MOTOR CONTROL TROUBLESHOOTING MODULE

890-FTS-1

Typical motor control application

Amatrol's 890-FTS-1 Motor Control Troubleshooting Module adds to the model 85-MT5 Motor Control Learning System to provide troubleshooting training via computer-based fault insertion. The 890-FTS-1 is unique because it can insert faults into electrical lines that carry full power to electric motors as well as control-level signals. This gives it the ability to create a more realistic troubleshooting environment for students. The Motor Control Troublehshooting Module also avoids damage to the equipment that is normally associated with manual fault insertion because it inserts the faults electronically. Training equipment last longer and troubleshooting is safer for both the student and the teacher.

Troubleshooting is one of the most important skills a student can learn. To do so requires intensive practice in a realistic setting and teacher analysis of each student's methods. The 890-FTS-1 module gives teachers the ability to accomplish this in an effective manner because it can automatically insert a wide array of faults throughout the training system and record student responses in a computer database. With this system, the teacher can work freely in the classroom, analyzing each student's results and coaching them while other students are performing their troubleshooting exercises.

The 890-FTS-1 Motor Control Troubleshooting Module consists of FaultPro software, PC-based fault control card, fault module with a wide array of faults and individual plug-in connection cables, power supplies, and operation manual. FaultPro software is a Windows-based software package that provides an on-line interface for student troubleshooting and a database for record keeping of student responses.

CURRICULUM IS THE KEY TO LEARNING

Learning Topics:

- Automated Fault Insertion
- Online Student Control
- Data Tracking
- Automated Grading
- Student Reports
- Class Reports
- Custom Templates
- Practice/Test Modes
- Custom Grading Rubrics

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Real World Faults - The 890-FTS-1 can insert faults into electrical lines that carry full power to electric motors as well as control level signals, providing students with a more realistic troubleshooting experience. It contains heavy-duty industrial relays that are optically-isolated from the PC running the Fault-Pro software. The 890-FTS-1 easily mounts to the rear frame of the 85-MT5 Motor Control Module and connects to the 85-MT5 components through plug-in cables. A PCI-style Fault Control Card inserts in the PC to provide communications between the PC and the Fault Control Module.
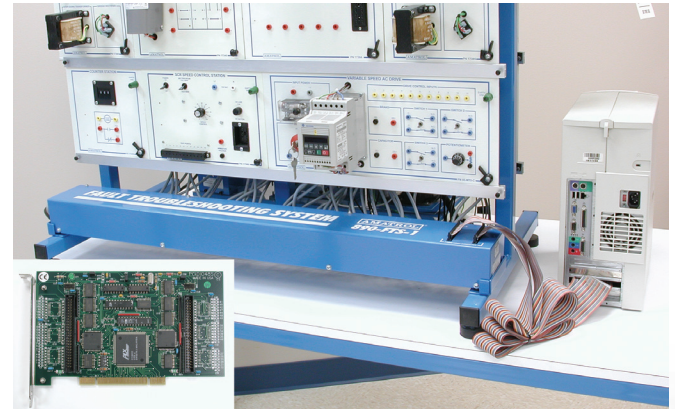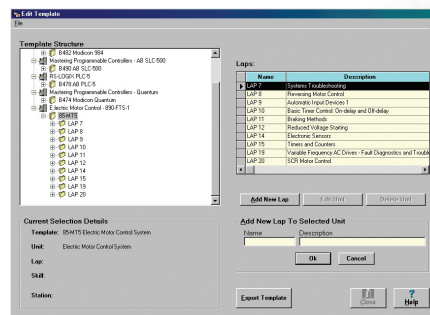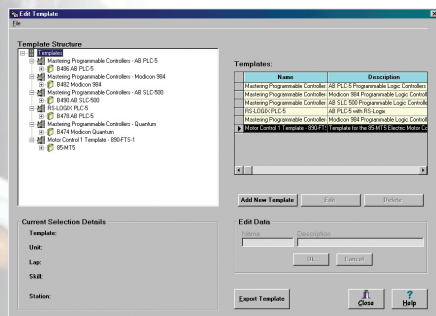
Realistic troubleshooting experience
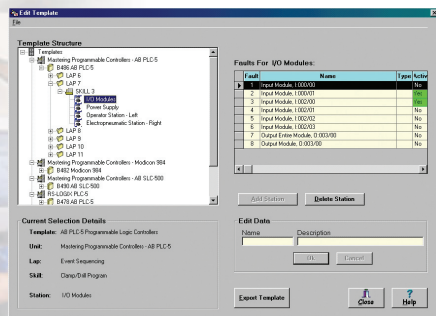
Immediate student troubleshooting feedback

On-Line Student Control - Fault-Pro software features on-line student control of troubleshooting activities through menu-driven screens, making it easy for students to perform their own troubleshooting exercises. Students get immediate feedback about their responses so they know if they are learning. An on-line help screen provides step-by-step instructions during the troubleshooting process.

TECHNICAL DATA

Fault Control Moduel
- Steel enclosure
- Dimensions 40 in. L X 3.25 in. W X 4.875 in. H
- Fault Relays (35)
- Fault interconnect cables (35)
- 10Amps, 115/230 VAC
- Internal power supply, 120/230 VAC, 50/60 Hz

Fault Control Card
- PCI-Style
- Ribbon Cables to connect the PC installed control card to the Fault Controller (2)

FaultPro Software
- CDROM-based media
- Windows 2000 or above, XP preferred

Additional Required Items
- 85-MT5 Electric Motor Control Module
- Personal computer with Windows 2000 or higher (XP preferred) and PCI slot
- Power requirements: 1 AMP, 115/230VAC

Data Tracking and Grading - Each student's responses are automatically recorded in the student's database and scored according to a rubric, which can be edited by the teacher. The data recorded includes: which faults are mastered, total time spent on each fault, and number of tries to master each fault. Class statistics can also be generated so teachers can analyze exercises and students.

Student tracking enables teacher coaching

Custom Templates - FaultPro software gives the teacher the ability to create custom templates for each troubleshooting exercise so students are presented with an appropriate troubleshooting experience for each lab activity. Faults can be added or deleted to each exercise as needed. Templates can be created for entire classes so setup for new classes is only a few clicks away.

Teachers can easily customize exercises