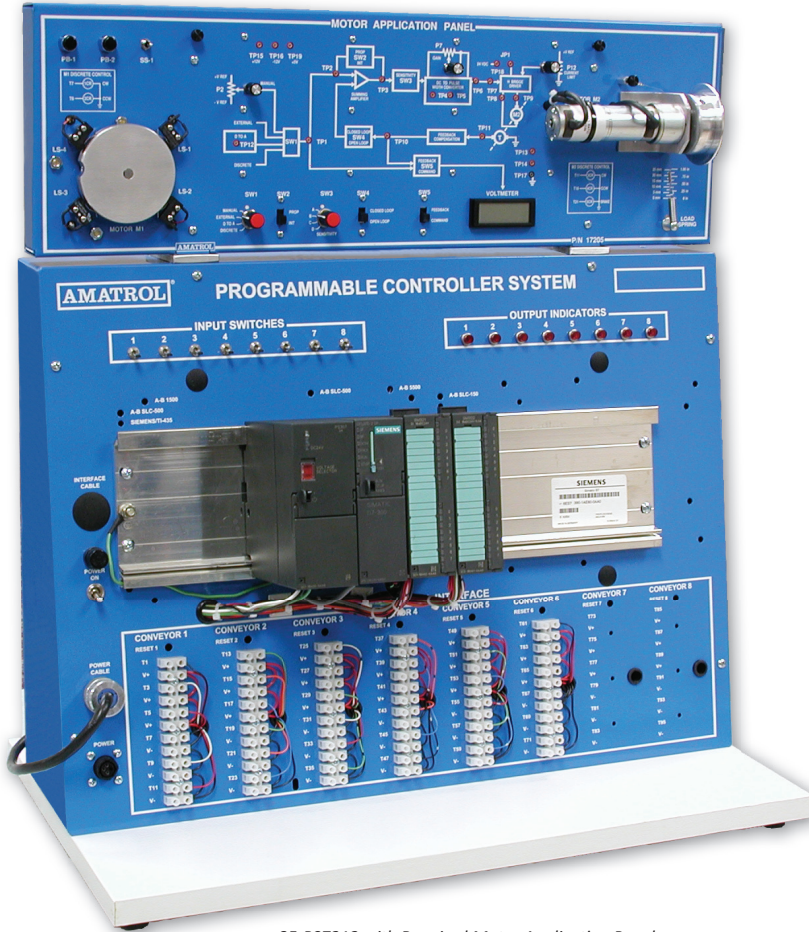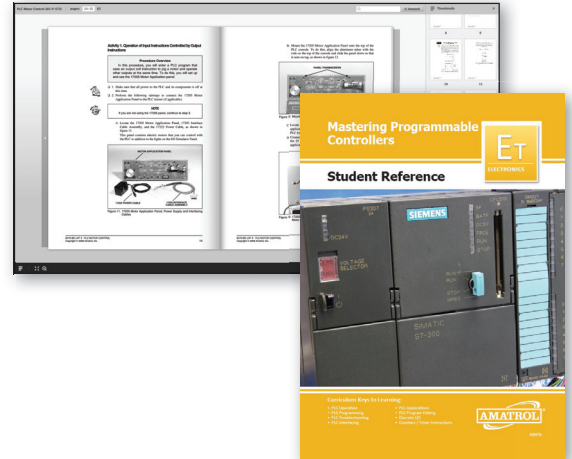# Programmable Controller Learning Systems

85-PS7312, 85-PS7315

85-PS7312 with Required Motor Application Panel

Optional eBook Curriculum and Student Reference Guide

Learning Topics:

- Introduction to Programmable Controllers
- PLC Programming Languages
- Basic PLC Programming
- Numbering Systems
- PLC Motor Control
- Interlock Functions
- Discrete I/O Interfacing
- Electronic Device Interfacing
- PLC Timer Instructions
- PLC Counter Instructions
- Event Sequencing
- Application Development

Considered by many to be the most important development ever in industrial automation, the versatile programmable controller is used in an amazing range of applications, including robots, conveyors, electric motor controls, air conditioning, process control, plastic injection molding, and CNC machines. These prepackaged, industrially-hardened computers are used in a seemingly limitless field of industries to control a wide range of industrial processes and machines. Amatrol's 85-P Series Programmable Controller Learning Systems will teach learners how to program, operate, and interface programmable controllers in several of these industrial applications.

The 85-P systems include a metal, silkscreened enclosure mounted with an industrial-quality Siemens programmable controller. These systems are designed to teach programming and real world applications of input and output devices and can be easily expanded to provide control of electromechanical and pneumatic devices. Some of the major topics covered by these systems include PLC timer and counter instructions, event sequencing, application development, and more! These systems also offer optional online eBook curriculum for computer-based learning.

AMATROL®

Choose Your Industrial-Grade PLC from one of the World-Leaders, Siemens

Amatrol offers two Programmable Controller Learning Systems, each featuring a different controller from one the world-leaders in programmable logic controllers, Siemens. Available PLCs include the Siemens S7312 (85-PS7312) or the Siemens S7315 (85-PS7315).
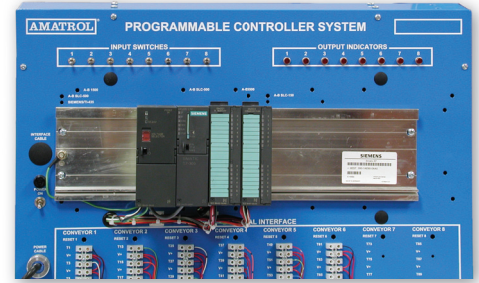

85-PS7315

Practice Hands-On Pneumatic and Motor PLC Applications

The required PLC Pneumatic Application Panel (17200) enables learners to study the programming and operation of sequential automation applications using electropneumatics actuator circuits. Each circuit includes end-of-travel electrical limit switches that can be used to teach event-driven sequencing as well as time-driven sequencing.

The required Electric Motor Application Panel (17205) allows learners to program and operate electric motor control applications including start/stop, sequential automation, variable speed, and closed loop control. Two motor applications are included: the first includes a motor with four electrical limit switches arranged around a rotating cam to support sequencing applications, and the second includes variable speed control using four digital outputs from the PLC or one analog output from an optional analog PLC I/O module.
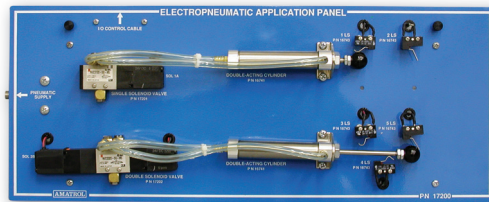

Electropneumatic Application Panel

PLC Curriculum Available in Optional eBook Format

The provided curriculum for each of the 85-P systems is Amatrol's standard printed learning activity packets. However, these courses are also available in an optional eBook curriculum so that all products feature a computer-based curriculum option. Amatrol's eBooks look like a real book and allow users to flip between pages with ease. Enhanced with features such as keyword searches and zoom controls that enable a user to quickly locate and view information, these eBooks are a fantastic learning tool. Easy to use zoom controls make reading schematic diagrams and other technical charts and graphs a snap. In addition, thumbnails of the pages can be used to visually scan for the desired page and quickly jump directly to it.
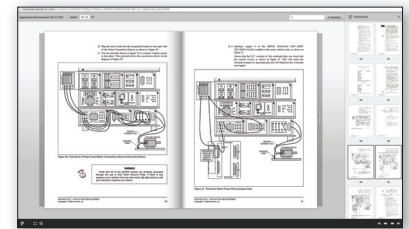
Optional eBook Curriculum
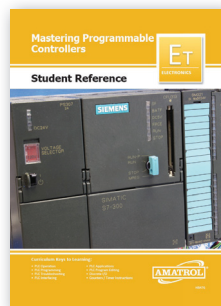
Student Reference Guide

A sample copy of the Programmable Controller Student Reference Guide is also included with each system for your evaluation. Sourced from the curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and content and combines them into one perfectly-bound book. Student Reference Guides supplement these courses by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.