Motion Control

Motion Control Fundamentals

VAN METER | Rockwell Automation | Allen-Bradley by ROCKWELL AUTOMATION

Course Number

CCN130

Course Purpose

Upon completion of this course, you should be able to demonstrate fundamental motion control concepts common to all Rockwell Automation motion control systems.

This course is designed to provide you with an understanding of the concepts, terminology, functionality and applications of motion control. In addition, you will also learn how motion control applications function using the concepts and principles discussed in each lesson.

This course will allow you to establish the strong essential foundation you need before learning the skills necessary to maintain and program motion control systems.

This course does not address motion control system design or specific motion control software programming. If you are seeking training in these areas, you should enroll in the relevant Rockwell Automation training courses, making sure you have fulfilled the prerequisites for those courses prior to enrollment.

COURSE AGENDA

DAY 1

- Identifying Servo Motion Elements
- Tracing the Power Supply Circuit
- Creating a Motion Profile
- Identifying and Applying a Reference

DAY 2

- Identifying Motion Drive Elements
- Tracing Signal Flow Through the Drive Control Module
- Identifying Motor Types and Components
- Identifying Feedback Devices
- Identifying and Scaling Loads

WHO SHOULD ATTEND

Individuals who need to learn basic motion control concepts for their job or as a prerequisite for attending other motion control courses should attend this course.

PREREQUISITES

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

- A background in basic electricity, electronics, and computer concepts
- A basic knowledge of controllers operation

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 Studio 5000 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-TD20941 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 involved in working with a motion control application.

NEXT LEARNING LEVEL

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

- *Kinetix 6000 Troubleshooting and Project Interpretation* (Course Number CCN200)
- *Studio 5000 Logix Designer Level 4: Kinetix 6000 (SERCOS) Programming* (Course No. CCN145)
- *Studio 5000 Logix Designer Level 4: Kinetix 6500 (CIP) Programming* (Course No. CCN144)

COURSE LENGTH

This is a two-day course.

TO REGISTER

Please contact us at VM.Training@vanmeterinc.com or call 1.800.247.1410.

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