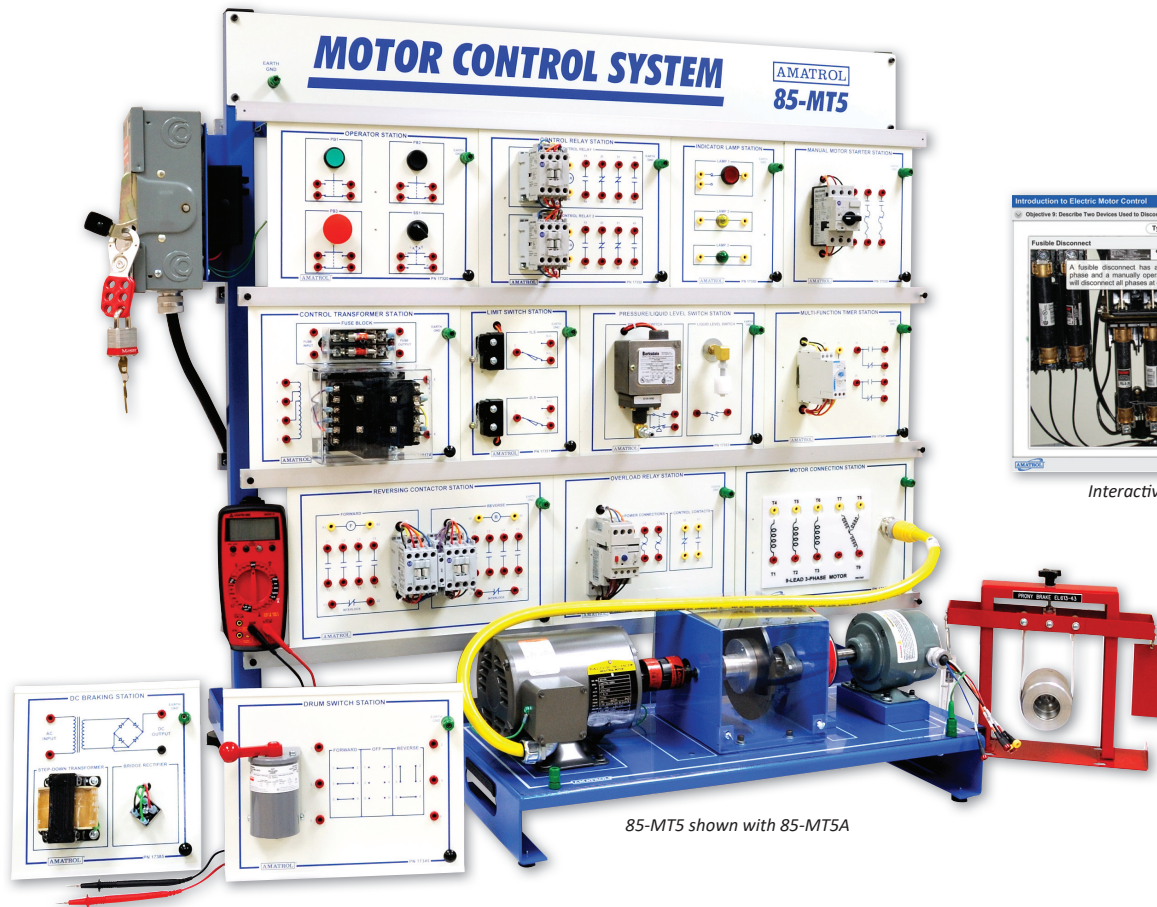
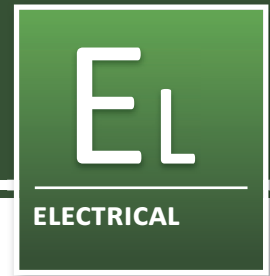
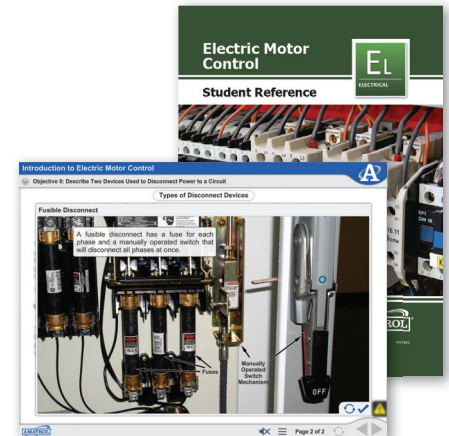


Electric Motor Control Learning System

85-MT5



85-MT5 shown with 85-MT5A



Interactive Multimedia Curriculum and Student Reference Guide

Learning Topics:

- Manual Motor Control
- Overload Protection
- Control Transformers
- Control Ladder Logic
- Control Relays
- Motor Starters
- Component Troubleshooting
- System Troubleshooting
- Reversing Motor Control
- Automatic Input Devices
- Basic Timer Control
- Electrical Safety

Amatrol's Electric Motor Control Learning System (85-MT5) covers electric relay control of AC electric motors found in industrial, commercial, and residential applications. Learners study industry-relevant skills including how to operate, install, design, and troubleshoot AC electric motor control circuits for various applications.

Electric Motor Control includes a heavy-duty steel, bench-top workstation, a 3-phase AC induction motor, twelve control component panels, a handheld digital multi-meter, and extensive curriculum covering various motor control topics like electrical safety, component and system troubleshooting, and basic timer control. This system uses industrial-quality components that allow learners to practice with equipment that they will encounter on the job. Some of the major components that learners will work with include a control transformer, reversing contactors, manual motor starter, multi-function timer, and control relays.

Electric Motor Control teaches learners how to troubleshoot motor control circuits under realistic conditions. Circuit faults can be introduced using either the included manual fault insertion or through the optional Fault Troubleshooting System (890-FTS1), which includes Amatrol's FaultPro, the industry's leading electronic-fault insertion software.



Technical Data

Complete technical specifications available upon request.

System Frame Assembly

Heavy Duty Steel Frame
36-in. H x 20-in. W x 46.5-in. L (910-mm H x
510-mm W x 1180-mm L)
11-gauge Steel Panels
Fault Module

Safety Switch Power Station

Fused 3-Phase Safety Switch
Lockout/Tagout System
Pre-Attached Power Cord (4 pole, 5 wire)

Operator Station Panel

Green Flush Push Button
Black Flush Push Button
Red Flush Push Button
Three Position Selector Switch
Fault Module

Indicator Lamp Station Panel

Green Indicator Lamp
Push-to-Test Red Indicator Lamp
Yellow Indicator Lamp
Fault Module

Control Transformer Station Panel

80 VA Control Transformer with Protective Cover
Dual Fuse Block with Protective Cover
1-AMP Class CC Fuses
Fault Module

Reversing Contactor Station Panel

4-Pole Contactors
Mechanical/Electrical Interlock
Fault Module

Overload Relay Station Panel

A-B Overload Relay

Manual Motor Starter Station Panel

Manual Starter

Multifunction Timer Station Panel

Multi-Function Timer with On-Delay, Off-Delay
Timing, Interval, Single Shot Timing, Repeat
Cycle Timing, Pulse Timing
Fault Module

Drum Switch Station Panel

Three-Phase Reversing Drum Switch

Limit Switch Station Panel

Industrial-Grade Limit Switch (SPDT)
Fault Module

Control Relay Station Panel

Four Pole Relays
Fault Module

Pressure/Liquid Level Switch Station Panel

Liquid Level Switch (Hall-Effect)

Motor Connection Station Panel

Multi-Pin Industrial Motor Connector
Fault Module

Handheld Digital Multi-Meter

Stackable Banana Lead Set

Fault Plug Set

Three Phase AC Motor

Squirrel Cage Induction Type
208 VAC / 3-Phase
1/3 Hp Rating

Motor Mounting Frame

4-in. H x 12-in. W x 27-in. L (100-mm H x
304-mm W x 685-mm L)

Interactive Multimedia Curriculum (N17401)

Instructor's Guide (C17401)

Installation Guide (D17401)

Student Reference Guide (H17401)

Additional Requirements:

Prony Brake (EL613-43)
Hand Tool Package (41202)

Additional Recommendations:

Mobile Technology Workstation (82-610) or
equivalent
Fault Troubleshooting System (890-FTS1)

Utilities:

Electricity (208 VAC / 60 Hz / 3 Phase)
Compressed Air (50 psi)

Real-World Components for Practicing Motor Control Skills Like Connecting and Operating Limit Switches

The Electric Motor Control system's electric motor and control components are off-the-shelf industrial standard components that provide learners with real world experience in installation and control of industrial motors. The 3-phase motor is rated at 1/3 Hp and uses industrial standard T-number wiring terminology.

Learners will use twelve component panels to practice different motor control skills. Some of the components on these panels include: transformers, fuses, contactors, relays, timers, and switches. These components are mounted onto panels that easily slide into the heavy-duty, welded steel frame.

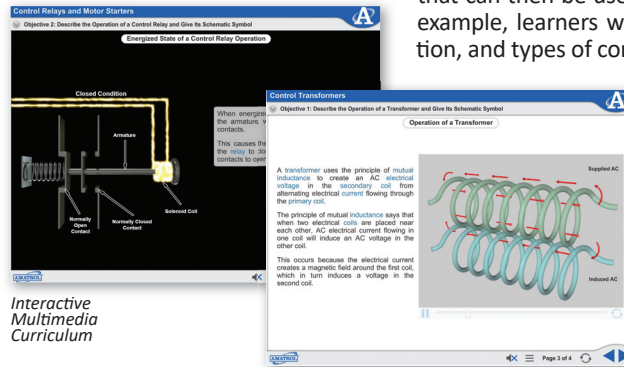


Manual Motor Starter Station Panel

World-Class Curriculum Covers Automatic Input Devices, Motor Starters, Control Transformers, and More!

The included Electric Motor Control curriculum is unmatched within the industry for its breadth and depth of motor control topics and hands-on skills. This curriculum advances through topics like three-wire start/stop control, reversing magnetic motor starter, and on-delay and off-delay timers that can then be used to practice hands-on skills. As an example, learners will study about the function, operation, and types of control relays and then practice hands-

on skills by actually connecting and operating a control relay in a circuit. This curriculum is offered in a multimedia format that combines text, audio, 3D illustrations, and loads of interaction to fully engage learners as they begin at the foundation of motor control knowledge.



Interactive Multimedia Curriculum

Add Electronic Fault Insertion to Expand Teaching Potential

Electric Motor Control features a variety of manual faults that allows learners to practice real world troubleshooting on actual industrial components. Optionally, this system offers electronically inserted faults using the Fault Troubleshooting System (890-FTS1). The 890-FTS1 uses Amatrol's electronic fault insertion software, FaultPro, which allows learners to practice troubleshooting over 35 faults on this system.

Student Reference Guide

A sample copy of the Electric Motor Control Student Reference Guide is also included with each system for your evaluation. Sourced from the 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 these courses by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

