

Product Name :
Astra Scientific Computerized Pressure Control Trainer

Product Code :
MeasurementLabs0004



Description :

Astra Scientific Computerized Pressure Control Trainer

Technical Specification :

The Trainer provides a comprehensive experimental introduction to the fundamentals of control engineering using an example of pressure control.

The air pressure control system is a 2nd order system. It comprises two in-line pressure tanks interconnected by a flow control valve. An additional valve on the second tank makes air tapping possible and so can be used to simulate a disturbance variable. A pressure sensor measures the pressure in the second vessel. The controller used is a state-of-the-art digital industrial controller. The actuator in the loop is a pneumatically operated control valve with a standardized current signal input. The controlled variable X and the manipulating variable Y are plotted directly on an integrated 2-channel line recorder.

Alternatively, the variables can be tapped as analogue signals at lab jacks on the switch cabinet. This enables external recording equipment, such as an oscilloscope or a flatbed plotter, to be connected.

FEATURES:

- Experimental introduction to control engineering using an example of pressure control

- Construction of the system with components commonly used in industry
- Digital controller with freely selectable parameters: P, I, D and all combinations

SPECIFICATION:

2 pressure tanks

- Capacity: each 10L
- Pressure: 10bar
- Operating pressure: 6bar

Pressure sensor: 0...6bar

Pneumatically operated control valve

- Connecting flanges: DN15
- Kvs: 0,1m³/h
- Reference variable: 4...20mA
- Stroke: 15mm
- Characteristic curve equal-percentage

Line recorder

- 2x 4...20mA
- Feed rate 0...7200mm/h, stepped

Controller

- Process variables X, Y as analogue signals: 4...20mA
- Power required for operation

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase

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