

# Material Handling PnP System

## MODEL: FA-PLC310-APP03



## Product Overview

This is a self-contained educational system that simulates an industrial automation task. It uses a PLC as the brain to control a material handling Vacuum Pick and Place. PLC triggers pneumatic pick up cylinder to do assembly process. It provides a realistic, hands-on training environment for learning automation and control systems

## Learning Outcome

- 1 Will learn to create, test, and troubleshoot PLC programs functions to operation and run distribution system.
- 2 Will learn variety sensors for object presence and material type and how to physically wire sensors and integrate their signals into the control logic.
- 3 Will learn electro-pneumatic control using an electrical signal from the PLC to activate a pneumatic valve/cylinder
- 4 Will learn the operation vacuum pick up handling and loading process.

## Learning Module

- PLC Module
- Sensor & Conveyor Module
- PnP Module
- Interface I/O Module

## Technical Specification

### PLC Module

- Omron CP2E-E20DR-A
- Digital input : 12, 24VDC inputs
- Digital output : 8, relay contacts
- Program capacity : 4K steps
- FB capacity : 10K steps
- Data memory capacity: 4K words
- Program language : Ladder diagram
- Built-in communication port : USB

### Sensor Module

- 4 x Optical sensor
- 8x Magnetic Reed Switch
- 1x Buzzer/counter

### Vacuum Pick Up Module

- 5 x 5/2 way solenoid valve c/w base and fittings
- 1 x Rodless Double acting cylinder
- 1x Twin rod cylinder
- 2 x 20x100 Air Cylinder
- 10x throttle control valve
- 1 x Air regulator unit
- 20 x workpiece

## Courseware

- CP2E Software User's Manual
- CP2E Instructions Reference Manual
- CX-One Introduction Guide
- CX-Programmer Operation Manual
- CX-Programmer Introduction Guide
- Training module consists of :
- Introduction to PLC Programming
- Lab/Experiments Manual
- Sample PLC Programs
- Electrical Diagram

## Training

3 days on site training by competent Trainer with many year experience industrial automation background

## Warranty

12 months against manufacturing defectly only



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## Technical Specification

### Operation Module

- Powder coated finish metal case
- 1 x Start button/indicator terminals
- 1 x Stop button/indicator terminals
- 1 x Alarm/Estop indicator terminals
- 1 x 24Vdc power supply
- 1 x Power on/off rocker switch with indicator
- 1x status tower light

### Work Table

- Table Top Aluminum Profile  
Experiment Board



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