

## Apply Control Circuits Diagnostic Skills (Blended)

### MF-AUT-302E-1

Code: ACCDS

Duration: 24 Hours

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#### Synopsis:

This module is developed to enable learners to acquire knowledge and skills to carry out fault finding on control circuit systematically and safely.

#### Course Objective:

On completion of this module, learners will be able to apply diagnostic skills on fault finding on control circuits.

#### Course Outline:

The knowledge and skills covered in this module include:

##### Skills:

- Use control circuit and diagrams to interpret how circuits work
- Locate the faulty components and connections in the control circuit
- Remedy the faulty components and connections in the control circuit
- Improve machine yields time through continual Improvement

##### Knowledge:

- Interpretation of Work Instructions
- Functions of control components and devices
- Application of the control devices
- Electrical rating of control devices
- Types of electrical protective devices
- Functions and application of electrical devices
- Common causes of overload
- The type of engineering safety devices such as guard, hard stop, relieve valve
- Types of fasteners commonly used in the workplace
- Methods of preventing the bolt from self-loosening
- Types of tools that determine the thread series
- Types of optical sensors
- Types of micro-switch
- Common causes of sensor failure
- Common types of fault
- Importance of understanding of electrical diagram, mechanical diagram, pneumatic diagram, mechanical assembly drawing and component layout

- Important of label and component locations
- Importance of cable sizing to meet the safety requirement
- The essentials of complete document standardisation

**For Whom:**

Suitable for Line or Team Leaders, Technicians, Supervisors and Engineers.

**Entry Requirements:**

Participants are assumed to:

- Have completed 'O' Level or equivalent; or
- Have the ability of:
  - Basic knowledge of the Singapore Workplace Safety and Health requirements;
  - Follow written and oral work instructions;
  - Listen, read and write English at a proficiency level equivalent to the Employability Skills System (ESS) level 5;
  - Manipulate numbers at a proficiency level equivalent to Employability Skills System (ESS) level 5.

**Training Medium:**

This module is conducted in English.

**Training Methodology:**

This module is delivered through e-learning, lectures, group activities and demonstration.

**Assessment Methodology:**

Practical and oral/written assessments are conducted at the end of the training module.

**Certification:**

An individual who completes a module will be awarded a Statement of Attainment (SOA).