

# PowerFlex® 400 HVAC Drives

## COURSE DESCRIPTION

### COURSE AGENDA

- Basics of Drive and Motor Theory
- PowerFlex 400 Product Overview
- General Programming Lab
- Application Specific Feature Overview and Lab
- Installation and Application Considerations
- Packaged Drives Overview
- Bypass Lab
- PC Software Lab
- Network Communications Lab
- Start Up Registration Procedure
- Written Exam (Optional)

## PowerFlex® 400 AC Drive Field Start Up for HVAC Applications



### COURSE NUMBER: CCA171-LD

#### *Course Purpose*

This skill-building course provides fundamental concepts of AC/DC drive and motor operation to enable effective Start Up of PowerFlex 400 drives within the HVAC market. The course also provides information related to applications, proper drive selection and sizing as well as various installation considerations.

You will learn how to recognize PowerFlex 400 drive hardware and properly program and troubleshoot the drive as part of a typical “start up” service. Throughout the course, you will use the LCD HIM and DriveExplorer™ software to program and monitor various drive parameters. After each demonstration, you will be given an application-based exercise that offers extensive hands-on practice using the PowerFlex 400 drive.

#### **Course Objectives**

As a result of this course, participants will be able to:

- Understand basic drive and motor technology
- Relate product features to application needs
- Verify proper installation of the drive
- Effectively program the drive
- Pass a written exam (optional)

### **Target Audience**

Maintenance and start-up technicians, contractors, ESCO's, HVAC controls integrators, and others who will conduct PF400 drive start ups for HVAC applications should attend this course.

### **What does a start up include?**

Start up is a verification and quality check of the drive installation and start up ensuring proper electrical, mechanical and environmental criteria is met. A qualified start up is limited to only those individuals who have taken the course. A qualified start up extends the standard Rockwell Automation product warranty from 12 months after start up (or eighteen months from the date of manufacture) to 24 months from start up (not to exceed 30 months from date of manufacture).

### **What will the technician provide?**

The start up technician will perform start up on PowerFlex 400 drives and provide warranty service when authorized by Rockwell Automation Technical Support Department. Warranty service is limited to drive replacement. Reimbursement for drive replacement will be limited.

The Drive Start Up technician will perform and document the following to qualify for the extended warranty:

- Drive and motor nameplate information
- Verify proper drive installation
- Physical inspection of the equipment, including checking all electrical connections for tightness
- Verify proper mounting and grounding
- Verify proper distribution network and power being applied to the Drive
- Verify installation checklist or electrical checks
- Verify drive set-up, tuning, programming and operation
- Provide application description

### **Course Length**

This is a one-day course.

### **Course Number**

The course number is CCA171-LD

### **IACET CEUs**

CEUs Awarded: 0.7



### **Prerequisites**

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

- Experience operating a personal computer within a Microsoft® Windows® environment
- Previous experience working with AC Drive technology

### **Course Location**

This course will be held locally or regionally based upon demand and number of students.

### **To Register**

To register for this or any 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](http://www.rockwellautomation.com)**

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