

Programmable Logic Controllers SLC-500 Series

This five-day course provides participants with hands-on instruction on the setup, operation, and maintenance of Programmable Logic Controllers (PLCs). An Allen Bradley SLC-500 Series PLC is used to demonstrate the installation, programming, maintenance, and troubleshooting of PLCs

I. Basic Programmable Controller Overview

- Purpose of Using PLC's in Industry
- Advantages/Disadvantages
- Plant Applications

II. Basic SLC-500 Components

- Processor
- I/O
- Power Supply
- Programmer
- Chassis

III. Number and Addressing Systems Used in Allen Bradley PLC-500 Series

- Binary
- Octal
- Hexadecimal
- BCD

IV. SLC-500 Data Files

- Output File
- Input File
- Status File
- Bit File
- Timer File
- Counter File
- Control File
- Integer File

V. SLC-500 Processor

- Memory Capacity
- Scan Times
- Indicator Lights
- Power Requirements
- Mounting Instructions
- Adding CMOS Memory
- Identifying Hardware and Software Problems

VI. Input/Output Modules

- Basic Operation
- Various Operating Voltages
- Power Requirements
- Mounting Instructions
- Wiring the Modules
- Identifying Faulty Modules

VII. Chassis

- Basic Description of Chassis
- Addressing Rules
- Power Requirements
- Mounting Instructions

VIII. Adding Memory to AB PLC-500 Series

- Extending Base Memory
- Adding CMOS

IX. SLC-500 Programming and Editing

- Clearing Memory
- Setting and Editing a Ladder File
- Using Various Ladder Logic Commands
- Exercises on all Commands

X. Interfacing the SLC with PLC-5

XI. SLC-500 Troubleshooting

- Basic 7 Step Principals
- Typical I/O Faults
- Using "Search" Function to Aid Troubleshooting
- Using Module Indicator Lights
- Using the Status File
- Exercises