

Process Control

PlantPax System
Configuration Fundamentals



Course Number

PRS013

Course Purpose

This course is intended for control engineers who have a background in process control – but are new to Rockwell Automation. This course introduces new students to the core components of a PlantPax® process control system, including controllers, HMI, networks, and instrumentation devices. Students will look at the individual components and see their relationships to the complete system.

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 new interactive displays for the operators, set up alarms, and develop trends of real-time data

This system includes (but is not limited to) the basic concepts of the following components:

Development Software: RSLogix 5000®

Networks: EtherNet/IP

Modules: Local I/O and HART

Operator Interface: FactoryTalk® View SE

- Boolean Function Block Diagram [FBD], Structured Text [ST], and Sequential Function Chart [SFC]

COURSE AGENDA

DAY 1

- Identifying a PlantPax System
- Locating ControlLogix Components
- Creating and Organizing a New Project
- Organizing ControlLogix Data
- Configuring Device-level Ring
- Programming a Function Block Diagram

DAY 2

- Configuring Devices Using HART
- Configuring PlantPax AOI
- Creating a Graphic Display
- Using Tag Placeholders
- Configuring Global Objects
- Configuring PlantPax Faceplates

DAY 3

- Creating a Tag Database
- Creating Alarms
- Creating a Data Log Model
- Creating a Trend
- Setting Up Reporting

DAY 4

- Configuring Security
- Programming a PID Loop
- Tuning a PID Loop
- Programming Considerations for Applications
- Programming Structured Text

DAY 5 (1/2 DAY)

- Designing an SFC
- Determining Workstation Layout
- Configuring Redundancy

WHO SHOULD ATTEND

Control engineers who have a background in process control – but are **new** to Rockwell Automation – should attend this course. This is an introductory course covering basic concepts related to Rockwell Automation components.

This course is **not** intended for those experienced with RSLogix 5000, FactoryTalk View SE, or the various components. For details on the topics covered, please see the Course Agenda.

PREREQUISITES

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

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.
- RSLogix 5000 and Logix5000 Procedures Guide
 - 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
 - Provides all of the steps required to complete common FactoryTalk View SE application development tasks, including the tasks in the exercise

- PlantPax Process Automation System Selection Guide
 - Specifies control products and system 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 using a PlantPax (Catalog Number ABT-TDPAX) workstation. Exercises focus on the skills introduced in each lesson.

NEXT LEARNING LEVEL

Once you have an understanding of the topics and skills covered in this course, you may want to attend specific safety training such as:

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

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>

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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