ControlLogix/ Studio 5000

Kinetix 6500 Troubleshooting and Project Interpretation

Rockwell Automation

AB Allen-Bradley
by ROCKWELL AUTOMATION

Course Number

CCN201

Course Purpose

Upon completion of this course, you will be able to apply maintenance and troubleshooting techniques to diagnose and correct common problems which may occur with a Kinetix® 6500 servo drive system.

You will practice operating and troubleshooting the system through hands-on exercises using the Studio 5000 Logix Designer® application.

Building upon the skills you developed in the Fundamentals of Motion Control (CCN130) course, you will develop skills to maintain and troubleshoot a multiaxis motion control system. You will practice identifying faults related to hardware, software, and motion networks by leveraging tools such as Web pages, system LEDs, and Logix Designer status indicators.

COURSE AGENDA

DAY 1

- Identifying the Physical Components and Wiring of a Kinetix 6500 Servo Drive
- Interpreting Kinetix 6500 Servo Drive Status Indicators
- Determining the Status of a Drive and its Associated Axis Using the Studio 5000 Logix Designer Application
- Verifying a Kinetix 6500 Servo Drive Configuration in a Studio 5000 Logix Designer Project
- Verifying a Kinetix 6500 Servo Drive Axis Configuration in a Studio 5000 Logix Designer Project

DAY 2

- Troubleshooting Failed Communication for a Kinetix 6500 Servo Drive Control Module
- Testing Wiring and Signals for a Kinetix 6500 Servo Drive Axis Using the Studio 5000 Logix Designer Application
- Trending Status Information for a Kinetix 6500 Servo Drive Axis Using the Studio 5000 Logix Designer Application
- Tuning a Kinetix 6500 Servo Drive Axis Using the Studio 5000 Logix Designer Application

DAY 3

- Interpreting Motion State Instructions for a Kinetix 6500 Servo Drive Axis in a Studio 5000 Logix Designer Project
- Interpreting Motion Move Instructions for a Kinetix 6500 Servo Drive Axis in a Studio 5000 Logix Designer Project
- Troubleshooting Ladder Logic for a Kinetix 6500 Servo Drive Axis in a Studio 5000 Logix Designer Project
- Accessing a Kinetix 6500 Servo Drive Web Page
- Removing and Replacing a Kinetix 6500 Servo Drive

WHO SHOULD ATTEND

Individuals who need to maintain and troubleshoot Kinetix 6500 motion control systems should attend this course.

PREREQUISITES

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

- Completion of the *Motion Control Fundamentals* course (Course No. CCN130) or equivalent knowledge of or experience with drives, feedback devices, and velocity and position loop systems.
- Completion of the *Studio 5000 Logix Designer Level 1: ControlLogix System Fundamentals* course (Course No. CCP146) or equivalent knowledge of or experience with the ControlLogix® platform and basic ladder logic.

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 Motion Control Procedures Guide
  - Provides the procedures for performing motion control tasks in a Logix5000™ system using Logix Designer and RSLinx® Classic software

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 ABT-TDK6500EN2TR and ABT-TDCLX3 workstations. Exercises focus on the skills introduced in each lesson.

You will use the Kinetix and ControlLogix workstations, containing real and simulated devices, to practice the tasks and concepts involved in maintaining and troubleshooting a Kinetix 6500 system. After learning maintenance and troubleshooting techniques, you will learn how to interpret Logix Designer projects for motion applications and test and tune a replacement Kinetix 6500 system.

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:

- **For motion programming:** *Studio 5000 Logix Designer Level 4: Kinetix 6500 (CIP) Programming* (Course No. CCN144)
- **For troubleshooting a ControlLogix system:** *Studio 5000 Logix Designer Level 2: ControlLogix Maintenance and Troubleshooting* (Course No. CCP153)

COURSE LENGTH

This is a three-day course.

IACET CEUS

Rockwell Automation is authorized by IACET to offer 2.1 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**

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