Introduction to Programmable Logic Controllers

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Introduction to Programmable Logic Controllers is a three-day course that provides participants with an introduction and basic working knowledge of PLCs. This course is designed not for those personnel directly responsible for maintaining PLCs, but those workers whose equipment is controlled by them and who must troubleshoot that equipment. A key element of this course is a guided discussion between the two groups as to their responsibilities surrounding the PLCs in their facility.

I. Basic Overview

- Purpose of Using PLCs in Industry
- Advantages/Disadvantages
- Plant Applications
- Safety Precautions

II. Basic SLC-500 Components

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

III. Number Addressing Systems Used in A-B PLC-500 Series

IV. SLC-500 Processor

- Memory Capacity
- Scan Times
- Indicator Lights
- Power Requirements
- Mounting Instructions
- Adding CMOS Memory

V. Input/Output Modules

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

VI. Chassis

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

VII. SLC-500 Troubleshooting

- Basic 7-Step Principals
- Typical I/O Faults
- Using Module Indicator Lights
- Exercises (Guided Discussion)