

PlantPax Process Automation System Integration

Process Control

COURSE AGENDA

Day 1

- Determining System Size and Performance Requirements
- Determining Workstation Layout
- Determining Operator Controls
- Determining Redundancy Needs

Day 2

- Creating and Organizing a New Project [RSLogix 5000]
- Communicating with I/O Modules [RSLogix 5000]
- Configuring Instrument Devices [RSLogix5000]
- Programming Function Block Diagram [RSLogix 5000]

Day 3

- Programming a PID Loop [FBD]
- Programming Considerations for Applications [RSLogix 5000]
- Programming Assignments, Expressions, and Instructions in Structured Text
- Designing Sequential Function Chart [SFC]

Day 4

- Resetting and Pausing a Sequential Function Chart [SFC]
- Creating a Graphic Display [SE]
- Using Tag Placeholders [SE]
- Configure Global Objects [SE]
- Tuning a PID Loop Using a Global Object Faceplate [SE]
- Creating Alarms [SE]

Day 5

- Creating and Viewing a Data Log Model [SE]
- Creating and Configuring a Trend [SE]
- Setting Up Reporting [SE]
- Configuring Security [SE]



COURSE NUMBER: PRS013

Course Purpose

This course introduces students to the various components of a process control system, including controllers, HMI, networks, and instrumentation devices. During the course, you will be introduced to the navigation and structure for automation system development. You will learn about controllers and operator stations in an integrated fashion so you see their relationships to each other and to the complete system.

This system includes (but is not limited to) the following:

- *Development Software:* RSLogix 5000 [ControlLogix]
- *Networks:* EtherNet/IP, ControlNet, and FOUNDATION Fieldbus
- *Modules:* Local 1756-I/O modules, Remote Flex I/O, and HART
- *Operator Interface:* FactoryTalk View SE [SE]
- *Programming Languages:* Function Block Diagram [FBD], Structured Text [ST], and Sequential Function Chart [SFC]

During the course, you will focus on the equipment control aspects and learn to:

- Create and organize a new project
- Develop control algorithms in function block programming language
- Create interactive displays for the operators, set up alarms, and develop trends of real-time data

LISTEN.
THINK.
SOLVE.

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Who Should Attend

Control engineers who need to be introduced to a process control applications should attend this course.

Prerequisites

To successfully complete this course, knowledge of basic process control is required.

Function block, structured text, and sequential function chart programming experience is preferred but not required.

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 5000 and Logix5000 Procedures Guide*, which provides all of the steps required to complete basic RSLogix 5000 software tasks that are common to all Logix5000 hardware platforms.
- *FactoryTalk View SE Procedures Guide*, which provides all of the steps required to complete common FactoryTalk View SE application development tasks, including the tasks in the exercise.
- *Integrated Architecture for Process Control System Reference Manual*, which specifies control products and performance recommendations for a process system.

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. These exercises focus on the skills introduced in each lesson.

Next Learning Level

Once you have an understanding of a process control system and the skills covered in this course, you may want to attend specific training such as:

- *RSLogix 5000 Level 4: Function Block Programming CCP152* course
- *FactoryTalk Historian Site Edition Configuration and Data Collection RS-FTHSEC* course
- *PID Loop Development and Tuning PRS010* course

Course Length

This is a 4.5-day course.

Course Number

The course number is PRS013

IACET CEUs

CEUs Awarded: 3.2

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>



www.rockwellautomation.com

Power, Control and Information Solutions

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation SA/NV, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846