

PowerFlex® Drives

PowerFlex® 400/70/700 AC Drive Field Start Up for Water Wastewater Applications Course Description

COURSE AGENDA

Day 1

- Understanding Basics of Drive and Motor Theory (review)
- Recognizing PowerFlex 400/70/700 Products
- Applying Drive Installation Best Practices

Day 2

- Monitoring and Modifying Drive Parameters using Hardware and Software
- Programming PowerFlex Drives
- Setting up a Drive to Communicate over Ethernet
- Troubleshooting a PowerFlex Drive over Ethernet



COURSE NUMBER: CCA174-LD

Course Purpose

This skill-building course provides you with fundamental concepts of AC drive and motor operation to enable effective startup of PowerFlex 400, PowerFlex 70 EC (enhanced control), and PowerFlex 700 VC (vector control) drives for Water Wastewater applications.

The course also provides information related to applications, proper drive selection and sizing as well as various installation considerations and troubleshooting practices.

You will learn how to recognize PowerFlex 400, 70 and 700 drive hardware and properly program and troubleshoot the drive as part of a typical startup. Throughout the course, you will use the LCD HIM, DriveExplorer™ software, DriveExecutive™ software, and DriveObserver™ software to program and monitor various drive parameters.

After each demonstration, you will be given an exercise that offers hands-on practice using PowerFlex 400 and/or PowerFlex 700 VC drives.

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

Who Should Attend

Individuals responsible for starting up PowerFlex drives in Water Wastewater applications should take this course.

Prerequisites

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

- Ability to perform basic Microsoft® Windows® tasks
- Completion of the *AC/DC Motors and Drives Fundamentals* course (Course No. CCA101) or *Fundamentals of AC and DC Motors and Drives* Web-based training (ePass/WBT1PACK) or equivalent experience

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 each student's learning experience, 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 400 Adjustable Frequency AC Drive Packages for Fan & Pump Applications User Manual*, which includes wiring diagrams, startup procedures, parameter lists, fault/alarm codes, and other configuration and troubleshooting tips.
- *PowerFlex 700 AC Drives User Manual - Series B*, which includes wiring diagrams, startup procedures, parameter lists, fault/alarm codes, and other configuration and troubleshooting tips.
- *PowerFlex 700 Standard and Vector Control Procedures Guide*, which provides all the steps required to complete common PowerFlex 700 tasks, including the tasks in the hands-on exercises. By following the procedures in this job aid, you can immediately apply what is learned in the course to your own job.

Student Materials (continued)

- *Documentation Reference Guides* for the following AC drives:

PowerFlex 400

PowerFlex 70 Enhanced Control

Power Flex 700 Vector Control

Each guide contains several relevant technical publications. These searchable, electronic resources contain the most frequently referenced configuration and troubleshooting information and are a quick and efficient on-the-job resource.

Hands-On Practice

Hands-on practice is an integral part of learning, and this course offers extensive hands-on opportunities. In-class workstations allow students to start up a drive and practice troubleshooting common faults and alarms. The PowerFlex 400 and PowerFlex 700 VC drive workstations introduce real-world startup and troubleshooting situations into a classroom setting.

Course Length

This is a two-day course.

Course Number

The course number is CCA174-LD.



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>.

www.rockwellautomation.com

Power, Control and Information Solutions

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