



Australian Government

ICTBWN303 Install lead-in module and cable for fibre to the premises

Release: 1

ICTBWN303 Install lead-in module and cable for fibre to the premises

Modification History

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

Application

This unit describes the skills and knowledge required to install a lead-in module and its associated cable for a fibre to the premises (FTTP) installation. Optical networks and FTTP are part of the strategies by service providers using wavelength division multiplexing (WDM) to deliver very high speed broadband capacity through the access network for the National Broadband Network (NBN) initiative.

It applies to individuals with specialist technical skills who work in teams to provide either underground or aerial services in next generation networks (NGN) using emerging technologies.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the ICT Implementation Guide Companion Volume or the relevant regulator for details of licensing, legislative or certification requirements.

Unit Sector

Telecommunications – broadband and wireless networks

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Set up and prepare for installation	1.1 Obtain relevant legislation, codes, regulations and standards for compliance when conducting work 1.2 Scope work by obtaining project plan from appropriate personnel and arrange for site access to comply with security arrangements

	1.3 Notify appropriate personnel of identified safety hazards at worksite 1.4 Determine type of lead-in module and cable from project plan and identify installation requirements using work instructions 1.5 Obtain tools and safety equipment and material to perform tasks safely and efficiently 1.6 Select and use required protective equipment and make site safe and secure for installation work 1.7 Obtain lead-in module, visually inspect for lead-in module damage and replace if necessary
2. Install lead-in module in enclosure	2.1 Follow work health and safety (WHS) and environmental requirements for given work, and identify and avoid other services 2.2 Identify position in enclosure to secure module and install mounting bracket according to manufacturer's specifications 2.3 Splice lead-in module tail to distribution joint 2.4 Attach lead-in module to mounting bracket and secure in position
3. Install optical fibre lead-in cable to premises	3.1 Unpack and prepare lead-in cable according to manufacturer's specifications 3.2 Haul optical fibre lead-in cable to premises, observing maximum strain on cable for underground installation 3.3 Coil excess cable length within enclosure 3.4 Install aerial lead-in using catenary and bearer wire to meet relevant height and minimum sag requirements
4. Terminate lead-in cable at premises	4.1 Access optical network termination (ONT) unit to expose lead-in cable to retrieve fibre and connector 4.2 Clean ONT adapter and connector according to manufacturer's specifications 4.3 Mate fibre connector with ONT adapter, ensuring free of contaminants 4.4 Route fibre cable within ONT and secure in position 4.5 Test operation of lead-in at ONT for optical power levels at designated operating WDM optical wavelength 4.6 Record connections, test results and park unused fibre leads for safety reasons according to organisational policy
5. Clean up work site	5.1 Seal ONT and enclosure 5.2 Remove installation waste and debris from worksite and dispose of according to environmental requirements 5.3 Notify appropriate personnel of job completion and obtain sign off

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 1.4, 2.1, 2.2, 2.4, 3.1, 3.3, 3.4, 4.2, 4.5, 4.6	Reads and interprets plans, specifications and other documentation from a variety of sources and consolidates information to determine requirements
Writing	1.2, 1.3, 3.5, 4.5, 4.6, 5.3	Accurately completes relevant reports and documentation using clear and technically specific language and numerical data
Oral Communication	1.2, 1.3, 5.3	- Participates in verbal exchanges with key personnel using appropriate, clear and detailed language to exchange information, ideas or solutions - Uses listening and questioning skills to confirm understanding of requirements
Numeracy	3.2, 3.4	- Takes measurements and uses them for work layout and construction - Performs mathematical calculations to check, interpret and confirm results of system tests
Navigate the world of work	1.4, 2.1, 2.2, 3.4, 4.6, 5.2	- Complies with explicit policies and procedures - Explores and implements where identified the implicit expectations of policies and procedures
Interact with others	1.2, 1.3, 5.3	- Uses a limited range of accepted practices for communicating in a work environment - Complies with work instructions and contributes to work group discussions using accepted conventions
Get the work done	1.1, 1.5-1.7, 2.2, 3.2-3.4, 4.1-4.6, 5.1, 5.2	- Plans and implements routine tasks and workload, making limited decisions on sequencing, timing and collaboration, and seeks assistance in setting priorities - Makes low-impact decisions within familiar situations, based on a range of predefined or routine solutions, and evaluates the effectiveness of the outcome - Uses the main features and functions of digital tools to complete work tasks and access

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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTBWN303 Install lead-in module and cable for fibre to the premises	ICTBWN3090B Install lead-in module and cable for fibre to the premises	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for ICTBWN303 Install lead-in module and cable for fibre to the premises

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Performance Evidence

Evidence of the ability to:

- safely use optical power test equipment
- accurately measure optical signals at TWO wavelength division multiplexing (WDM) wavelengths
- install lead-in module in the enclosure for both an aerial and an underground installation
- complete connection recording for both lead-ins
- perform and test an optical fibre lead-in to a distribution joint.

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:

- outline licence requirements for working at heights
- identify the location and summarise the contents of relevant organisational policies and procedures
- discuss personal safety issues
- explain the propagation of light in optical communication systems
- describe the role of transmitters and receivers in optical communication systems
- identify the critical aspects of site engineering
- explain specific WHS requirements relating to the handling of optical fibre and the use of laser light sources
- explain WDM applications.

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 – broadband and wireless networks field of work and include access to:

- a fibre lead-in module, distribution pit, premises conduit and relevant optical network termination (ONT) unit
- tools, equipment and personal protective equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities.

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

Links

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