BMP100

PRESSURE MEASUREMENT METHOD STUDY UNIT

Experimental capabilities

- **Theoretical reminders of the different principles of pressure measurement**
- **Handling methods**
- **Characteristic curves**
- **Comparison of the different sensors**
- **Adjusting the Indicator**
- **Calibration of sensors against a reference**
- **Data acquisition**

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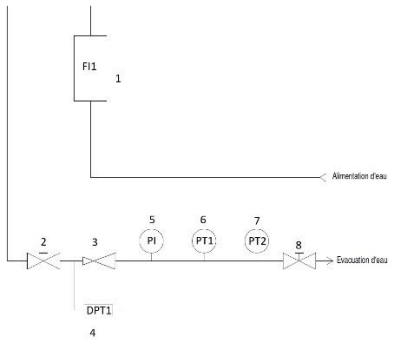
version : FT-BMP100-STD-D

BMP100

Operating principle

The BMP 100 bench allows the study of the different pressure sensor technologies. The sensors are placed in series.
The water from the network ensures the increase in pressure of the circuit. Users will have to study the technology of each sensor, check their characteristics and connect them to a measurement loop. The display of the pressure measurements will be achieved by a digital indicator that receives the information of the different pressure measurements.
The unit is delivered complete, instrumented with technical and educational documentation in French as well as all the accessories necessary for the proper functioning of the software interface.
The rugged design of this equipment makes it perfectly suited for use in a school setting.
Its anodized aluminum structure gives it a very high robustness as well as great flexibility of integration into your premises. The manufacture of this equipment complies with the European Machine Directive.

Illustrations



The bench is installed on an aluminium profile structure equipped with four braked-directional castors.
The bench also includes a power supply box with RCD, general disconnect switch and a 2P+T socket to connect accessories

1. **Float Flow Meter**
   Scale: 1 to 10L/min
2. **TOR Plug Valve**
3. **Pressure Reducing**

Technical details

4. **Differential pressure sensor**
   Industrial capacitive sensor
   Current loop output 4-20 mA
   Relative 0 to 6 bar scale
5. **BOURDON type pressure gauge**
   DN100 all stainless steel
   Accuracy class: 1
   No analog output
   Relative 0 to 6 bar scale
6. **Absolute pressure sensor**
   Piezo-resistive sensor
   Current loop output 4-20 mA
   Absolute 0 to 7 bar scale
   IO-LINK sensor (comes with io-link interface)
7. **Relative Pressure Sensor**
   Certec measuring cell with ceramic membrane
   Current loop output 4-20 mA
   Relative 0 to 6 bar scale
   Supplied with local configuration indicator
8. **Multi-turn control valve**

Services required

- Electricity: 230 VAC single phased - 50 Hz - 4 A
- Water supply : 10 l/min – 3 bars
  Or supply by the UTL 050 (not supplied)
- Dimensions: (LxlxH mm): 750 x 795 x 650
- Weight(Kg): 50

Note: In the context of an installation of the equipment by our services, all connections to the networks must be located within 2m of the machine

Documentation

- Instruction manual
- Pedagogical manual
- Technical documentation
- Lab exercises
- Electrical diagram
- Hydraulic diagram
- Software
- CE Certificate of Conformity

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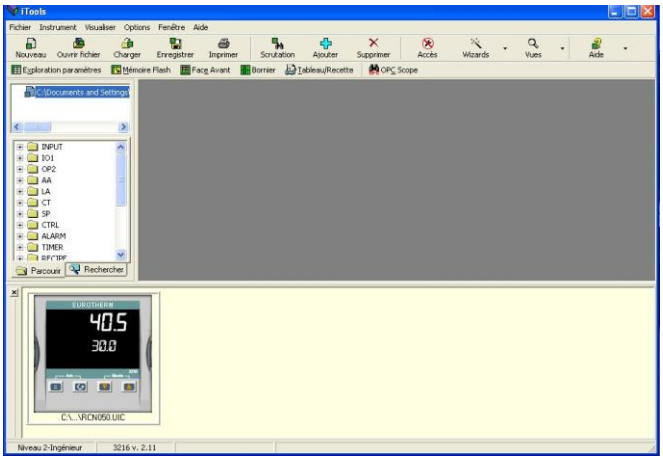
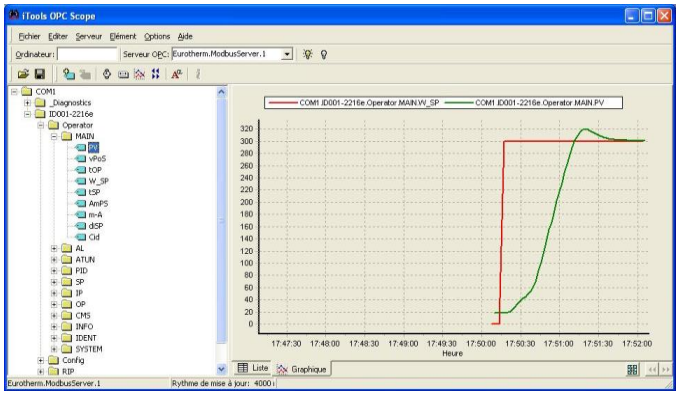
Setting, Supervision, Plotting curves,

The bench is also equipped as standard with a supervision and setting software. The connection towards the PC is made by a standard USB port. The software is divided into two parts :

SETTING :

This part provides access to display parameters directly via data explorer similar to Windows.
The front of the indicator is reproduced on the PC screen and the operator can operate the buttons and controls as if it were on the pilot





SUPERVSION, PLOTTING CURVES :

This part allows to draw curves with the regulator's signals. For example in this image here one visualizes the setpoint and the real-time measurement, but it is possible to add other parameters such as the output signal ...

Options

- Module of water supply
- Ref: UTL050

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