

CO2 AIR QUALITY MONITOR

User's manual

Please read the product instructions carefully before use. Please keep this leaflet in a safe place.

The Quaelis 14 CO2 meter (part number 11325) has been designed for indoor use only.

Carbon dioxide is an odourless and colourless gas from various sources (greenhouse gases, transport, fuel oil, heating, etc.).

Carbon dioxide (CO2), which occurs naturally in the atmosphere, is a molecule produced by the human body during respiration. Its concentration in the indoor air of buildings is related to human occupancy and air change, and is an indicator of the level of air confinement. For this reason, the concentration of CO2 in indoor air is one of the criteria on which the regulation of ventilation in buildings is based. Current regulatory or normative limit values usually vary between 1000 and 1500 ppm. They apply to school buildings, residential buildings and offices and have no significance for the health quality of indoor air.

Source : www.anses.fr

The Quaelis 14 carbon dioxide (CO2) meter allows continuous measurement of the CO2 level and provides a practical, timely and alternative prevention solution to the decree (referred to in Article 5.1 of Decree No. 2015-1000 of 17 August 2015: 2012-14 on the measurement of indoor air pollutants in establishments open to the public (ERP)).

Art. 5 - 1. - The pollutant campaign consists of a continuous measurement of carbon dioxide (CO2) carried out over a single period, during the facility's heating period, if any.

The Quaelis 14 CO2 meter has been designed to continuously monitor and analyse the CO2 (carbon dioxide) concentration level as well as the temperature and humidity of the room in real time.

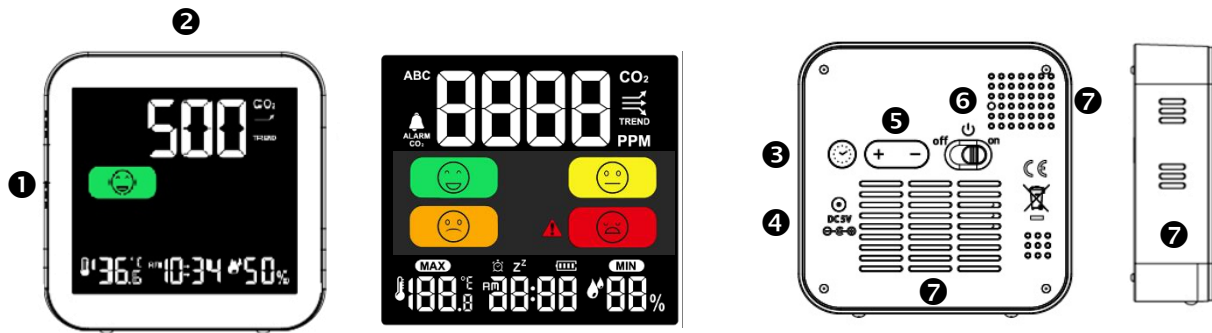
Technical characteristics :

- Colour LCD screen.
- CO2 measurement. Technology: NDIR sensor.
- Display of time, temperature and indoor humidity.
- Adjustable brightness.
- A wake-up alarm
- Power supply: 500 mAh rechargeable battery via DC 5.0V USB adapter cable (supplied).

Measuring range	CO2	From 400 to 5000 ppm
	Temperature	From -9°C to +50°C
	Moisture content	From 1% to 99%.
Accuracy	CO2	50 ppm +/- 5%.
	Temperature	+/- 1%
	Moisture content	+/- 2%
Sensitivity/ resolution	CO2	1 ppm
	Temperature	1°C
	Moisture content	1%

Take the product out of its packaging and check that all parts are included.

Transport and protective packaging of the product requires the meter to be placed in a well-ventilated area for 30 minutes before use to allow the sensors to clear.



- 1: Display of information.
- 2: Touch button for backlighting.
- 3: Button for the settings menu and to confirm.
- 4: Battery charging adapter port.
- 5: "+" and "-" buttons
- 6: "OFF" and "ON" button
- 7: Locations of sensors and fans.

Step 1: Charge the battery.

Plug the end of the USB cable into the slot provided (4) and then plug the other end of the cable into a powered USB port (USB/ 230V adapter, computer...).

To turn on the meter: move the cursor (6) to the ON position. The display will light up quickly and beeps will sound. The display then counts down for one minute to allow the unit to warm up and adjust. After this time, all measurements are displayed.

Caution: Do not make any adjustments during the countdown. The meter makes a slight noise. This is normal and is related to the ventilation of the sensors during use. The noise stops when the meter is turned off.

While the battery is charging, the icon above the time indicates the battery charge progress bar and then goes out when the battery is fully charged. The meter will run for approximately 5 hours when the battery is fully charged (excluding USB connection). The battery charging time will vary depending on the USB power mode used. We recommend leaving the meter connected to USB to allow continuous measurements.


Caution: To recharge the battery, the meter must be plugged in and in the ON position. The battery does not charge in the OFF position.

Step 2: Place the meter

It is recommended to place the meter in the living room, bedroom, meeting room, etc. on a piece of furniture and to choose a location that allows the sensors (7) to remain unobstructed in order to ensure proper operation of the device.

Ideally place the meter in the centre of the room and at least one metre away from the walls or ceiling of the room. Keep away from any direct source of pollutants, liquid products, heat, flammable products and magnetic fields.

Step 3: Adjustments and settings.

Press and hold the button  (3) until the 12H or 24H time format flashes.

Select with the "+" and "-" buttons (5). Then press the button (3) briefly to confirm and move on to the next setting.

The time flashes → select with keys (5) → press (3) to confirm.


The minutes flash → select with keys (5) → press (3) to confirm.

The alarm time flashes → select with keys (5) → press (3) to confirm.

The alarm minutes are flashing → select with keys (5) → press (3) to confirm.

The temperature unit format flashes → select °C or °F with keys (5) → press (3) to confirm and exit the setting mode.

Caution: If no button is pressed for 30 seconds during the settings, the meter exits the settings mode and returns to the display screen. Resume settings.
When selecting the 12H format, the display shows AM or PM next to the time.

To activate/deactivate the alarm function: in normal display mode (excluding settings), press button (3) briefly: the alarm time is displayed for a few seconds and the icon  appears in the upper left-hand corner above the time to confirm that the alarm is activated.






Press (3) again to deactivate the alarm clock: the icon is not displayed.
The alarm will sound for one minute. Press button (2) to enter snooze mode (alarm repeats every 5 minutes) or press any other button to stop the alarm.

Step 4: Display and CO2 recommendations.

As mentioned, carbon dioxide is an odorless and colorless gas from a variety of sources and current regulatory or normative limit values usually vary between 1000 and 1500 ppm.

- The risks vary depending on the exposure to CO2 :
- Light exposure: slight headache, nausea, fatigue...
 - Medium exposure: stabbing headaches, drowsiness, confusion...
 - Extreme exposure: loss of consciousness...


Thus, the comfort indices for CO2 are indicated according to the following measures:


Colour	Smiley	CO2 (ppm)	Air quality
Green		400-600	Excellent
Yellow		601-1000	Good
Orange		1001-1500	Poor
Red		1501-2000	Bad
Flashing red		> 2000	Review


Caution: It is recommended to air the room regularly in order to renew the air in the room.

Please note: The meter allows a measurement range of up to 5000 ppm. We recommend not to exceed 2000 ppm in the room.

The Quaelis meter allows to indicate the trend in CO2 concentration in the room.
The "TREND" trend is displayed to the right of the CO2 concentration measurement.

If the concentration increases by 100 ppm or more, the indicator displays 


If the concentration decreases by 100 ppm or more, the indicator displays 

If the concentration does not change above 100 ppm, the indicator displays 

Step 5: Customise the CO2 alarm.


The audible alarm is set by default to go off at 1000 ppm.

However, in order to adapt to different needs and regulations, the alarm triggering measure is customisable. This does not change the measurement system.


In normal display mode, press and hold the "-" button (5) until the CO2 value flashes and the icon  appears.

Press the "+" and "-" buttons to increase or decrease the CO2 alarm threshold value. Press button (3) to confirm and return to the display.

Caution: For safety reasons, the alarm threshold for the CO2 concentration level can only be set between 500 ppm and 3000 ppm.

To activate the CO2 alarm function: in normal display mode (not including settings), press the "-" button briefly and the icon  will appear to the left of the CO2 measurement.

Do this again to deactivate the CO2 alarm.

When the set threshold is exceeded, the alarm sounds and the icon  flashes.

Step 6: Display of the minimum and maximum values.

The Quaelis 14 meter displays the recorded minimum and maximum values for CO2, temperature and humidity.


In normal display mode, press the "+" button on the knob (5) briefly → the **MAX** symbol (above the temperature) is displayed as well as all the MAXI values → press "+" → **MIN** appears (above the humidity) as well as all the MINI values → press "+" to return to normal display mode

While viewing the recorded minimum and maximum values, press and hold the "+" button (5) to reset. The display shows "- - - -" to confirm.

Attention: When displaying the minimum and maximum values for CO2, the smiley face does not appear. This is normal. The meter allows to save the minimum and maximum values for 24H and the values will be automatically deleted and reset every day at 00:00.

Brightness adjustment :

The Quaelis meter allows you to adjust the brightness on 3 levels: press successively on the button (2) to increase or decrease the brightness of the screen.

Low battery indicator: When the battery is low the icon  flashes and the display shows "- - - -" and the display brightness is automatically reduced.

Calibration function :

Sensors can wear out over time and depending on the level of pollution: measurements and accuracy can drift. To avoid this problem and to ensure the accuracy of the measurements, the Quaelis 14 meter has the ABC (Automatic Baseline Calibration) technology which ensures a regular automatic calibration of the device.

Caution: The Quaelis 14 is equipped with ABC calibration technology which automatically ensures the correct functioning of the device.

If the user wishes to perform a manual calibration, it is necessary to ensure that the meter is placed in a 400 ppm outdoor environment to perform this process. To do this the meter must be in the ON position and the battery must be fully charged. When not in setup, press and hold the "+" button (5), "CAL" will flash. Press button (3) to start the manual calibration.

Calibration can take up to 30 minutes. Do not turn off the meter or press any buttons during calibration. When calibration is complete, the display will return to the CO2 measurement.

Conditions of use and safety :

Use the air quality meter for its intended purpose.
Do not modify the structure of the product or repair it yourself.
Do not use other connectors than those supplied with the product.
The manufacturer is not responsible for damage to the product due to improper use or maintenance.
Keep out of reach of children.

Maintenance / safety :

Do not use cleaning products containing caustic or abrasive agents and pollutants.
Keep away from direct sources of pollutants, carbon dioxide, liquid sources, heat sources, flammable materials and magnetic fields.

Solutions to problems encountered :

<u>Defects found</u>	<u>Solutions / how to solve the problem</u>
The meter does not light up.	Check that the battery is charged and that the meter is in the ON position.
The meter does not charge.	Check that the USB port is powered (computer on, socket on...). Check that the cable is correctly inserted in the slot provided (4). The meter must be in the ON position only. If the meter is in the OFF position, the battery is not charging.
The time is not correct.	When the display shows "AM" or "PM" this means that the time is displayed in 12H format. Change the format in the settings.
The alarm clock does not ring.	Check that the alarm is activated.
The temperature seems high or wrong.	Check the selected temperature unit: Celsius (°C) or Fahrenheit (°F) in step 3.
The CO2 alarm does not sound.	Check the value set for the alarm (step 5). Check that the alarm is not disabled. Activate the sound if necessary by pressing the dedicated button (step 5).
The measurements are frozen or do not seem correct.	Turn the monitor off for a few minutes, then on again and place it outside (without sources of pollution) for 30 minutes to clear the sensors.
Calibration function.	The Quaelis 14 is equipped with ABC calibration technology, which automatically ensures that the device is working properly.

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However, the latter are available in several languages in digital form. Please scan the QR code or contact your distributor.



Notice 11325

