

Material Conveyor Sorting System

Model: FA-PLC310-APP01-OM

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 sorting and distribution. PLC triggers pneumatic cylinders to eject and sort material into the correct chutes. 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 & maintenance of air compressor.

Learning Module

- PLC Module
- Sensor Module
- Feeding Module
- Interface I/O Module

Technical Specification

PLC Module

- Omron CP2E-N20DR-A
- Digital input : 12, 24VDC inputs
- Digital output : 8, relay contacts
- Program capacity : 10K steps
- FB capacity : 10K steps
- Data memory capacity: 10K words
- Program language : Ladder diagram
- Built-in communication port : RJ45 Ethernet prot

Sensor Module

- 2 x Photoelectric sensor
- 1 x Inductive proximity sensor
- 1 x Capacitive proximity sensor
- 4x Magnetic Reed Switch

Feeding Module

- 2 x 5/2 way solenoid valve c/w base and fittings
- 1 x Air regulator unit
- 20 x workpiece
- 2 x Actuator

Courseware

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

Accessories

Portable Oil Free Silent Air Compressor

- Power : 1100w/1.5Hp
- Max Pressure 8 bar
- Tank Capacity - 6L
- Air Filter/Regulator
- Input power AC240V, 2850rpm



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 MCB switch
- 1x tower light

Mini Conveyor

- 50BW x 500mm
- DC Motor Drive
- Material in/out sensor

Working Panel

- Aluminum Profile Experiment Board
- Size 750x750mm