

<b>Title</b>	<b>Describe automotive electronic components, actuators, sensors and signals</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to describe automotive electronic components, actuators, sensors and signals.
----------------	--

<b>Classification</b>	Motor Industry > Automotive Electrical and Electronics
-----------------------	--

<b>Available grade</b>	Achieved
------------------------	----------

---

## Guidance Information

---

### Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, and company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015; and any subsequent amendments and replacements.
- 3 Definitions  
*Company requirements* refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.  
*Service information* may include – technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.
- 4 Machines may include – forklifts, earth moving equipment, grader equipment, loaders, dozers, tractors, agricultural equipment, dump trucks, prime movers; electric machines including – forklift, walk-behind pallet, ride-on pallet, reach truck, order picker, counterbalance truck, turret truck.

---

## Outcomes and performance criteria

### Outcome 1

Describe electronic components.

**Performance criteria**

1.1 Electronic components are described.

Range electronic control module, integrated circuits.

**Outcome 2**

Describe electronic signals.

**Performance criteria**

2.1 Electronic signals are described.

Range digital, analogue, frequency, amplitude, pulse width modulation.

**Outcome 3**

Describe types of sensors.

**Performance criteria**

3.1 Sensor types are described.

Range chemical content, fluid level, position, pressure, speed, temperature.

**Outcome 4**

Describe types of actuators.

**Performance criteria**

4.1 Actuator types are described.

Range motors, stepper motors, solenoids, relays.

<b>Planned review date</b>	31 December 2022
----------------------------	------------------

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	25 January 2018	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

---

**Comments on this unit standard**

Please contact MITO New Zealand Incorporated [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.