



## ELECTRO HYDRAULICS CONTROL SYSTEM

### OBJECTIVES

The Basic Electro Hydraulics Control System is designed to teach the basic electric relay control of hydraulics and its industrial applications. Electric relay control is a fundamental building block in the study of automation because programmable controllers and solid-state controls also use the same programming methods: ladder diagrams and Boolean logic. With this system, participants can set up a wide variety of basic industrial automation control circuits using ladder diagrams and Boolean Logic.

### WHO SHOULD ATTEND

1. Anyone with general technical knowledge.
2. Working in a technical environment.
3. Technicians, Supervisors and Engineers who wish to enhance their knowledge in the operation of control system.

### COURSE OUTLINE

#### DAY 1

1. Introduction to Electrically-controlled fluid power systems.
2. Equipment Familiarization and Safety
3. Electric Control Concepts: Basic Electricity, Input Switches, Control Logic, Electric Power and Measurement of voltage and current in circuits

#### DAY 2

1. Basics of Ladder Diagrams: Structure of a Ladder Diagram and Ladder Diagram Rules
2. Solenoid-operated Valves: Operation of a single-solenoid, 2 valve (DCV), Operation of a double-solenoid, 3 Position Directional Control Valve (DCV), Measuring current through the solenoid coil. Using manual overrides.
3. Push Buttons: Types of Push Buttons, Push Button Circuit Applications – Jog Circuit, Stop Circuit, Two-Hand Start and Alternate Start Circuit.

#### DAY 3

1. Selector Switches: Power ON/OFF Selector, and Sequence Selector
- Indicator Lights: Wiring Lights Circuits
2. Relays: Ladder Diagram Relay Symbols, Control Relay Circuit Applications – Energizing Valve Solenoids, Seal-In Relay Circuits and Control Relay Logic
- Limit Switches: Safety Interlock and Event Deenergizing Circuits
3. Motor Control: Remote START/STOP
- Multiple Cylinder Control: Dual Cylinder Reciprocation Using One Limit Switch.
- Safety Circuit: Cycle Stop Circuit.

### TRAINER

PESDC has a panel of professionally qualified, well-trained and industrially experienced technical trainers.

### COURSE FEE

(STECH-H03)

**RM540.00 per pax (member)**

**RM720.00 per pax (non-member)**

*(Inclusive of course materials, lunch and refreshment).*

Certificate of Achievement will be awarded upon successful completion of the course.

**SBL**  
*claimable*

### COURSE DETAILS

**Duration : 3 Days**

**Date : Flexible**

**Time : 9.00am to 5.00pm**

**Venue : PESDC Training Complex**

*For Further Enquiries, please contact:*

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PESDC Training Complex

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