

Email:

sales@laboratoryinstrumentsmanufacturers.com

**Product Name:** 

Basic Electro-Pneumatics Trainer- Educational Equipment

Product Code: LIM-CAT-L0043-00007



## **Description:**

Basic Electro-Pneumatics Trainer- Educational Equipment

## **Technical Specification:**

Basic Electro-Pneumatics Trainer- Educational equipment

This trainer is a modular system composed of vertical frame where the modules is easily inserted for the execution of the experiments. The boards of this trainer has insulated front panel with the diagram scheme. It is composed as follows:

Module with simple effect (SE) magnetic cylinder with retracted piston rod and flow micro-regulator Module with 3/2 electro-pneumatic valves, 1 NC (YES) and 1 NO (NOT)

Module with slide valve, filter-regulator with manometer and distributor

Module with 5/2 electro-pneumatic valves, bistable (1) and monostable with mechanical spring (1) with filters Module with double effect (DE) magnetic cylinder with flow micro-regulators (2), reed sensors (2) and photo-electric sensor

Module with double effect (DE) magnetic cylinder with flow micro-regulators (2), reed sensors (2), inductive sensor and capacitive sensor

Stabilized power supply module: 24Vdc, 2A

Module with 6 push-buttons (with 1 NO contact, 1 NC contact each)

Module with 3 relays (with 4 NO contacts, 4 NC contacts each)

Module with 4 lamps, 2 timers (on-delay and off-delay) and two switches (with 1 NO contact, 1 NC contact each).

With this trainer it is possible to perform the following experiments:

Single acting cylinder controls

Double acting cylinder controls

Basic logic functions applied for controlling a SE cylinder - Unstable E.V.

Single cycle of a DE cylinder without starting safety - Stable E.V. - E+/E- sequence

Examples of functions performed by a relay

Self-holding circuit for "dominating switch on" on the control of a DE cylinder - Unstable E.V. - E+/E- sequence Self-holding circuit for "dominating switch off" on the stable control of a DE cylinder - Unstable E.V. - E+/E- sequence

Information on timers

Basic circuits with timers module

Timed working stroke of a DE cylinder - Unstable E.V. without end of stroke sensors

Continuous cycle of a DE cylinder with SOC and FC pushbuttons - Unstable E.V. - E+/E- sequence

Single cycle of a DE cylinder without starting safety - Unstable E.V. - E+/E- sequence

Single cycle of a DE cylinder without starting safety. - Unstable E.V. - E-/E+ sequence

Single cycle of a DE cylinder with safety of stroke completion - Unstable E.V. - E+/E- sequence

Single cycle of a DE cylinder with anti-repetition - Unstable E.V. - E+/E- sequence

Single cycle of E+/E- sequence with stable control - Unstable E.V.

Continuous cycle of a DE cylinder with start and stop pushbuttons - Stable E.V. - E+/E-sequence

Timed positive stroke of a DE cylinder with limit sensors - Unstable E.V. - E+/E- sequence

Bimanual safety control

Continuous cycle of the E+/E- sequence. The EM stop the E+ stroke and immediately retract the cylinder - Stable E.V.

Continuous cycle of the E+/E- sequence. The EM stop the cycle at the reached step - Stable E.V.

E+/E- Sequence of a DE cylinder supplied through two unstable 3/2 NC E.V.'s controlled by two pushbuttons.

Single cycle of the E+/F+/E-/F- sequence with starting safety - Stable E.V.'s

Continuous cycle of the E-/F+/E+/F- sequence - Stable E.V.'s

Single-automatic cycle of the E+/F+/E-/F- sequence - Unstable E.V. of cylinder E

Continuous cycle with repeated and simultaneous strokes of the E+/E-F+/E+/E-F- sequence - Stable E.V.'s

Continuous cycle of the E+/F+/F-/E- sequence with locking signals - Stable E.V.'s

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