



Australian Government

UEEIC0014 Develop, enter and verify programs in supervisory control and data acquisition systems

Release: 1

UEEIC0014 Develop, enter and verify programs in supervisory control and data acquisition systems

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 develop, enter and verify programs in supervisory control and data acquisition (SCADA) system.

It includes identifying, developing and entering programs using dedicated SCADA software. It also includes monitoring, verifying and documenting programming activities.

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

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEEIC0013 Develop, enter and verify discrete control programs for programmable controllers

UEEIC0015 Develop, enter and verify word and analogue control programs for programmable logic controllers

Competency Field

Instrumentation & Control

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify SCADA system

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) procedures for a given work area are

identified obtained and applied

- 1.2** Hazards are identified, risks are assessed and control measures implemented
 - 1.3** Extent of SCADA system is determined from design brief and job specifications
 - 1.4** Process data is analysed for development of graphical design/mimic diagrams
 - 1.5** Programmable logic controller (PLC) analogue and digital addresses are related to tag databases
 - 1.6** Tag data types are entered and configured in tag database
 - 1.7** Graphic objects are created and added to a graphic library, as required, in accordance with vendor software
 - 1.8** Security requirements are determined for SCADA system to prevent access by unauthorised person/s
 - 1.9** SCADA system is configured to provide appropriate reporting mechanisms
 - 1.10** Equipment, software and testing devices for work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 2 Develop and enter program using dedicated SCADA software**
 - 2.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed
 - 2.2** SCADA software is used to develop human-machine interface (HMI) processes and to accept and implement operators control instructions
 - 2.3** Supervisory control functions, data acquisition components and automated tasks are programmed using SCADA software
 - 2.4** Data is manipulated within the SCADA software to function in accordance with design brief and job specifications
 - 2.5** Alarms and limits for processing variables are identified and programmed in accordance with workplace procedures

- | | | |
|---|------------|--|
| | 2.6 | Trends for process variables and limits are programmed in accordance with workplace procedures and manufacturer instructions |
| | 2.7 | Reports are configured to display/print appropriate information |
| | 2.8 | User rights/security is configured to provide appropriate access to SCADA system |
| | 2.9 | Unplanned situations are responded to in accordance with workplace procedures and selected for safety and specified work outcomes |
| 3 Monitor verify and document programming activities | 3.1 | Device operation is tested in accordance with WHS/OHS requirements and workplace procedures |
| | 3.2 | Entered objects and settings are tested in accordance with job specifications and manufacturer specifications |
| | 3.3 | SCADA software tools are used to test and monitor programs, and operating anomalies are identified and corrected in accordance with workplace procedures |
| | 3.4 | WHS/OHS work completion risk control measures and workplace procedures are followed |
| | 3.5 | SCADA system specifications and programs are documented in accordance with workplace procedures |
| | 3.6 | Work completion is reported 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.

Developing, entering and verifying programs • at least five graphic objects

in SCADA systems must include the following:

Unit Mapping Information

This unit replaces and is equivalent to UEENEEI152A Develop, enter and verify programs in Supervisory Control and Data Acquisition systems.

Links

Companion Volume implementation guides are found in VETNet - -

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