MODULE

TPS-3017 PROCESS CONTROL TRAINING SYSTEM

Objectives

This course introduces the student to process control, open and closed loop system control based on a problem solving approach. The system is built as a modular analog computer.

Description

The system is stand-alone, containing all the necessary electronics components needed for performing the experiments.
The system includes the SES Lab unit with a two-channel oscilloscope and a function generator, which communicates with a PC for controlling the function generator and oscilloscope display, including spectrum analysis.
The built in function generator also can be operated manually, controlled by the embedded micro-controller for Sinus/Triangle, Sweep/Constant signals.

MechaTech 3000
Mechatronics

M O D U L E

TPS-3017

Analog Computer & Process Control

Technical caracters

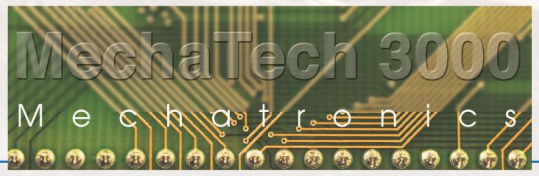
The trainer is in a metal case with a wide experiment platform printed circuit board (22X36 cm), which ensures easy handling and good visibility of the components The components are located on the board with silk screen print of the analytical circuit and component symbols. The central part of the experimenting board includes all the circuit block drawings and the all the hands on components, test points and banana sockets.

The protected components are located on the top side of the board panel, clearly visible to the student and covered by a sturdy transparent protecting cover.

The system includes a built in power supply with +12V, +5V and variable DC voltage outlets. An included low voltage external AC power adapter feeds the system.

The system includes:

- Pushbutton Switch
- Wet Sensor
- Light Sensor
- Temperature Sensor
- Voltage reference
- Comparator
- Adder and amplifier
- Feedback amplifier
- Driver
- Lamp
- Motor
- Buzzer
- Multitester
- SES Lab unit with two-channel scope and function generator, which communicates with a PC for controlling the function generator and oscilloscope display, including spectrum analysis.
- PC software (OPTIONAL)



Experiments

A kit of modules, which enables to study control systems' open and closed loop systems based on a problem solving approach.

The course covers:

- Switches and Sensors
- Open Loop Control
- Temperature Closed Loop Control
- Light Closed Loop Control
- Light Closed Loop Control
- Bi-stage Closed loop Control

Scientific Educational Systems