

Barometer 1000549

Instruction Sheet

10/15 Hh



1. Safety instructions

- To avoid permanent damage to the built-in semiconductor sensor, never exceed the maximum threshold pressure of 400 kPa or 4 bars.
- Suitable only for non-corrosive gases such as air, helium and nitrogen.
- Do not allow the sensor element to come into contact with water.

2. Description

This absolute pressure sensor with an extensive measurement range is particularly suitable for measuring atmospheric pressure during meteorological observations and for any other experiments dealing with atmospheric pressure. The barometer can also be used as an altimeter in mountain climbing.

Two-port measurement procedure for the pressure sensor: nozzle 1 is connected to the external pressure via a connecting nipple, and nozzle 2 is connected to a sealed reference vacuum.

The sensor box is automatically recognised by the interface.

3. Equipment supplied

- 1 Sensor box
- 1 8-pin mini DIN connection lead, length: 60 cm
- 1 Silicone tube

4. Technical data

Measurement range: 70 to 120 kPa
700 to 1200 mbars

Sensor type: Semiconductor sensor

Accuracy: $\pm 1.5\%$

Resolution: 0.1 mbar

Connections: Serrated nozzle 4.8 mm dia.

5. Operation

- Place the sensor box in the surroundings where the experiment is to be conducted (e.g. inside a building, weather-protected area outdoors).
- If necessary, connect the sensor to a pressure source with a piece of the silicone tube.

6. Sample experiment

6.1 Measuring the change in atmospheric pressure over a period of four days

Apparatus required:

1 3B NET/log™ @ 230 V 1000540

or

1 3B NET/log™ @ 115 V 1000539

1 3B NET/lab™ 1000544

1 Barometer 1000549

- Connect the barometer sensor box to one of the two analog inputs, A or B, of the 3B NET/log™ interface.
- In log mode, select a time period of e.g. 94 hours and record the changes in atmospheric pressure.

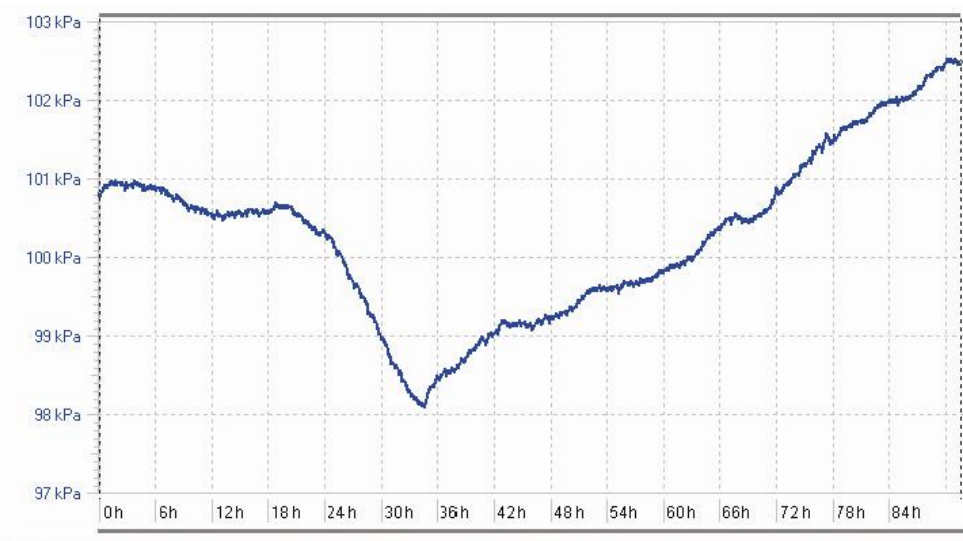


Fig. 1: Changes in the atmospheric pressure over a period of four days