

# Drives

PowerFlex 700 Vector Control  
Maintenance and Troubleshooting



## Course Number

CCA163

## Course Purpose

This skill-building course introduces concepts and techniques that will assist you in successfully maintaining and troubleshooting a PowerFlex® 700 vector control drive. You will learn how to recognize PowerFlex 700 drive hardware and properly wire the drive. You will also learn to diagnose specific load related, environmental, and equipment faults. Throughout the course, you will use the LCD HIM, DriveExplorer™ software, and DriveExecutive™ software to clear faults and alarms. After each demonstration, you will be given an application-based exercise that offers extensive hands-on practice using the PowerFlex 700 drive.

This one-day course can be taken as a stand-alone course, or it can be taken in conjunction with other courses in the PowerFlex 700 curriculum for further skill development.

## COURSE AGENDA

### DAY 1

- Replacing and Rewiring Drive Hardware
- Configuring Drive Parameters Using the LCD HIM
- Configuring Drive Parameters Using Drive Explorer Software
- Configuring Drive Parameters Using Drive Executive Software
- Uploading and Downloading Drive Data
- Troubleshooting and Clearing Drive Alarms
- Clearing Drive Faults
- Troubleshooting Drive Load and Environmental Faults
- Troubleshooting Drive Equipment Malfunctions
- Integrated Practice: Maintaining and Troubleshooting a PowerFlex 700 Vector Control Drive

## WHO SHOULD ATTEND

Individuals responsible for configuring parameters and starting up PowerFlex 700 vector control drives should attend this course.

## PREREQUISITES

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

- Working knowledge of electricity, and knowledge of electrical and industrial safety (including PPE requirements and safe practices).
- Ability to perform basic Microsoft Windows tasks
- Completion of the AC/DC Motors and Drives Fundamentals course (Course No. CCA101) or equivalent experience

## STUDENT MATERIALS

To enhance and facilitate the students' learning experiences, 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.
- *PowerFlex 700 Standard and Vector Control Troubleshooting Guide*, which contains flowcharts that help the user find the root of the drive problem and choose the correct solution.
- *PowerFlex 700 Standard and Vector Control Procedures Guide*, which provides the steps required to clear drive

faults and alarms. This guide also contains a very helpful glossary of common terms.

- *PowerFlex 700 Standard and Vector Control Quick Reference Guide*, which provides lists of parameters in both alphabetic and numeric order.

## HANDS-ON PRACTICE

Hands-on practice is an integral part of learning, and this course offers extensive hands-on opportunities. An in-class workstation allows students to replace PowerFlex 700 control drive components and troubleshoot faults and alarms. The PowerFlex 700 drive workstation introduces real-world maintaining and troubleshooting situations into a classroom setting.

## COURSE LENGTH

This is a one-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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Publication GMST10-PP175I-EN-E - January 2020 | Supersedes Publication GMST10-PP175H-EN-E - September 2018

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