resideo

R200 Monitor

Installation and Setup Guide

1

resideo

2

3
4
5 CO₂

500

°C/°F
%RH
PPM

6

7 SET
AUTO

8 TEST
HUSH

9 Adapter
DC5V/1A

10 ON /OFF
Switch

ON

11
12

resideo

°C/°F
%RH
PPM

CO₂

SET
AUTO

TEST
HUSH

A

B
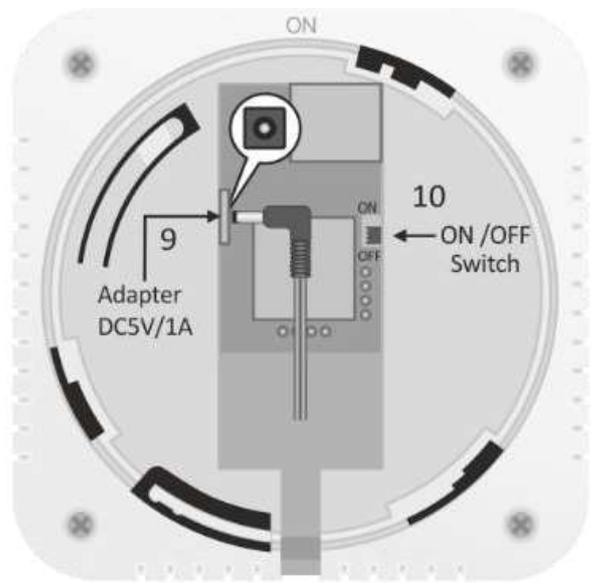
1. Introduction

Thank you for the purchase of this carbon dioxide monitor. Carbon dioxide is also known as CO_2. This product is designed for measuring CO_2 concentrations as well as air temperature and humidity. To be used at home, office, school, canteen, etc. The CO_2 monitor adapts itself to its environment (auto calibration). No settings need to be made. This CO_2 monitor alerts users through voice messages and audible alarms. Always avoid exposure to high concentrations of CO_2. This product, when used properly, is designed to alert you to elevated levels to CO_2 so that you may take action to remove yourself from such environment.

- Accurate measurement of:
  - carbon dioxide, ± 50ppm ± 5%
  - temperature, ± 0.5°C or 0.9°F
  - moisture, ± 5% RH
- LED status indication
- Voice alarm notification
- Automatic adjustment of the display brightness
- Rechargeable internal backup battery (approx. 12 hours)

2. Explanation (see page 2)

Number	Function	Number	Function
1	Voice / siren output	7	SET/AUTO operation button
2	Green / Yellow / Red status indicator	8	TEST / HUSH operation button
3	Temperature indicator	9	Adapter connection
4	Humidity indicator	10	ON / OFF Switch back-up battery
5	CO2 indicator	11	Remove from mounting plate
6	Display	12	Attach to mounting plate

3. Where to install the device?

The CO_2 sensor needs a process that adapts to the current environment. In order to achieve a more accurate detection effect, after changing the CO_2 monitor's location it should continue to work for more than 24 hours to complete the automatic calibration. After the completion, the calibration will not be performed at the next startup.

Ideally, a device should be installed in every room containing a fuel-burning appliance and in a room where the occupant(s) spend most of their time, like the living room, bedroom and study or hobby room. The CO_2 monitor can be wall mounted (eye level) – use cable input **A (see page 2)**, or placed on a cabinet or table/desk – use cable input **B (see page 2)**.

4. Where not to install the device

In an enclosed space (for example in a cupboard or behind a curtain).
Where it can be obstructed (for example by furniture).
Directly above a sink.
Next to a door or window.
Next to an extractor fan.
Next to an air vent or other similar ventilation openings.
In an area where the temperature may drop below -5°C or exceed 50°C.
Where dirt and dust may block the sensor.
In a damp or humid location.
In the immediate vicinity of a cooking appliance.

5. Mounting (see page 2)

The CO_2 Monitor comes with screws and wall plugs for mounting on the wall. Remove the CO_2 Monitor from the mounting plate, turn (11) counterclockwise approximate 15°. Use the mounting plate to mark the drill holes. After drilling, place the dowels in the holes and then screw down the mounting plate with the screws. Switch on the back-up battery (10), fully charged is approximate 12 hours usage without adapter connection. Connect the adapter to the CO_2 monitor (9) and a power outlet. Place the CO_2 Monitor on the mounting plate and turn (12) approximate 15° clockwise.

6. Status indicator - Green / Yellow / Red

When CO_2 concentration is ≤1000PPM, the status indicator turns green.
When CO_2 concentration is 1000PPM ~ 1500 PPM, the status indicator turns yellow.

When CO_2 concentration is ≥1500 PPM, the status indicator turns red and a 75db@1m alarm is emitted. Take actions recommended in Section 8 to prevent risks to your health and safety.
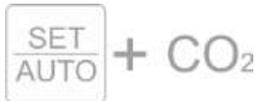
7. Explanation operation buttons

Short press to switch between temperature, humidity and CO_2 display.

Short press to get temperature display and then long press to set degrees Celcius or degrees Fahrenheit.
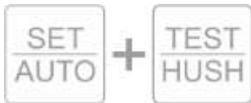
Short press to get CO_2 display and then long press to set alarm sound ON/OFF.

Long press to test the alarm.
Short press to delay/hush the alarm for 10 minutes.

Within 150 seconds from turning the product on, press and hold both keys simultaneously for 3 seconds. You will hear a voice message in the currently selected language. Press again for 3 seconds and the selection moves to the next available language.

8. Recommended actions when the CO_2 Monitor warning has been activated

Keep calm.
Open all doors and windows and turn off all combustion appliances.
If the CO_2 Monitor continues to sound the alarm, evacuate your home.
Leave all doors and windows open and do not enter until the alarm has stopped.
Seek medical attention for anyone who may be suffering from the effects of carbon dioxide.

9. Carbon dioxide levels and guidelines

400 PPM	Normal outdoor air level
400 ~ 1000 PPM	Typical level indoors with good ventilation. NOTE: If CO_2 levels are low when building is sealed and occupied, check for overventilation (too much fresh air = energy wasted).
>1000 PPM	ASHRAE and OSHA recommended maximum level in a closed room. Considered maximum comfort level in many countries.
>1200 PPM	Poor air quality - requires ventilation.
>2000 PPM	According to many studies this level of CO_2 produces a significant increase in drowsiness, tiredness, headache lower levels of concentration and increased likelihood of spreading respiratory viruses like colds, etc.
>5000 PPM	OSHA and NIOSH first threshold for safety. Maximum allowed concentration within an 8 hour working period.

10. Maintenance

We recommend to manually test CO_2 Monitor once a month by pressing and holding the test button. Dust is a major cause of false alarms. Therefore, clean the CO_2 Monitor once a month. Use a vacuum cleaner to gently remove any accumulated dust along the sides of the CO_2 Monitor. Never use a wet cloth or detergent to clean your CO_2 Monitor. Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

11. Warnings

This manual contains important safety information about the CO_2 Monitor.
Read the manual carefully and keep it in a safe place for future reference.
Do not open the device in case it is damaged.
Do not remove any safety signs, stickers or labels from the device.
Keep all safety signs, stickers and labels legible condition.
This product cannot be used in factories, warehouses and other industrial environments that may be in high CO_2 concentration for a long time.
If the product is to be placed in a narrow space, the space should be well ventilated, especially the two diffusion windows should be in a well-ventilated position.
The product should be away from heat source, and avoid direct sunlight or other thermal radiation.
This product should not be used in the environment with high dust density for a long time.

12. Specifications

Working voltage	:	DC5V (Power adapter 5V/1A)
Sensor type	:	None-dispersive infrared (NDIR) sensor
CO_2 measurement range	:	400 ~ 5000 PPM
CO_2 measurement error range	:	± 50PPM ± 5%
Pressure dependence	:	+ 1.6 % reading per kPa deviation from normal pressure
CO_2 measurement resolution and response time	:	1 PPM ; T90 < 120s
Temperature range	:	-5°C ~ 50°C or 23°F ~ 122°F
Temperature measurement error range	:	± 0.5 or 0.9
Temperature measurement resolution/response time	:	0.1.1°C /°F; T90 < 120sT90 < 120s
Humidity measurement resolution and response time	:	0.1% ; T90 < 600s.1% ; T90 < 600s
Humidity measurement range	:	0.0% ~ 99.9%RH
Humidity measurement error range	:	± 5% RH
Backup battery running time	:	~12 Hours
Work environment	:	Working temperature -5°C ~ 50°C
	:	Working humidity 0 ~ 90% RH (no condensation)
Storage environment	:	Storage temperature -10°C ~ 60°C
	:	Storage humidity 0 ~ 95% RH (no condensation)
Sensor service life	:	10 years (end of product life: the display shows "End")
IP Rating	:	IP40
Environmental protection standard	:	RoHS
Overall dimensions	:	99 mm x 99 mm x 37 mm
Product weight	:	Net weight 291gr

13. Service and Contact

For questions about the installation, use or operation of this product please visit www.resideo.com and use the search engine to find more information. Please Note: While every effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This publication is not intended to form the basis of a contract.

14. Symbols

When the unit has come to the end of its life, dispose of it in accordance with local regulations. It is classified as electronic waste and contains a battery and therefore should be disposed of separately from household waste.

CE compliance logo. This product is in conformity with the relevant European union harmonization legislation.

15. Disclaimer

This CO_2 Monitor is designed to alert you to a potentially dangerous build-up of Carbon Dioxide gas. It is not designed to remedy a Carbon Dioxide problem nor to locate a specific source of Carbon Dioxide. Resideo shall not be liable to pay for any Carbon Dioxide investigation or service call carried out or arranged in response to an alarm.

16. Warranty

RESIDEO'S 10 YEAR WARRANTY POLICY

R100C-1, R200C-1, R200S-1, R200H-N1, R200ST-N1, R200C-N1, R200S-N1, R200C-2, R200S-2, R200H-N2, R200ST-N2 R200C-N2, R200S-N2, R200C2-A, R200C2-A-UK

Beneficiary of this Warranty

This limited warranty is provided to its direct customer ("Buyer") by the member of the Resideo Technologies, Inc group of companies ("Resideo") which sells the product. Resideo does not provide this warranty to the consumer or end-user of the product. Resideo expects that Buyer will give its customers an equivalent warranty to that given by Resideo to Buyer hereunder. This does not affect any statutory obligations that Resideo may have to consumers as manufacturer of the Products. Resideo reserves the right, at its discretion, to change these Warranty Terms and the products to which these Warranty Terms apply. Any changes to these Warranty Terms only apply to Products sold after the date of the change.

Resideo's Warranty

Resideo warrants that the Products will be free from defective materials and faulty workmanship and conform to applicable specifications for a period of 120 months from the manufacturing date code on the Product. If any Product becomes defective during the applicable warranty period for a reason that is not excluded below, Resideo will, at its sole option, either repair or replace free of charge with a new or re-furbished product, or credit to Buyer's account the price paid for the Product. Resideo will not be responsible for any of Buyer's costs of de-installing and re-installing the Product, travel or any other costs.

Exclusions from the Warranty

This warranty is an extended manufacturer's warranty and to the extent permitted by law, is in lieu of all other warranties and conditions, expressed or implied including those of satisfactory quality or fitness for a particular purpose. Resideo shall have no obligation under this warranty or otherwise if: i) The product is not installed in accordance with Resideo's installation instructions and applicable installation standards, is not used for a purpose for which it is designed and in accordance with Resideo's user instructions or is not maintained in accordance with Resideo's care and maintenance instructions or is altered (including the alteration of any serial number), serviced or repaired by anyone other than Resideo/Resideo's Authorized Service/Repair Centre: ii) Damage is caused by outside occurrences, such as lightning, power surges, fire, floods, acts of nature, or the like or quality of water, or is caused by misuse, or vandalism; or iii) A defect is not caused by reason of defective materials or workmanship. iv) This warranty does not cover the re-changeable battery used in R200C2-A & R200C2-A-UK. This warranty does not cover the costs of replacing consumable items (such as batteries), maintenance checks and adjustments, such as Product calibration, which may be required in accordance with the Product use and maintenance instructions.

Returns and Repairs

Prior to returning any Product that has become defective during the applicable warranty period for a reason that is not excluded under these Warranty Terms, Buyer must contact Resideo customer service to obtain a return merchandise authorization (RMA) number. To obtain the RMA number, Buyer must provide: i) Product model number and serial number, ii) Proof of purchase, iii) Description of the defect. Buyer shall send the defective Product to Resideo at its own expense, appropriately packaged to prevent damage to the Product, together with the RMA and proof of purchase, in accordance with the instructions of the Resideo customer service representative. Resideo will test the returned Product to verify that it is defective. At Resideo's request Buyer shall provide such additional information as Resideo may reasonably require to verify the cause of the defect, including date and location of installation, Product application, manner of operation, maintenance records and failure mode. If Resideo determines that the Product is defective, Resideo will decide whether to repair or replace the Product or credit the Product purchase price to Buyer's account. If Resideo decides to replace the Product, Resideo will send the replacement Product to Buyer at Resideo's expense. Unless otherwise agreed in writing, Resideo will destroy any Product that it determines to be defective. If Resideo does not find the Product defective, Resideo reserves the right to charge the Buyer for the reasonable costs of its investigation of the alleged defect. If Buyer pays Resideo in advance for the costs of returning the Product, Resideo will send the non-defective Product back to Buyer but otherwise Resideo will destroy the Product.

Out of Warranty Repairs

At the request of Buyer, Resideo will provide to Buyer a quotation for the costs to repair any Product outside of the applicable warranty period, if Resideo considers such Product to be repairable. If Buyer accepts the quotation and sends the Product to Resideo (following the same process as for in-warranty returns), Resideo will repair the Product in accordance with the quotation and return the repaired Product to Buyer. The repaired Product will be warranted for 90 days from the date of repair.

Miscellaneous

If any part of these Warranty Terms is prohibited by applicable laws, the relevant part shall be null and void, but the remainder of the Warranty Terms shall remain in full force and effect.

resideo

www.resideo.com

Security Communications SAS
1198 Avenue Maurice Donat
06250 Mougins, France

This product is manufactured by Resideo Technologies, Inc. and its affiliates