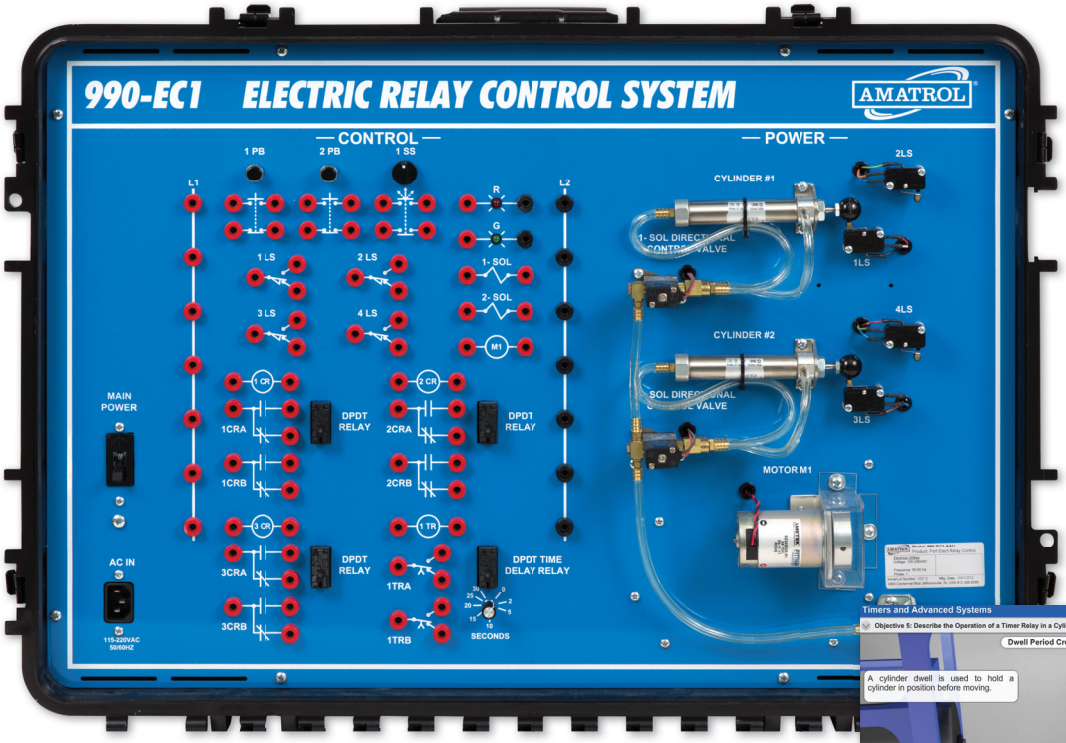
Portable Electric Relay Control Learning System

990-EC1

EL
ELECTRICAL



990-EC1



Interactive Multimedia and Student Reference Guide

Learning Topics:

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

Amatrol's Portable Electric Relay Control Learning System (990-EC1) teaches electric relay control concepts and hands-on skills in a highly-durable, easily-portable learning system. The world leader in skills-based technical learning systems, only Amatrol combines high-quality, real-world components with in-depth, interactive multimedia in a flexible, convenient package.

Widely-used in industrial, commercial, and residential applications to regulate electric motors and fluid power actuators, electric relay control is an important part of other automation systems, such as programmable controllers. The 990-EC1 features an electric relay control panel with pre-mounted electric control, pneumatic, and electric power components. Learners can connect electrical terminals to heavy-duty banana jacks to test various automation control circuits.

AMATROL®

Technical Data

Complete technical specifications available upon request.

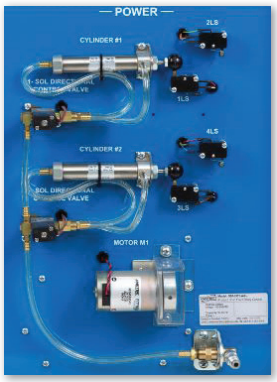
Portable Case
Electric Relay Control Panel
- 24V, 6000RPM Motor
- 15MM, 2" Stroke Double-Acting Cylinders (2)
- 4-Way Solenoid Operator Valves (2)
- Limit Switches (4)
- DPDT Relays (3)
- Timer Relay DPDT
- Pushbuttons (2)
- 3-Position Selector Switch
- Indicator Lights (2)

Power Cord
Lead Set, 12" Stackable Banana (25)
Multimedia Curriculum (N11132)
Instructor's Guide (C11132)
Installation Guide (D11132)
Student Reference Guide (H11132)
Additional Requirements:
- Compressed Air Supply (0.5 CFM @ 50 PSIG)
- Computer (Visit www.amatrol.com/support/computer-requirements for details.)

Utilities:
- Electricity: 120VAC/60Hz/1 phase or 220VAC/50Hz/1 phase

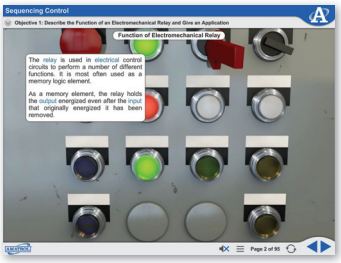
Study Electric Relay Control and Practice with Real-World Components

Amatrol's Portable Electric Relay Control Learning System teaches the basics of electric relay control, from the elements of control logic to more advanced topics like a timer relay's operation within an unloaded motor start circuit. Learners will apply what they learn by practicing hands-on skills. For example, learners will study how multiple cylinders can be controlled by limit switches and then immediately operate a dual-cylinder control circuit using two limit switches. The combination of theoretical knowledge and hands-on skills solidifies understanding and creates a strong basis for pursuing more advanced skills.



Practice with Real-World Components

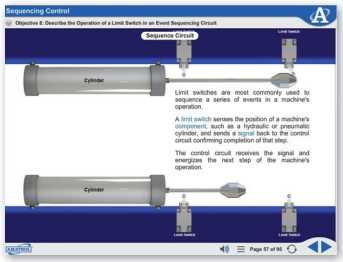
Learn Electromechanical Relay Operation and Applications



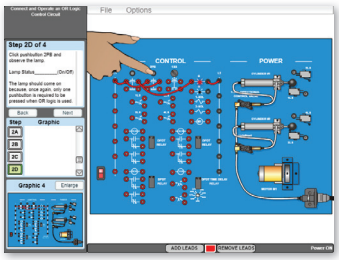
Electromechanical relays, most often used as memory logic elements, make electric relay control possible. Learners will study applications of these vital components, as well as the available styles of control relays and their ladder diagram symbols. The multimedia curriculum also teaches how relays are used to perform control logic, energize a fluid power solenoid, and make a seal-in circuit possible. Learners will then apply what they've learned to perform skills involving relays, such as designing a logic circuit that uses a relay and connecting and operating a relay to perform a seal-in function.

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. For example, the 990-EC1's curriculum teaches learners about the operation of limit switches and their application in an event-sequencing circuit. Watching animated graphics of key concepts solidifies concepts in learners' minds.



Virtual Trainer for Online Relay Control Skill-Building



The Portable Electric Relay Control Training System also features a virtual multimedia trainer! Amatrol's virtual trainers replicate hands-on equipment in such great detail that learners will feel like they are using the actual equipment. Learners will perform essentially the same tasks using virtual trainers that they would perform using equipment hardware. Transition from theory to hands-on is a seamless process.

Student Reference Guide

A sample copy of the Electric Relay Control 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.



AMATROL®
Certified ISO 9001:2015

2400 Centennial Blvd. Jeffersonville, IN 47130 USA 800.264.8285 812.288.8285 www.amatrol.com

Printed in the USA Copyright © 2020 Form No. 6870-C