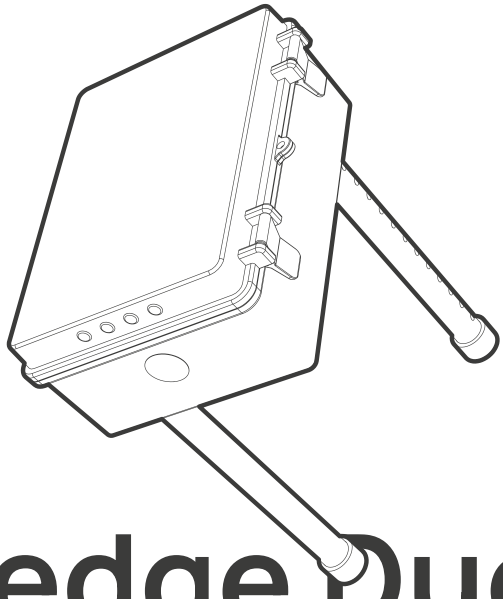
kaiterra



Sensedge Duct

(Wireless Model)
Installation and Setup Guide

1. Important Safeguards

Please read the safety warnings before use and take the necessary precautions to reduce the risk of fire, electric shock, or injury. The Kaiterra limited warranty applies only if the unit is used according to these instructions. Kaiterra will not be liable for any damages, injuries, or losses resulting from use of the product that does not comply with these instructions or the safety warnings provided.

Warning ⚠

- To reduce safety risks, always use service personnel from the manufacturer or service provider, or other qualified personnel for installation and maintenance.
- Make sure the power is OFF during installation or maintenance.
- ONLY use 3.6V ER14505 Li-SOCL2 batteries.
- DO NOT tamper with or use non-official spare parts for repair or maintenance.
- DO NOT use the device in environments with high humidity or possible direct exposure to water.
- DO NOT use the device near heat sources such as radiators, furnaces, ovens, or stoves.

What's Included

Parts and Tools You Will Need for Installation

Parts (Included in the Packaging)

In-duct kit

Sensedge Go

Sensedge Go sensor module x 1 (in the device)

Drill assist sticker

Mounting brackets x 4

Tapping screws (M4 x 10mm) X 4

Tapping screws (M4 x 20mm) X 4

Cable grommet

Large washer x 4

Small washer x 4

Large seal plug x 2

Small seal plug x 4

Tools (Not included in the Packaging)

Cross screwdriver

Power drill

35 mm Carbide-tipped hole saw

2.5mm (3/32") Drill bit

Gateway

This product requires a Kaiterra Gateway for operation, which is not included. Please ensure you have one available prior to initiating the installation process.

2. Pre-installation Review

Before You Begin

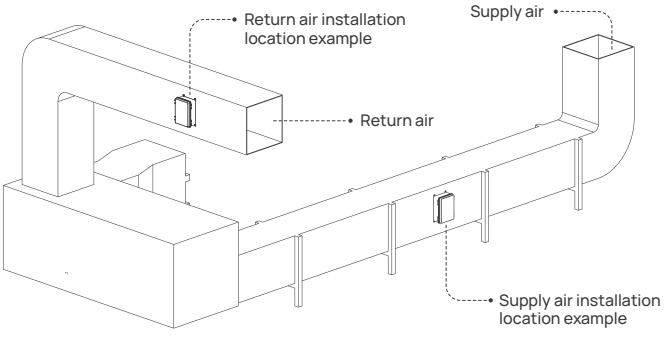
Ensure you have the following before starting the device installation:

- **Kaiterra Data Platform Account:** If you don't have an account or need help, please contact your Customer Success Manager at Kaiterra, or email us at support@kaiterra.com.
- **Kaiterra Configuration App:** A smartphone with the latest version of the app installed. Search for **"Kaiterra"** in the Apple App Store or Google Play Store to download.
- Review all proposed device locations with your **Customer Success Manager** to confirm that all installation locations are project-suitable.
- Devices are to be installed directly onto a **supply** or **return air duct**.

Optimal Device Installation Location

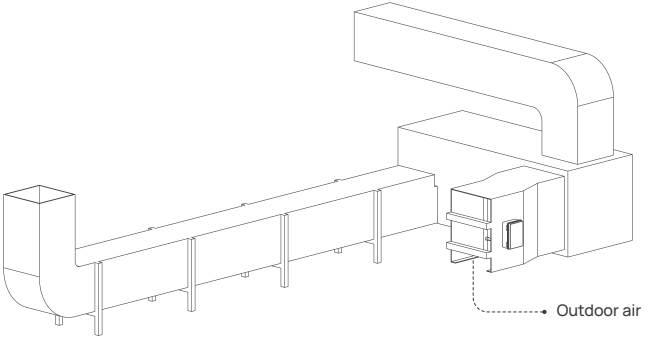
For measuring air quality in the supply or return duct:

- For supply air measurement, install the **Sensedge Duct in the supply duct** downstream of filtration and mixing.
- For return air measurement, when a dedicated return duct is available, install the **Sensedge Duct in the return duct**. When the system uses an unducted return, install an indoor air quality monitor such as a **Sensedge Go** on a wall within the return air zone. A Sensedge Duct is not required.



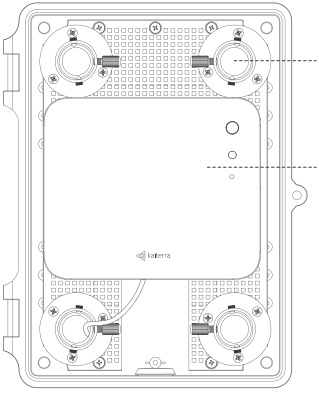
For measuring air quality in the outdoor air intake:

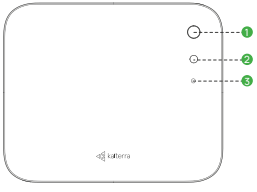
- For outdoor air intake measurement, install a **Sensedge Duct in the outdoor air intake duct** where only outdoor air is present, typically between the weather louver and the mixing box, downstream of the louver and upstream of any mixing with return air.

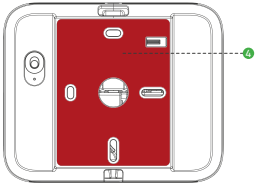


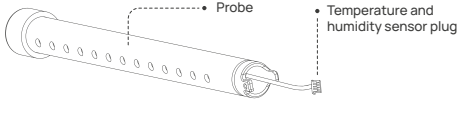
3. Know Your Device

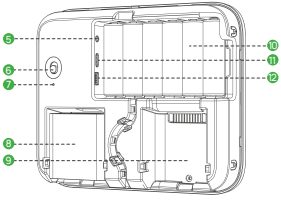
The Sensedge Go draws air in from the lower side and releases it from the upper side. It is essential to keep both sides unobstructed, as any disruption to the airflow can impact the device's readings and accuracy.







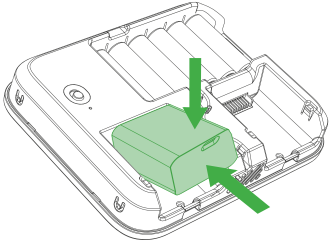




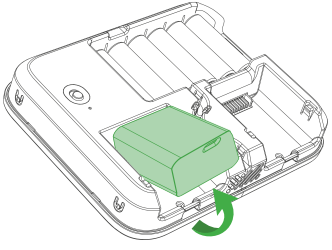
1. PIR sensor
2. Light sensor
3. LED
4. Double-sided tape
5. External antenna port
6. ON/OFF switch
7. RESET button
8. Module bays
9. Module bays
10. Batteries
11. USB-C 5V/0.5A
12. External sensor connection point

4. Sensor Modules

Sensors may be inserted in either sensor bay, and in any order. They may be swapped both when the Sensedge Go is powered on and operational, and when the device is turned off. To insert a sensor module, align it head-first with the bay, press it in, and ensure it clicks into place securely. To remove a sensor module, lift the module from the bottom up.



Insert



Remove

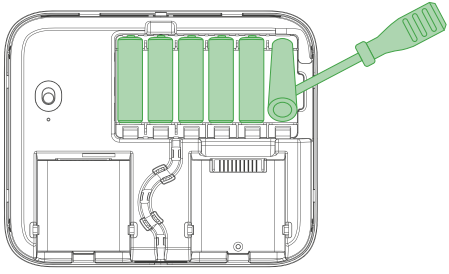
5. Power Options

The Sensedge Go provides 2 power options:

3.6 V AA Li-SOCL2 batteries

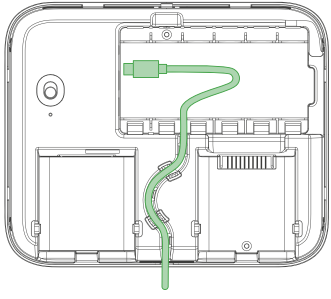
The Sensedge Go is designed to operate with 1 to 6 batteries, allowing flexibility in power configurations. Always use 3.6V ER14505 Li-SOCL2 batteries for optimal performance. Do not use rechargeable batteries, as they may damage the device.

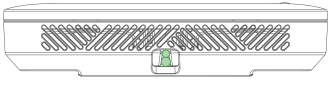
To remove the batteries, use a flat-head screwdriver to gently push the far-right battery out of its compartment. When installing new batteries, ensure proper placement: insert each battery with the positive terminal (+) aligned with the top contact and the negative terminal (-) aligned with the bottom contact, following the orientation guide inside the compartment.



USB-C (USB-C power cable not included)

The Sensedge Go is equipped with a 5V/0.5A USB-C port, located on the left side of the battery bay. This port provides a reliable and convenient option for powering the device in addition to battery operation. Ensure compatibility with the specified power output for optimal performance.





The bottom exit

6. Control and Status

Move the ON/OFF switch up to turn on the device. After several seconds, the STATUS light will light up blue to indicate the device has been powered on. To reset the device, use a paperclip or pin and hold down the RESET pinhole. The STATUS light will flash red rapidly, indicating that the reset is successful.

How to factory reset

To clear all settings and put the Sensedge Go back into its factory state:

1. Locate the RESET pinhole on the back of the Sensedge Go, below the power switch.
2. Turn on the device and wait for it to boot up fully, confirmed when the blue LED light turns off.
3. Insert a pin or similar object into the reset hole.
4. Press and hold the RESET button inside the hole for about 10 seconds.
5. Release the button when the LED begins blinking rapidly in blue, indicating the device has been reset to factory settings.

Device status light indications

Device State	LED Behaviour
Booting up	Solid blue for 4 seconds
Waiting for configuration	Pulse orange every 1 second
Searching for / connecting to gateway	Pulse orange every 3 seconds
Connected to gateway	Solid blue for 4 seconds
Factory-reset countdown	Blink blue for the final 10 seconds of the countdown
Factory-reset confirmed	Fast blink orange

7. Installation Steps

❶ Set up a gateway

a. Attach the gateway antenna.
b. Connect gateway to Ethernet, unless this installation will be using the included SIM card (fees apply).
c. Connect gateway to power.
d. Wait for at least 4 mins. Removing power before the gateway is fully booted up can lead to errors or failure.

❷ Select the installation point

Choose a straight, vertical section of the duct to mount the monitor. Ensure at least 5 feet (1.5 meters) of straight, unobstructed ductwork upstream of the sensor for accurate airflow measurement.

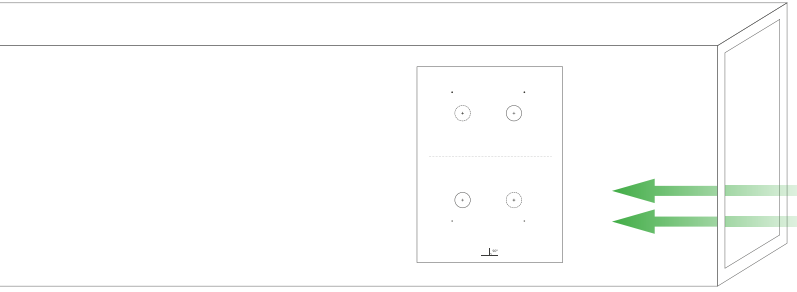
❸ Identify the airflow direction

ⓘ Important! Air should only enter the kit through one of the lower ports and exit through the opposite upper port.

❹ Apply the drilling template

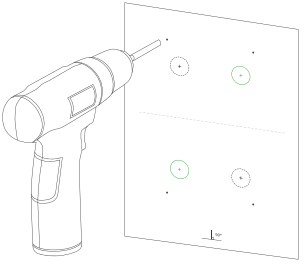
a. Identify the correct holes to drill on the template sticker according to your installation setup. Select either Group A or Group B only.

b. Position the template sticker on the duct, making sure it is level and aligned perpendicular to the airflow direction.



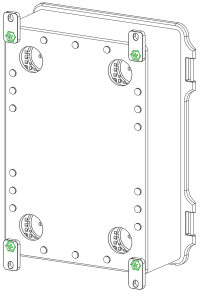
5 Drill holes

a. Use the drill bit sizes indicated on the template to create the required openings.
b. Drill only the holes identified earlier.



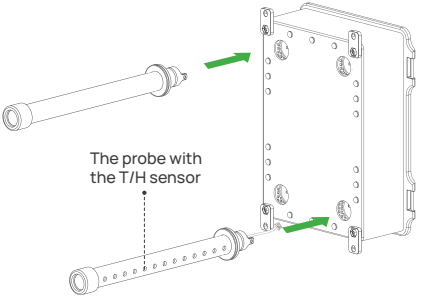
6 Assemble the duct kit

a. Secure the mounting brackets to the rear of the in-duct housing using the 10mm tapping screws.

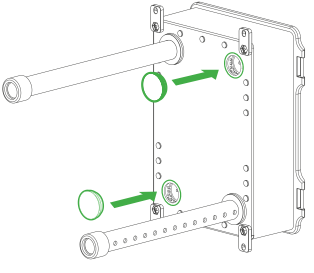


b. Place two O-rings on each probe.

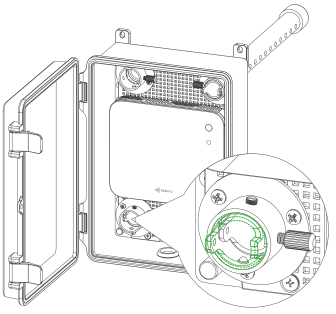
c. Insert the probe with the T/H sensor into the lower port, and the other probe into the upper port.



d. Cover the remaining two holes using the stoppers.



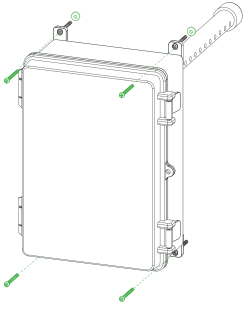
e. Push the probes from the back of the kit until you hear a click, confirming they are securely seated at the correct depth.



❼ Secure the monitor assembly to the ductwork

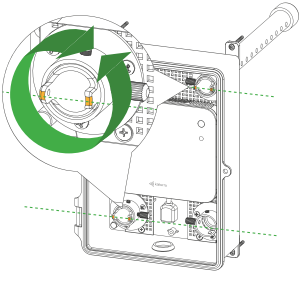
a. Install the Sensedge Duct onto the ductwork, secure using the tapping screws. Place a washer between the bracket and the duct wall.

b. Make sure the O-ring forms a complete seal, covering any gaps between the Sensedge Duct and the ductwork.

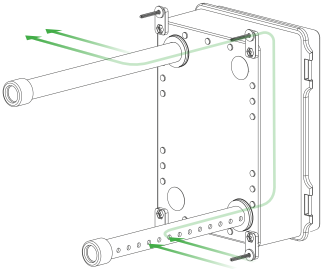


❽ Securing the probes

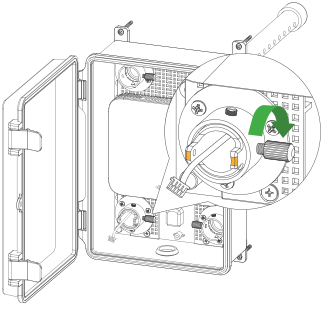
a. Adjust the angle of the probe by rotating it. Use the orange markings at the end of the probe to confirm correct alignment.
Note: The end of the finger grip with the small hole indicates where the sensing holes are located inside the duct.



b. Ensure the holes on the lower air-in probe are aligned parallel to and facing directly into the airflow. Position the holes on the air-out probe so they face away from the airflow and remain parallel to the airflow direction.

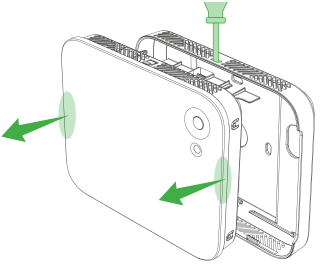


c. Tighten the knob on the side to lock the probes in position. Tighten just enough to prevent movement, but avoid over-tightening, as excessive force may deform the probes.

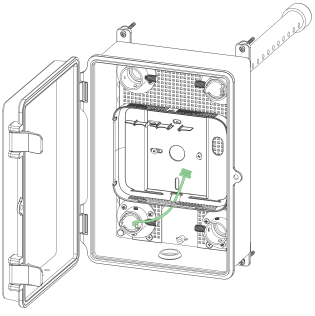


9 Connect the external T/H sensor

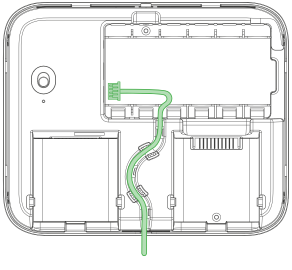
a. Remove the back cover, insert a flat-head screwdriver (5mm or 3/16 inch) or pin into the slit at the top of the device. Apply gentle pressure to release the device slightly, then pull it forward to detach it from the cover.



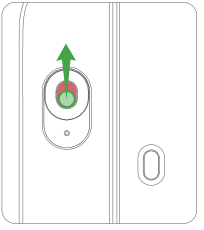
b. Insert the temperature and humidity probe cable through the bottom opening of the device's back cover.



c. Plug the temperature and humidity sensor into the external sensor connection point, ensure the cable is securely fitted into the cable slot.



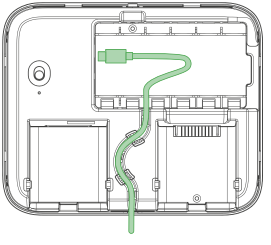
⑩ Power on device



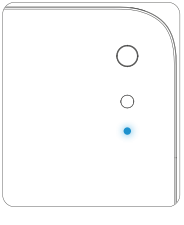
Option A: Pre-installed batteries

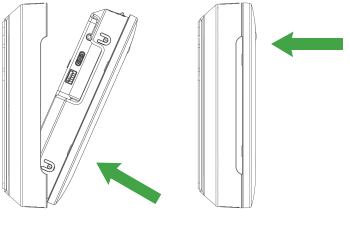
Turn on the device by sliding the ON/OFF switch on the back of the device upwards (batteries are pre-installed in the device by default).

Option B: USB-C cable

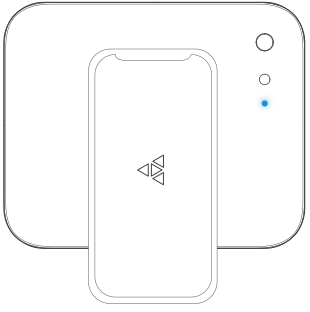


a. Route the USB-C cable through the port opening at the bottom of the box and connect it to the USB-C port. Ensure the cable is securely fitted into the designated cable slot to prevent strain or disconnection.
b. Turn on the device.
c. Check the front panel to confirm the power connection; the status LED will illuminate blue for a few seconds, followed by blinking orange.
d. Put the device back into the back cover, first place the bottom of the device into the cover. Then, press the top of the device into place until you hear a click, indicating it is securely fastened.





e. Log in to Kaiterra app on a mobile device.
f. Follow the instructions in the mobile app to set up your device.
g. Log into the Kaiterra data platform to see your IAQ data!



⓫ Complete setup

Close the front cover and secure it using the two snap locks on the sides.

8. Troubleshooting

For installation, configuration, and technical troubleshooting inquiries, contact your Customer Success Manager or directly email our support channel at support@kaiterra.com.