

CompactLogix/Studio 5000

Studio 5000 Logix Designer Level 1:
CompactLogix Fundamentals
and Troubleshooting



**Rockwell
Automation**



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.

IACET CEUS

Rockwell Automation is authorized by IACET to offer 3.2 CEUs for this program.







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>

Rockwell Automation is accredited by the International Association for Continuing Education and Training (IACET) and is authorized to issue the IACET CEU. **Click here** to view the Rockwell Automation Certificate of Accreditation.

To be respectful of the environment, Rockwell Automation is transitioning some of its training courses to a paperless format. Students are asked to complete downloads and bring personal devices to these classes. A full list of digital/paperless courses is currently available through your local distributor.

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