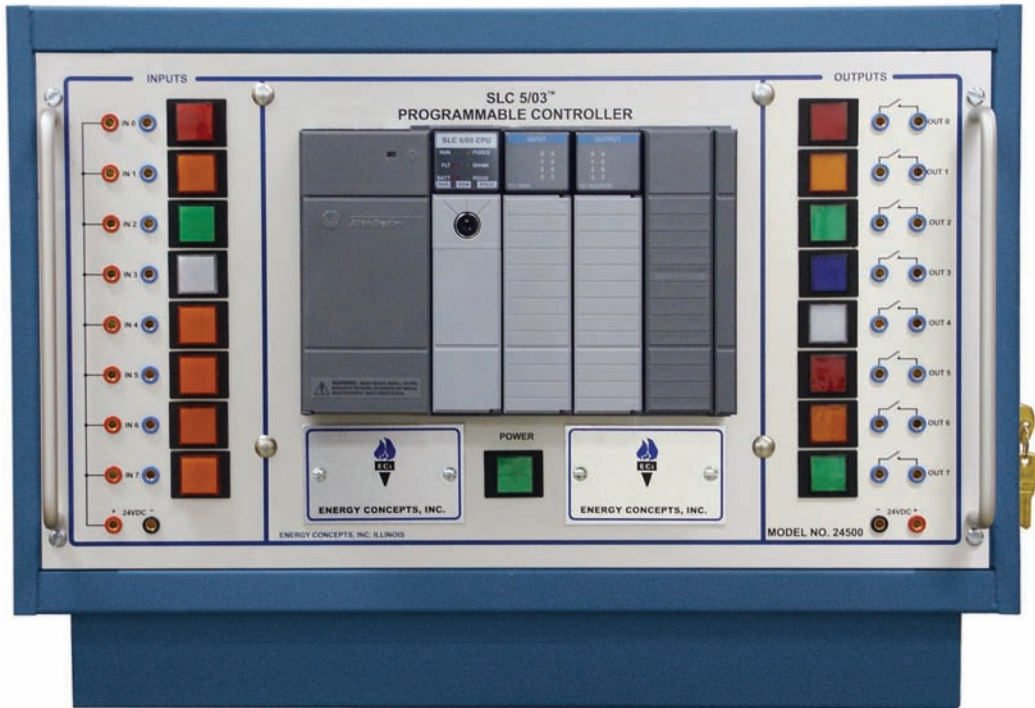# *ALLEN BRADLEY* SLC 5/03™
PROGRAMMABLE LOGIC CONTROLLER
245S

ALLEN-BRADLEY SLC5/03™

The SLC 5/03™ provides students with a 8000 instruction capacity CPU, a power supply, and five diagnostic indicators on the front of each processor.

These diagnostic indicators show: Power, PC Run, CPU Fault, Forced I/O, and Battery Low. In addition, each Allen-Bradley SLC 503™ has LED indicators to show the status of each I/O point.

INPUT SWITCHES

Eight industrial standard raised illuminated push-button. Four are momentary and eight are maintained.

INPUT JACKS

Eight clearly marked sets of inputs for accepting external devices. Inputs have a current limiting protection circuit that allows reverse-voltage and over-voltage protection.

OUTPUT INDICATORS

Eight flush-mounted industrial standard pilot lights in various colors allow students to see the resulting outputs of their programs.

OUTPUT JACKS

Eight clearly marked sets of Out-puts provide contact closures for accepting external devices.

FEATURES

- A competency based lab manual bound in a large easy-to-use ring binder

- All illustrations in 2-color format for student's ease of understanding

- Programmable from most IBM compatible computers, or from an optional hand-held terminal

- Built-in 24 volt DC power supply with front panel jacks.

- Rockwell's RS Logix 500™ Programming Software.

- Eight built-in easy to use fault insertion. Fault switches are covered and locked on the side of the cabinet.

- Modules housed in a durable steel cabinet for years of classroom life.

- Includes Programmable Logic Controllers text book and workbook with PLC simulation software.

Fault Switches

COURSEWARE
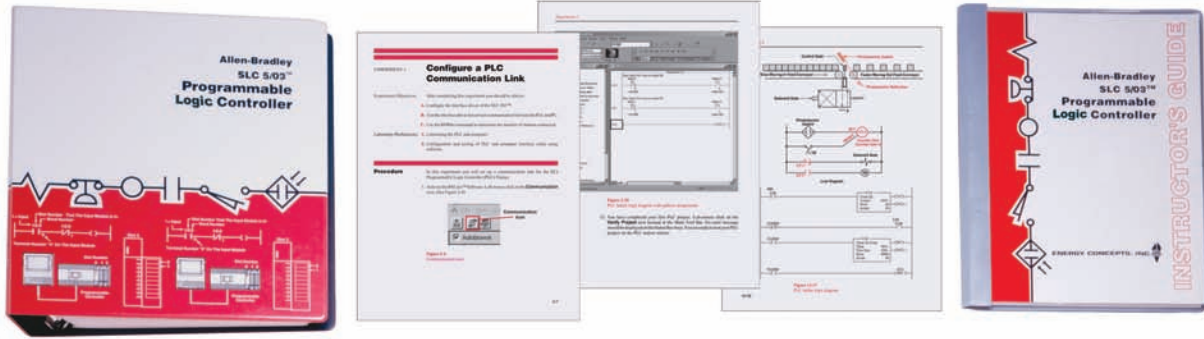
ECI's competency-based courseware guides students through the RS Logix™ software where they create ladder logic diagrams to control standard types of industrial circuits. Design challenges and troubleshooting experiments are provided for students to develop practical skills and troubleshooting techniques. The ECI lab manual has an easy-to-read, two-color format, that shows professional illustrations, photos, and graphic representations of the programming screen. This technique provides students with the most dynamic, self-paced software available. The lab manual's 14 chapters present students with 53 hands-on programming lessons, which directly correlate to the ECI 245 trainer.

The experiments cover the following topics:

System Familiarization
● Introduction to the SLC 5/03™ Trainer Control Circuits and Automated Industrial Systems

Software Overview
● Configure PLC Communication Link
● Using RSLogix TM Software to Create a Ladder Logic Diagram

Rules for Creating Ladder Logic Diagrams
● Testing Input/Output Devices on the ECI Trainer

Creating an Offline Ladder Diagram
● Creating Subroutine Files
● Latch/Unlatch Functions
● Force Functions

Saving the program on floppy diskette
● Branching
● Modifying PLC Projects

Creating Reports
● Creating Instruction Symbols
● Using Subroutines to Turn on Outputs

Using Series Connections and Parallel Connections
● Nested Loops
● AND Gate
● OR Gate
● XOR Gate
● NOT Gate
● NAND Gate
● NOR Gate
● XNOR Gate

Timer Functions
● Non-Retentive Timer On-Delay
● Creating Variable Value Timers
● Retentive Timer On-Delay
● Timer Off-Delay
● Using Two Timer Functions

Counter Functions
● Counter Up Function
● Counter Down Function
● Using Timer and Counter Functions
● Add/Subtract Functions

JMP, JSR and MCR functions
● JMP Functions in PLC Ladder Logic Diagram
● Using Compare Functions to Energize JMP Functions
● Using Compare Functions to Energize JSR Functions
● Using Motor Control Relay (MCR) Functions

BSL and BSR Functions
● Configuring the BSL Function
● Configuring the BSR Function

Sequencer Functions
● Configuring the SQO Function
● Automatic Sequencer Program
● Sequencer Routine with Variable Time Interval
● Configuring the SQC Function

PLC Control Applications
● Traffic Light Controller
● Starting a Drill Press
● Starting/Stopping a Conveyor Belt
● Controlling a Robot
● Part Inspection/Rejection
● Starting Three Conveyor Belts
● Using Timer Off-Delay Function
● In Feed/Out Feed Conveyor System
● Forward/Reverse Moving Conveyor System
● Motor Sequence Circuit

PLC Troubleshooting
● Testing the Input and Output Ports
● Bottle Filling Circuit
● Pump Control
● Cutting Paper

Glossary

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ECI offers a full line of training systems for Industrial Maintenance, including Industrial Controls, Basic Industrial Controls, Basic Programmable Controls, Variable Frequency Drive, Pneumatics, and Hydraulics.

ENERGY CONCEPTS, INC. ECi
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