Content
Community
Connection

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PLC Training Course - Advanced

Course details: https://www.electricityforum.com/electrical-training/plc-training-advanced

Our 12-Hour (2-Day)Advanced PLC Training Course is designed to give students a basic understanding of Programmable Logic Controllers and how PLCs function.

This Advanced PLC training course will not make students PLC experts but rather give them a basic understanding of the PLC, the PLC's functionality and limitations. The PLC training seminar is generic in nature and applies to all types and manufacturers.

This course is designed for people who have previous experience in PLC programming and would like to improve their programming and troubleshooting skills.

You should already have taken the PLC Training, Basic or PLC Training, Intermediate course or have real world experience before taking this course.

- You'll gain in-depth knowledge of Automationdirect.com, PLCs, I/O, and C-More Operator Panels.
- This course provides excellent training for maintenance staff enabling them to troubleshoot and install PLCs.

Our PLC Training Course is also designed to help delegates keep abreast of the latest PLC technologies and techniques available in this area, this tutorial offers an excellent opportunity for delegates to ask specific questions and exchange ideas relating to their own

applications.

LEARNING OBJECTIVES

Our Advanced PLC Training Course is designed to instruct electrical control professionals on how to successfully integrate a PLC into actual day-to-day industrial electrical processes. It not only deals with the hardware and software, but all the surrounding systems that must be compatible to achieve a safe and reliable control system. This training is generic in nature and applies to all types and manufacturers.

WHO SHOULD ATTEND

- PLC Engineering and design personnel
- Maintenance and technical services personnel
- Process and operations personnel
- Technical and process managers
- Engineering and design personnel
- Electrical consulting engineers
- Electrical contractors

STUDENTS RECEIVE

- 100-Page Digital PLC Handbook - Value $20 (Details Below)
- 1.2 Continuing Education Unit (CEU) Credits (12 Professional Development Hours)
- A **FREE** Magazine Subscription (Value $25)
- **$100** Coupon Toward Any Future Electricity Forum Event (Restrictions Apply)
- Course Presentations In Paper Format

COURSE OUTLINE

DAY ONE

Defining a PLC

- Definition
- Basic functions of a PLC
- Types and sizes of PLCs

History of the PLC

- Who invented the PLC and why.
- The early years.
- Today
- The future

Types and sizes of Programmable Logic Controllers
Small Logic Controllers

- Uses and limitations

Mid-sized PLCs

- Uses and limitations

Large PLC's

- Uses and limitations

PLC Hardware

Power Supplies

- Determining what power supply to use

CPU's (Central Processing Unit)

- Micro-Processor
- Memory
- User Memory
- Executive Memory
- Input and Output Processor (IOP)

Chassis or Rack

- Fixed I/O Chassis:
- Modular I/O Chassis
- Input and Output Modules
- Discrete I/O modules
- Analog I/O modules
- Specialty I/O modules

PLC Memory and Data Table

- Memory size and types
- Data Table
- User memory

How PLC's work
Scanning

- Program Scan
- I/O Scan

DAY TWO

Basic Programming Instructions

- Examine on (normally open contacts)
- Examine off (normally closed contacts)
- Output energize (coils)
- Latched Outputs (latched coils)
- Unlatch Outputs (unlatching coils)
- One shots

Timers

- Basic timer operations
- Memory required for timers
- Time on delay timers (TON)
- Time off delay timers (TOF)
- Retentive timers and resets (RTO & RES)
- Retenitive Time On Delay Timers
- Resets

Counters

- Basic counter operations
- Count up counters (CTU)
- Count down counters (CTD)
- Resetting counters (RES)

Comparison instructions
Basics of comparison instructions

- Equal To
- Greater Than
- Less Than

Math Instructions
Basics of math instructions

- Addition instruction (Add)
- Subtract instruction (Sub)
- Multiply instruction (Mul)
- Divide instruction (Div)

File Instructions, Shift Registers and Logical Instructions

- Basics of File Instructions
- Basics of Logical Instructions
- Shift Register Instructions

Other Advanced Instructions

- Trig Functions and Advanced Math Instructions
- ASCII Instructions

- Program Control Instructions
- PID (Proportional, Integral and Derivative) Instruction

Communications
Overview of Communications Protocols

- RS-232/RS-485
- Data Highway and Data Highway Plus
- Modbus and Modbus Plus
- Profibus
- Secros
- Ethernet

PLC Limitations

Open Discussion of Applications (If time allows)

Questions and Answers

COURSE TIMETABLE

Both days:

Start: 10:00 a.m. Eastern Time
Finish: 4:30 p.m. Eastern Time

Contact us Today for a FREE quotation to deliver this course at your company's location.

https://www.electricityforum.com/onsite-training-rfq