AUTOMATION STUDY BENCH / ANALOG CONTROL FUNCTIONS TOR / PID /

SERVICE : POWER SUPPLY: 220 V MONO, -0.3 KW
DIMENSIONS : 1000 X 400 X 1200 MM

REFERENCE : MP131B

Study the automated command and control systems associated with hydraulic and technical installations (pump speed variation, level measurement, basin emptying, basin agitation)

Identify sensors, actuators, process to control
Write a GRAFCET.
Calibrate an analog sensor and study its linearity,
The system consists of a stirred mixing tank fed by two bins. Each bin has an electric drain valve and a manual drain valve and a low level sensor. The mixing tank also has a high level sensor.

The bench consists of :

- Three 5 liter PVC tanks with emptying,
- Three electric solenoid valves,
- Four capacitive level sensors,
- An agitator (motor and propeller).
- A pH control loop managed by the PID function of the PLC. She is made of :
- A pH measuring probe,
- A pH / I transmitter (4-20 mA),
- A 110V peristaltic pump, the speed of the motor is managed by a Eurotherm variator
- A feed tray for the acid or base,
- A 600x400x250 painted steel cabinet with :

  - 1 padlockable switch,
  - 1 emergency stop,
  - 1 reset button,
  - 1 power on indicator,
  - 1 start and 1 stop button,
  - 4 switches,
  - PLC wiring terminals,
  - Control and the agitator protection,
  - 1 transformer
  - 24V relay and solenoid valve,
  - 1 contactor,
  - 1 continuous 24V supply for the PLC.

Technical specifications :

The MP131B bench is available in three versions

Version 1 :

- 1 TWIDO Télémécanique PLC: PID control and control of the 180V DC pump, time stamp function.
- 1 screen for man / machine communication
- Software

Version 2 :

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Tel 04 68 24 50 70 - mail : info@deltalab.fr

Siren 799 693 189 - Naf 2299 B

- 1 M221 PLC (including analogue functions, PID and time stamp) grafcet ladder
- 1 screen for man / machine communication
- Locigiel SoMachine

Version 3 :

- 1 M241 controller (including analog functions, PID and time stamp) and grafcet grahiques
- 1 screen for man / machine communication
- Locigiel SoMachine