



**Australian Government**

# **UEERS0021 Assemble and wire electrical rail signalling equipment**

**Release: 1**

# **UEERS0021 Assemble and wire electrical rail signalling equipment**

## **Modification History**

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

This unit replaces and is not equivalent to UEERS0001 Assemble and wire internal electrical rail signalling equipment.

Modifications in the second release of this unit of competency in the UEE Electrotechnology Training Package include:

- Title changed.
- Application updated to reflect title change.
- UEERS0020 added to prerequisites.
- Element titles and performance criteria amended to reflect title change.
- Performance criteria 3.5 added.
- Performance evidence updated for clarity.
- Content related to inverters in Knowledge Evidence moved to a different unit.
- Minor text amendments made to assessment conditions.

## **Application**

This unit involves the skills and knowledge required to assemble and wire electrical rail signalling equipment.

It includes relevant workplace procedures for: assembling and mounting components, performing wiring, terminating cables, and wiring to comply with signalling designs and standards.

Persons achieving competence in this unit will need to fulfil the applicable state/territory legislated rail safety requirements and to comply with relevant codes of practice, rules and/or guidelines.

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

## **Pre-requisite Unit**

UEEEL0003 Arrange circuits, control and protection for general electrical installations

UEERS0020 Apply rail signalling principles

## Competency Field

Rail Signalling

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare to assemble and wire signalling equipment**

### PERFORMANCE CRITERIA

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

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for work area are identified and applied
- 1.2** Hazards are identified, risks assessed, and control measures and workplace procedures are implemented
- 1.3** Safety hazards that have not previously been identified are noted on the job safety assessments and existing risk control measures implemented
- 1.4** Technical requirements relating to specific signalling equipment are obtained
- 1.5** Assembly and wiring are appropriately sequenced in accordance with job schedule
- 1.6** Appropriate person/s is consulted to ensure work is coordinated effectively with others involved on the worksite
- 1.7** Materials needed for assembly wiring and cabling are obtained in accordance with workplace procedures and checked against job requirements
- 1.8** Tools, equipment, and testing devices needed to assemble and wire equipment are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.9** Rail signalling equipment is prepared for assembly and wiring in accordance with workplace procedures,

- drawings/diagrams and relevant specifications
- 2 Assemble and wire signalling equipment**
- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed
  - 2.2** Equipment is assembled, wired, connected and labelled to comply with technical standards and job specification requirements
  - 2.3** Risk control measures for dealing with unplanned situations are discussed with appropriate person/s and documented in job safety assessments
  - 2.4** Unplanned situations are dealt with safely in a manner that minimises risk to personnel and equipment and with the approval of authorised person/s
  - 2.5** Equipment is assembled, wired, connected and labelled efficiently without waste of materials or damage to apparatus, the surrounding environment or services using sustainable energy practices
- 3 Complete assembly and wiring of signalling equipment**
- 3.1** WHS/OHS work completion risk control measures and workplace procedures are followed
  - 3.2** Wire and cable terminations are checked in accordance with workplace installation procedures to ensure tightness and functionality
  - 3.3** Continuity and insulation tests are carried out in accordance with workplace test procedures to ensure and verify system standards are met
  - 3.4** Wiring and cabling diagrams, quality requirements and safety issues are addressed and relevant reports/documentation are updated and completed in accordance with workplace procedures
  - 3.5** Completed signalling equipment is reported and released for independent testing and certification

## 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.

## Unit Mapping Information

This unit replaces and is not equivalent to UEERS0001 Assemble and wire internal electrical rail signalling equipment.

## Links

Companion Volume Implementation Guides are found in VETNet -

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