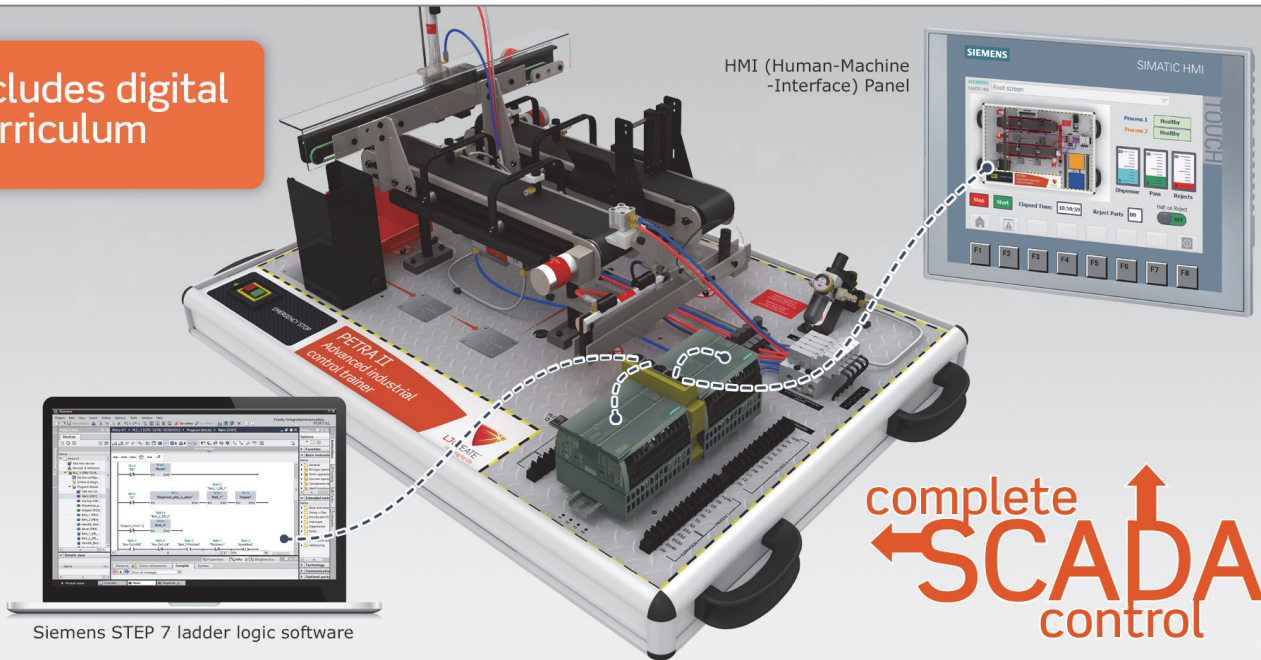


## Product Information Sheet

### PETRA II Advanced Industrial Control Teaching Set



Includes digital curriculum



complete SCADA control

The PETRA II Advanced Industrial Control Teaching Set includes both our **PETRA II Trainer**, and a **Siemens HMI Pack**.

The PETRA II Advanced Industrial Control Teaching Set provides a cost-effective way to teach the principles of **SCADA**. A network of PLCs, an HMI panel, and programming software combine to control a simulated industrial plant.

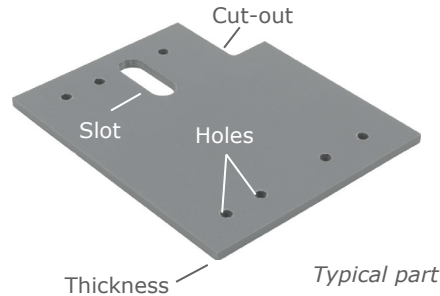
The teaching set uses **SCADA** control to introduce students to the concepts of:

- Monitoring
- Supervising
- Trend Analysis
- Predictive Maintenance

Students can use the PETRA II to develop and test PLC programs that:

- Move component parts along, and between, conveyor belts
- Control pneumatic actuators
- Monitor the outputs of a wide range of pneumatic and optoelectronic sensors
- Compare each part against its specification
- Reject non-conforming parts and accept parts that are within specification

The PETRA II includes two conveyors and a dispenser containing an assortment of parts, some of which are outside of specification.



A pneumatic pick-and-place plunger travels along a carriage gantry to place parts on one conveyor and remove them from the other.

A pneumatically-activated gripper arm transfers parts between the conveyors.

A range of pneumatic and optoelectronic sensors allow the parts to be tested for compliance with the specification as they pass along the conveyors.

Starting with simple programs that monitor and control individual sensors and actuators, students develop their programming skills until they can control the complete industrial process to separate good and reject parts.

An on-board DIN rail and screw terminal connectors allow the PETRA II to be used with a wide range of industry-standard PLCs, including:

- Allen Bradley MicroLogix820
- Siemens Simatic S7-1200

A range of expansion connections allow additional sensors and actuators to be connected for student project work.

A set of switchable faults allow students to explore fault diagnosis in a complex plant. This includes intermittent faults which are not instantly obvious, but can be detected by features such as trend analysis.

For more information visit [www.ljcreate.com](http://www.ljcreate.com)

# Product Information Sheet

## PETRA II Advanced Industrial Control Teaching Set



### PETRA II Trainer Features:

- Two conveyor belts
- Parts dispenser
- Set of 20 parts - some inside, and some outside specification
- Pneumatic pick-and-place plunger mounted on a carriage gantry
- Two-position pneumatically operated gripper arm
- Parts sensors
- System control sensors
- Control inputs
- On-board air pressure regulator
- Storage bins for separation of good and reject parts
- On-board DIN rail allows a wide range of industry-standard PLCs to be mounted on the unit
- Screw terminal connectors enable PLC connections to be changed easily
- Expansion connector allows connection of additional sensors and actuators for student project work
- On-board +24V DC connection may be used to power any PLC with a power requirement of 24V at 0.5A max

### Programming Activities include:

- Creating, downloading and running ladder logic programs
- Programming the pick-and-place carriage
- Programming the transfer arm
- Moving parts around the system
- Use sensors to monitor part compliance
- The complete PETRA II control sequence

### Items Included:

- PETRA II Advanced Industrial Control Trainer
- 24V DC power adapter
- PLC connection leads
- User Manual
- Curriculum in Digital Format
- 1 x Siemens HMI Pack (includes 2x PLCs, STEP 7 Software, and an HMI Panel)

### Other Items Required:

- Computer running PLC programming software
- Compressed air supply: operating pressure of 0.2 MPa, 2 bar, 30 psi

### General Information:

- Approximate dimensions: 930 x 855 x 550 mm (L, W, H)
- PETRA II supply voltage: 24V DC
- Power adapter supply voltage: 110-240V AC, 50-60Hz
- Packed Volume: 0.32 m<sup>3</sup>
- Packed Weight: 30 kg

**Order Code: 292-00**

P9316-G

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