



ANEMON SENSORS

AMON — User Guide

Ammonia (NH₃) monitoring sensor and dashboard

This guide walks you through setting up your AMON sensor, installing the display program on your computer, and using the dashboard that shows your measurements in real time. No technical skills are required.

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1. The AMON sensor: buttons and start-up

The AMON sensor has three coloured buttons on the front of the case. This section explains what they do and how to switch your sensor on and off.



Front of the AMON sensor: the blue button (top), the black button and the white button (left).

- **The blue button — On / Off**

This is the power button. To switch the sensor on, press it for about 3 seconds: the green LED lights up inside the box and the sensor starts. To switch it off, press again for about 3 seconds, until the green LED goes out.

- **The white button — Zero calibration**

A long press (about 5 seconds) on the white button starts the sensor's zero calibration. This is done in reference air, free of ammonia. A short press has no effect: the long press prevents accidental triggering.

- **The black button — Reset the Wi-Fi**

The black button restarts the sensor. Two quick presses (a “double-click”) reopen the “AMON-Setup-” configuration network so you can choose a new Wi-Fi network; the procedure is detailed in the “Connect the sensor” section (Option B). In normal use, this button does not need to be pressed.

Switching on and off day to day

The sensor works best when left on continuously: avoid unnecessary button presses. AMON can run on mains power or on battery (about 72 h of autonomy). It is recommended to keep it plugged in as much as possible, using a charger supplied by Anemon Sensors, for optimal long-term operation.

2. Connecting the sensor: USB or Wi-Fi

Your sensor can communicate with the computer in two ways: over a cable (USB) or wirelessly (Wi-Fi). These are two alternative modes, you don't need both at once. Choose the one that suits you, then follow only the matching part below. The mode is then selected in the dashboard (see “Install the program”).

Option A — Over a USB cable

In USB mode, a cable connects the sensor directly to the computer. It is simple and reliable, ideal for monitoring a sensor placed next to the computer. The cable plugs into the connector located under the case.

Mind the connection direction

The cable connector has no key: nothing prevents plugging it in the wrong way round. So carefully follow the orientation and wire order shown in the photo below. A reversed connection would prevent communication, and could even damage the hardware.



Correct connection on the connector marked “UART”: follow this wire order.

Once the cable is connected, go to the “Install the program” section: you will choose USB mode in the dashboard and tick the matching port.

Option B — Wireless (Wi-Fi)

In Wi-Fi mode, the sensor sends its measurements over the network, with no cable. Several sensors can then be monitored remotely at the same time. When first switched on, the sensor needs to be connected to your Wi-Fi network: this is a one-time operation, done from a phone or computer, with no software to install.

1. Turn the sensor on

Power up the AMON sensor (blue button, about 3 seconds). Wait about a minute for it to start up.

2. Connect to its network

On your phone, open the Wi-Fi settings. In the list of available networks, select the one named “AMON-Setup-” followed by a series of characters. No password is required.

3. Choose your Wi-Fi

A configuration page opens automatically. If it doesn't, open your browser and enter the address 192.168.4.1. Then select your usual Wi-Fi network and enter its password.

4. Confirm

The sensor saves your credentials, restarts, and connects to your network. That's it: each time it is switched on afterwards, it will reconnect on its own, without asking anything.

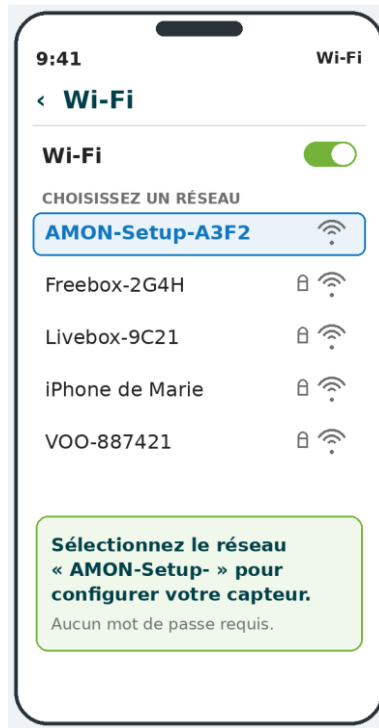


Illustration only: on your phone, choose the “AMON-Setup-” network from the list of Wi-Fi networks.

Changing the Wi-Fi network later

If you need to connect the sensor to a different network, press the black button (RESET) twice in a row, like a double-click: one press, wait about a second for the sensor to restart, then a second press. The “AMON-Setup-” network reappears, and you can repeat the setup above with the new network.

Good to know

The sensor measures and records continuously on its memory card, even without Wi-Fi. The Wi-Fi connection is only used to display measurements live on the dashboard.

3. Install the program on the computer

The AMON program (the “broker”) is the link between your sensors and the dashboard. It runs on a Windows computer connected to the same Wi-Fi network as the sensors.

1. Get the program

You have received a file named AMON-Dashboard-WiFi-USB.exe. Place it wherever you like on your computer, for example on the Desktop.

2. Launch it

Double-click AMON-Dashboard-WiFi-USB.exe. A black window (cmd Windows) opens: it displays operating information, which is normal. Do not close it while you are using the dashboard.

3. The dashboard opens

Your web browser opens automatically on the dashboard. Your sensors appear there as they connect.

On first launch

Windows may show a security alert asking you to allow the program to communicate on the network. Accept it, ticking the “private” networks, so that the sensors can connect.

Choosing the data source: Wi-Fi or USB

Your sensors can communicate in two ways, as you prefer. The setting is in the dashboard, in the left column, under the “Data source” section. Your choice is remembered: at the next startup, the program automatically resumes in the chosen mode.

- **Over Wi-Fi (wireless)**

Sensors send their measurements over the Wi-Fi network. This is the usual mode: several sensors can be monitored remotely at the same time, with no cable.

- **Over USB (cable)**

A sensor connected to the computer with a USB cable is read directly. Choose “USB” in the “Data source” section, then tick the port(s) matching the connected sensors. You can connect several sensors at once, each on its own cable.

About USB mode

A given sensor can only be read by one program at a time. If you had opened a serial-port monitoring tool (for example the monitor in the programming environment), close it before reading the sensor from the dashboard, otherwise the port will not be available.

To stop the program

Simply close the black window. The dashboard will no longer show new measurements, but the data already recorded is kept.

4. Get to know the dashboard

The dashboard displays your sensors' measurements in real time. Here are the main areas of the screen.



Overview of the dashboard. The markers refer to the areas described below.

1. The list of connected sensors, with their state (coloured indicator).
2. The choice of data source: Wi-Fi or USB.
3. The ammonia concentration (NH₃), the main reading, in ppb.
4. The environment (temperature, humidity, pressure) and the battery.
5. The sensor's resistance values (R), in ohms.
6. The history chart, described in detail below.

- **The sensor list (left)**

Each connected sensor appears in the left column. An indicator shows its state: green when data is arriving normally, amber after about thirty seconds without a new measurement, red if disconnected.

- **The sensor readings (centre)**

The highlighted value is the ammonia concentration (NH₃), expressed in ppb. Next to it are the sensor's resistance values (labelled R), in ohms: a raw value and corrected values (Kalman and derivative), useful for the technical monitoring of the measurement.

- **Environment and battery (right)**

Here you find temperature, humidity, pressure, as well as the charge level and voltage of the sensor's battery.

- **The language button (top right)**

A button switches the display between English and French. Your choice is remembered.

The history chart

At the bottom of the screen, a chart shows how measurements change over time. It can display several quantities at once, each with its own colour and its own scale.

- **Choosing the period**

Buttons let you choose the displayed period: 15 minutes, 1 hour, 6 hours, 24 hours, or the whole history.

- **Showing or hiding a curve**

Below the chart, a legend lists the available quantities (NH₃, the resistances R, humidity RH...). Click a name to show or hide the matching curve. Each quantity has a colour, echoed on its axis: NH₃ (green) is read on the left axis, resistances (orange) and humidity (blue) on axes to the right. An axis only appears when its quantity is shown.

- **Zooming on a period**

To look at a period more closely, click on the chart and drag horizontally to select the range you want: the chart zooms in on it, and the scales recalculate automatically for that area.

- **Returning to the full view**

As soon as a zoom is active, a “Reset view” button appears above the chart. One click returns to the overall view.

Network settings

In the left column, a “Network settings” section lets you choose the address through which the sensors communicate with the computer. In the vast majority of cases, leave the choice on “Auto”: the program works out the right address on its own. This setting is only useful if your sensors cannot connect despite a good network; you can then manually select your computer's address from the list.

Good to know about the broker

The broker only receives data from the sensor if the computer is switched on and running continuously, it is advisable to disable sleep mode and power management on the connected computer. In any case, the data is stored on the SD card.

5. Data recording

The AMON program automatically records every measurement it receives, so that you can review it later or analyse it in a spreadsheet.

- **Automatic recording**

As soon as a sensor sends measurements, they are saved on the computer, with no action on your part. Recording continues as long as the program is running.

- **Where is the data stored?**

Measurements are kept in a database file created next to the AMON-Dashboard-WiFi-USB.exe program (named amon_history.db). If the program's folder is write-protected, this file is placed in your personal folder, the exact location is shown in the black window (cmd Windows) at startup.

- **The history is complete**

All measurements are kept, with no time limit and no automatic deletion. You therefore keep the full history of your sensors (as long as the computer is active).

- **Export to Excel**

Below the chart, the “Export CSV” button downloads all measurements into a file compatible with Excel and spreadsheets. You can then analyse your data, create your own charts, or archive it.

6. Troubleshooting

- **The “AMON-Setup-” network doesn't appear**

Check that the sensor is switched on and wait a minute. If you had already configured a network, double-press RESET to reopen the configuration network.

- **My sensors don't appear on the dashboard**

In Wi-Fi mode, check that the computer and the sensors are on the same network, and that the Windows security alert was accepted on first launch. In USB mode, check that the right port is ticked in the “Data source” section and that no other program is already using that port.

- **The black window closes immediately**

This usually indicates a startup problem. Note the message shown and send it to Anemon Sensors support.

- **An antivirus blocks the program**

Some antivirus software flags this type of program out of caution. Allow AMON-Dashboard-WiFi-USB.exe in your antivirus, or contact Anemon Sensors support.

For any questions, contact [Anemon Sensors support](#).