Australian Government

UEEEL0073 Verify compliance and functionality of special LV electrical installations

Release: 2

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Modification History

Release 2. Minor change. Typographic error in prerequisites corrected.

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 verify compliance and functionality of a special low voltage (LV) electrical installation.

It includes preparing for testing and visual inspection for verifying an electrical installation, and completing reporting and recommendations of finding.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

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

UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work

UEEEL0003 Arrange circuits, control and protection for general electrical installations

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0039 Design, install and verify compliance and functionality of general electrical installations

UEEEL0023 Terminate cables, cords and accessories for low voltage circuits

UEEEL0018 Select wiring systems and cables for low voltage general electrical installations

UEEEL0005 Develop and connect electrical control circuits

UEEEL0069 Select and arrange equipment for special LV electrical installations

UEEEL0019 Solve problems in direct current (d.c.) machines

UEEEL0021 Solve problems in electromagnetic devices

UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits

UEEEL0008 Evaluate and modify low voltage heating equipment and controls

UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment, and controls

UEEEL0010 Evaluate and modify low voltage socket outlets circuits

UEEEL0024 Test and connect alternating current (a.c.) rotating machines

UEEEL0025 Test and connect transformers

UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories

and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

Competency Field

Electrical

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 inspect and test an electrical installation	**1.1** Work health and safety (WHS)/occupational health and safety (OHS) measures for the site are identified, obtained and applied
	1.2 WHS/OHS risk control measures and procedures in preparation for the work are followed

	1.3	WHS/OHS hazards not previously identified are noted, risks assessed and risk control measures implemented
	1.4	Installation documentation and relevant industry standard are reviewed and applied
	1.5	Appropriate person/s is consulted to ensure the work is coordinated effectively with others
	1.6	Tools, equipment and testing devices needed to verify compliance are obtained in accordance with workplace procedures and checked for operation and safety
	1.7	Preparatory work is checked to ensure no damage has occurred in accordance with workplace procedures
2 Visually inspect the installation	**2.1**	WHS/OHS risk control measures and procedures for carrying out the work are followed
	2.2	Need to inspect, test and measure live work is determined in accordance with WHS/OHS requirements and workplace procedures
	2.3	Circuits/machines/plant are checked and isolated in accordance with WHS/OHS requirements and workplace procedures
	2.4	Installed wiring is checked for suitability for the environments and protected from damage and overheating
	2.5	Cable conductor sizes acquired are inspected to meet current-carrying capacity requirements, voltage-drop and fault-loop impedance limitations in accordance with relevant industry standards
	2.6	Inspection protection methods and devices are validated to meet coordination requirements for overload and short circuit protection in accordance with relevant industry standards
	2.7	Switchgear and control gear are inspected, validated and appropriately rated to meet functional requirements in accordance with relevant industry standards
	2.8	Electrical equipment is checked for compliance with safety requirements in accordance with relevant industry standards

	2.9	Earthing system components are checked, located and conductors correctly sized in accordance with relevant industry standards
	2.10	Markings on switchboards are checked for accuracy and clarity in accordance with relevant industry standards
3 Conduct safety testing	**3.1**	WHS/OHS risk control measures and procedures for carrying out the work are followed
	3.2	Need to test and measure live electrical work is conducted in accordance with WHS/OHS requirements and workplace procedures
	3.3	Circuits/machines/plant are checked and isolated in accordance with WHS/OHS requirements and workplace procedures
	3.4	Mandatory tests are conducted to verify earthing conductor resistance is sufficiently low; insulation resistance is sufficiently high; polarities are correct; circuit connections are correct; and tests are in accordance with relevant industry standards
	3.5	Inspection and testing are conducted to verify fault-loop impedance is sufficiently low and residual current device (RCD) operates as intended in accordance with job requirements and relevant industry standards
4 Report inspection and test findings	**4.1**	WHS/OHS risk control work completion measures and workplace procedures are followed
	4.2	Worksite is cleaned and made safe in accordance with workplace procedures
	4.3	Non-compliance defects are identified and reported in accordance with workplace procedures
	4.4	Recommendations for rectifying defects are made in accordance with workplace procedures
	4.5	Mandatory documentation is completed in accordance with workplace procedures

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.

Verifying compliance and functionality must include at least two types of installations from the following:

- caravan parks
- construction and demolition sites
- marinas
- medical treatment areas
- moveable premises

Unit Mapping Information

This unit replaces and is equivalent to UEENEEG121A Verify compliance and functionality of special LV electrical installations.

Links

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