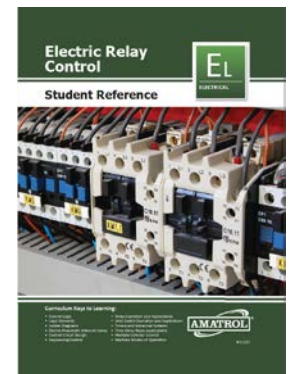
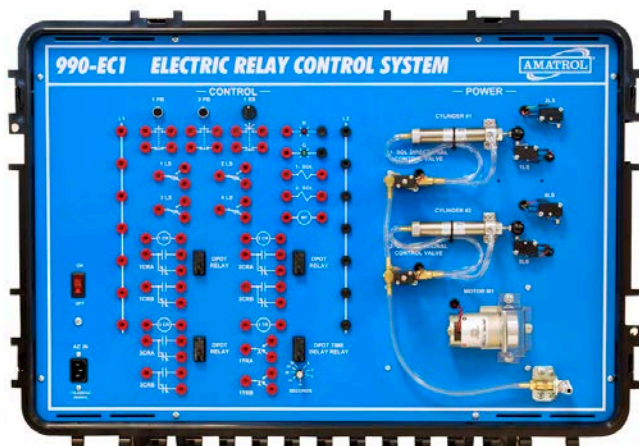


Portable Electric Relay Control Learning System – 990-EC1



Amatrol's Portable Electric Relay Control Learning System (990-EC1) covers concepts widely used in industrial, commercial and residential applications to regulate electric motors and fluid power actuators. Electric relay control also forms the building block of other automation systems, such as programmable controllers. This portable learning system offers flexibility and convenience when a trainer is needed in multiple locations or where space is too small for a full-size trainer.

The 990-EC1 includes a relay control panel with pre-mounted electrical control and pneumatic and electric power components. Learners use these components to connect electrical terminals to heavy-duty banana jacks to test various automation control circuits. Combined with Amatrol's world-class curriculum, this innovative product can provide learners with a thorough understanding of electric relay control.

Training is as Easy as a 990-EC1, a Desk and a Computer

Amatrol offers a full array of training in a portable system, so learners only need desk space for the trainer and a computer. An electrical relay, most often used as a memory logic element, is the component that makes electrical relay control possible. Learners will study applications of this vital component, as well as the available styles of control relays, the major components and their ladder diagram symbols.

The 990-EC1's curriculum also covers how electrical relays are used to energize a fluid power solenoid, perform control logic and make a seal-in circuit possible. Learners then use this knowledge to perform skills involving relays, such as designing a logic circuit and connecting and operating a relay to perform a seal-in function.

Electrical Relay Control Curriculum and Skills: From Logic Elements to Timer Relays

Amatrol offers extensive multimedia curriculum covering electric relay control basics, such as the six elements of control logic, and more advanced topics like a timer relay's operation within an unloaded motor start circuit. Learners then apply this theoretical knowledge to hands-on skills. For example, learners study how multiple cylinders can be controlled by limit switches and then immediately operate a dual cylinder control circuit using two limit switches. This combination of theory and practice ingrains concepts in a learner's mind and makes more advanced topics easier to comprehend.

Portable Workstation

The 990-EC1 offers customers complete mobility. This highly efficient learning system includes wheels and a handle for easy transportation, a lock for safety, and a storage pouch in the front cover for the 990-EC1's lead set. The system's front cover is easily removed, enabling the case to sit firmly upright on a table surface.

Multimedia Curriculum

Amatrol's multimedia utilizes text, audio and 3D animations that engage learners in both theoretical knowledge and hands-on skills. This exceptionally detailed curriculum begins with the basics and steadily advances to more complex concepts and skills. Through partnerships with key industry leaders and leading edge educators, Amatrol developed the right balance of knowledge and applied skills needed to train learners.

Student Reference Guide

A sample copy of this course's Student Reference Guide is included with the learning system. Sourced from the multimedia curriculum, the Student Reference Guide takes the entire series' technical content and combines them into one perfect-bound book. If you would like to inquire about purchasing additional Student Reference Guides for your program, contact your local Amatrol Representative for more information.

Learning Topics

- Control Logic
- Logic Elements
- Ladder Diagrams
- Electro-Pneumatic Solenoid Valves
- Control Circuit Design
- Sequencing Control
- Relay Operation and Applications
- Limit Switch Operation and Applications
- Timers and Advanced Systems
- Time-Delay Relay Applications
- Multiple Cylinder Control
- Machine Modes of Operation