

Domain	Control and Instrumentation
Title:	Apply knowledge of Signal Conditioners
Level: 4	Credits: 3

Purpose

This unit standard specifies the competencies required to apply knowledge of Signal Conditioners. It includes demonstrating knowledge of Signal conditioning Processing Apply knowledge of Signal Conditioning Techniques, Demonstrate knowledge of signal Processors. This unit standard is intended for those who work in instrumentation industry.

Special Notes

1. Entry information:

Prerequisite

- *Unit 1157 - Demonstrate basic knowledge of workplace health and safety*
- *Unit I&C02 - Plan and organise work in instrumentation work environment*
- *Unit I&C05 - Demonstrate knowledge of basic electronic components and circuits*
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2. Assessment evidence may be collected from a real workplace or an appropriate simulated realistic environment in which Instrument and Control operations are carried out.

3. To demonstrate competence, minimum evidence of installing a signal conditioner, as per drawing, ensuring its operational as prescribed and including interpretation of its operation.

4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' guidelines and instructions

4. Glossary of terms:

- *specifications'* refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements

5. Regulations and legislation relevant to this unit standard include the following:

- Labour Act 2007, No. 11, 2007
- IEEE 315
- IEEE 518
- Regulations relating to the health & safety of employees at work under Schedule 1 (2) of the Labour Act No.11 of 2007
- And all subsequent amendments

6. Performance of all elements in this unit standard must comply with industry standards.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the

Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Demonstrate knowledge of Signal conditioning Processing

Range

Elements of signal conditioning include but not limited to pressure, current, pulses, voltage and frequency

Performance Criteria

- 1.1 Signal conditioning Processing are interpreted
- 1.2 Elements of signal conditioning are underlined
- 1.3 Elements of signal conditioning processes are interpreted
- 1.4 Principles of operation of signal conditioners are explained

Element 4: Demonstrate knowledge of signal Processors

Range

Performance Criteria

- 4.1 basic measurement system is explained based on functionality
- 4.2 various types of signals processors and their conversion are described
- 4.4 principles of analogue and digital processors are explained,

Element 2: Apply knowledge of Signal Conditioning Techniques

Range

Signal conditioning techniques may include but is not limited to voltage to current, resistance to voltage, pressure to current, pulses to frequency, optic to voltage

Performance Criteria

- 2.1 Various Signal measurement techniques are explained and applied
- 2.2 Characteristics of the signal measuring techniques underlined
- 2.3 Signal Conditioners are selected, Installed, Applied and Maintained

Registration Data

Subfield:	Electrical Engineering
Date first registered:	
Date this version registered:	

Anticipated review:	
Body responsible for review:	Namibia Training Authority