PLC PROCESS

CE111

A self-contained, bench-mounted liquid flow and level process, providing a physical system to experience the programming of programmable logic controllers, for use with the PLC Trainer (CE123).

- Allows basic and advanced studies of programmable logic controllers (PLCs) in industrial applications

- Demonstrates control of liquid flow, volume and level in two tanks

- Includes a selection of fully controllable valves to give many different liquid level and flow control experiments, including batch processing

- Front panel includes mimic diagram of the process so students can clearly see what they are controlling

LEARNING OUTCOMES:

When used with the CE123:
- Basic programming of a PLC
- Basic level control
- Tank filling sequence
- Simulated batch processing (sequencing)
- Ladder logic programming
- Editing and adding comments in a PLC program

The open structure of the CE111 and CE123 allows the user to create additional experiments to suit their needs.

The apparatus has two transparent tanks, mounted one above the other. A variable-speed pump transfers water from the reservoir (in the base of the unit) into the upper tank. The water can drain down to the lower tank and then back into the reservoir. Solenoid valves may be individually opened or closed to control and redirect the movement of the water. The pump control is on or off , but a manual control allows the user to set the speed. A float switch in the reservoir monitors the level of water.

The object is to connect and program an external programmable logic controller to monitor and control the level and flow rate of water in a two-tank system.

ESSENTIAL BASE UNIT:

- PLC Trainer (CE123)   79

DIGITAL CONTROL

PROCESS CONTROL ENGINEERING