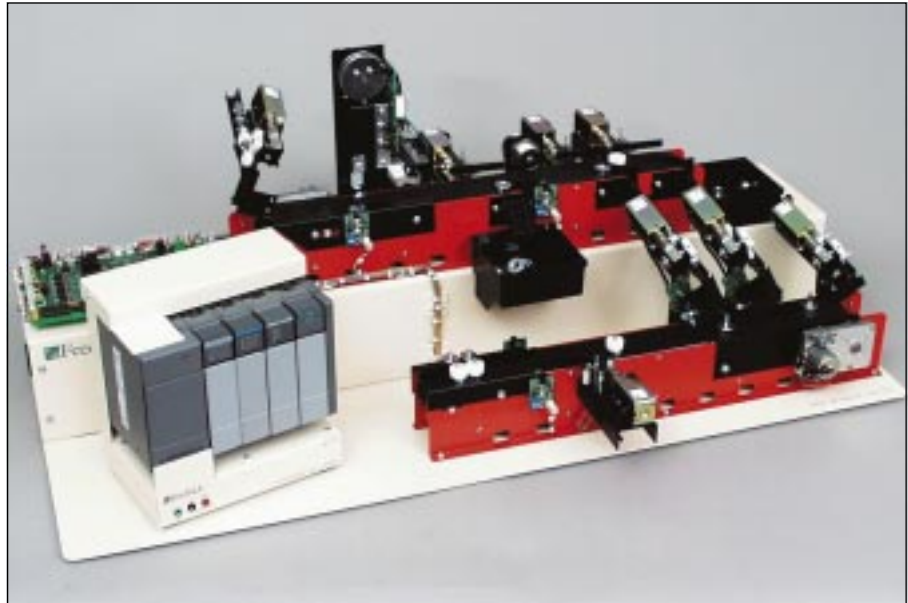


Programmable Logic Control Systems and Applications

Feedback have many years experience of supplying equipment to the process control industry, and our new range of PLC applications is an extension of this work. From basic digital input/output systems, the range develops through parts selection assembly systems into complex process control systems with a combination of analogue and digital control requirements. Fault diagnosis of both analogue and digital control is also addressed.

Dual Conveyor System.

The Single Conveyor System is as shown with the lower conveyor removed.



Single Conveyor System - Mitsubishi 34-001 Allen-Bradley 34-002

This low cost conveyor features a dc motor driven system with vertical gauging unit, inductive and optical proximity detectors. The unit is fully self-contained comprising a power supply, interface unit and a range of sensors and solenoid actuators.

The conveyor system carries out a simple parts selection process. The first selection is made on the basis of component height, tolerances can be set on the gauging unit allowing rejection of under and over-sized components. Rejected components are ejected from the conveyor using a solenoid operated actuator. Correctly sized components are sorted into plastic or steel. This detection process being carried out by a combination of optical and inductive detectors.

Curriculum Coverage

- Fundamentals of Logic
- Basics of PLC programming
- Developing Ladder Logic Programs
- Programming Timers
- Programming Counters
- Jump Instructions and Subroutines
- PLC Installation Practices

Workcell System - Mitsubishi 34-003 Allen-Bradley 34-004

This system extends the parts selection task into a simple assembly system. Plastic and Metal components are selected by size and material, fed onto chutes for dispensing into a final assembly task where they are combined with a second component. The finished components are then stored by material type or type of assembly. The added complexity of this system allows further study of PLCs in process control systems. An optional width gauge is available.

Curriculum Coverage

- Fundamentals of Logic
- Basics of PLC programming
- Developing Ladder Logic Programs
- Programming Timers
- Structure of Control Systems
- Sequencer Programs
- Master Control and Zone Control Instructions
- Programming Counters
- Jump Instructions and Subroutines
- Combined Counter and Timer Functions
- PLC Installation Practices

Control & Instrumentation

Programmable Logic Control Applications 34-400

Comprising two bench-top open-board application modules. Each unit contains function switches and LED status indicators, showing the operation being performed.

Curriculum Coverage

- Fundamentals of Logic
- Basics of PLC programming
- Developing Ladder Logic Programs
- Programming timers
- Setting Initial Conditions
- Time Based Process Control
- Use of Interrupts & Emergency Stop



Automatic Washing Machine

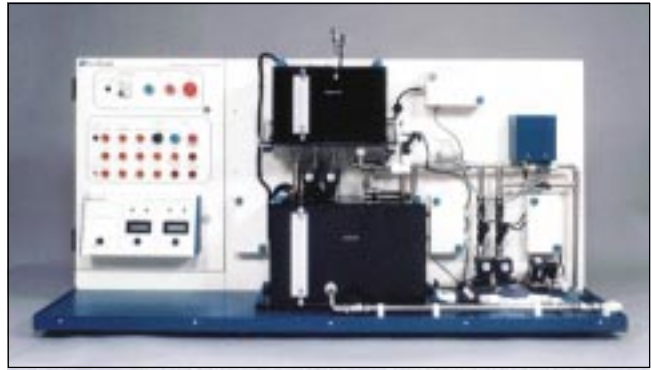
This easy to understand process allows a sequence of events to be controlled and allows the development of several different programs that can be developed as conditional jumps depending on how the initial conditions have been set.

Traffic Signal Control

This simple sequence application allows simple traffic light control of a cross-roads to be implemented on a timed sequence. The control program can be further developed to cope with interrupts generated from pedestrian crossing requests or off-peak vehicle detector inputs.

Both units use 5V TTL signal levels and are interfaced to a PLC using standard 24V dc logical inputs.

Industrial Process Trainer 34-250



The 34-250 Industrial Trainer has been developed to teach a methodical approach to fault diagnosis in an industrial process. Designed to be used by people studying industrial process maintenance it can also be used as a process trainer in its own right using either Electronic Controllers (PID) or Programmable Logic Controllers (PLC's).

The Mitsubishi PLC pack 34-352 or Allen Bradley PLC pack 34-362 can be used with this system to provide interesting examples of Analogue & Digital PLC control. By adding process faults this rig becomes a powerful training tool for modern process control fault diagnosis training within PLC controlled environments.

For full details on this product see leaflet SFC 4.1.

Feedback offer the following range of PLC's, from entry level through to advanced PLC's combining analogue & digital sequence control.

Mitsubishi Entry-level PLC Pack 34-351

Allen Bradley Entry-level PLC Pack 34-361

This is an entry level PLC device, suited to first time users. It is designed for use with Feedback's Automatic Washing Machine and Traffic Signal Control, Single Conveyor Workcell systems & Industrial Process Trainer.

Mitsubishi Advanced PLC Pack 34-352

Allen Bradley Advanced PLC Pack 34-362

These powerful PLC devices combine conventional digital PLC I/O with analogue I/O. The units can be configured for 4-20mA operation for use with the Industrial Process Trainer 34-250 to implement three term PID control. These PLC devices can be used to control all products in the range.



For further information on these and other equipment in the Feedback range please contact

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