

AUTOMATION STUDY BENCH / ANALOG CONTROL FUNCTIONS TOR / PID /

REFERENCE : MP131B



Non contractual photo

**SERVICE : POWER SUPPLY: 220 V MONO,
-0.3 KW**

DIMENSIONS : 1000 X 400 X 1200 MM

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 :

- 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 graphiques
- 1 screen for man / machine communication
- Locigiel SoMachine