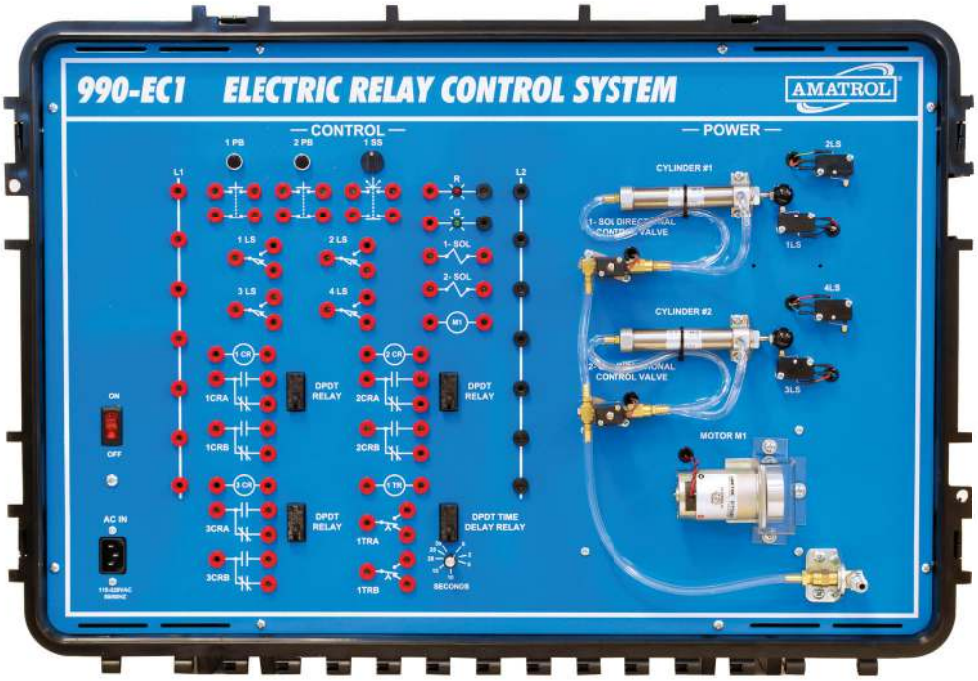
Portable Electric Relay Control Learning System

990-EC1

EL
ELECTRICAL



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

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 brings customers flexibility and convenience when there's a need to use a trainer in multiple locations or where space is too small for a full-size trainer.

The 990-EC1 includes a relay control panel with premounted electrical control, pneumatic, and electric power components. Learners can 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 innovated product can provide learners with a thorough understanding of electric relay control.

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Technical Data

Complete technical specifications available upon request.

Portable Case
- Suitcase: 28.8” L x 20.1” W x 14.8” D
- Durable ABS Plastic

Electric Relay Control Panel
- Double-acting cylinders, 15 MM, 2” stroke (2)
- Motor, 24V, 6000 RPM
- Solenoid operator valves, 4-way (2)
- Limit switches (4)
- DPDT relays (3)
- Timer relay DPDT
- Pushbuttons (2)
- Selector switch, 3-position
- Indicator lights (2)

Power Cord, 14/3, 15A

Lead Set, 12” (25)

Multimedia Curriculum (M11132)

Instructors Guide (C11132)

Additional Requirements:
- See http://www.amatrol.com/support/computer-requirements

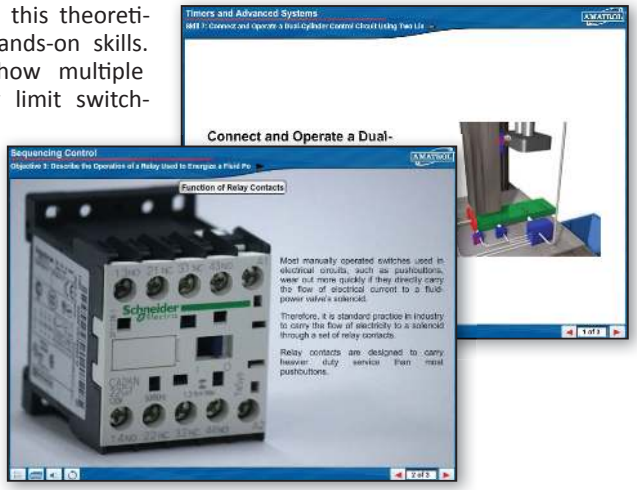
Utilities Required:
- 120/220 VAC, 50/60 Hz
- Power Outlet
- Air supply of at least 50 psig/345 kPa

Training Is as Easy as a 990-EC1, a Desk, & a Computer

Amatrol offers a full array of electric relay control training in a portable learning system, where learners only need desk space for the trainer and a computer to study this vital industry skill. 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, to perform control logic, and to 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, thorough multimedia curriculum covering electric relay control basics such as the six logic elements of control logic and more advanced topics like a timer relay’s operation within an unloaded motor start circuit. Learners can then apply this theoretical knowledge to immediate 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 made from durable ABS plastic 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.

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