

PROGRAMMING AND SIMULATION UNIT FOR INDUSTRIAL AUTOMATION



Experimental capabilities

- **Programming of PLC controllers**
- **Programming of industrial touch screen**
- **Wiring**
- **Independent operation (simulation of the inputs and outputs by buttons and lights)**
- **Operation as master for a real system (optional system needed)**
- **Management of the safeties with the PLC controller**

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Dans le cadre de l'amélioration permanente de nos produits, ce descriptif technique est susceptible d'être modifié sans préavis
As part of the continuous improvement of our products, this technical specification may be modified without previous notifying

AUT050



Operating principle

The AUT 050 has been designed to help the student to work on automation (on-off control, proportional, PID) and touch screen programming

On the right side, it is possible to set up different types of PLC controllers (option of AUT050). The connection between the PLC controller and the AUT050 is done with quick connectors. The benefit of this unit is that you can use various types of PLC controller with only one workbench for the simulation.

The pushbuttons, the switches, the potentiometers and the lights set up on the synoptic are linked to the test sockets on the panel. The student can make their own wiring to the PLC controller inputs and outputs.

The touchscreen is linked to the PLC controller with an RJ45 cable (Protocol MODBUS – serial / RTU). There is one USB port for the touch screen and one USB port the controller on the front panel.

All the inputs and outputs of the controller are linked to test sockets on the panel. Those sockets can be wired to :

- The pushbuttons, the switches, the potentiometers and the lights set up on the synoptic
- Actuators and sensors of operative systems from DIDATEC Brand.
- The simulation system SIM010 (DIDATEC brand).

The electrical supply of the elements is made with a 24VDC power supply connected to test socket on the panel (protected by a fuse).

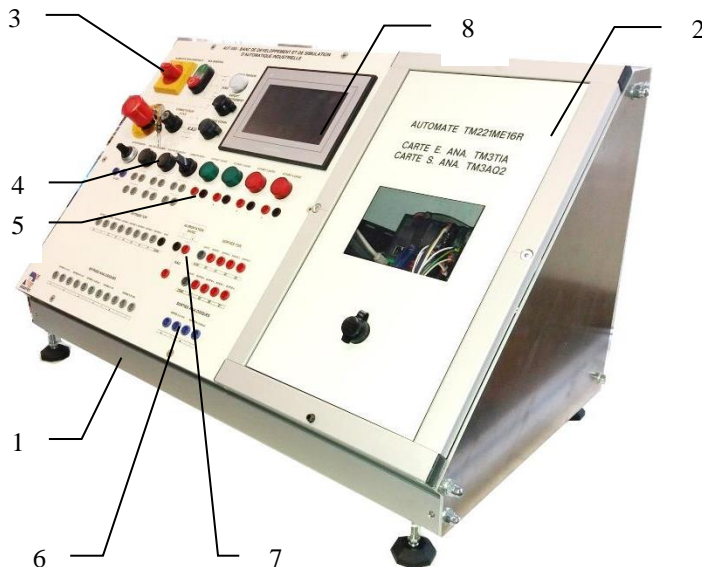
The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises. The manufacture of this equipment complies with the European standard for machinery manufacturing.

This equipment can be used alone or with other compatible equipment from our range (see last section of this document).

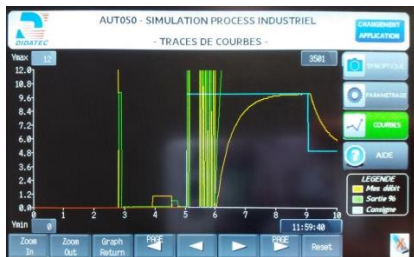
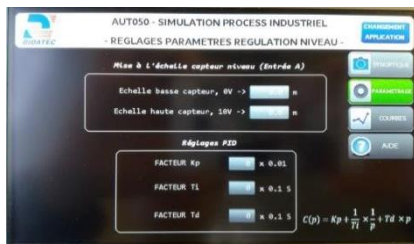
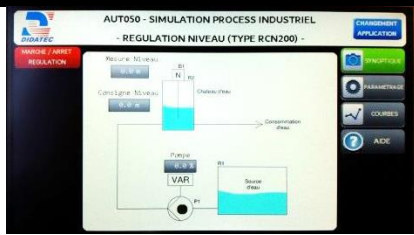
Illustrations

Technical details



1. Frame made of aluminium profile. Side panels made of aluminium and PVC. The front panel is covered with an engraved plate with all the labels.
2. PLC controller area. The PLC controller can be easily changed by removing the front panel and disconnecting the electrical connector.
(standard : PLC controller M221 Ethernet schneider included – 8 inputs on-off / 8 outputs on-off, 4 analogical input 0-10V/ 4-20mA / T°, 2 analogical outputs 0-10V / 4-20mA) –USB connector for programming
3. Main switch, power on button, starting switch with key and emergency stop button.
4. 2 pushbuttons with NO + NC, 1 switch 2 positions with NO+NC, 1 potentiometer for the signal 0-10V, 4 lights 24V
5. Test sockets for the wiring of buttons, lights...
6. Test sockets connected to the inputs and outputs of the PLC controller (ON-OFF and analogical)
7. Test sockets connected to the power supply 24Vdc (0V/ 24Vdc)
8. 7.5" color touch screen. Programming and data export through the USB port on the front panel.

TOUCH SCREEN



Each configuration file is associated to an application on the touch screen and allow to do the parameterizing and view the datas of the process. This configuration of the touchscreen can be used with different type of PLC controllers

Each simulated process includes 4 screen sheets :

- A sheet with the P&ID of the process and the main datas
- A sheet with all the parameters such as the scale of the sensors, the alarms..
- A sheet with the curves to plot graphs (ex : setpoint vs time). The datas can be saved to a CSV files on a time drive connected on the USB port on the front panel..
- A sheet help including all the informations to help the students to do the wiring, explain how the process is working...

The software to do the programming of the screen and the configuration files are supplied with the AUT050. The end user can program his own page and customize the system.

Services required

- Electrical supply : 230 Vac – 50 Hz – 6 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 700 x 700 x 800
- weight (Kg): 60

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Technical documentation of the components
- Configuration files (PLC controller, touch screen)
- Software (PLC controller, touch screen)
- Certificate of conformity CE

Options

- | | |
|---|--|
| <ul style="list-style-type: none"> • PLC controller with support plate M340 Schneider • PLC controller with support plate S7-1200 Siemens • PLC controller with support plate S7-300 Siemens • Other PLC controller with support plate • Configuration files and programming for other PLC controllers | <ul style="list-style-type: none"> • Ref : AUT061 • Ref : AUT062 • Ref : AUT063 • On request • On request |
|---|--|

Other equipment compatible with AUT050

- | | |
|---|--|
| <ul style="list-style-type: none"> • Industrial process for automation simulator • Level control study unit • Flow control study unit • Temperature control study unit • Ph control study unit • Operative unit – sorting station • Other system, on request | <ul style="list-style-type: none"> • Ref : SIM010 • Ref : RCN200 • Ref : RCD200 • Ref : RCT200 • Ref : RPH050 • Ref : UAP004 |
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