# Portable AC Drive Troubleshooting Learning System - Mitsubishi

990-DRV1FM





FaultPro, Multimedia Curriculum, and Student Reference Guides

# **Learning Topics:**

- Variable Frequency AC Drives
- Two- and Three-Wire Control
- Jogging Contro
- Speed Control
- Torque Control
- Ramping
- Acceleration Methods
- Braking
- Fault Detection
- Troubleshooting

Amatrol's Portable AC Drive Troubleshooting Learning System (990-DRV1FM) teaches the fundamentals of configuring and operating an AC variable frequency drive. The system includes industry-standard components, such as a Mitsubishi variable frequency AC drive, a HMI pane and a 3-phase AC motor, in a convenient, portable case that can be used practically anywhere.

The system also features FaultPro, Amatrol's exclusive electronic fault insertion software. FaultPro allows users to learn motor drive troubleshooting skills, such as drive input, motor input, and drive relay troubleshooting. FaultPro allows users to troubleshoot realistic situations they will encounter on the job in industries like packaging, textiles, and paper where rapid motor acceleration and deceleration are required.



#### **Technical Data**

Complete technical specifications available upon request.

- Portable Case
- Mitsubishi E800 AC Drive
- 3-Phase AC Motor
- HMI Display
- LED Motor Speed Display
- Potentiometer
- Forward/Reverse Selector Switch
- Indicator Lamps (2)
- PLC Discrete & Analog I/O Interfaces
- Emergency Stop Circuit
- Lockout/Tagout Kit
- Lead Set
- USB Fault Connector
- Fault Controller
- FaultPro Software
- Interactive Multimedia (M11135/M11153)
- Instructor's Guides (C11135/C11153)
- Installation Guides
- Student Reference Guides
- Additional Requirements:
  - o Computer (Visit www.amatrol.com/support/computer-requirements for details.)
- Utilities:
  - o Electricity (120 VAC/60 Hz/1 phase)

#### Real-World Troubleshooting with FaultPro

The 990-DRV1FM features FaultPro, Amatrol's exclusive electronic fault insertion system. FaultPro allows users to insert more than 20 faults into the system for realistic troubleshooting of situations they will encounter on the job. FaultPro's computer-based fault insertion software automatically track progress, enabling learners to gain troubleshooting skills in a self-paced environment that ensures that faults are inserted safely, protecting both learners and equipment.



### **Practice Hands-On Skills Wherever You Are**

The Portable AC Drive Troubleshooting Learning System allows learners to practice hands-on skills with industry-standard components, like an Mitsubishi variable frequency AC drive and a 3-phase AC motor. Learners will gain real-world experience that will prepare them for work opportunities. The system also includes: onboard analog and discrete input devices that enable



Convenient, Portable, Hands-On Skills Training

learners to operate the drive in many different program applications; a digital tachometer to monitor output; a digital voltmeter to monitor analog input into the motor; and a lockout/tagout kit to learn vital safety skills when working with AC motors.

## **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 990-DRV1FM curriculum teaches learners

about the operation, installation, and performance analysis of AC variable frequency drives and AC motors. Learners will

also gain experience with relevant hands-on skills, such as operating a variable frequency AC drive to provide low speed boost. Other major topics include jogging and torque control, ramping commands, DC injection braking, acceleration methods, and troubleshooting various system faults.





#### **Student Reference Guides**

Sample copies of the AC Variable Frequency Drives & AC Variable Frequency Drive Troubleshooting Student Reference Guides are also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guides take the entire series' technical content contained in the learning objectives and combine them into perfect-bound books. Student Reference Guides supplement this course by providing condensed, inexpensive reference tools that learners will find invaluable once they finish their training, making them the perfect course takeaways.

