



Australian Government

Assessment Requirements for AURETR048

Construct and test basic electronic circuits

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency

Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- correctly and safely construct and test two different basic electronic circuits.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- key aspects of work health and safety (WHS), occupational health and safety (OHS) and environmental requirements relating to the construction of basic electronic circuits, including:
 - use of personal protective equipment, including safety glasses
 - use of soldering irons
 - use of hand tools and electrical test equipment
 - identification of electrical risks and hazards
 - disposal of used electronic components
- meaning of electrical terms, including:
 - voltage
 - amperage
 - watts
 - current
 - resistance
- theory of electrical circuits, including:
 - Ohm's law
 - Watt's law
- types and application of electronic components, including:
 - heat sinks

- electronic wiring
- terminals
- solder
- switches
- lamps
- potentiometers
- relays
- diodes
- resistors
- capacitors
- transistors
- integrated circuits
- types, application and operation of basic electronic circuits, including:
 - flashing circuits
 - timing circuits
 - speed control circuits
 - methods for drawing electronic circuit diagrams
 - procedures for constructing basic electronic circuits
 - procedures for testing electronic circuits, and identifying and rectifying faults
- work area clean-up and maintenance requirements.

Assessment Conditions

Assessors must satisfy SNR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to having constructed basic electronic circuits, e.g. circuit diagrams.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- automotive workplace or simulated workplace, including a safe work area for constructing electronic circuit boards
- personal protective equipment appropriate to the workplace, including safety glasses
- electronic components and materials, including:
 - heat sinks
 - electronic wiring
 - terminals
 - solders
 - switches

- lamps
- relays
- diodes
- resistors
- capacitors
- transistors.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

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