

<b>Title</b>	<b>Prepare and interpret diagrams for instrumentation and control systems</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	<p>This unit standard covers drawing and interpreting diagrams used to document the operation and connection of instrumentation and control systems.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– prepare diagrams of industrial measurement and control systems; and;</li> <li>– interpret diagrams of industrial measurement and control systems.</li> </ul>
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<b>Classification</b>	Industrial Measurement and Control > Industrial Measurement and Control - Theory
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<b>Available grade</b>	Achieved
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## Guidance Information

### 1 Definitions

*IEC* – International Electrotechnical Commission.

*Industry requirements* – includes all asset owner requirements; manufacturers' specifications; enterprise requirements which cover the documented workplace policies, procedures, specifications, and business requirements; and quality management requirements relevant to the workplace in which the assessment is carried out.

*ISA* – International Society for Automation.

*ISO* – International Organisation for Standardisation.

### 2 Range

- a Diagrams may include but are not limited to – piping and instrumentation diagrams (P & ID); process flow diagrams; single-line diagrams; loop diagrams.
- b Diagrams must include all relevant details and principal elements appropriate to the type of drawing.
- c All diagrams must comply with industry or site standards.
- d Neat sketches will be adequate to demonstrate competence.

## Outcomes and performance criteria

### Outcome 1

Prepare diagrams of industrial measurement and control systems.

Range evidence of a minimum of four diagrams is required, which may all relate to the same part of a system.

### Performance criteria

- 1.1 Draw diagrams relating to the process operation using standard symbols and formats.
- 1.2 Draw diagrams with layouts that aid interpretation of measurement and control systems.

### Outcome 2

Interpret diagrams of industrial measurement and control systems.

Range evidence of at least four diagrams of different types is required.

### Performance criteria

- 2.1 Interpret a diagram to explain system operation.
- 2.2 Explain system functions and items included in a diagram in accordance with industry requirements.

<b>Planned review date</b>	31 December 2021
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### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 May 2008	31 December 2019
Review	2	28 November 2013	N/A
Rollover	3	28 June 2018	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

### Comments on this unit standard

Please contact The Skills Organisation [reviewcomments@skills.org.nz](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.