AIR QUALITY MONITOR

User manual

Please read the instructions carefully before use. Keep these instructions.

The indoor air quality monitor Quaelis 20 (No. 23656) has been designed to monitor and analyse indoor air pollution. Indoor use only.

Technical features:

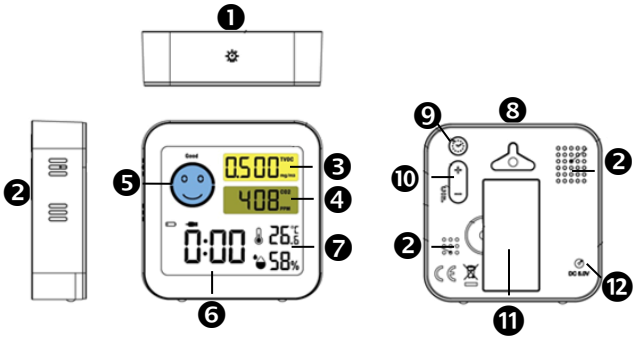
- Large colour LCD screen (8.4 cm) with very good contrast.
- Time display (12H or 24H format).
- Carbon Dioxide (CO2) display: 400 to 9999 ppm. Resolution:1 ppm.
- Measurement of Volatile Organic Compounds (VOC): up to 9,999 mg/M3. Resolution: 0.001 mg/M3.
- Temperature (in °C and °F). From -9°C to +50°C. Resolution: 0.1°C
- Humidity level: from 10% to 95% RH. Resolution: 1%
- Two power supply modes to choose from:

  DC 5.0V 100 mA / USB adapter cable (supplied): measurements are performed and updated continuously. The back light is on at all times.

  With 2 AAA LR03 batteries (not supplied): data is updated manually. Likewise the back light is turned on manually. This mode enables function of clock, temperature and humidity only.

Installation and use:

Remove the product from its packaging and check all the items are included.



1. Back light On Button.
2. Sensor and fan locations.
3. VOC measurements display
4. CO2 display.
5. Comfort smiley face.
6. Time.
7. Temperature and humidity display.
8. Wall mounting.
9. Time setting dial.
10. Button ' **+** ' and ' **-** ' for setting the time.

10: Up selection buttons ' **+** ' for the time format (12H or 24H).

10: Down selection button ' **-** ' for the temperature unit (°C and °F).

11. Battery compartment cover.
12. Power socket.

Placing the air quality monitor

After shipping and removing the protective packaging, the product must be placed in a well-ventilated area for a two hours prior to set up and use to clear the sensors ready for use (2). To ensure proper operation of the unit, place the monitor on a piece of furniture and in a location that allows the sensors (2) to remain unobstructed. Keep away from all direct sources of carbon dioxide, liquid products, heat, flammable products and magnetic fields.

Connect the indoor air quality monitor.

Option 1: Plug the power cable into slot (12) and connect the USB plug into a powered USB port (230V adapter, computer...). The icon ars above the time to confirm correct connection. The screen lights up.

Option 2: Open the battery cover (11) and insert 2 AAA LR03 batteries. Observe the polarity and replace the cover. When using on batteries: the icon appearing and low display lighting indicates that the batteries are spent. Change the batteries.

A 5 minutes countdown is shown on the display while the device warms up and prepares for operation. After the countdown, the monitor displays the VOC (3), CO2 (4), temperature and humidity (7) measurements of the room. Measurements of VOC and CO2 are done during last five seconds of countdown only.

Important: Do not make any adjustments during countdown.

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Important: When the monitor is on USB power, the measurements are displayed continuously and updated automatically every 5 seconds. The back light is on.

To save batteries (when the monitor is on batteries), the monitor enables clock, temperature and humidity functioning. Measurements of VOC and CO2 are not updated automatically and the display is not backlit. Measurements and back lighting must be updated manually:

- Short press button (1): the screen is lit for 10 seconds.
- Press and hold button (1) until the 5 minute countdown starts. Measurements will be updated at the end of the countdown.

Warning: It is recommended to use USB cable only for continuous monitoring of VOC and CO2.

Setting the Time:

Press and hold down button (9) until the hour digit flashes. Press buttons '**+**' and '**-**' (10) to set the time. Press button (9) again and the minute digits will flash. Set the minutes with the buttons '**+**' and '**-**' (10). Press button (9) to finalize the setting. The time display is set.

Important: If no button is pressed for 10 seconds while setting the time, the screen returns to the standby display.

In standby mode (normal display), briefly press the up button '**+**' of (10) to select 12H or 24H format. In 12H mode, the 'AM' or 'PM' icon appears to the left of the time.

Setting the temperature units.

In standby mode (normal display), briefly press the down button '**-**' on (10) to select the temperature units Celsius (°C) or Fahrenheit (°F). The display changes automatically (7).

Air quality display.

The Quaelis 20 monitor is used to measure the accumulation of various Volatile Organic Compounds (VOCs) and to indicate the CO2 content of the room.

- *Carbon dioxide is a colourless, odourless gas that comes from a variety of sources (greenhouse gases, transport, fuel, heating…).*

  Carbon dioxide (CO2), a molecule that is naturally present in the atmosphere, is produced by the human body during respiration. Its concentration inside buildings is proportional to the rate of occupation and the renewal rate of the air. The current regulatory standards limits vary between 1000 and 1500 ppm.

Risks vary with exposure to CO2:

- Mild exposure: slight headache, nausea, fatigue...
- Moderate exposure: throbbing headache, drowsiness, confusion...
- Extreme exposure: loss of consciousness…

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

- Up to 700 ppm. The air is good quality.
- 701 to 1199 ppm. It is recommended to ventilate the room.
- From 1200 ppm. It is necessary to ventilate and leave the room in order to renew the air.

Values in a room above 2000 ppm can cause nuisance to the occupants: it is recommended to leave the room, ventilate and improve the air quality.

Important: The monitor has a display range up to 9999 ppm. We recommend not to exceed 2000 ppm in a room.

- *Volatile Organic Compounds are pollutants from hydrocarbons, solvents, exhaust gases, furniture, ceilings, paints, glues...*

The comfort indices (5) for VOCs are defined according to the following measures:

VOC measurement ranges (mg/M3).	0 - 0.300	0.301 – 0.600	0.601– 1.000	1.001 – 3.000	3.001 – 9.999
Indoor Air Comfort Index.	Very Good	Good	Normal	Bad	Very Bad

Important: When the VOC Comfort Index is poor, ventilate the room to renew the air. Do not stay in the room when the quality index is bad.

Conditions of use and safety:

Use the indoor air quality monitor for its intended purpose.
Do not modify the product and do not repair it yourself.
Only use the connection accessories supplied with the product.
The manufacturer is not liable for damages relating to the product if it is improperly used or maintained.
Keep away from children.

Maintenance / safety:

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

Solving any problems encountered:

Faults experienced	Solutions/how to resolve the problem
The monitor does not turn on.	Using the USB cable: check that the USB port is powered (computer on, plug on...). Check that the cable is correctly inserted in the intended slot (12). When using on batteries: check that the batteries are new and correctly inserted. Respect the polarities.
The screen turns off automatically. The back light is not working.	When using on batteries: the back light is not lit permanently in order to save batteries. Press button (1) to activate the back light. When the icon appears, the batteries are exhausted and the manual back light is disabled. Change the batteries.
The battery is not charging.	The monitor is not equipped with a built-in rechargeable battery.
The screen displays 'LL'. The screen displays 'HH'.	This means that the temperature is below the minimum display range (-9°C). This means that the temperature is above the maximum display range (+50°C).
The time is not correct.	When the display shows 'AM' or 'PM', it means that the time is shown in 12-hour format. Change the format (24 or 12 hour clock) in the 'Time setting' parameter.
The monitor beeps.	When a button is pressed, the monitor beeps.
Measurements do not change or do not appear to be correct.	To save batteries (when the monitor is on batteries), Measurements of VOC and CO2 are not updated automatically. Proceed manually as explained. New measurements of VOC and CO2 are displayed after the countdown. Then the monitor enters saving mode (no pollutants measurements). If the measurements do not change, turn the monitor off and then on again and place it in a ventilated area or outdoors to clear the sensors. Observe the instructions for installing the monitor as described in the manual. Sensors can wear out over time. If measures remain incorrect, proceed to factory reset. Long press " - " of button (10). Screen displays "REST". Press button (9) to confirm. Countdown appears.

NB: Electric or electronic products at the end of their useful lives can have negative effects on human health and the environment. They should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product to a designated collection point.
Batteries must never be disposed of in household waste or incinerated. They must be disposed of according to applicable local regulations for chemical wastes. This product complies with WEEE and RoHS directives.When you dispose of this device, please respect local laws or regulations.

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