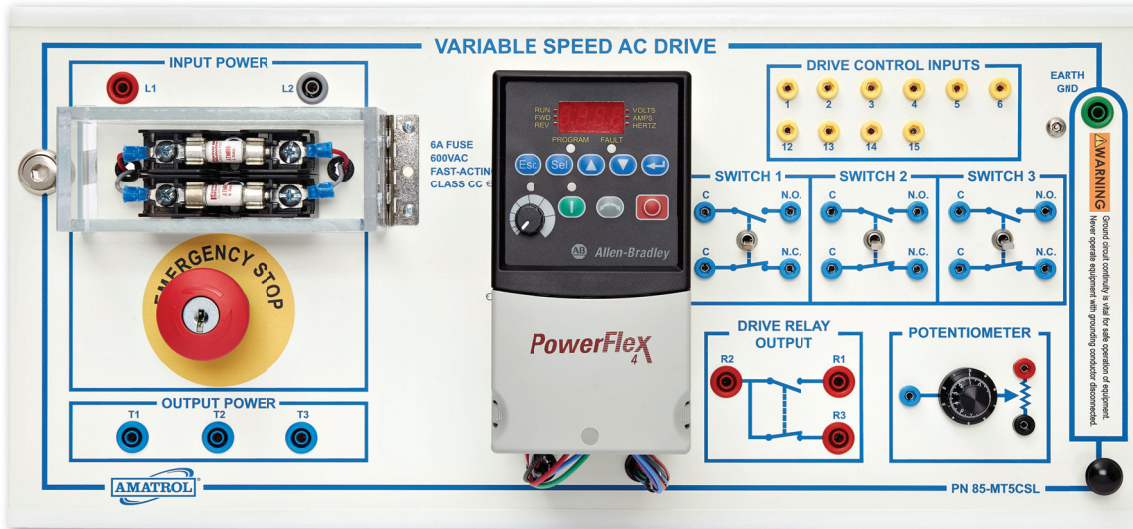
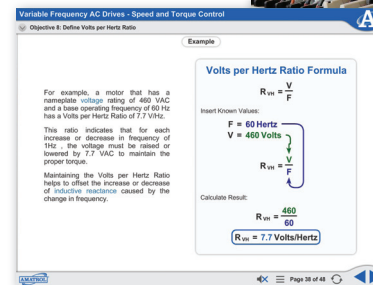
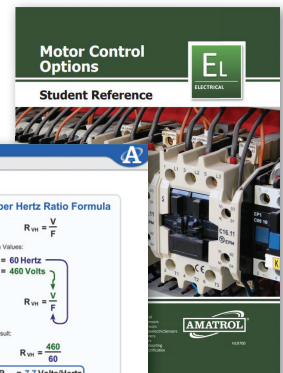


# Variable Frequency AC Drive Learning System

85-MT5C



85-MT5C



Interactive Multimedia Curriculum and Student Reference Guide

## Learning Topics:

- Variable Frequency AC Drives
- Two- and Three-Wire Motor Control
- Jogging Control
- Speed Control
- Torque Control
- Acceleration
- Deceleration
- Braking
- Ramping
- S-Curve Acceleration
- Fault Detection
- Troubleshooting

Amatrol's Variable Frequency AC Drive Learning System (85-MT5C) adds to the Electric Motor Control Learning System (85-MT5) to teach basic and advanced concepts related to variable frequency drives (VFDs), as well as their many industrial applications, including fans, pumps, conveyors, mixers, grinders, and hoists. For example, learners will study the operation, installation, design, performance analysis, and troubleshooting of VFDs.

Learners will also practice hands-on skills like programming and operating a variable frequency AC drive to ramp a motor up to its rated speed and decelerate to a stop. The training system features heavy-duty, real-world components, such as a PowerFlex4 VFD, multi-turn potentiometer for speed control, and selector switches for general drive control, basic stop/start, ramping, and dynamic braking. These industry-standard components prepare learners for situations that they will encounter on the job.



## Technical Data

Complete technical specifications available upon request.

### Variable Frequency AC Drive Panel

- Programmable Variable Frequency AC Drive
- Two-Position Fuse Block with Fuses
- Drive Control Inputs
- Switches (3) for General Drive Control
- Potentiometer for Speed Control
- Fault Module with 5 Faults

### Motor Connection Panel

#### Lead Set

#### VFD User Manual

#### Multimedia Curriculum (M17411)

#### Instructor's Guide (C17411)

#### Installation Guide (D17411)

#### Student Reference Guide (H19700)

#### Additional Requirements:

- Electric Motor Control Learning System (85-MT5)
- Computer (Visit [www.amatrol.com/support/](http://www.amatrol.com/support/) for computer requirements for details.)

#### Utilities Required:

- Electricity (Provided by 85-MT5)

## Study VFD Components and Practice on Real-World Equipment

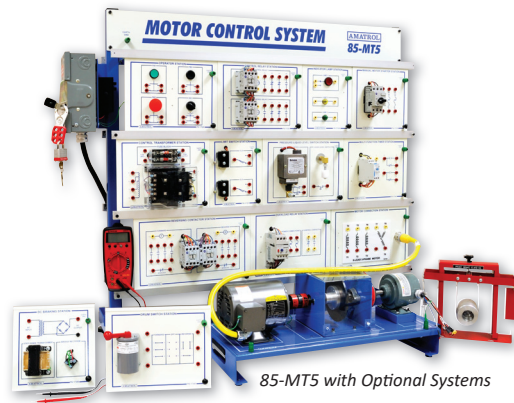
Amatrol's Variable Frequency AC Drive Learning System (85-MT5C) includes real-world equipment, such as a variable frequency AC drive, dual fuse block, emergency stop pushbutton with key-lock, multi-turn potentiometer for speed control, and selector switches for general drive control, basic stop/start, ramping, and dynamic braking. These industry-standard components teach learners essential hands-on skills they'll actually use on the job.



PowerFlex 4 Variable Frequency AC Drive

## Learn Essential VFD Operation and Troubleshooting Skills

Added to the 85-MT5, learners using the 85-MT5C will study basic and advanced VFD topics, such as two- and three-wire motor control, jogging control, speed control, ramping, special acceleration methods, and braking. They then apply this theoretical knowledge to hands-on skills, like programming and operating a variable frequency AC drive to drive a motor above its base speed. The system also adds five faults focused on the variable frequency AC drive to FaultPro, Amatrol's exclusive computer-based fault insertion system. Learners will practice hands-on fault detection and clearing through skills like troubleshooting the parameter settings of a variable frequency AC drive and manually clearing a fault on a VFD.

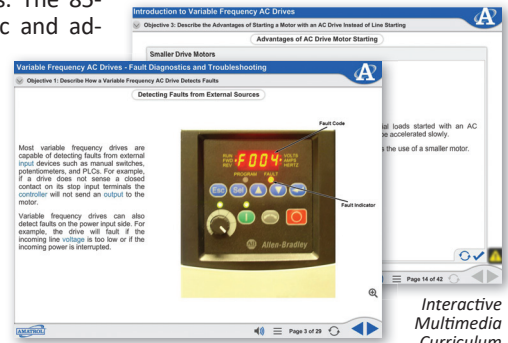


85-MT5 with Optional Systems



## Engaging, Highly-Interactive Multimedia

Amatrol's curriculum features a highly-interactive, multimedia format that includes stunning 3D graphics and videos, voiceovers of all text, and interactive quizzes and exercises designed to appeal to learners with different learning styles. The 85-MT5C curriculum teaches learners both basic and advanced variable frequency AC drive concepts. For example, learners will study variable frequency AC drive acceleration, deceleration, braking, and troubleshooting, as well as more advanced hands-on skills like programming and operating a two-wire control circuit using a VFD. The combination of theoretical knowledge and hands-on skills solidifies understanding and creates a strong basis for pursuing more advanced skills.



Interactive Multimedia Curriculum



## Student Reference Guide

A sample copy of the Motor Control Options Student Reference Guide is also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training, making it the perfect course takeaway.

