



Australian Government

UEEIC0022 Install instrumentation and control apparatus and associated equipment

Release: 1

UEEIC0022 Install instrumentation and control apparatus and associated equipment

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 instrumentation and control apparatus and associated equipment.

It includes preparing and installing instrumentation and control apparatus and associated equipment, as well as completing and reporting installation activities.

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. Where a licence or permit to practice is not held, a relevant contract of training, such as an Australian Apprenticeship, is required.

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

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

UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals

Competency Field

Instrumentation & Control

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify instrumentation, control apparatus and associated equipment

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** WHS/OHS requirements and workplace procedures are identified and applied
- 1.2** Hazards are identified, risks are assessed and control measures implemented
- 1.3** Safety hazards not previously identified are reported on job safety assessment and advice on risk control measures are implemented
- 1.4** Installation of apparatus is prepared in consultation with relevant person/s and scheduled
- 1.5** Nature and location of work is determined from documentation and/or relevant person/s to determine scope of work
- 1.6** Location of instrumentation, control apparatus and associated equipment is planned within constraints of building structure, significant and regulations
- 1.7** Advice is sought from relevant person/s to ensure work is coordinated with others in accordance with workplace procedures
- 1.8** Materials needed for installation work are obtained in accordance with workplace procedures and checked against job requirements
- 1.9** Tools, equipment and testing devices needed for work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.10** Preparatory work is checked by supervisor to ensure no damage has occurred and work complies with job requirements

2 Install instrumentation, control apparatus and associated equipment

- 2.1** WHS/OHS risk control measures and procedures for carrying out the work are followed

- 2.2 Need to test or measure live electrical components is determined in accordance with WHS/OHS regulatory requirements and workplace procedures
 - 2.3 Circuits/machines/plant are checked and isolated in accordance with workplace procedures
 - 2.4 Instrumentation, control apparatus and associated equipment are installed with sufficient excess to adjust and maintain terminations in accordance with technical standards, manufacturer specifications and job requirements
 - 2.5 Wiring and tubing is terminated at instrumentation, control apparatus and associated equipment in accordance with manufacturer specifications, functional and regulatory requirements
 - 2.6 Unplanned situations are discussed with relevant person/s and documented in accordance with workplace procedures
 - 2.7 Unplanned situations are dealt with safely and with approval of authorised person/s in accordance with workplace procedures
 - 2.8 Regular quality checks of installed apparatus are undertaken in accordance with workplace procedures
 - 2.9 Apparatus installation is performed without waste of materials, damage to apparatus, circuits, surrounding environment or services using sustainable energy principles and practices
- 3 Complete and report installation activities**
- 3.1 WHS/OHS work completion risk control measures and workplace procedures are followed
 - 3.2 Worksite is cleaned and made safe in accordance with workplace procedures
 - 3.3 Final checks are made to installed apparatus to ensure it meets job requirements
 - 3.4 'As-installed' apparatus and associated equipment are documented and relevant person/s notified 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.

Instrumentation and control apparatus and associated equipment must include at least four of the following:

- pressure measurement apparatus and systems
- temperature measurement apparatus and systems
- level/density measurement apparatus and systems
- flow measurement apparatus and systems
- chemical measurement apparatus and systems

Unit Mapping Information

This unit replaces and is equivalent to UEENEEI108A Install instrumentation and control apparatus and associated equipment.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEEIC0022 Install instrumentation and control apparatus and associated equipment

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including implementing risk control measures
- applying sustainable energy principles and practices
- checking circuits/machines/plant are isolated
- cleaning and making safe worksite
- completing and reporting installation activities
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- identifying and installing instrumentation, control apparatus and associated equipment
- locating and installing instrumentation, control apparatus and associated equipment
- obtaining relevant materials and checking against job requirements
- obtaining tools, equipment and testing devices
- terminating wiring and tubing
- undertaking regular quality checks in accordance with relevant industry standards.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- instrumentation and control equipment installation requirements and techniques
- live electrical components
- quality checks
- regulatory requirements, including:
 - equipment specification
 - manufacturer s installation instructions
 - system specifications
 - communication/signal cabling installation requirements

- power wiring requirements
- initial set-up procedures
- relevant job safety assessments or risk mitigation processes, including risk control measures
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- sustainable energy principles and practices
- wiring and tubing terminations.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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