



جامعة المنوفية
كلية الهندسة الإلكترونية بالمنوف
قسم هندسة الإلكترونيات الصناعية والتحكم



معمل القياسات الالكترونية

Electronic Measurements Lab



أهداف المعمل

- Basic Control Systems Equipment
- Positional Resistance Transducer
- Wheatstone Bridge Measurements
- Temperature Measurement
- Light Sensors
- Linear Position or Force Applications
- Environmental Measurements
- Rotational Speed or Position Measurements
- Sound Measurements and Sound Output



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- Linear or Rotational Motion
- Display Devices
- Signal Conditioning Amplifiers and Signal Conversion
- Comparators, Oscillators and Filters
- Temperature control systems and Light level control systems.
- Control systems Evaluation: Investigation of control system characteristics including On/Off, Proportional, Proportional + Derivative and full Proportional + Integral + derivative control systems. Design and Implementation of Speed Control systems, Positional Control systems, Temperature control systems and Light level control systems.

أهم الأجهزة الموجودة بالمعمل

Transducer & Instrumentation Trainer

[A](#) Contained panel trainer with a steel case and integral power supplies. It provides a range of transducer input and output devices together with associated instrumentation circuitry. The transducer and signal conditioning elements of this trainer are typical of those used throughout industry. These elements include:

- Transducer input devices.
For the detection of rotary and linear position, temperature, light, pressure, strain, airflow, humidity and audible and Ultrasonic sound
- Transducer Output devices:
For the generation of heat, light, rotary and linear actions, audible and ultrasonic sound and visual indication of voltage, time and number of events.
- Instrumentation circuitry:
For the investigation of Wheatstone Bridges and current measurement techniques, linear and non-linear signal amplification, closed and open loop control, one, two and three term (PID) control, DC restoration of AC signals, signal transmission techniques and alarm generation.



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