



The PLC Based Electro-Hydraulic Trainer (52289) outlines the basic Principle of Hydraulic Control System, basic and advanced hydraulic Control System components & its applications using PLC, electronic Proximity position sensor & electro-mechanical actuators (solenoid valves).at

Features

- Compact Ergonomic Design.
- ISO Symbol for each mounted components.
- User Friendly, Self Explanatory Systems.
- Leak proof Safety Measures, sturdy piping & Robust Construction.
- Training Manuals, mimic Charts for Operation Ease.
- System Frame with Caster Wheel Arrangement for ease in movement.
- M.S. fabricated powder coated with necessary fittings, couplings and hydraulic mountings.
- Inbuilt Safety Measures to avoid improper usage.
- Wall mounting assemblies of hydraulic actuator & self-reciprocating cylinder.
- QRC couplings provided, Tubing for circulation of pressure.
- Manifold for distribution.
- Oil Hydraulic power pack for power supply.
- Optional component are available to allow fault operation and diagnosis training.
- Hydraulic motor (Optional) & Hydraulic Accumulator (optional).
- Caster wheel mounted movable frame

Experiments

- Study of fundamental principles of Hydraulics & its applications
- Study of sequencing operation of two cylinders using PLC and electro-hydraulic components.
- Study of Pressure control, Speed Control & Flow Control.
- Study of direction control.
- Study of hydraulic valves
- Study of cylinder control.
- Study of power pack characteristics.
- Study of sequencing of two cylinders using Pressure sequence valve
- Study of PLC based electro-hydraulic control.
- Study of hydraulic Motor (Optional).
- Study of Hydraulic Accumulator (Optional).
- Study of operation of Telescopic Cylinder(Optional).
- Study of operation of Limited Rotary Actuator (Optional).

Note: Specifications are subject to change.

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Technical Specification

No.	Item Name	Technical Specifications
1	PLC	PLC Make: Siemens Logo / Equivalent, Digital Inputs: 8, Digital Outputs: 4, 24 VDC operated.
2	Single Acting Cylinder	Bore: 40 mm x Stroke: 75mm/100mm, Mounting: Foot.
3	Double Acting Cylinder	Bore: 40 mm x Stroke: 75mm/100mm, Mounting: Foot.
4	Solenoid Valve	2 No.s, 4/3 way, ¼", 24VDC. & 4/2 way, ¼", 24 VDC.
5	Pressure Relief Valve	¼", 60 Kg/cm ²
6	Flow Control Valve	¼" (F), Square Body.
7	Block Manifold	¼", 4 ways.
8	Male Connector	¼" Quick Release Couplings.
9	Indicator	24 VDC Operated.
10	Proximity Sensors	4 no. Type: Inductive 2 wire/3 wire, Diameter: 18 mm, Sensing Distance: 5 mm.
11	Oil Hydraulic power pack	MS Powder Coated Oil Tank, Capacity: 25/30 Liters. With Oil Level Indicator, Gear Pump: 3-5 LPM, 40/60 Bar, Breather, Oil filter & suction, Electric Motor- Single Phase, 230VAC / 3 Phase 415 V AC, ½ HP/ 1 HP, DOL starter.
12	Pressure Gauge	Range- 100 Kg/cm ² , Dial Size: 50/60 mm, Glycerin Filled.
13	Hydraulic Hoses	10 nos.
14	Pressure sequence valve	¼" (F), Square Body, 60kg/cm ² .
15	Hydraulic Accumulator (Optional)	Capacity: 0.075 Liters, mWP bar: 250 bar, Weight: 0.62 Kg, Connection: ½" BSP.
16	Hydraulic Motor (Optional)	3 LPM, Flange mounting type.
17	Meter-in Circuit & Meter Out Circuit.	
18	Bleed-off Circuit.	
19	Pulley Arrangement to carry load applied to the actuator, i.e., Double Acting Cylinder(Optional).	
20	Transverse & Feed Circuit(Optional).	
21	Hydraulic Telescopic Cylinder (Optional).	
22	Limited Rotary Actuator (Optional).	
23	System Dimension	3.5 Ft. (L) X 2Ft. ((W) X 4.5 Ft (H)
24	Services Required:	Electric supply 1F 230 V AC / 3φ supply of 415 V, 50 Hz suitably used for direct on line starting of an induction motor

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