Assessment Requirements for ICTCBL247 Install, maintain and modify customer premises communications cabling: ACMA Open Rule

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Modification History

Release	Comments
Release 1	This version released with ICT Information and Communications Technology Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to perform the tasks outlined in the elements, performance criteria, and foundation skills, and to:

- complete a cabling installation and termination for:
  - three different types of telephone sockets:
    - Australian modular socket
    - RJ45, RJ12 or RJ11 modular socket
    - Mode 3 alarm socket
  - one network termination device (NTD), including the completion of TCA1 compliance forms and NTD records
- read and interpret drawings related to cable layouts, outlet location, cable coding system, and identifiers and distributor locations
- comply with all work, health and safety (WHS) requirements and work practices
- meet Australian Communications and Media Authority (ACMA) requirements
- apply cable conductor identification codes to connector pins
- conduct tests and interpret cable test results
- identify the correct telecommunications cable by its colour identifier
- terminate systems at both distributor and outlet locations
- install and terminate two jumperable distributors (campus distributor or building distributor) with a capacity of 100 pair or greater
- terminate one non-jumperable distributor (local distributor)
- terminate both cable ends for at least one 50 pair cable, 10 or 20 pair cable and one 4 pair data cable, including accurate completion of installation records, drawing alterations and compliance forms
- place cables on support structures and building faces for both internal and external locations
- secure cables with appropriate fasteners for the above locations
- apply work practices that avoid cable damage

- install at least one common type of earthing system used in customer premises for cabling systems
- interpret and apply relevant legislation, regulations, codes, and standards
- install earthing to suit cabling conditions
- identify and rectify faulty cabling
- use appropriate personal protective equipment when performing cabling tasks.

Note: Evidence must be provided at least once when a specific volume or frequency is not stated.

Knowledge Evidence

The candidate must demonstrate the knowledge required to perform the tasks outlined in the elements, performance criteria, and foundation skills, which includes knowledge about:

- legislation, regulations, codes, standards, rules, guidance notes and other formal agreements that impact on work, in particular:
  - Australian Communications and Media Authority (ACMA) Telecommunications Cabling Provider Rules, cabling registrars, cabler registration rules, regulations and standards
  - current Australian Standards including AS/CA S009:2013 Installation requirements for customer cabling (Wiring Rules)
  - national and state/territory WHS requirements
  - workplace and worksite requirements
  - cabling environment, cable type, cable identification, termination systems, earthing and protection, records
  - ACMA certified components list
  - labelling requirements
- basic electrical principles of:
  - insulation, resistance
  - capacitance
  - impedance – as causes of, impedance, attenuation and cross-talk
- cable screening types
- colour codes
- cable conductor – types of codes
- customer switching systems and services
- printed circuit boards
- customer cabling environment for which cabling registration may be required for internal, external, above ground or below ground installation
- information required to operate equipment according to a test specification
- various cable types, their identifiers, termination systems (including jumperable and non-jumperable distributor), separations, support systems and fastening techniques used for telecommunications cabling

- documentation and records required when cabling
- manufacturer requirements for safe operation of equipment
- earthing and protection strategies and technologies relevant to different cabling applications
- test methods and performance requirements
- typical issues and challenges that occur on site
- installation requirements for underground and aerial cables including:
  - minimum depth of cover (below ground)
  - segregation from hazardous electrical and other services
  - earthing requirements
- design parameters for underground cables with regards to the purpose they will serve and the prevention of water ingress
- devices for a range of telecommunications cabling applications, including, ethernet data systems, audio and video systems, security systems and fire protection systems
- integral bearer wires and application according to current Australian Standards
- cable blocking agents used to prevent the ingress of water underground (excluding blown fibre tube systems)
- features of cables designed for underground use that may be laid in conduit trenches or directly buried
- responsibilities and process for communications installation works.

Assessment Conditions

Skills must be assessed in a workplace or simulated environment where conditions are typical of those in a telecommunications work environment or workplace.

Access is required to:

- site/s on which communications cabling activities can be carried out
- two jumperable distributors (campus distributor or building distributor) with a capacity of 100 pair or greater
- one non-jumperable distributor (LD) and a patch panel
- a 50 pair and 4 pair and one ethernet cable
- cabling and field equipment currently used in industry
- relevant regulatory and site related documentation.

Assessment by a Telecommunications Industry Training Advisory Board (TITAB) registered assessor is recommended for this unit.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. Refer also to the *Requirements for assessors* in the ICT Information and Communications Technology Training Package Companion Volume Implementation Guide.

Links

Companion Volume Implementation Guides are available from VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2