

Domain	TELECOMMUNICATION AND WIRELESS TECHNOLOGY	Unit ID: 2286
Title:	Install and power telecommunication devices	
Level: 4		Credits: 5

Purpose

This unit standard is intended for those who install and power telecommunication devices. People credited with this unit standard are able to prepare and arrange to install power supply systems, mounting and powering telecommunication devices, select and terminate cables for a given application, install protective telecommunications earthing system and complete work and clean up.

This unit standard is intended for those who work in the telecommunication and wireless technology working environment.

Special Notes

1. Entry information:

Prerequisites:

- None

2. This unit standard is to be delivered and assessed in the context of information and communication technology.

3. Assessment evidence may be collected from a real or a simulated workplace in which telecommunication and wireless technology operations are carried out.

4. Tools and equipment may include but are not limited to computer, external devices, storage devices and other and basic computer applications.

5. Performance of all elements in this unit standard must comply with industry standards.

6. Regulations and legislation relevant to this unit standard include the following:

- Labour Act No. 11 of 2007
- Petroleum Products and Energy Amendment Act No. 2 of 2005
- National Energy Fund Act of 2000
- Gas Act (Draft 2b)
- Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments
- ISO 14001 (Environmental Management Standard)
- Electricity Act No.4 of 2007
- SANS 10142-1 and SANS 10142-2 electrical wiring codes and all subsequent amendments to any of the above.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Prepare and arrange to install power supply systems

Range

Preparation may include but is not limited to scope of work, resources, specifications, work plan, drawings and identification of hazards. Customer Premises Equipment includes but is not limited to batteries and solar system.

Performance Criteria

- 1.1 The nature and extent of the installation is determined from job specifications.
- 1.2 Safety and other regulatory requirements to which the installation shall comply are identified, obtained and interpreted.
- 1.3 Circuit diagrams are interpreted according to specific task.
- 1.4 Tools, and test equipment to be used are selected according to specified task and are checked for safe and effective operation.
- 1.5 Circuits are arranged to ensure safe and functional operation of the installation.
- 1.6 Circuits are arranged to comply with technical standards and job specifications and requirements.
- 1.7 Earthing is arranged to comply with the standards and local energy supplier's requirements.

Element 2: Mounting and powering telecommunication devices

Range

Customer premises fixed equipment may include but is not limited to batteries, adapters, surge protectors, solar panel, charge controllers and regulators.

Performance Criteria

- 2.1 Mounting brackets and other fixtures are installed according to manufacturers' procedures.

- 2.2 Power supply equipment are installed according to manufacturer's specifications and procedures.

Element 3: Select and terminate cables for a given application

Range

Cables may include but not limited to tough plastic-sheathed (TPS) and conduit wire, neutral-screened (co-axial) cable.

Data may include but are not limited to maximum demand, maximum permissible volt-drop, and length of run, class of excess-current protection, grouping and installation method.

Performance Criteria

- 3.1 Types of cable are selected to match the application in terms of operating conditions and environment.
- 3.2 Cable size is determined from given data in accordance with current regulations and standards and manufacturer's data.
- 3.3 Tools for cable works are identified and selected.
- 3.4 Cables are surface mounted (for permanent wiring) using accessories appropriate to the cable type, according to current regulations and standards, and safe and sound practice.
- 3.5 Cables are isolated from interference according to industry practice.
- 3.6 Flexible cord is terminated at the appliance in accordance with current regulations and standards, and industry practice.
- 3.7 Cables and conductors are terminated to meet the requirements of the regulations and standards and installation plans.
- 3.8 Terminations are completed in industry-acceptable time-frames.

Element 4: Install protective telecommunications earthing system

Performance Criteria

- 4.1 Required earthing application and location are identified.
- 4.2 Selected earthing route is checked and confirmed not to be causing any interference to system performance.
- 4.3 Earth continuity is maintained at all times to ensure safe and reliable system operation.
- 4.4 Earth system faults are identified and rectified prior to re-testing.

Element 5: Complete work and clean up

Performance Criteria

- 5.1 Work is completed and appropriate personnel notified in accordance with workplace procedures.
- 5.2 Work area is cleared of waste, cleaned, restored and secured in accordance with workplace procedures.
- 5.3 Reusable material is collected and stored in accordance with workplace procedures.
- 5.4 Tools and equipment are cleaned, checked and maintained in accordance with workplace procedures.
- 5.5 Work completion details are finalised in accordance with workplace procedures.

Registration Data

Subfield:	Information and Communication Technology
Date first registered:	30 July 2020
Date this version registered:	30 July 2020
Anticipated review:	2025
Body responsible for review:	NTA