



Control Lab Equipment -

Flow Control set up using PID controller (ULP-250 & ULP-25T)



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Flow Control Setup Comprises of a Orifice with DPT to measure flow Rate. The flow of water is controlled by Control Valve with pneumatic actuator. I to P converter is provided to control the actuator. Rotameter is provided to measure actual flow rate. The system is mounted on a table top model with all necessary piping.

The electronic panel comprises of ADC/DAC card with RS-232 interfaces is provided for interface the system with computer.

Software is provided for experimentation, Control action like PD, PI, PID can be conducted. Online data acquisition, trend plot are the salient feature of the system. Off line analysis, Printing of data graph can be done easily. The software is compatible with windows XP operating system. Detail Manual will be provided to conduct experiment.

SPECIFICATION

- Flow Sensor : (a) Orifice with DPT (ULP-250).
(b) Turbine type flow Meter (Paddle Wheel) (ULP-25T)
- Water Circulation : FHP Pump with necessary piping (Flexible type)
- Source Tank : SS Tank of capacity 20 lt (approximately)
- Control Valve : 1/2" Globe valve (Linear) 15mm Stem travel.
- Actuator : Diagram type Pneumatic Actuator input 3 to 15 PSI
- I to P Converter : Input 4-20mA output 3-15 PSI supply air pressure upto 60 PSI.
- PC Interface card : 16 Bit ADC (8 Ch) with 12 Bit DCA interface with PC through RS232 USB Port.
- Power Supply : 230V 50 Hz
- Pressure Gauges : Bourdon Pressure gauge.

- Manual Bypass valve : 0-100PSI-1 No, 0-30PSI- 1 No
- Flow Measurement : Needle valve (1/2") for Manual Bypass.
- Mounting : Rotameter (1500 LPH), Digital Indicator(Optional)
- Controller : Mounted on a powder coated metal frame (appi : 650x500x750 LxBxH)
: PC based dedicated PID software to control the process, control. Action P, PI, PID, Trend plot with online and off line analysis. Printing and analysis.
- Accessories (Optional) : - Digital Flow Indicator with Retransmission output
- Air Compressor
- Personal computer with latest features.