HVAC Controls Learning System

T7300

THERMAL



Student Reference Guide

Learning Topics:

- Electrical Safety and Schematics
- Disconnects and Protective Devices
- Contactors
- Fan and Blower Motors
- Compressor Motors
- Pressure Switches
- Basic Refrigeration Control
- Air Conditioning Control Circuits
- Heat Pump Control Circuits
- Defrost Timers
- Auxiliary Circuits

Amatrol's HVAC Controls Learning System (T7300) provides comprehensive motor control training specifically targeted at common HVACR applications, including residential air conditioners and heat pumps, as well as commercial refrigeration. This state-of-the-art training system features modern components, such as an electronic temperature controller, a programmable digital thermostat, a PSC single-phase AC compressor motor, a shaded pole single-phase AC blower motor, a programmable defrost controller, contactors, multiple types of switches, and built-in safety features, such as sheathed leads, lockout/tagout, and component guards.

The HVAC Controls Learning System includes Amatrol eLearning curriculum that begins with the basics of electrical safety, schematics, disconnects, and protective devices before moving on to more advanced topics related to contactors, fan and blower motors, compressor motors, pressure switches, basic refrigeration control, air conditioning and heat pump control circuits, defrost timers, and auxiliary circuits. Users will learn relevant hands-on skills, such as connecting, operating, and testing an electronic temperature controller, a digital thermostat, a defrost timer, and a float switch.



Teach Advanced Troubleshooting Skills

The HVAC Controls Learning System features a manual fault insertion system that provides robust troubleshooting training. In addition, it boasts an interface to the optional 890-FTS1 Automatic Fault Insertion System, which provides troubleshooting training via Amatrol's exclusive FaultPro computer-based fault insertion. The 890-FTS1 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.



Comprehensive Motor Control Training in a Compact Unit

890-FTS1

with FaultPro

FAULT TROUBLESHOOTING SYSTEM

The HVAC Controls Learning System features a dual-sided design with a dozen panels for a wide variety of HVACR applications and modern components. The system can also be expanded with additional panels to teach more applications. Users will appreciate the convenience and safety of this training system. Test points allow users to safely take measurements. Need to consult the schematic for an application? It's printed in color right there on the panel. The T7300 also boasts enclosed evaporators that allow users to adjust airflow.

Real Industrial Equipment, including Three Motors & a Defrost Controller

The HVAC Controls Learning System teaches users relevant hands-on skills using real industrial equipment they'll encounter in the workplace. For example, the system features three different motors to simulate a compressor, fan, and blower. Users will also gain hands-on experience with three different types of capacitors: start, run, and start and run. The T7300 is also the first Amatrol training system with a fully programmable defrost controller. The Paragon 9145 defrost controller can be programmed based upon either temperature or length of time. This defrost controller is UL873 standard certified and the only multivoltage defrost controller engineered to refrigeration standard.



890-FTS1

T7300 Motors & Paragon 9145 Defrost Controller



Safely and Quickly Simulate Multiple HVAC Circuits

The HVAC Controls Learning System's Operator Station allows users to practice basic motor control without wiring an entire circuit. The system's various application panels provide training in the connection of nine different types of HVAC circuits using a variety of real industrial components. Users can even simulate refrigerant by connecting an air supply to the dual pressure switch.

T7300 Application Panels

Multimedia Student Curriculum with Dozens of Hands-On Skills

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 T7300 curriculum starts with the basics of electrical safety, schematics, disconnects, and protective devices before moving on to more than two dozen hands-on skills related to contactors, fan and blower motors, compressor motors, pressure switches, basic refrigeration control, air conditioning and heat pump control circuits, defrost timers, and auxiliary circuits. The combination of theoretical knowledge and hands-on skills solidifies understanding and creates a strong basis for pursuing more advanced skills.





Student Reference Guide

A sample copy of the HVAC Controls 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.

