi-loop and control sequencing programs.
Standard operating procedures	Industry standards, production schedules, material safety data sheets, work notes and plans, product labels, manufacturers' specifications, operator manuals, enterprise policies and procedures, supervisors' oral and written instructions, current State/Territory occupational health and safety legislation, standards and codes of practice.
Operating parameters	Includes timer, counter and set point settings. All specifications and procedures gained from a range of circuit drawings, engineering data sheets, step print out, manufacturers' procedure and data books

Unit Sector(s)

Unit sector	

Co-requisite units

Co-requisite units		

Competency field

Competency field	Installation and commissioning