CompactLogix/Studio 5000

Studio 5000 Logix Designer Level 1:
CompactLogix Fundamentals
and Troubleshooting

RA Rockwell Automation   **AB Allen-Bradley** by ROCKWELL AUTOMATION

Course Number

CCP298

Course Purpose

Upon completion of this course, you should be able to troubleshoot a previously operational CompactLogix™ system and restore normal operation.

In this course you will develop and practice these skills by:

- Learning basic concepts and terminology used with:
  - CompactLogix system hardware
  - Studio 5000 Logix Designer® application
- Practicing a systematic strategy for diagnosing and troubleshooting problems:
  - Faulty/malfunctioning field devices
  - Controller, I/O, or other hardware issues
  - Electrical Noise
  - Configuration issues
- Performing hands-on exercises

All Logix5000™ systems use the same control engine; therefore, tasks are similar. You will see applicable references for other systems.

COURSE AGENDA

- Locating CompactLogix Systems Components
- Navigating through the Logix Designer Application
- Connecting a Computer to a Communications Network
- Downloading and Going Online
- Locating I/O Tags and Devices
- Interpreting Logix Designer Project Organization and Execution
- Interpreting Ladder Logic Structure
- Locating and Editing Tag Values
- Interpreting Bit Instructions
- Interpreting Frequently Used Instructions
- Interpreting Arrays
- Interpreting Tags of User-Defined Data Types
- Searching for Project Components
- Integrated Practice - Interpreting a Basic Project
- Forcing I/O and Toggling Bits
- Troubleshooting Digital I/O Problems
- Troubleshooting Analog I/O Problems
- Troubleshooting Banked Local I/O and Distributed I/O Problems
- Updating Logix5000 Firmware
- Troubleshooting Controller Problems
- Troubleshooting Power Supply Problems
- Analyzing and Troubleshooting a System Using a Trend Chart
- Integrated Practice-Troubleshooting Basic Projects
- Editing Ladder Logic Online
- Managing Logix Designer Project Files
- Documenting and Printing Components
- Troubleshooting Noise-Related Problems

WHO SHOULD ATTEND

This course is intended for individuals who need to maintain and troubleshoot a CompactLogix system – but have little or no current working experience with CompactLogix systems.

PREREQUISITES

To successfully complete this course, the following prerequisites are required:

- Ability to perform basic Microsoft Windows tasks
- Previous experience with common industrial control system concepts

STUDENT MATERIALS

To enhance and facilitate the students' learning experiences, the following materials are provided as part of the course package:

- Student Manual
  - Includes the key concepts, definitions, examples, and activities presented in this course
- Lab Book
  - Provides learning activities and hands-on practice. Solutions are included after each exercise for immediate feedback.
- Studio 5000 Logix Designer and Logix5000 Procedures Guide
  - Provides the steps required to complete basic software tasks common to all Logix5000 controllers

HANDS-ON PRACTICE

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises. Exercises focus on the skills introduced in each lesson and are performed on a CompactLogix workstation.

Integrated practices combine and practice several key skills at once.

COURSE LENGTH

This is a four-and-a-half-day course.

TO REGISTER

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley® Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at **http://www.rockwellautomation.com/training**

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