WiNG-CO2 Quick Start Guide

Thank you for purchasing a WiNG-CO2 wireless sensor. Before you install your device, consult rletech.com to ensure you're working with the most recent version of documentation available. If you need further assistance, please contact RLE Technologies at support@rletech.com.

Falcon

v06.21

RLE Technologies

Supplies for Installation

WiNG-CO2 Sensor
Small flathead screwdriver

Installation Instructions

1. WiNG-CO2 sensors can only be seen by an RLE WiNG controller with the following firmware requirements:

Device	Minimum Required Firmware Version
WiNG-MGR	v3.6.0
WiNG-MGR v2	v1.0.27
BMS-WiNG	v3.2

If your device's firmware is older than necessary, download the latest firmware from the RLE website (rletech.com) and update your device.

2. Remove the lid from the sensor enclosure. The lid has one large tab at the top and two small tabs at the bottom that secure it to the sensor base. Squeeze the top of the lid to release the large tab. Pivot the top of lid out from the base and gently separate the two bottom tabs from the base.

   NOTE: The serial number is printed on a white label on the outside of the sensor lid. The serial number is unique to each sensor and you will need to refer to this number throughout the life span of the device.

3. Remove the circuit board from the base to expose the mounting holes. Before you take it apart examine how the board fits into the base. You'll have to put it back into the base so make sure you have a clear understanding of how it was assembled before you remove it.

4. To remove the board pull the circuit board clip out to relieve the tension that holds the board in place. Angle the board up and then pull it to the right to remove it from the base. Move the board slowly and gently to get it out of the base without damaging any circuitry.

5. Secure the base in the desired location. Select a location for the transmitter, keeping the following in mind:

   - For best reception, mount the enclosure base as high off the floor as you can with the most direct/clear line of sight to the controller.
   - Do not mount the transmitter behind metal objects.

6. Put the circuit board back into the enclosure. Angle the board in under the lip of the L brackets and as far down as it will go against the plastic pegs at the bottom of the enclosure. Guide the board so it is parallel with the base. Pull the circuit board clip out and push the board down until the board clip securely snaps into place. The board is a very tight fit in the enclosure. Work slowly and gently so the board isn't damaged.

7. Each WiNG-CO2 sensor **must** be configured for its environment during deployment. The sensor will not operate properly until all steps of this initial configuration procedure are completed:

   a. Remove the batteries from the sensor. Wait 20 seconds for power to dissipate.

   b. Compensate for Altitude: Altitude has a significant impact on CO_2 readings - for example, a CO_2 reading taken at 10,000ft will have a measurement change of 44% from the same reading taken at sea level. Each WiNG-CO2 must be configured to compensate for the altitude of its location.

   Use a small flathead screwdriver to point the arrow of the rotary switch to the setting that corresponds with the closest altitude setting:

Rotary Switch Setting	Altitude (ft)	Altitude (m)	CO2 Measurement Change (%)
0	0	0	0
1	500	153	3
2	1,000	305	5
3	1,500	458	7
4	2,000	610	10
5	2,500	763	12
6	3,000	915	15
7	3,500	1,068	17
8	4,000	1,220	19

Rotary Switch Setting	Altitude (ft)	Altitude (m)	CO2 Measurement Change (%)
9	4,500	1,373	22
A	5,000	1,525	24
B	6,000	1,830	28
C	7,000	2,135	32
D	8,000	2,440	36
E	9,000	2,745	40
F	10,000	3,050	44

c. Set the Auto-Zero Function: When auto-zero is on, the sensor automatically re-calibrates every two weeks - the zero point of the CO2 module resets to the lowest point detected during the past two weeks. This operation relies on there being a regular period of unoccupancy in the space, such as at nights or weekends, to ensure levels drop to around 400ppm. By default, each sensor is shipped with auto-zeroing turned ON.

- Auto-Zero ON: The white jumper is in the leftmost "AUTO" position, covering the farthest left and middle pins.
- Auto-Zero OFF: The jumper in the rightmost "OFF" position, covering the middle and farthest right pins.

d. Configure the Zero Point in Fresh Air: The CO2 module must now be configured with the fresh air setting for its location. Expose the sensor to fresh air outside or in an unoccupied area for 5-10 minutes.

e. The measurement interval on the WiNG-CO2 is by default set to 2 minutes. This interval is configurable. If you'd like to change the measurement interval, you must do so now. Refer to the WiNG-CO2 Measurement Interval Configuration Guide for complete instructions.

f. The initial configuration is complete, and now you must save the settings you've just programmed:

1. Hold the push button on the top of the sensor.
2. While continuing to hold the button, reinstall the batteries. The LED will turn white to indicate that the sensor is in configuration mode.
3. Continue to hold the push button. The LED will then turn green to indicate that configuration has completed successfully.
4. Once the LED turns green, release the push button.

5. Check the WiNG-MGR web interface or BMS and verify the sensor appears in the list of sensors connected to it. You may need to click the Sensor Discovery button in the WiNG-MGR web interface to allow the unit to find this new sensor.

6. Check the WiNG-MGR web interface or BMS to make sure the sensor status reports accurately.

7. Replace the lid, ensuring that the antenna is held in place by the antenna guides and feeds out the vent hole in the side of the enclosure. Do not pinch the antenna between the lid and the case.

Antenna Guides

Antenna

Push Button

LED

3.6V Lithium Batteries

Circuit Board Clip

Auto-Zero Jumper

L Brackets

Rotary Switch

Plastic Peg

Plastic Peg

CO2 Sensor