

# SLC™ 500 Processors

## SLC™ 500 and RSLogix™ 500 Maintenance and Troubleshooting Course Description

### COURSE AGENDA

- Identifying SLC 500 System Components
- Getting Started with RSLogix 500 Software
- Communicating with a SLC 500 Processor
- Identifying Memory Layout and SLC 500 System Addresses
- Monitoring and Entering Data
- Interpreting Bit Instructions
- Editing Ladder Logic
- Documenting an RSLogix 500 Project
- Searching Ladder Logic
- Interpreting Timer and Counter Instructions
- Integrated Practice: Tracing Through Ladder Logic
- Interpreting Comparison Instructions
- Interpreting Data Handling Instructions
- Interpreting Program Control Instructions
- Configuring and Previewing a Project Report
- Creating a Histogram
- Forcing Inputs and Outputs
- Troubleshooting Noise-Related Problems
- Troubleshooting Processor and Power Supply Problems
- Troubleshooting Discrete I/O Problems
- Troubleshooting Analog I/O Problems
- Integrated Practice: Maintaining and Troubleshooting an SLC 500 System



### COURSE NUMBER: CCPS43

#### *Course Purpose*

This skill-building course provides you with the necessary practice needed to interpret, isolate, and diagnose common hardware problems related to noise, power, and discrete and analog I/O. In troubleshooting scenarios, you will be introduced to basic ladder logic interpretation, which is applied to diagnostic tasks. You will practice these diagnostic skills by tracing through ladder logic instructions in an RSLogix 500 project. An integrated practice of multiple troubleshooting skills completes the training.

#### *Who Should Attend*

Individuals who are responsible for troubleshooting and maintaining SLC 500 systems using RSLogix 500 software should attend this course.

### **Prerequisites**

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

- Experience maintaining electrically controlled systems
- Working knowledge of programmable controllers or completion of the *PLC-5/SLC 500 and RSLogix Fundamentals* (Course No. CCP122)
- Experience operating a personal computer within a Microsoft® Windows 98®, Windows 2000®, Windows ME®, Windows NT®, or Windows XP® environment

### **Technology Requirements**

All technology is provided for student use in the classroom by Rockwell Automation. It is not necessary for students to bring any technology with them when attending this course.

### **Student Materials**

To enhance and facilitate your learning experience, the following materials are provided as part of the course package:

- *Student Manual*, which contains the key concepts, definitions, and examples presented in the course and includes the hands-on exercises.
- *RSLogix 500 and SLC 500 Procedures Guide*, which provides all the steps required to complete common RSLogix 500 software tasks, including the tasks in the exercises. By following the procedures in this job aid, you can immediately apply what is learned in the course to your own job.
- *SLC 500 Documentation Reference Guide*, which contains several relevant technical publications. This searchable, electronic resource contains the most frequently referenced information and is a quick and efficient on-the-job resource.
- *SLC 500 and RSLogix 500 Troubleshooting Guide*, which contains diagnostic procedures that efficiently lead the user to possible maintenance and troubleshooting solutions.

### **Hands-On Practice**

Diagnostic and problem-solving skills are sharpened through hands-on exercises using a troubleshooting guide and an SLC 500 processor linked to an interactive I/O simulator. Throughout the course, you will maintain and troubleshoot a real-world RSLogix 500 project that controls a simulated, two-compressor, cooling unit.

### **Next Learning Level**

Once you have mastered the maintaining and troubleshooting skills covered in this course, you may want to expand your logic and programming knowledge by attending the *SLC 500 and RSLogix 500 Programming* course. (Course No. CCPS41).

### **Course Length**

This is a four-day course.

### **Course Number**

The course number is CCPS43.



### **IACET CEUs**

CEUs Awarded: 2.8

### **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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