

Product Name :
Astra Scientific Computerized Level Control Trainer

Product Code :
MeasurementLabs0003



Description :

Astra Scientific Computerized Level Control Trainer

Technical Specification :

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

A pump delivers water from a storage tank to the transparent level-controlled tank. The liquid level is measured by a pressure transducer installed at the base of the level-controlled tank. The controller used is a state-of-the-art digital industrial controller. The actuator in the control loop is a pneumatically operated control valve with an electro-pneumatic positioner. A ball valve in the outlet line enables defined disturbance variables to be generated. 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.

Process control software is optionally available.

FEATURES:

- Experimental introduction to control engineering using an example of level control
- Construction of the system with components commonly used in industry
- Digital controller with freely selectable parameters: P, I, D and all combinations
- Level measurement by pressure sensor

SPECIFICATION:

Storage tank: 30L

Centrifugal pump

- Power consumption: 250W
- Flow rate: 150L/min
- Head: 7m
- Speed: 2800min⁻¹

Level-controlled tank

- 7L
- Level: 0...0,6m

Pressure sensor: 0...100mbar

Pneumatically operated control valve DN 20

- Kvs: 4,0m³/h
- Reference variable: 4...20mA
- Nominal 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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