



Australian Government

Assessment Requirements for ICTTEN201 Use electrical skills in telecommunications work

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Performance Evidence

Evidence of ability to:

- use fundamental electrical principles to solve basic AC and DC electrical problems
- connect and test an AC and DC circuit
- evaluate and compare characteristics of analog and digital signals
- compare and select cables according to transmission characteristics.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe principles of AC and DC electricity and how it impacts telecommunications work including:
 - AC and DC electrical SI units of measurement
 - work health and safety (WHS) issues
 - Ohm's law and other relevant calculations
 - circuit configuration
- identify and describe common AC and DC faults, fault finding techniques and use of testing equipment
- explain application of binary to decimal conversion and vice versa
- describe principles of analog and digital electronics and building blocks common to analog and digital circuits
- explain the distinction between analog and digital signals and devices
- explain encoding techniques and their application in wired, wireless and optical communications systems
- outline features and applications of unshielded twisted pair (UTP), coaxial and fibre cables

- list typical electronic devices, cable types and their applications
- explain modulation techniques used in wired, wireless and optical communications systems
- explain techniques to convert analog to digital and digital to analog
- describe characteristics of signal transmission
- list and describe common telecommunications cables and the characteristics of use and application.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the Telecommunications Network Engineering field of work and include access to:

- appropriate AC and DC testing equipment
- manufacturer's documentation and equipment
- safety equipment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>