

ControlLogix/Studio 5000



Kinetix 6000 Troubleshooting and Project Interpretation Course Description

Course Agenda

Day 1

- Locating Kinetix 6000 Components
- Checking Kinetix 6000 Connections
- Interpreting Kinetix 6000 Indicators
- Analyzing Fault Codes in a Kinetix 6000 System
- Interpreting Motion State Instructions in a Studio 5000 Logix Designer Project

Day 2

- Interpreting Motion Move Instructions in a Studio 5000 Logix Designer Project
- Integrated Practice: Troubleshooting a Kinetix 6000 System
- Testing SERCOS Hardware
- Tuning SERCOS Axes
- Replacing a Kinetix 6000 Drive



Course Number

CCN200

Course Purpose

Upon completion of this course, you will be able to apply maintenance and troubleshooting techniques to diagnose and correct common problems that may occur with a Kinetix® 6000 system.

During class, you will practice operating and troubleshooting the system through hands-on exercises using workstations and the Studio 5000 Logix Designer® application.

Building upon the skills developed in the *Fundamentals of Motion Control* (CCN130) course, you will develop skills to help maintain and troubleshoot a multi-axis motion control system. You will practice identifying faults related to hardware and software by employing methods such as viewing fault code tables, interpreting system LEDs, and working with other status indicators.

LISTEN.
THINK.
SOLVE.®

Who Should Attend

Individuals who need to maintain and troubleshoot Kinetix 6000 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.

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 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.
- *Kinetix 6000 Multi-Axis Servo Drives User Manual*:
 - Provides detailed instructions for mounting, wiring, and troubleshooting your Kinetix 6000 drives.
- *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

Hands-on practice is an integral part of learning and this course offers extensive hands-on opportunities. Throughout the exercises, you will use a workstation containing real and simulated devices to practice the tasks and concepts involved in maintaining and troubleshooting a Kinetix 6000 system.

After learning maintenance and troubleshooting techniques, you will learn how to interpret Logix Designer projects for motion applications, understand fault routines, and test and tune a new system.

Next Learning Level

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

- For motion programming: *Studio 5000 Logix Designer Level 4: Kinetix 6000 (SERCOS) Programming* (Course No. CCN145).
- For troubleshooting a ControlLogix system: *Studio 5000 Logix Designer Level 2: ControlLogix Maintenance and Troubleshooting* (Course No. CCP153)

Course Length

This is a two-day course.

IACET CEUs

CEUs Awarded: 1.4



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>

Allen-Bradley, ControlLogix, Kinetix, LISTEN.THINK.SOLVE., Logix5000, Rockwell Software, RSLinx, and Studio 5000 Logix Designer are trademarks of Rockwell Automation, Inc. Trademarks not belonging to Rockwell Automation are property of their respective companies.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

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, 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