



Australian Government

**Assessment Requirements for MEM18062
Install, maintain and calibrate
instrumentation sensors, transmitters and
final control elements**

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Modification History

Release 1. Supersedes and is equivalent to MEM18062B Install, maintain and calibrate instrumentation sensors, transmitters and final control elements

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 equipment specifications, circuit diagrams, engineering drawings, supplier catalogues and replacement components and obtaining relevant data with respect to installing, maintaining and calibrating instrumentation sensors, transmitters and final control elements
- interpreting device characteristics and principles of operation for cleaning and servicing of elements to maintain optimum operating condition
- consultation with relevant plant personnel
- selecting, installing and testing sensors, transmitters and final control elements to site and manufacturers' specifications
- obtaining and performing relevant scheduled/preventive maintenance schedules and determining correct function and recording the results
- identifying, localising, monitoring and reporting/recording faults and preparing sequential action plan to correct faults, including applying procedures to sequential and loop testing
- repairing/overhauling faulty items using appropriate tools, equipment, techniques and procedures to manufacturers' specifications
- refitting sensors, transmitters and final control elements and preparing for testing and calibration
- configuring, calibrating, testing and adjusting tuning and validating system performance against manufacturers' instruction sheets and returning system to service
- completing all service reports according to 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)

- characteristics, specifications and principles of operation of the sensors, transmitters and final control elements to be installed
- cleaning and servicing requirements to maintain optimum operating condition for elements
- relevant codes, standards, safety and legislative requirements
- criteria for selecting sensors, transmitters and final control elements and factors that determine the type of test equipment required
- procedures for testing, installing and maintaining sensors, transmitters and final control elements and for reporting/recording and monitoring faults and/or malfunctions in sensors, transmitters and final control elements
- tools, equipment and techniques required to install sensors and transmitters
- connections to be made to sensors, transmitters and final control elements
- variations of test results from specifications and probable causes of variations between test results and specifications
- test equipment and techniques required to determine correct function or malfunction of sensors, transmitters and final control elements
- probable causes of variations between test results and specifications
- need for systematic and/or sequential testing
- procedures for configuring, calibrating, testing, adjusting, tuning and validating system performance, including sensors, transmitters and final control elements
- physical standards against which sensors, transmitters and final control elements are to be calibrated
- devices, equipment and techniques required to calibrate sensors, transmitters and final control elements
- zero, span and range tests to be applied to the sensors, transmitters and final control elements
- procedures for recommissioning sensors, transmitters and final control elements.

Assessment Conditions

- Assessors must:
 - have vocational competency in installing, maintaining and calibrating instrumentation sensors, transmitters and final control elements 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>