

## Learn how to setup, configure, and program Allen-Bradley CompactLogix Small Programmable Automation Controller in Compact Basics

### Level 1 Lesson Topics:

(Included with Standard and Extended courses)

#### Hardware

- Finding and Using Product Manuals
- Overview of Five Generation of Hardware
- CompactLogix Controller Architecture, OS
- Selecting System Components, Using IAB
- 1769, 1734, 5069 I/O Setup, Forcing

#### Software

- History, Packages and Versions
- RSLogix and Studio 5000 First Look
- RSLinx Driver Setup and using BOOTP
- ControlFlash and Firmware Files

#### Communications

- Ethernet - Multicast vs Unicast
- Distributed Ethernet I/O
- Testing and Troubleshooting I/O
- How to setup RSLinx Classic Drivers
- Flashing Controller and Module Firmware

#### Programming

- Controller Properties
- Tasks, Programs, Routines, Tags
- Controller and Program Tags
- Logix Ladder Logic Diagram Routines (LD)
- Creating a Motor Control Ladder Routine
- Using Photo Eyes for Part Sensing (LD)
- Track Production with Timers and Counters
- How to Code Building to a Preset
- Controller Time and using the GSV
- Creating and Using Trends
- How to Code Jogs & Single Cycles
- Migrating Projects to the 5380

### Level 2 Lesson Topics:

(Included with Level 2 course only)

#### Advanced Programming

- How Function Block (FBD) Routines work
- Machine Maintenance Routine (FBD)
- Material Sensing Routine (FBD)
- Machine Alarm Routine (FBD)
- Feed and Eject Routine (FBD)
- How Structured Text (ST) Routines work



**Our CompactLogix Level 1 Course (Compact Basics) is designed for those students who are already familiar with PLCs, and would like to learn how to setup, program, and troubleshoot the CompactLogix using RSLogix 5000 and Studio 5000**

### What students will learn in the Level 1 Course:

- Understanding the design and different models of CompactLogix Controllers
- The difference between RSLogix 5000 and Studio 5000
- How to size a system, choose components, and configure Controllers, I/O, and Comms
- How to setup Ethernet, Serial DF1, and USB drivers in RSLinx Classic
- How to setup, configure, and edit RSLogix/Studio 5000 projects
- How to add, edit, and test Local I/O, and Distributed Ethernet I/O
- Understanding Controller and Program tags, and how to create and edit Tags and Aliases
- How to setup, configure and edit Tasks, Programs, and Routines
- How to create and troubleshoot Motor Control Ladder Routines
- How to create and troubleshoot Part Sensing Routines
- How to use Timers and Counters to Track Production
- How to create and troubleshoot code to Build to a Preset Number of Parts
- Controller Time and using the GSV Instruction, Creating and Using Trends
- Considerations when Migrating Projects to the 5380

### What students need to complete the optional hands-on exercises:

- Windows 10 PC, preferably with an Ethernet or USB Port and an internet connection
- An Allen-Bradley CompactLogix Controller (may also require a power supply & end cap)
- A licensed version of RSLogix/Studio 5000 that supports your CompactLogix Controller

**Note:** There are no free editions of the programming or emulation software, however 30 day trail copies are available directly from Rockwell.

### Course Editions (Note: Online courses include instructor support, completion certificate, and lifetime access)

- **TAS-CPX21-O** Compact Basics Level 1 Online Course (Level 1 Topics, upgradeable to Level 1 and 2) **\$99<sup>99</sup>**
- **TAS-CPX22-O** Compact Basics Level 1 & 2 Online Course Bundle (Level 1 and Level 2 Topics) **\$149<sup>99</sup>**

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