Australian Government

UEEDV0003 Install and connect cabling for direct access to telecommunications service

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to install and connect cabling for direct access to telecommunications service.

It includes working safely, preparing cabling routes, laying and connecting cabling for direct access to telecommunication services, terminating cabling, inspecting and testing, and completing cabling documentation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

and

UEEDV0013 Solve problems in voice and data communications circuits

or

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

Competency Field

Data and Voice

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare to lay and connect cabling for direct access to telecommunication services	**1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified, obtained and applied
	1.2 WHS/OHS risks are identified and risk control measures and workplace procedures are followed in preparation for the work
	1.3 Remote power feeding is identified and risk control measures prepared
	1.4 Scope of work is determined from documentation and/or discussions with relevant person/s
	1.5 Cable routes are planned within the constraints of the building structure, significants and regulations
	1.6 Earthing requirements are determined with existing earthing arrangements and cable system earth upper and lower resistance limitations
	1.7 Advice is sought from relevant person/s to ensure work is coordinated effectively with others
	1.8 Sources of materials required for work are checked in accordance with routines and workplace procedures
	1.9 Tools, equipment and testing devices required to carry out work are obtained and checked for correct operation and safety
2 Lay and connect cabling for direct access to telecommunication services	**2.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed

2.2 Installed support structure is checked to ensure cable is protected against damage during installation and general operation

2.3 Sufficient excess is allowed at cable ends to facilitate termination

2.4 Telecommunication outlet ends of cable are uniquely labelled to match identifier at originating location in accordance with relevant industry standards

2.5 Cable is placed and secured to maintain safety and interference segregation in accordance with relevant industry standards

2.6 Cable ties are tightened without damage to cable sheath or transmission impairment and trimmed flush in accordance with workplace procedures

2.7 Cables are installed as catenaries or supported by catenaries in internal and external environment to meet above ground clearances and clearances from hazardous electrical services in accordance with relevant industry standards

2.8 Cables are installed underground to meet depth of cover and segregation from hazardous electrical and relevant services in accordance with relevant industry standards

2.9 Over-voltage protection devices are fitted to all cable pairs, as required, to suppress voltage surges with devices protectively earthed in accordance with relevant industry standards

2.10 Telecommunications reference conductor (TRC)/communications earth system (CES)/earth wire insulation is protected and segregated against damage in accordance with relevant industry standards

2.11 Workplace procedures for referring unplanned events to immediate supervisor for directions are followed

2.12 Cabling is installed without waste of materials, energy, services, damage to apparatus and the surrounding environment

2.13 Quality checks are carried out to ensure cabling is in accordance with relevant industry standards

3	**Terminate, inspect and test cables and earth wires**	**3.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed
		3.2 Cable sheath is removed to allow for correct termination length without damage to underlying conductors and relevant insulation
		3.3 Network termination device is installed and cable pairs sequentially fanned for termination in accordance with manufacturer specifications
		3.4 Conductors are terminated with colour code sequence using relevant termination tools in accordance with manufacturer specifications
		3.5 Cable shield is earthed in accordance with manufacturer specifications and relevant industry standards
		3.6 Visual inspection is conducted to confirm termination colour code sequence prior to end-to-end testing of wire and pair termination integrity
		3.7 Cable pairs are inspected, tested and labelled to provide accurate identification in accordance with relevant industry standards
		3.8 TRC/CES/earth wires are terminated with connectors in accordance with relevant industry standards and manufacturer specifications
		3.9 TRC/CES/earth wire continuity is maintained throughout and interface requirements and electrical systems are observed
		3.10 TRC/CES/earthing installation is inspected and tested for continuity, insulation resistance and conductive resistance in accordance with industry standards
		3.11 Compatibility of alterations with existing systems and new work is confirmed and tested in isolation and integrated with existing systems
		3.12 Workplace procedures for referring unplanned events to immediate supervisor for directions are followed
		3.13 Cabling is terminated without waste of materials, energy and/or damage to apparatus, the surrounding environment and/or services

		3.14	Quality checks are carried out and defects rectified to ensure cabling is in accordance with workplace procedures and relevant industry standards
4	**Complete cabling work records and reporting**	**4.1**	WHS/OHS work completion risk control measures and workplace procedures are followed
		4.2	Worksite is cleaned and made safe in accordance with workplace procedures
		4.3	Cabling completion advice is documented and reported in accordance with workplace procedures and relevant industry standards

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Cabling installations must include at least the following:	• single telephone line (two-pair) and directly connected to telephone sockets

Unit Mapping Information

This unit replaces and is equivalent to UEENEEF101A Install and connect cabling for direct access to telecommunications service.

Links

Companion Volume implementation guides are found in VETNet - - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6