

# Portable Motor Control Troubleshooting Learning System

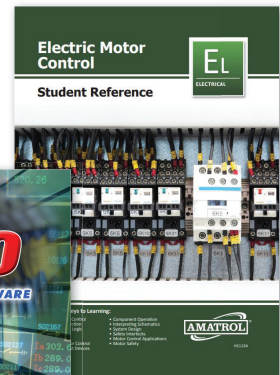
990-MC1F



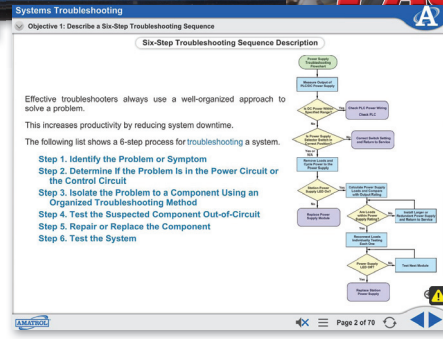
990-MC1F



Portable Workstation



Student Reference Guide



Includes FaultPro Software and Interactive eLearning

## Learning Topics:

- Control Relay Troubleshooting
- Reversing Contactor Troubleshooting
- Limit Switch Troubleshooting
- Pushbutton Troubleshooting
- Manual Motor Control
- Overload Protection
- Control Ladder Logic
- Control Relays
- Motor Starters
- Troubleshooting
- Reversing Motor Control
- Automatic Input Devices

Amatrol's Portable Motor Control Troubleshooting Learning System (990-MC1F) features standard industry components like a 3-phase AC squirrel cage motor and uses 3-phase AC for power and 24 VDC for control all packed within a space-saving, portable product. These real-world motor control components will prepare learners for work opportunities in industries where motor control is used in applications like conveyor control and driving large utility pumps. Teach students how to read and interpret ladder diagrams. The 990-MC1F also uses FaultPro, Amatrol's unique electronic fault insertion, to teach motor control troubleshooting skills, such as control relay, reversing contactor, limit switch, and pushbutton troubleshooting.

The 990-MC1 uses industrial components to cover the operation, installation, and applications for electric relay control of AC motors all within this portable, durable learning system that can be set up nearly anywhere. This system also builds knowledge and skills across topics like manual motor control, control ladder logic, motor starters, and automatic input devices. Nowhere else can you find this breadth of training in a portable platform!



## Technical Data

Complete technical specifications available upon request.

AC 3-Phase Motor  
Start, Stop, and Reset Pushbuttons  
Reversing Motor Contactors  
Transformer  
Forward/Reverse Selector Switch  
Overload Switch  
Limit Switches (2)  
Pressure Switch  
Float Switch  
Drum Switch  
Manual Motor Starter  
Reversing Motor Starter  
DC Power Supply  
Control Relays (2)  
Timer Relay  
Indicators (3)  
Multimeter  
Lead Set  
FaultPro Software (11164)  
Student Curriculum – Interactive PC-Based  
Multimedia (N11134, N11152)  
Instructor's Guide (C11134, C11152)  
Installation Guide (D11134, D11152)  
Student Reference Guide (H11134, H11152)  
Additional Requirements:

Personal Computer  
Computer: See requirements: <http://www.amatrol.com/support/computer-requirements>

### Utilities Required:

Electricity (208VAC / 60Hz / 3 Phase)

## Learn Troubleshooting Using the Industry's Only Electronic Fault Insertion System!



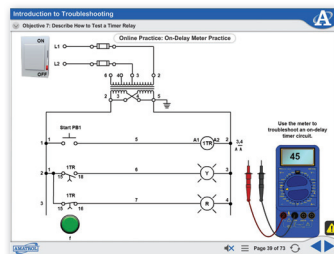
Amatrol's FaultPro, the industry's only electronic fault insertion system, allows learners to insert faults in the system as they progress through industrial troubleshooting methods. FaultPro can also randomly select and insert faults to strengthen a learner's control relay and pushbutton troubleshooting abilities and prepare them for real-world technical problems. The 990-MC1F includes over 30 faults including control relay, reversing contactor, limit switch, and pushbutton troubleshooting.

## Industrial Components Packed Within One Space-Saving System

This learning system features an extensive range of industry-standard components needed to teach this complex industrial topic, all without sacrificing the curriculum depth and skill building needed by today's industries. The 990-MC1F features a 3-phase AC squirrel cage motor, the most commonly used in industry, 3-phase AC for power, and 24 VDC for control. Additional industry-standard components include a drum switch, reversing motor contactors, a pressure switch, and a float switch, so that learners can practice skills on mechanisms that they'll actually see in the field. The 990-MC1 also includes lockout/tagout components to teach vital safety steps when working with industrial motors.



## Stunning Motor Control Multimedia Curriculum

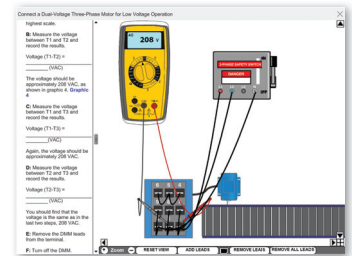


Interactive Multimedia: On-Delay Meter Practice

The 990-MC1F's extensive multimedia curriculum combines text, audio, 3D illustration, and loads of interaction to fully engage learners as they begin at the foundation of motor control knowledge. 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 a control relays and then practice hands-on skills by actually connecting and operating a control relay in a circuit.

## Virtual Trainer for Online Motor Control Troubleshooting Skill-Building

The Motor Control Troubleshooting Training System also features a virtual multimedia trainer! Amatrol's virtual trainers replicate hands-on equipment in such great detail that learners will feel like they are using the actual equipment. Learners will perform essentially the same tasks using virtual trainers that they would perform using equipment hardware. Transition from theory to hands-on is a seamless process.

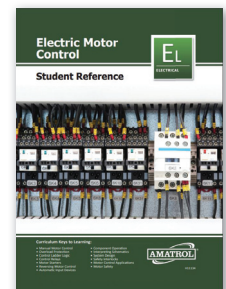


## Mobile, Durable - Use Anywhere!

The 990-MC1F is set within a durable ABS plastic case featuring wheels and a handle so that moving this world-class trainer from one destination to another is safe and easy. Another advantage of the 990-MC1F is the minimal set-up time. Once the case's cover is removed, the trainer sits upright on the training surface.

## Student Reference Guide

A sample copy of the Portable Electric Motor Control Learning System's Student Reference Guide is also included with the system for your evaluation. Sourced from the system's multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-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.



2400 Centennial Blvd. Jeffersonville, IN 47130 USA 800.264.8285 812.288.8285 [www.amatrol.com](http://www.amatrol.com)

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