

# Sensedge Mini

**Installation Guide with  
Outdoor Housing Accessory**

# 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.

## Warning

- This outdoor housing is exclusively designed for use with the Kaiterra Sensedge Mini.
- Use the recommended outdoor power source as advised by Kaiterra or your Kaiterra-approved supplier.

## 1. What you will need

You will need two packages for installing the Sensedge Mini with the outdoor housing: the original Sensedge Mini package and the outdoor housing accessory package.

The following is a list of the parts included in each package that you will need.

## Sensedge Mini Package - Parts



Sensedge Mini



Sensedge Mini  
sensor modules x 2



Certificate of  
calibration and testing



User Manual

## Outdoor Housing Accessory Package - Parts



Backplate



Outdoor housing



Stainless steel bracket



Fastening screws x 2



M4 screws and  
anchors (2 pairs)



Cable clips x 2 (already  
adhered onto backplate)



Extra cable clips x 2

## You Will Also Need:



Cross screwdriver



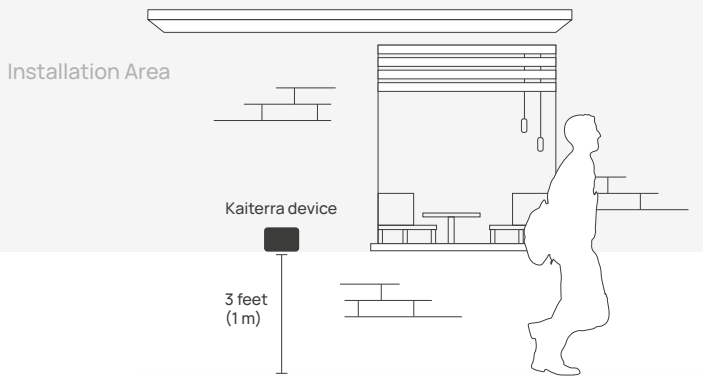
Power drill



Power cable suitable for outdoor use (through  
direct wiring to the 4-pin Phoenix connector on  
the back or via Power-over-Ethernet, if the  
device version supports it)

## 2. Where to place your Sensedge Mini?

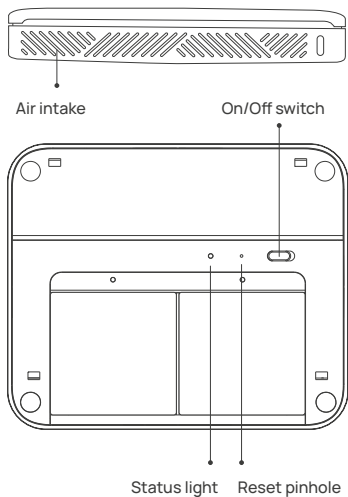
- Install in a covered area away from direct sunlight. Prolonged exposure to direct sunlight may reduce its overall lifespan. Choose a location with adequate shade to shield the device from the sun.
- Install the device vertically upright with the opening facing downward to prevent rainwater from entering the housing. Do not angle the housing, as it may reduce its coverage ability.
- Install your device at least 3ft (1m) above ground level to prevent water from splashing into the device.
- Please make sure that your desired mounting location is close to a power source.
- Ensure that the power supply will not be submerged in water.
- To ensure optimal performance, keep the installation site and opening free from debris, insects, or spider webs that may accumulate at the bottom of the unit and obstruct the airflow.



### 3. Know your device

Remove the front cover of the Sensedge Mini, and you will find the ON/OFF switch and RESET pinhole, as well as a device status light.

Air is drawn into the Sensedge Mini from the lower side, as well as the air intake on the upper side. It is vital that neither side of the device is covered. Any changes in airflow may affect the readings and accuracy.

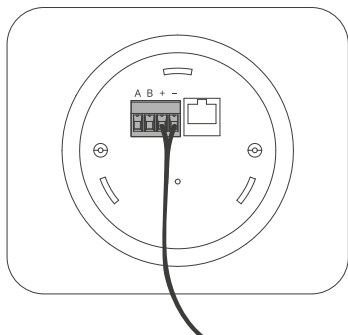


## 4. Power the device

Plug a 4-pin Phoenix connector or Ethernet cable (if the device version supports it) into the corresponding terminals on the back of the device.

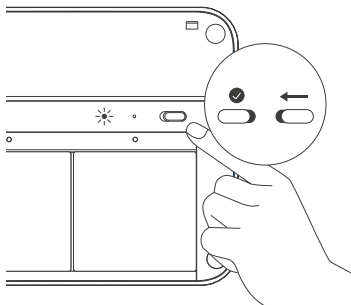
### IMPORTANT SAFEGUARDS

- Please use a power source suitable for outdoor use.
- Please contact the facility manager or other responsible personnel if the power source specification is not clear.
- The device must be installed by certified electricians or other authorized personnel ONLY.
- When installing the device, ALWAYS follow safety precautions to reduce risk of fire, electric shock, injury to persons.
- Make sure the power is cut off before proceeding!



## 5. Turn on the device and check for power connection

Move the ON/OFF switch to turn on the device. The STATUS light will go on briefly to indicate the device has been powered on.



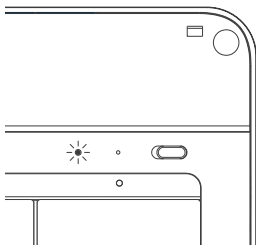
## 6. Choose your connectivity option

### A. Set up Wi-Fi

#### 1. Prepare for configuration

Download the Kaiterra Configuration Tool and install it on your computer or smartphone.

After the device has been turned on, it will automatically enter the configuration mode for 15 minutes.



The STATUS light will flash in yellow. If your device isn't in configuration mode, please turn off the device and turn it back on again.

## 2. Connect to Wi-Fi

Open network settings on your computer or smartphone and look for the Wi-Fi network that starts with "Kaiterra". Connect to that network.

On the Configuration Tool, you can enter a name for the device (e.g. the location of the device or the serial number) and a project tag. This will provide easy identification and filtering in the configuration history page later on to help you quickly connect the device to the Kaiterra dashboard.

Enter the Wi-Fi details to the applicable fields on the Configuration Tool, including:

- SSID
- Security type
- Password
- IP (manual mode only)
- Subnet mask (manual mode only)
- Gateway (manual mode only)

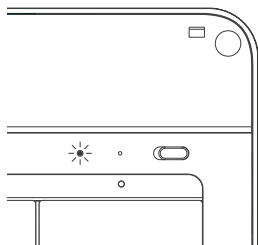
Click configure device and disconnect from the "Kaiterra" network.





### 3. Check for connectivity

The STATUS light will flash in green during the pairing process, and eventually go off when the connection is successfully completed.

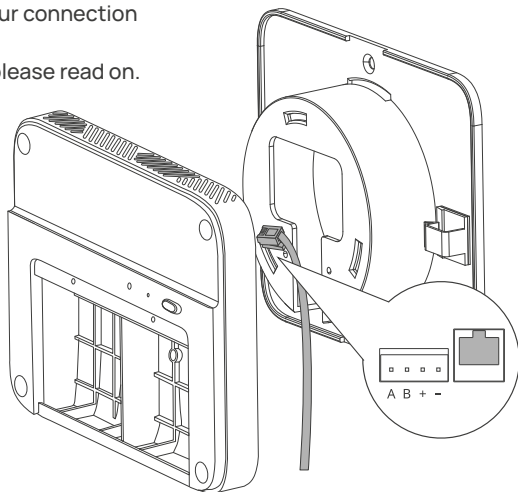


### B. Set up ethernet

Run your Ethernet cable through the opening on the plate, and into the Ethernet port on the back side of the device. You should hear a click sound and see a green light on the cable port.

If DHCP mode is used, your connection should be completed.

If Manual Mode is used, please read on.



## 1. Manual mode - prepare for configuration

If you choose to set up manual mode, please download the Kaiterra Configuration Tool and install it on your computer or smartphone.

After the device has been turned on, it will automatically enter the configuration mode for 15 minutes. The STATUS light will flash in yellow. If your device isn't in configuration mode, please turn off the device and turn it back on again.

## 2. Manual mode - connect to network

Open network settings on your computer or smartphone and look for the Wi-Fi network that starts with "Kaiterra". Connect to that network.

On the Configuration Tool, you can enter a name for the device (e.g. the location of the device or the serial number) and a project tag. This will provide easy identification and filtering in the configuration history page later on to help you quickly connect the device to the Kaiterra dashboard.

Enter the network details to the applicable fields on the Configuration Tool, including:

- IP
- Subnet mask
- Gateway

Click configure device and disconnect from the "Kaiterra" network.

## 3. Check for connectivity

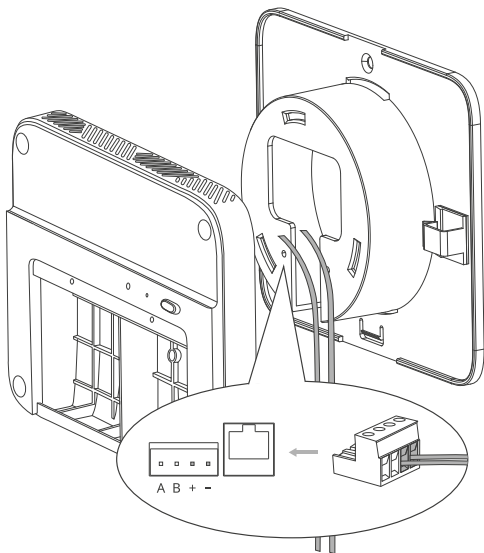
The STATUS light will flash in green during the pairing process, and eventually go off when the connection is successfully completed.

## C. Set up Modbus via RS-485

To set up Modbus communication, connect your cable from the RS-485 network to the 4-pin Phoenix pin plug on the power source. Check the “A” “B” marks on the back of the device to make sure the cables are connected in the right order, and fasten the screws on the Phoenix pin plug to secure the cables.

Plug the 4-pin Phoenix pin plug into the corresponding terminals on the back of the device.

The default Modbus address is set as 1, and can be changed later via the Kaiterra Configuration Tool.



## 1. Configure Modbus settings - prepare for configuration

Download the Kaiterra Configuration Tool and install it on your computer or smartphone.

After the device has been turned on, it will automatically enter the configuration mode for 15 minutes. The STATUS light will flash in yellow. If your device isn't in configuration mode, please turn off the device and turn it back on again.

## 2. Configure Modbus settings - connect to network

Open network settings on your computer or smartphone and look for the Wi-Fi network that starts with "Kaiterra". Connect to that network.

On the Configuration Tool, you can enter a name for the device (e.g. the location of the device or the serial number) and a project tag. This will provide easy identification and filtering in the configuration history page later on to help you quickly connect the device to the Kaiterra dashboard.

Enter the Modbus settings details to the applicable fields on the Configuration Tool, including your Modbus address (enter a number between 1 and 247), AQI standards, and pollutants to include in your AQI calculation.

Please consult the facility manager or other responsible personnel if the Modbus address is not clear.

Click configure device and disconnect from the "Kaiterra" network.

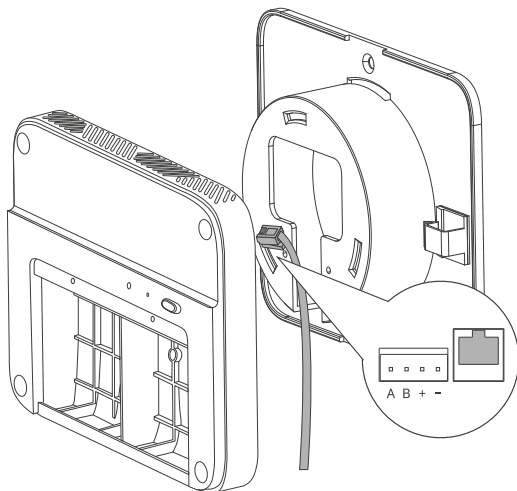
## D. Set up BACnet via Wi-Fi or ethernet

To set up BACnet communication, connect via Wi-Fi or Ethernet cable. Please follow the instructions above for your preferred network connection (Wi-Fi or Ethernet) to proceed.

### 1. Configure BACnet settings - prepare for configuration

Download the Kaiterra Enterprise Configuration Tool and install it on your computer or smartphone.

After the device has been turned on, it will automatically enter the configuration mode for 15 minutes. The STATUS light will flash in yellow. If your device isn't in configuration mode, please turn off the device and turn it back on again.



## 2. Configure BACnet settings - connect to network

Open network settings on your computer or smartphone and look for the Wi-Fi network that starts with “Kaiterra”. Connect to that network.

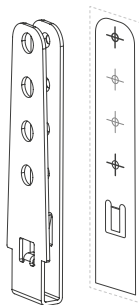
On the Configuration Tool, you can enter a name for the device (e.g. the location of the device or the serial number) and a project tag. This will provide easy identification and filtering in the configuration history page later on to help you quickly connect the device to the Kaiterra dashboard.

Enter the BACnet settings details to the applicable fields on the Configuration Tool, including your BACnet ID (enter a number between 1 and 4194302). If this field is left empty, BACnet will be disabled.

Click configure device and disconnect from the “Kaiterra” network.

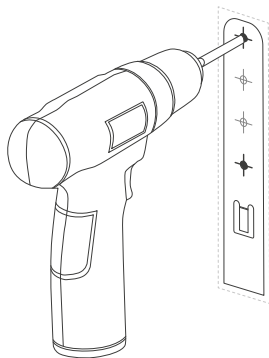
## 7. Prepare with the wall bracket

Find the bracket included in the packaging. Adhere the drill-assist sticker at the desired location for installation.



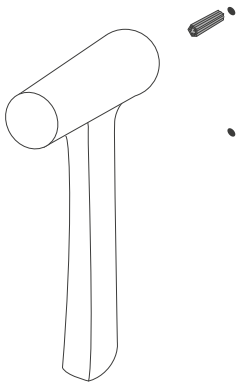
## 8. Drill holes for anchors

Use your power drill and 6mm drill bit to create two holes at the marked screw hole locations.



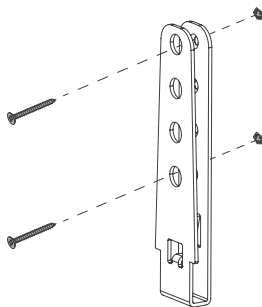
## 9. Placing anchors in the wall

Hammer the anchors into the holes with your mallet.



## 10. Mount wall bracket to the wall

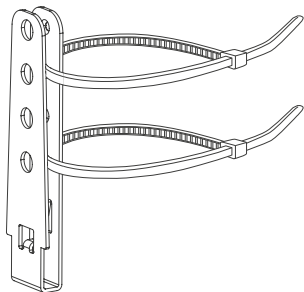
Line up the bracket (large holes facing front) with the anchors and mount it to the wall using the provided M4 screws.



Optional:

Use cable ties to secure the housing. It is important to install the device vertically upright with the opening facing downward to prevent rainwater from entering the housing. Do not angle the housing, as it may reduce its coverage ability.

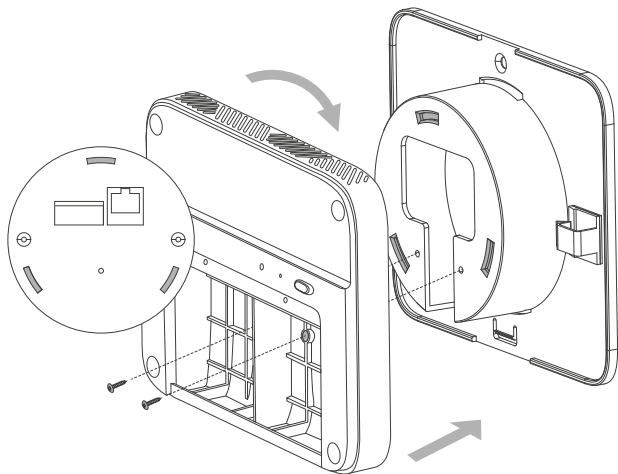
(Cable ties not included)





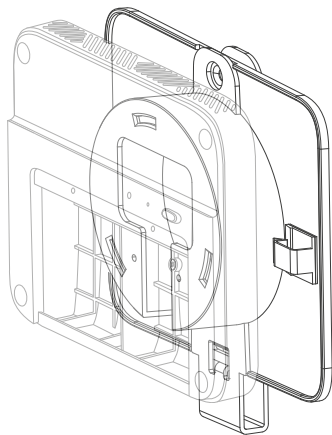
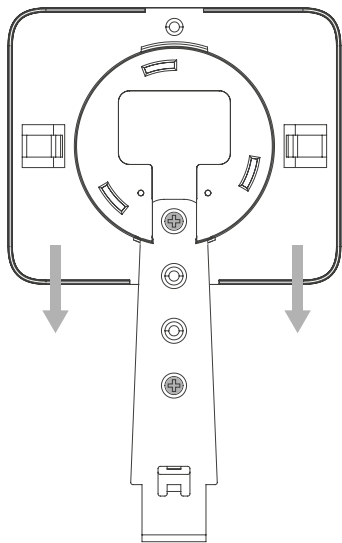
## 11. Attach the backplate onto the device

You will find three slots on the plate and three corresponding protrusions on the back of the device. Line the device up with the plate such that the protrusions are inside the corresponding slots. Rotate gently to secure the device and lock it in place, and use the two fastening screws to fasten the device to the plate.



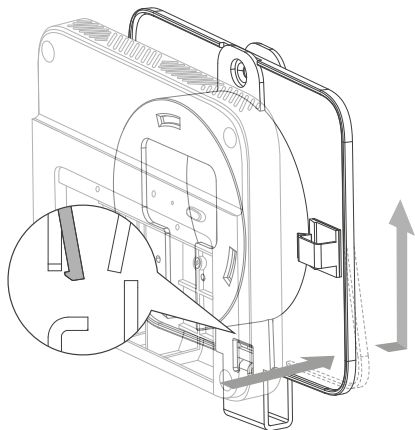
## 12. Secure the device in place

Slide the backplate over the bracket, making sure that the bracket is properly inserted into the correct slots. Once the backplate is securely latched onto the bracket, you will hear a distinct 'click' sound.



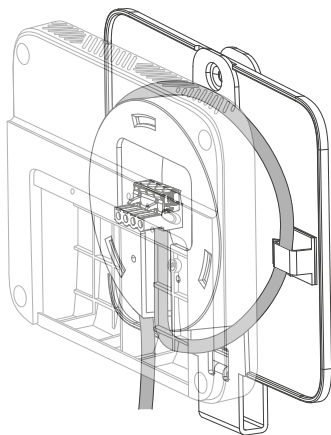
## To remove the backplate

To remove the backplate, press down on its bottom corners to release it from the latch, and then lift and remove it.



## 13. Secure the power cable

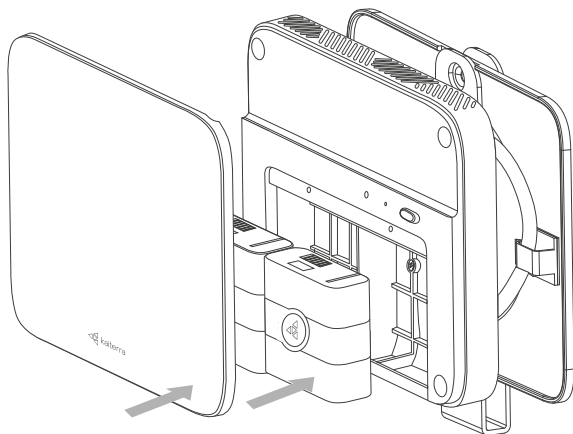
Wrap the power cable around the backplate. Use the clips to fix the cables in place to prevent any accidental tugging or pulling that could cause damage to the terminal.



## 14. Install the modules

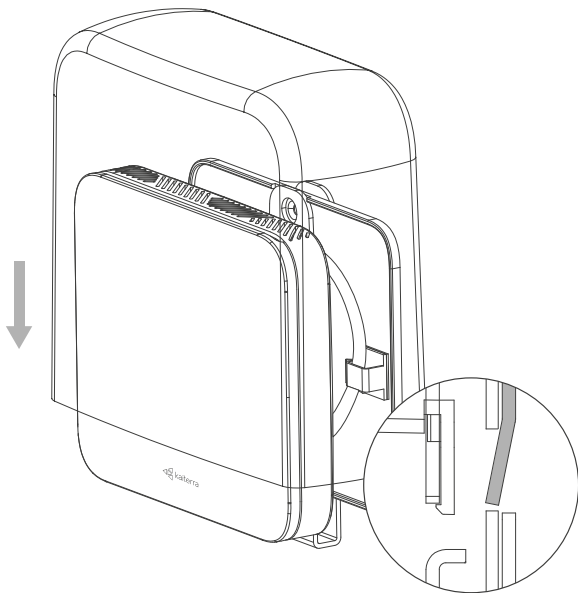
To install the sensor module, simply align it with the bay and press it in, ensuring the Kaiterra logo on the plastic tab is facing outwards. When inserted correctly, the module will click into place, and an LED light above the bay will briefly flash red if the device is powered on.

Sensor modules may be inserted in either sensor bay, and in any order. After successfully installing the modules, put the front cover on.



## 15. Attach the outdoor housing

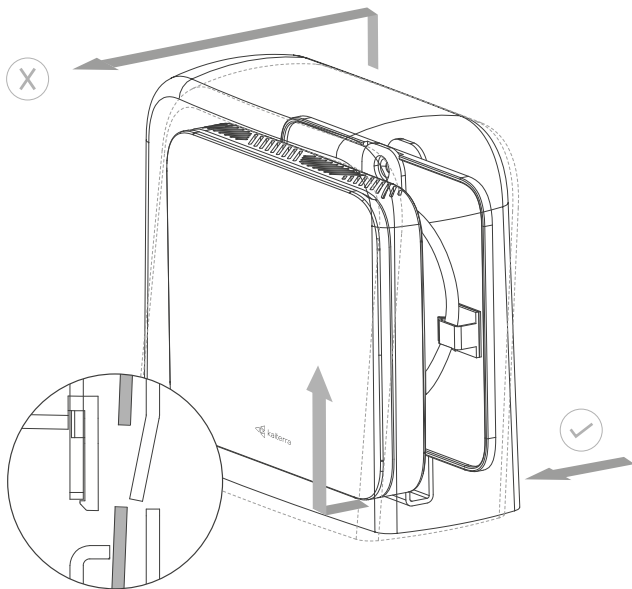
Make sure the device is fully covered, with only the bracket visible. Make sure the housing is properly locked into position, as shown in Image 3.



## To remove the outdoor cover

To remove the housing, start by pulling the back of the housing forward to unlatch it from the bracket, and then lift it up.

Avoid pulling the housing forward from the top directly, as this may cause deformation to the bracket.



## 16. Installation completed!

You have completed the installation process. Now follow our Dashboard Setup Guide to set up your Kaiterra dashboard account and connect your device to the dashboard.



For additional support, please contact us at [support@kaiterra.com](mailto:support@kaiterra.com)