



Particulate Matter (PM) Sensor

Product Number: ENPM



Overview

The sensor is compatible with the einstein™ Tablet3, LabMate2 and newer versions.

The PM sensor measures floating particulate matter in the air in three ranges: 1 μM , 2.5 μM and 10 μM .

It is ideal for use in a wide range of experiments in Environmental issues, especially concerning air pollution.

Typical experiments



Chemistry

- Indoor air quality
- Outdoor air quality
- Industrial air quality
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How does it work?

The PM sensor is a laser dust sensor using the laser scattering principle to detect dust particles in the air, with good selectivity and stability.

Sensor specification

Range	1 μM , 2.5 μM and 10 μM
Accuracy	(2.5 μM) 0 -1000 $\mu\text{g}/\text{m}^3$: $\pm 15\%$ readin
Working humidity	-10 -50°C
Response Time	T90<45s

Technical Notes

- Air inlet and out must always be open.
- For accurate measurements, take at least three readings and calculate the average.
- Pay attention not to cover the two openings of the sensor.

Calibration

The PM Sensor requires no calibration.

Data Logging and Analysis

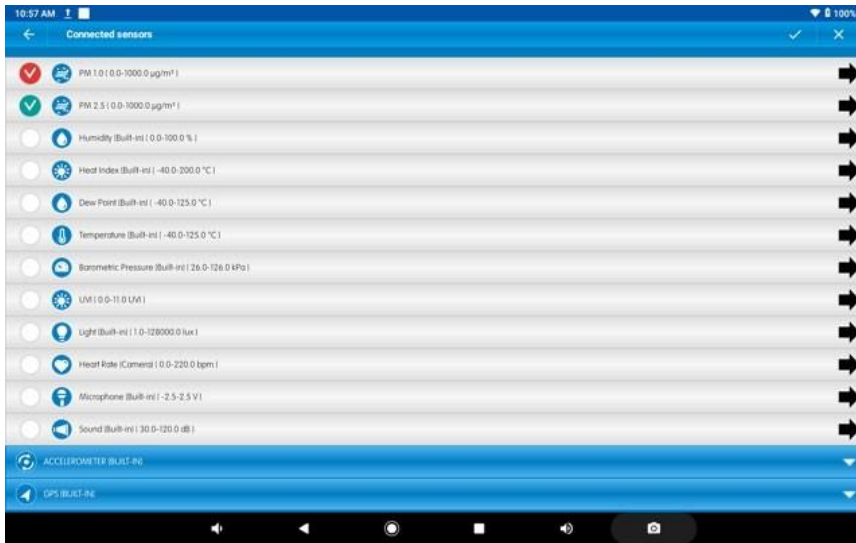
Android

NOTE: If using a Fourier Einstein Tablet, a LabMate is not required. The sensor can be plugged directly into the Einstein Tablet sensor ports.

When using an iOS or Android Tablet, a LabMate device is required.

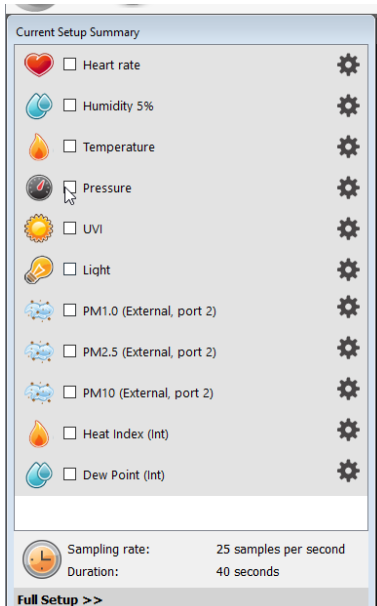
1. Take your einstein™ Tablet or pair your einstein™ LabMate with your Android or iOS tablet.
2. Insert the sensor cable into one of the sensors ports.
3. Launch the MiLABEx app and tap on LAB start an Experiment
4. MiLABEx automatically detects the sensor and selects it

- To ensure its selection go to Sensors
- If needed, Check the circle next to the sensor to enable it for logging.



MiLABEx Desktop

- Pair the einstein™ LabMate to the computer using Ble or connect via USB cable.
- Insert the sensor cable into one of the sensor ports.
- Launch MiLABEx and click LAB start an Experiment
- MiLABEx will automatically detect the sensor and will show it the **Current Setup Summary** window.
- Click **Full Setup >>** in the **Current Setup Summary** window to program the data logger's sample rate, number of samples, units of measurement, and other options.
- Click the Run button on the main toolbar to start logging



Technical support

Please contact the Fourier technical support team as follows: Web: <http://fourieredu.com/support/>
Email: support@fourieredu.com

Copyright and Warranty

All standard Fourier Systems sensors carry a one (1) year warranty, which states that for a period of twelve months after the date of delivery to you, it will be substantially free from significant defects in materials and workmanship.

This warranty does not cover the breakage of the product caused by misuse or abuse.

This warranty does not cover Fourier Systems consumables such as electrodes, batteries, EKG stickers, cuvettes and storage solutions or buffers.

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