MERRYIOT

MerryIoT Sensors Home Kit

Quick Installation Guide

Content

Safety Warning

Read this manual before attempting to install the device!

Failure to observe recommendations included in this manual may be dangerous or cause a violation of the law. The manufacturer, **Browan Communications Inc.** will not be held responsible for any loss or damage resulting from not following the instructions of this user manual.

- The device must not be dismantled or modified in any way.
- The device is only intended for indoor use. Do not expose it to moisture.
- The device is not intended to be used as a reference sensor, and **Browan Communications Inc.** will not be held liable for any damage which may result from inaccurate readings.
- The battery should be removed from the device if it is not to be used for an extended period. Otherwise, the battery might leak and damage the equipment. Never leave a discharged battery in the battery compartment.
- The device must never be subjected to shocks or impacts.
- To clean the device, wipe with a soft moistened cloth. Use another soft, dry cloth to wipe dry. Do not use any detergent or alcohol to clean the device.

Contact Us

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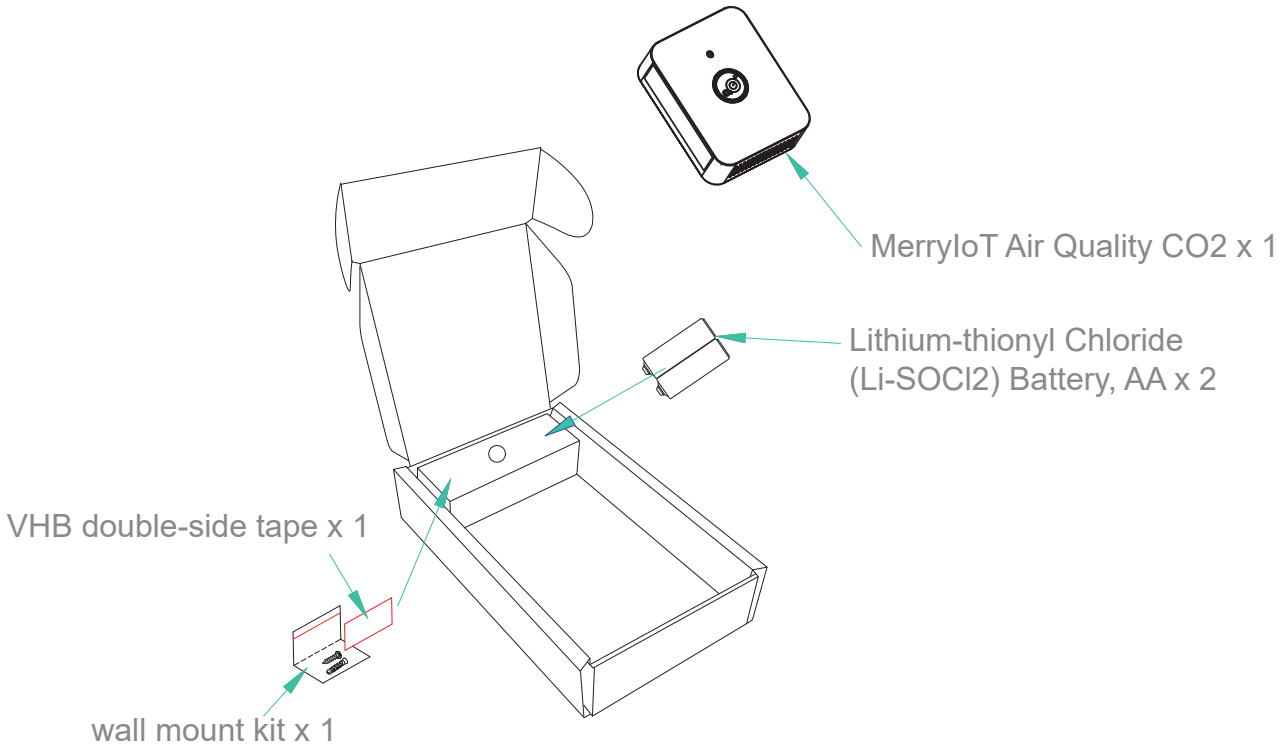
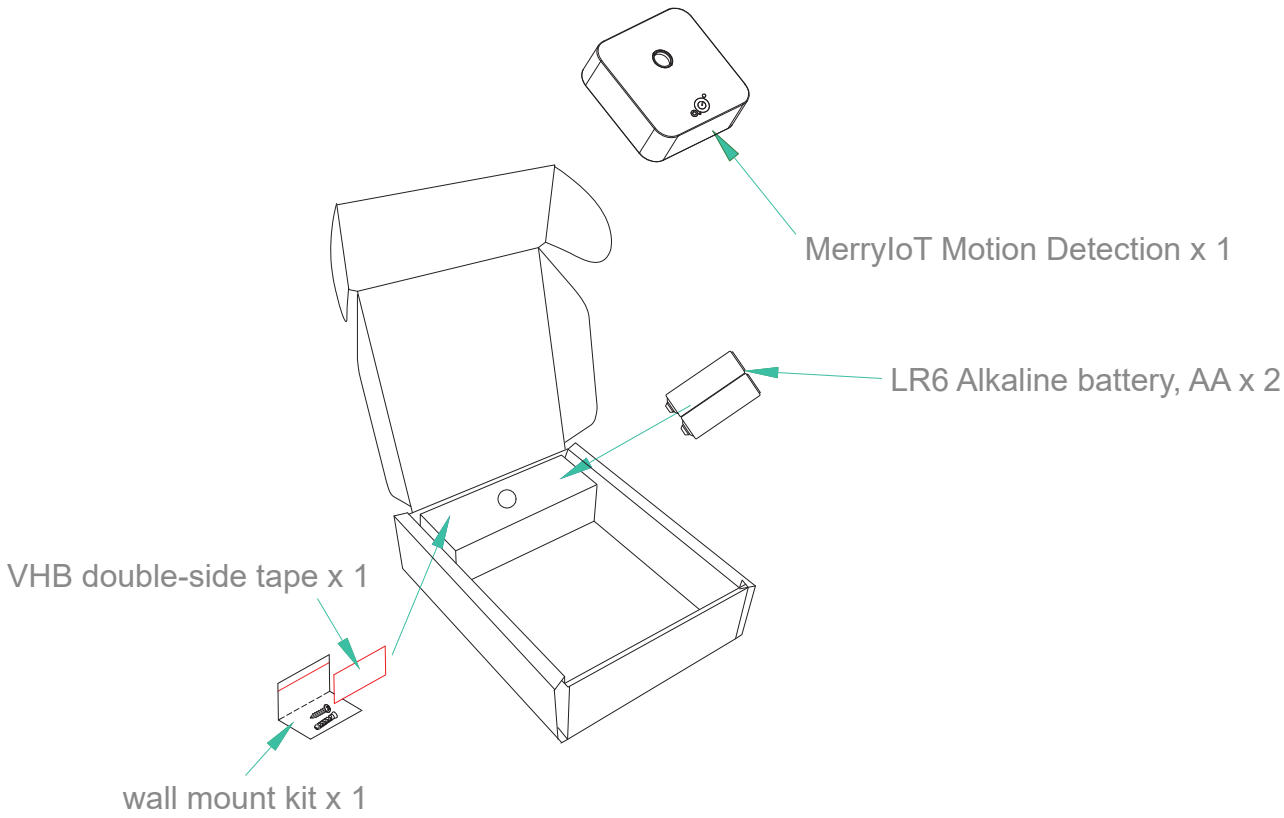
Hukou, Hsinchu, Taiwan, 30352

Chapter 2 - Package Content

MerryIoT Air Quality CO2 (CD10)

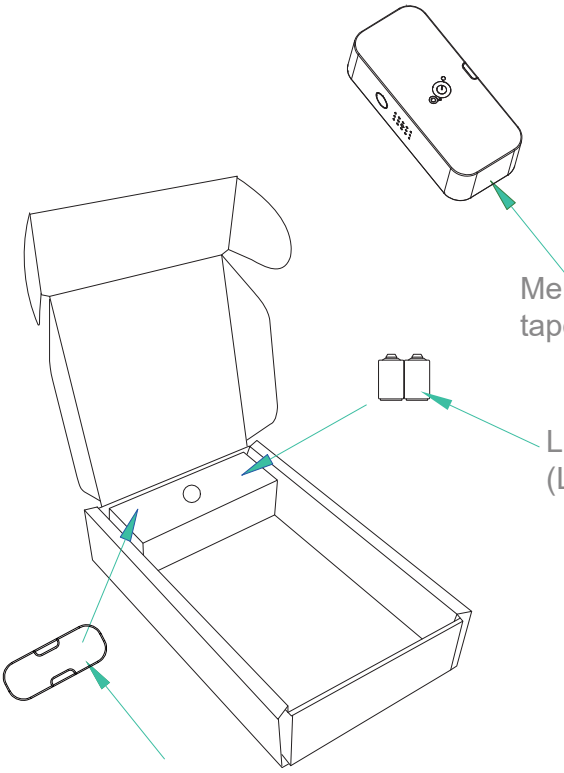


MerryIoT Motion Detection (MS10)



Chapter 2 - Package Content

MerryIoT Open/Close (DW10)

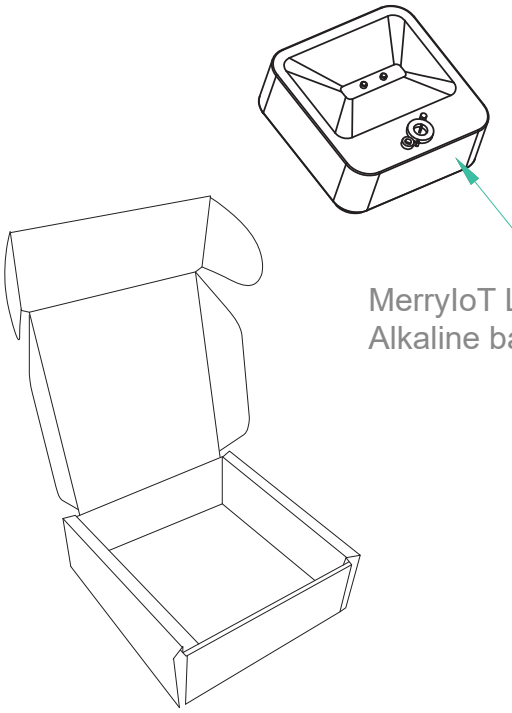


MerryIoT Open Close x 1 with VHB double-side tape x 1 attached on the sensor

Lithium-thionyl Chloride (Li-SOCl2) Battery, 1/2 AA x 2

Magnet x 1

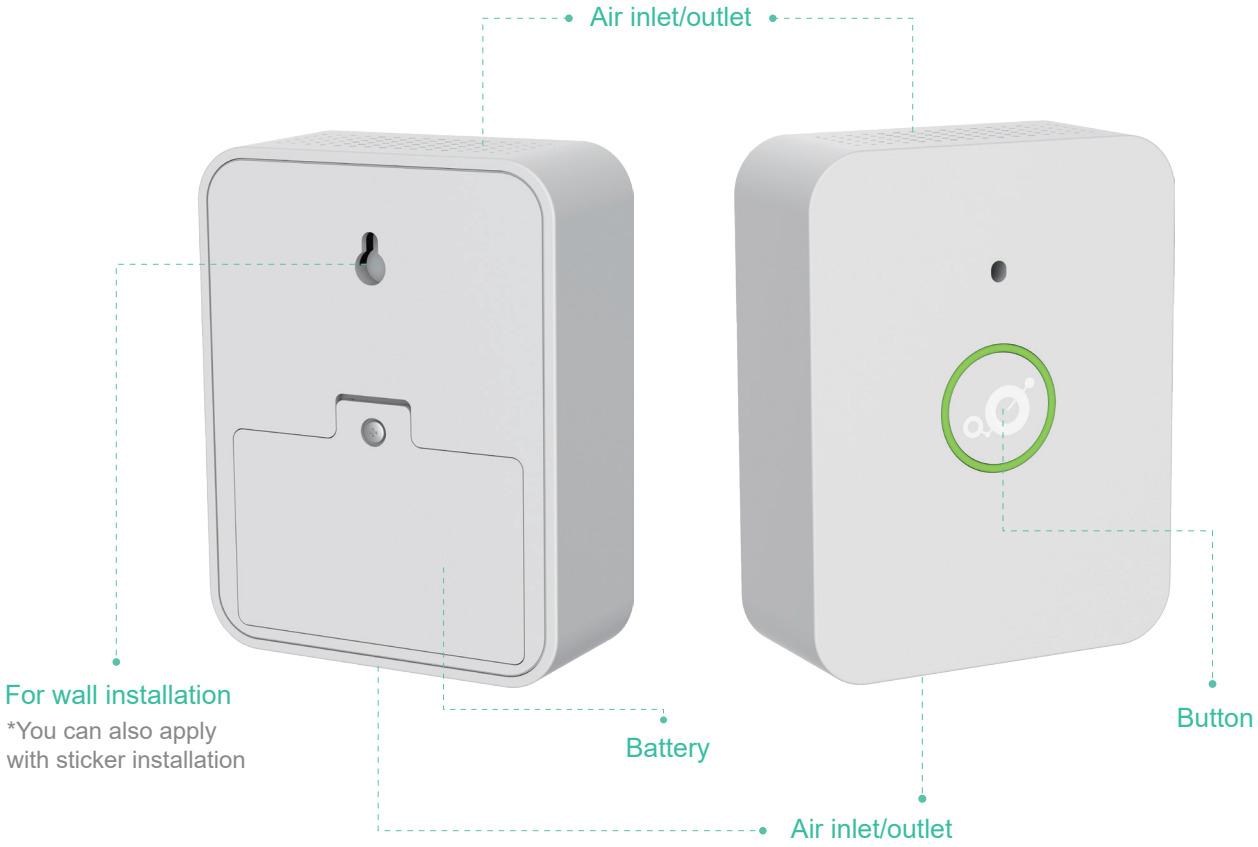
MerryIoT Leak Detection (WL10)



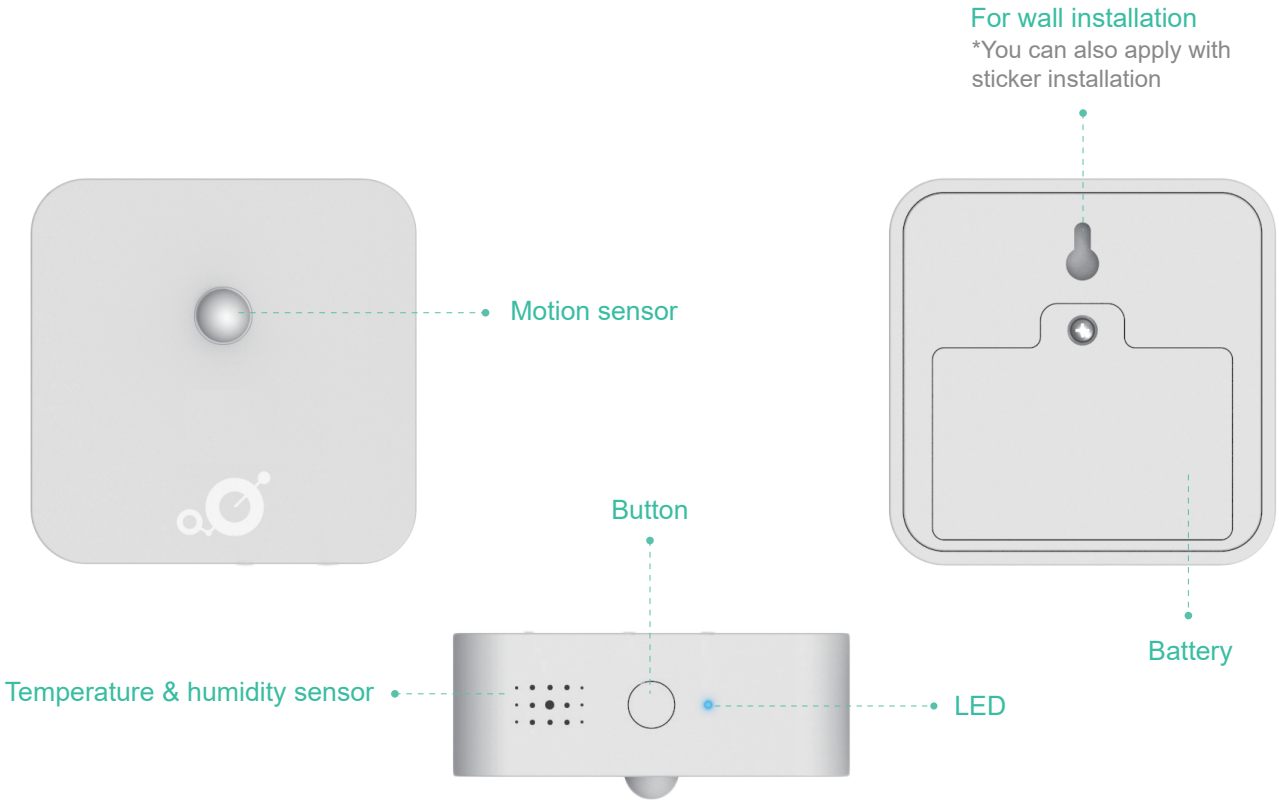
MerryIoT Leak Detection x 1 with LR6 Alkaline battery, AA x2 installed inside

Chapter 3 - Input / Output

MerryIoT Air Quality CO2 (CD10)



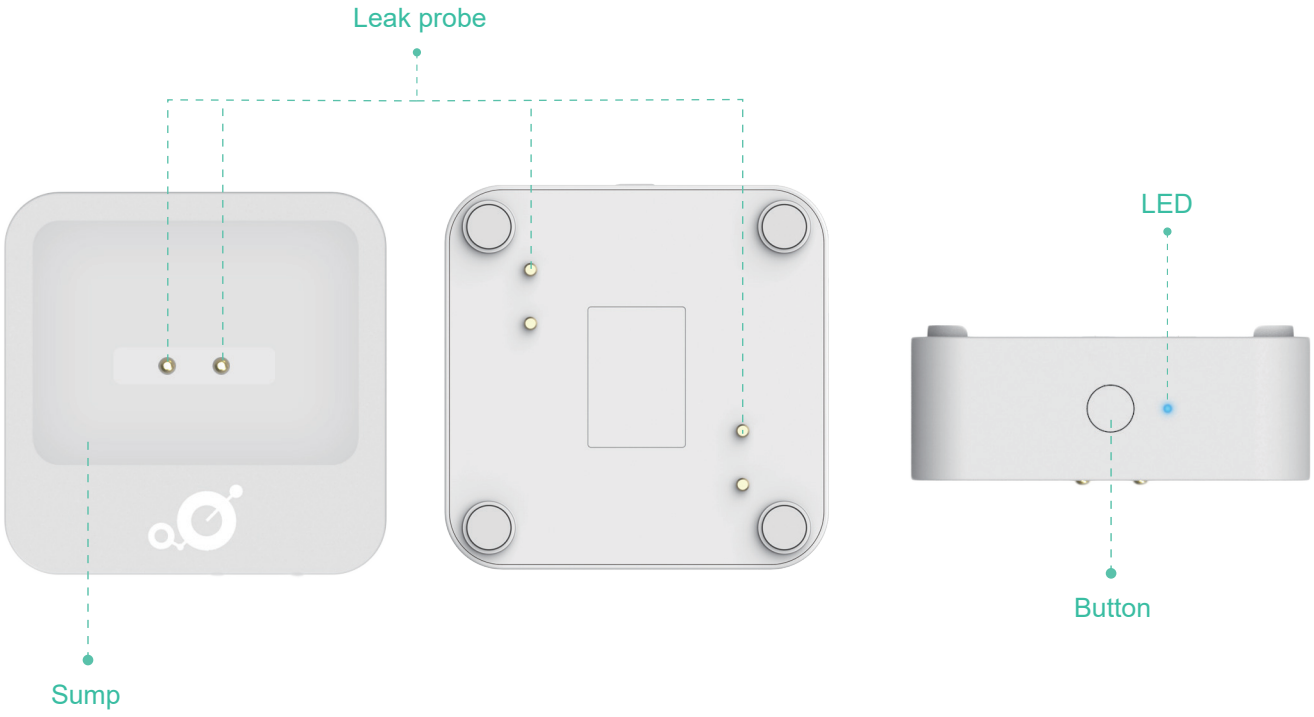
MerryIoT Motion Detection (MS10)



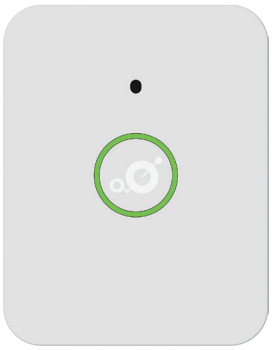
Chapter 3 - Input / Output

MerryIoT Open/Close (DW10)

MerryIoT Leak Detection (WL10)



Chapter 4 - Sensor Introduction



MerryIoT Air Quality CO2
CD10

MerryIoT Air Quality CO2 sensor (CD10) is a professional LoRaWAN smart device. Its minimalistic design makes it ideal for mounting on walls at home or at work. It provides full surveillance over the CO2 levels, temperature, and humidity.

Features:

- 3 sensors in 1 (CO2 & Temperature & Humidity)
- Built-in buzzer for alarm if the CO2 level is more than 1000 ppm
- LoRaWAN technology with a long communication distance
- Coverage test button for easy installation
- Up to 2 years of battery lifetime

  *Note: Battery life is mainly determined by the reporting frequency. Other factors include moisture and high temperature.

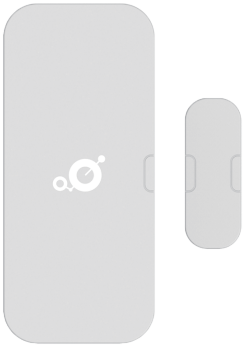
MerryIoT Motion Detection
MS10

MerryIoT motion detector (MS10) is an easy step toward a safer home. It monitors front and back doors, driveways, sheds, garages, and gates, making it suitable for all your properties. This sensor also provides an additional level of security for your loved ones. Moreover, it promptly alerts you in case of emergencies.

Features:

- 4 sensors in 1 (PIR & Temperature & Humidity & Vibration)
- Detect human presence accurately
- LoRaWAN technology with a long communication distance
- Coverage test button for easy installation
- Alarm message for the device is been moved or tampered
- Up to 3 years of battery lifetime

  *Note: Battery life is mainly determined by the reporting frequency. Other factors include moisture and high temperature.
- Ultrawide range detection
  - 125° Horizontal
  - 100° Vertical
  - Up to 7m distance



MerryIoT Open/Close
DW10

MerryIoT Open/Close sensor (DW10) gives you peace of mind, anywhere, anytime. Get real time alerts at the exact moment you have unexpected guests, broken windows, opened safes, an opened mailbox or escaped pets.

Features:

- 4 sensors in 1 (Open/Close & Temperature & Humidity & Vibration)
- LoRaWAN technology with a long communication distance
- Coverage test button for easy installation
- Alarm message for the device is been moved or tampered
- Up to 3 years of battery lifetime

  *Note: Battery life is mainly determined by the reporting frequency. Other factors include moisture and high temperature.

Chapter 4 - Sensor Introduction

MerryIoT Leak Detection
WL10

MerryIoT Water Leak Sensor (WL10) will instantly notify you as soon as it detects water leakage. You can now say goodbye to concerns about leaks or flooding in your basement, under your sinks, around your water heater, or anywhere else in your home.

Features:

- 4 sensors in 1 (Drip/Leak/Flood & Temperature & Humidity & Vibration)
- Built-in water sensing probes on top and bottom for leak/flooding detection
- LoRaWAN technology with a long communication distance
- Coverage test button for easy installation
- Alarm message for the device is been moved or tampered
- Up to 3 years of battery lifetime

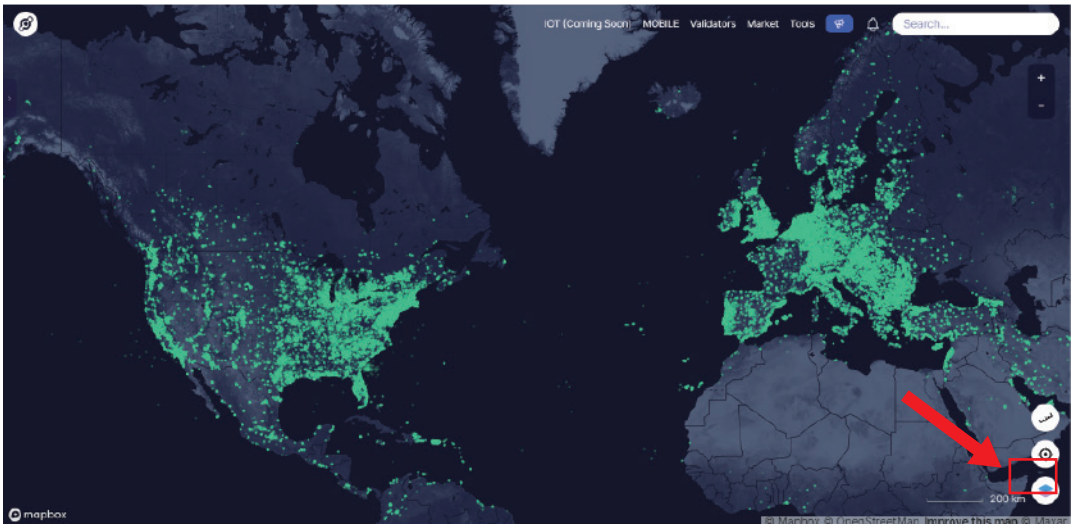
*Note: Battery life is mainly determined by the reporting frequency. Other factors include moisture and high temperature.

Chapter 5 - Sensor Installation

1. Please ensure you have Helium coverage in your area before installing the MerryIoT Sensors. Best senerio is you already have a Helium miner up and running. If you don't have a Helium miner running, you should check the Helium coverage in your neighborhood. Visit https://explorer.helium.com and follow these steps:

   ① Press "find my location" icon, and the map will redirect to the vicinity of your location.

   ② According to the vicinity of your location, find your accurate location to see if any Helium coverage around here.



*Annotation: A hexagon in Helium represents a semi-precise point location covering 300 m² (3200 ft²), which is comparable to the footprint of a large house. The number displayed on the Hexagons indicates how many Helium hotspots have been confirmed to be located within that area. This can give you an idea of how many Helium hotspots are installed within a 300 m² (3200 ft²) space.

Chapter 5 - Sensor Installation

2 Install and launch MerryIoT mobile application on your phone.

*Search: MerryIoT Sensor

GET IT ON Google Play

Download on the App Store

3 Register your account.

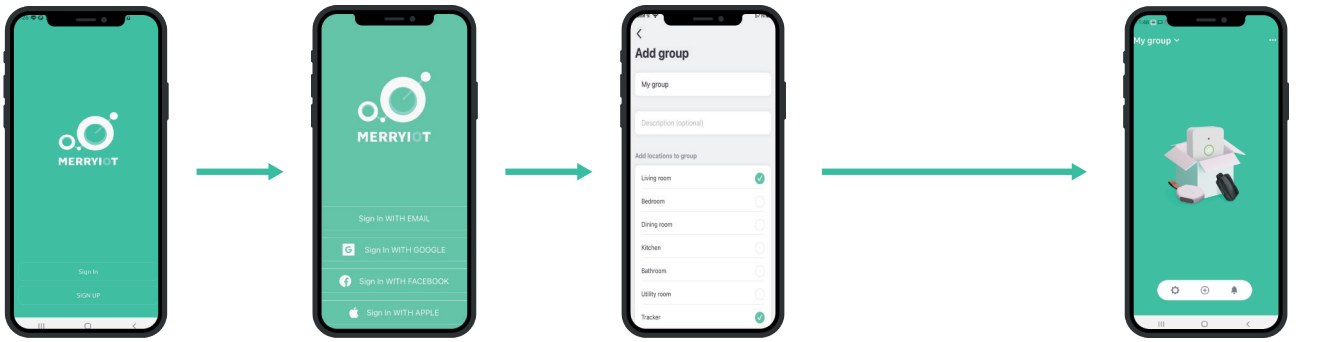
Sign in by social media:

1 Press Sign In.

2 Select Sign In WITH GOOGLE/APPLE.

3 Add your group, you will see the main view after.

Sign in successfully



Create an account:

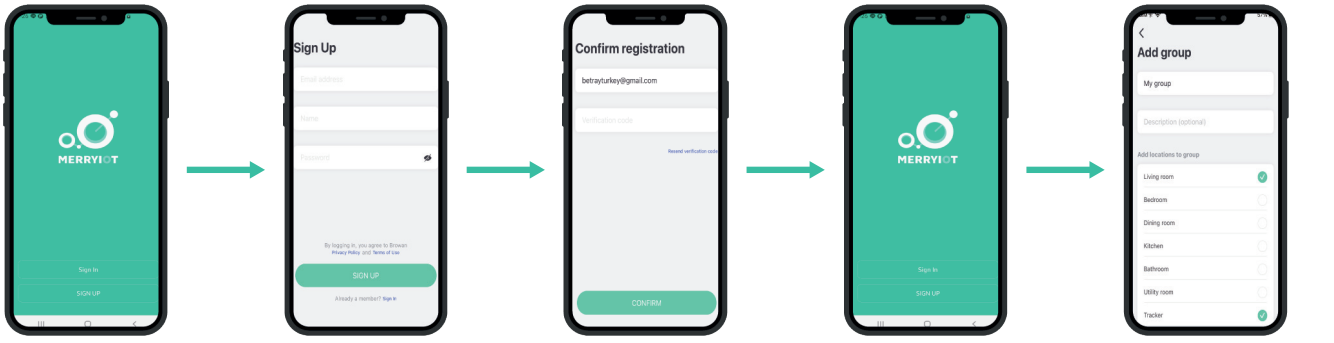
1 Press Sign In.

2 Fill in your information.

3 Confirm your mail (fill in the verification code).

4 Press Sign In and select "Sign In WITH EMAIL".

5 Add your group, you will see the main view after.

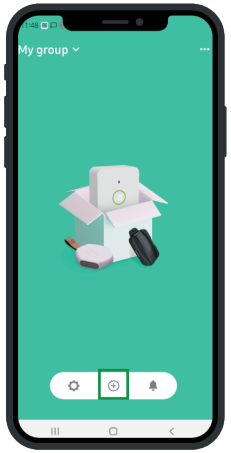


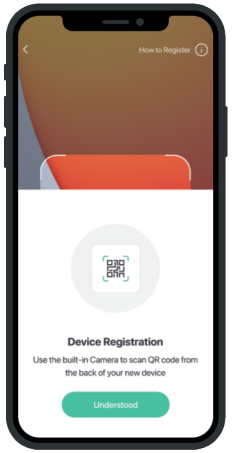
Chapter 5 - Sensor Installation

4 Add your device to the App.

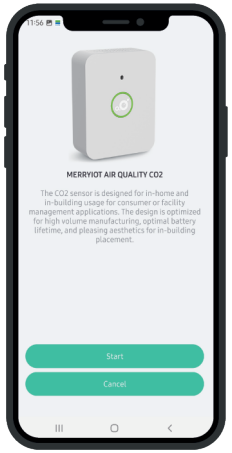
MerryIoT Air Quality CO2

CD10





After scan

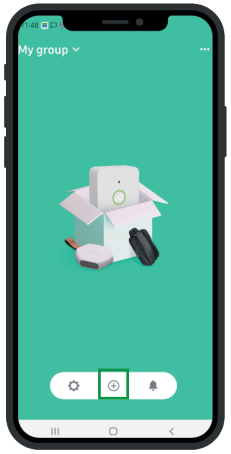


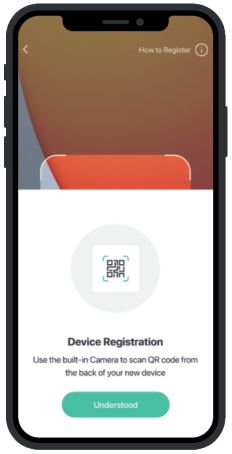
Fill in the name and the location

Click "complete".
Once the group page appears, you will have successfully added your sensors!

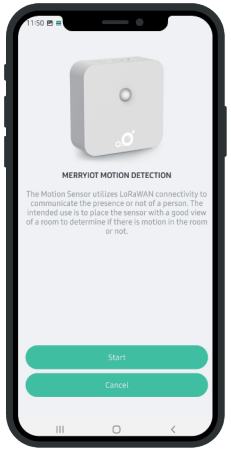
MerryIoT Motion Detection

MS10





After scan

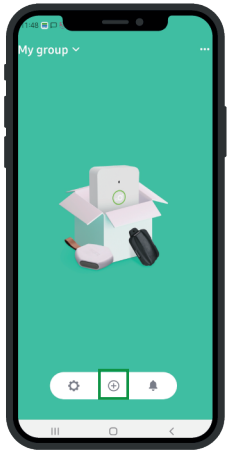


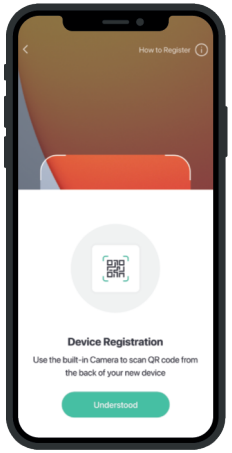
Fill in the name and the location

Click "complete".
Once the group page appears, you will have successfully added your sensors!

Chapter 5 - Sensor Installation

MerryIoT Open/Close
DW10





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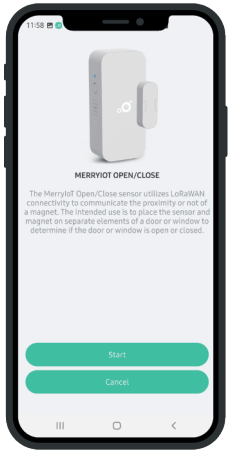
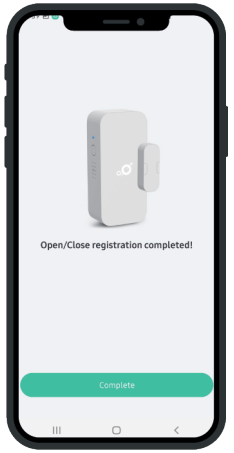
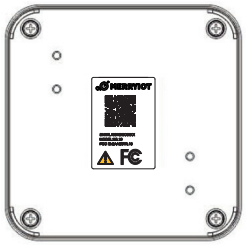


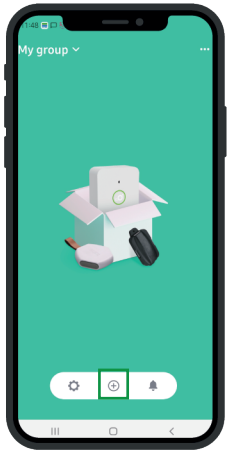
Fill in the name and the location

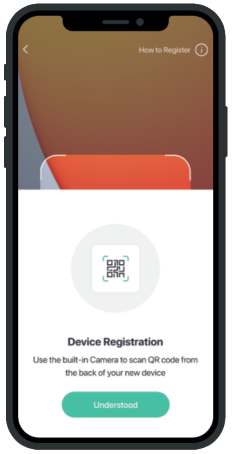


Click "complete".
Once the group page appears, you will have successfully added your sensors!

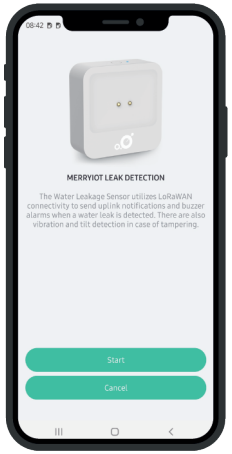


MerryIoT Leak Detection
WL10





After scan



Fill in the name and the location

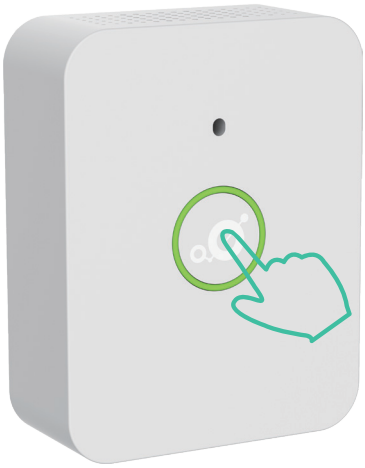
Click "complete".
Once the group page appears, you will have successfully added your sensors!

Chapter 5 - Sensor Installation

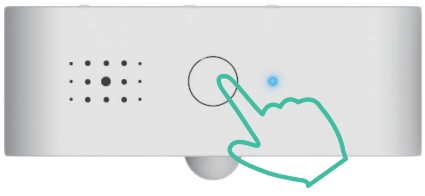
5 When the sensor is successfully online, the LED will keep on for 3 seconds.

6 Press the button on the senser, the sensor's real-time status will be updated.

7 Once the Sensor is successfully connected, the following icon will appear on the dashboard.



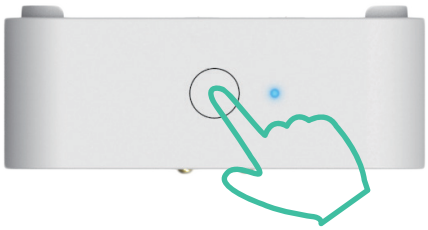
MerryIoT Air Quality CO2
CD10



MerryIoT Motion Detection
MS10

Chapter 5 - Sensor Installation

MerryIoT Open/Close
DW10



MerryIoT Leak Detection
WL10

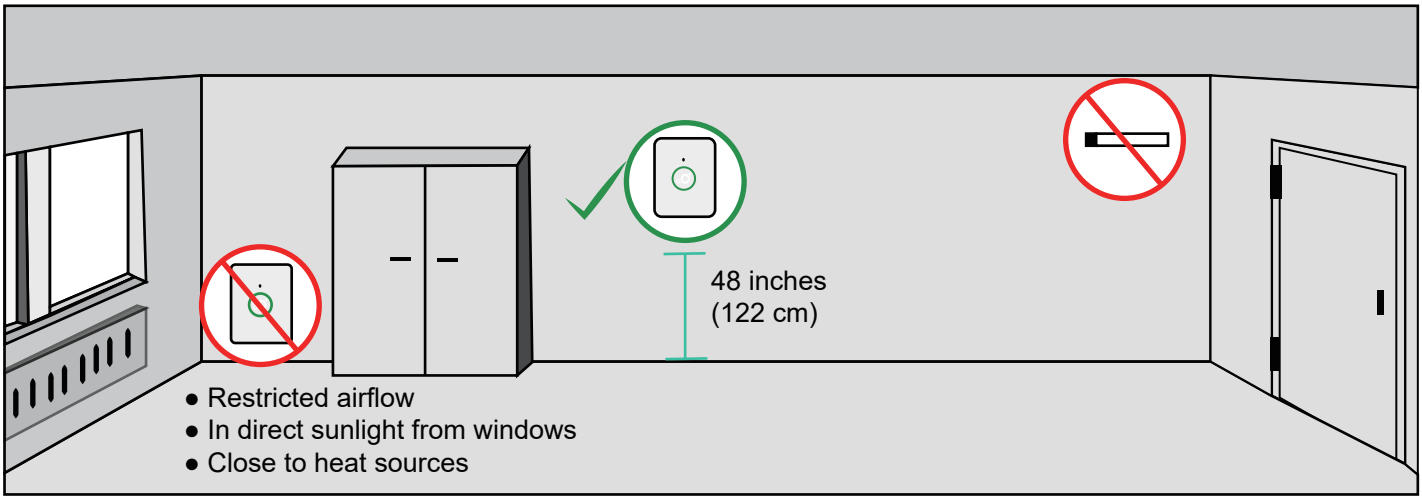
Chapter 5 - Sensor Installation

7 Once the Sensor is connected, install the Sensor to your desired location

MerryIoT Air Quality CO2 (CD10)

It is important to note that the CO2 sensor unit should be mounted at 48 inches (122cm) above the floor and kept away from external doors or windows, which may make the space appear to have more fresh air than it actually does.
Think of CO2 behaving like water – it rises from the bottom, similar to how water fills a cup. This principle applies to indoor spaces such as draft coolers, restaurants, breweries, and grow facilities. Because CO2 gas is denser than regular air, it tends to flow down stairs or collect in low lying areas first.

So, please avoid these placement:
- Restricted airflow
- In direct sunlight from windows
- Close to heat sources



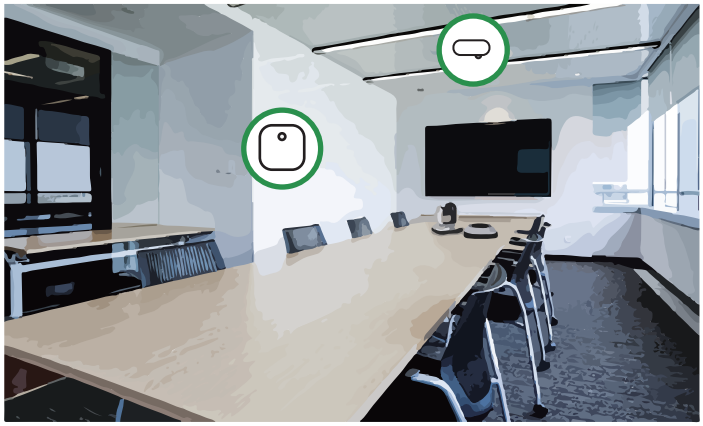
MerryIoT Motion Detection (MS10)

Assets where intruders are most likely to enter or for other applications related to occupied spaces include the following:

1. Garage Entrence (for security purposes)
   The eye of the sensor should be oriented in the direction where intruders may approach.
2. Meeting Room (for occupied space purposes)
   It is recommended to install 2 MerryIoT Motion Detections within a single space to determine its occupancy status. One sensor should be positioned with its sensor eye directed towards the entrance of the space, and the other one pointing at where people assumed to be stayed in the space.

Garage Entrence

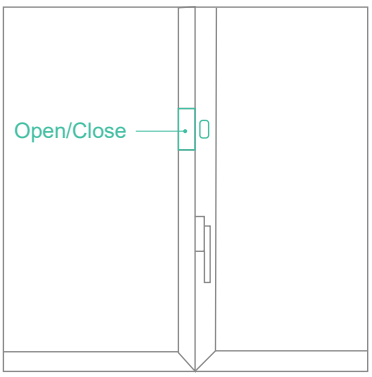
Meeting Room



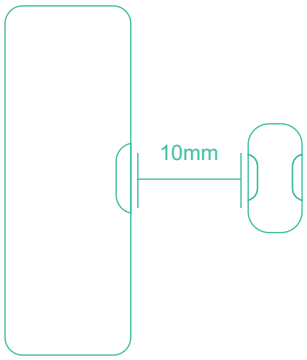
Chapter 5 - Sensor Installation

MerryIoT Open/Close (DW10)

1. Clean the installation area.
2. Remove the protective layer from the double-sided tape on the door sensor, place the door sensor in the desiredposion (the fixed part of your door or window), and press firmly for at least 5 seconds.
3. Remove the protective layer from the double-sided tape on the magnet, place the magnet in the desired postion (align the magnet marking with the hall sensor marking on the sensor), and press firmly for at least 5 seconds.
   *Note: the maximum sensing distance is 10mm.



On the window or door in any room
or on the mailbox door.

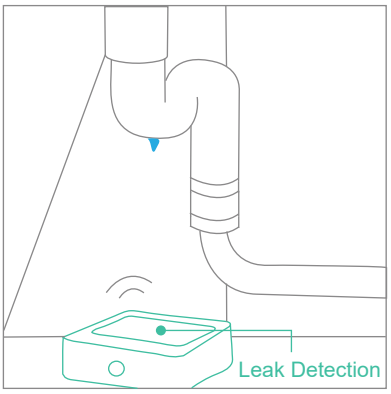


MerryIoT Leak Detection (WL10)

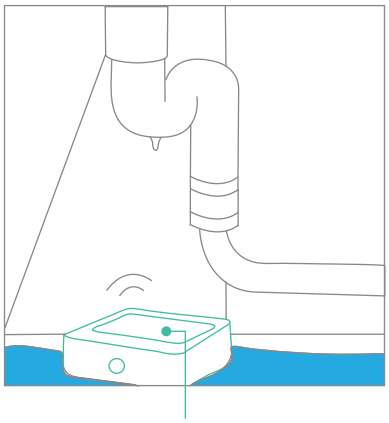
The most common application for our water detection sensors is placing them underneath AC units, which are prone to leaks. However, it is important to also address other possible risks, such as existing pipework, heating systems, kitchens, toilets and areas that might be likely to flood first during extreme weather conditions (by doors/windows).

It is recommended to install multiple MerryIoT Leak Detection Sensors in one space, where the potential leakage may occur.

1. For Home basement use.
2. For server rooms and data centers.

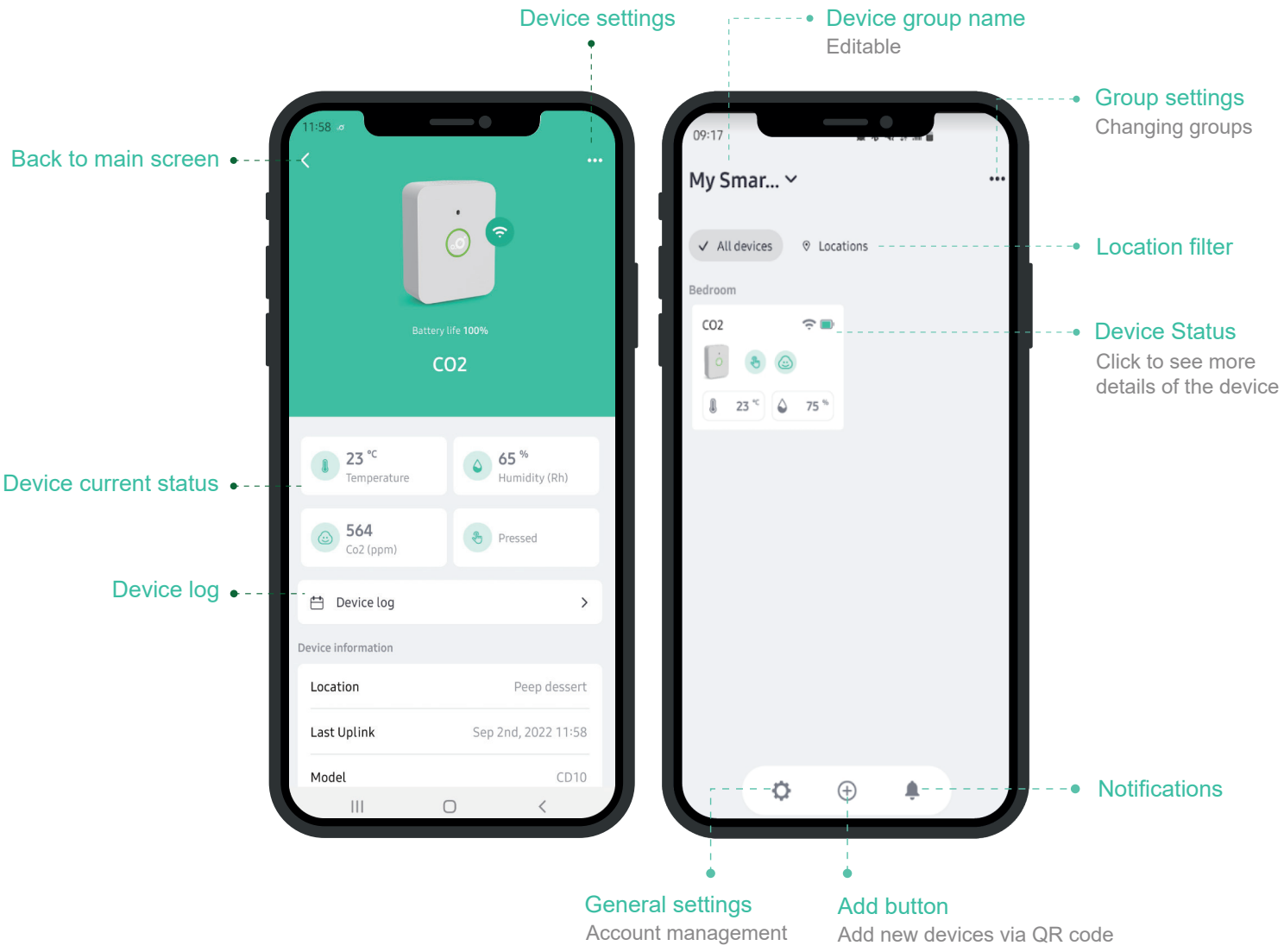


In the kitchen cabinet,
where the water pipes locate



Chapter 6 - APP Functions

MerryIoT Air Quality CO2 (CD10)



Icons

Battery status

Sufficient (green): >3.0V
Low (yellow): >2.8V
Exhausted (red): ≤2.8V

LoRaWAN Connection status

On/off

Temperature (°C/°F)

22°C

Relative Humidity (%)

50%

Both the icons of Temperature and Relative Humidity will be updated by 2 situations:
1. Periodically every 1 hour
2. Press the device's test button

Button pressed

This icon will be displayed on your app dashboard when you press the device's test button, also the CO2 level, temperature and humidity will be updated at the same time.

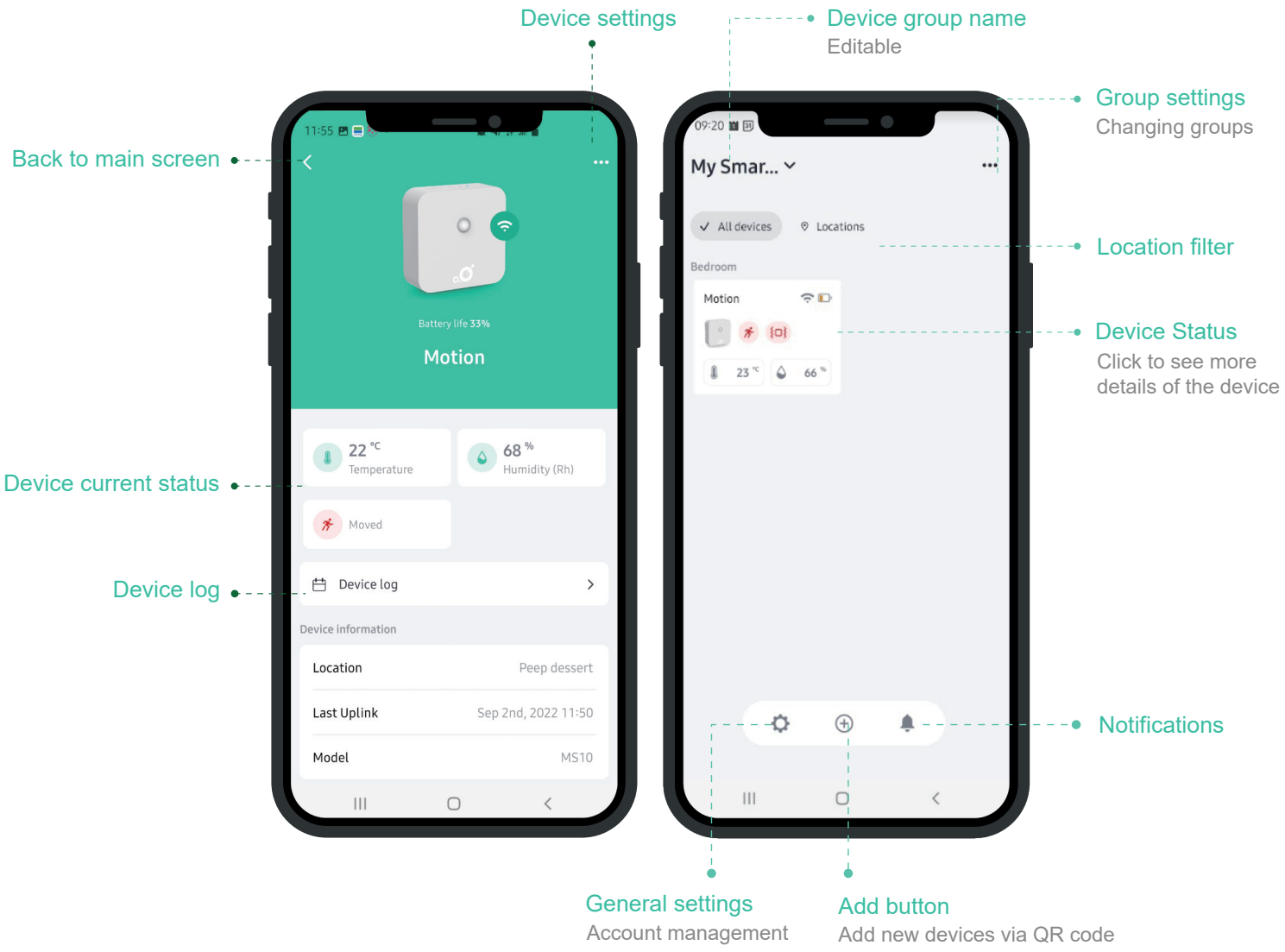
Air quality/CO_2 concentration

Excellent (green): <800 ppm
Good (yellow): 800-1000 ppm
Bad (red): >1000 ppm

This icon will be updated by 3 situations:
1. Periodically every 1 hour
2. Immediately if the CO2 level is more than 1000 ppm
3. Press the device's test button

Chapter 6 - APP Functions

MerryIoT Motion Detection (MS10)



Icons

Battery status
Sufficient (green): >2.6V
Low (yellow): >2.5V
Exhausted (red): ≤2.5V

LoRaWAN Connection status
On/off

22°C Temperature (°C/°F)

50% Relative Humidity (%)

Both the icons of Temperature and Relative Humidity will be updated by 2 situations:
1. Periodically every 1 hour
2. Press the device's test button

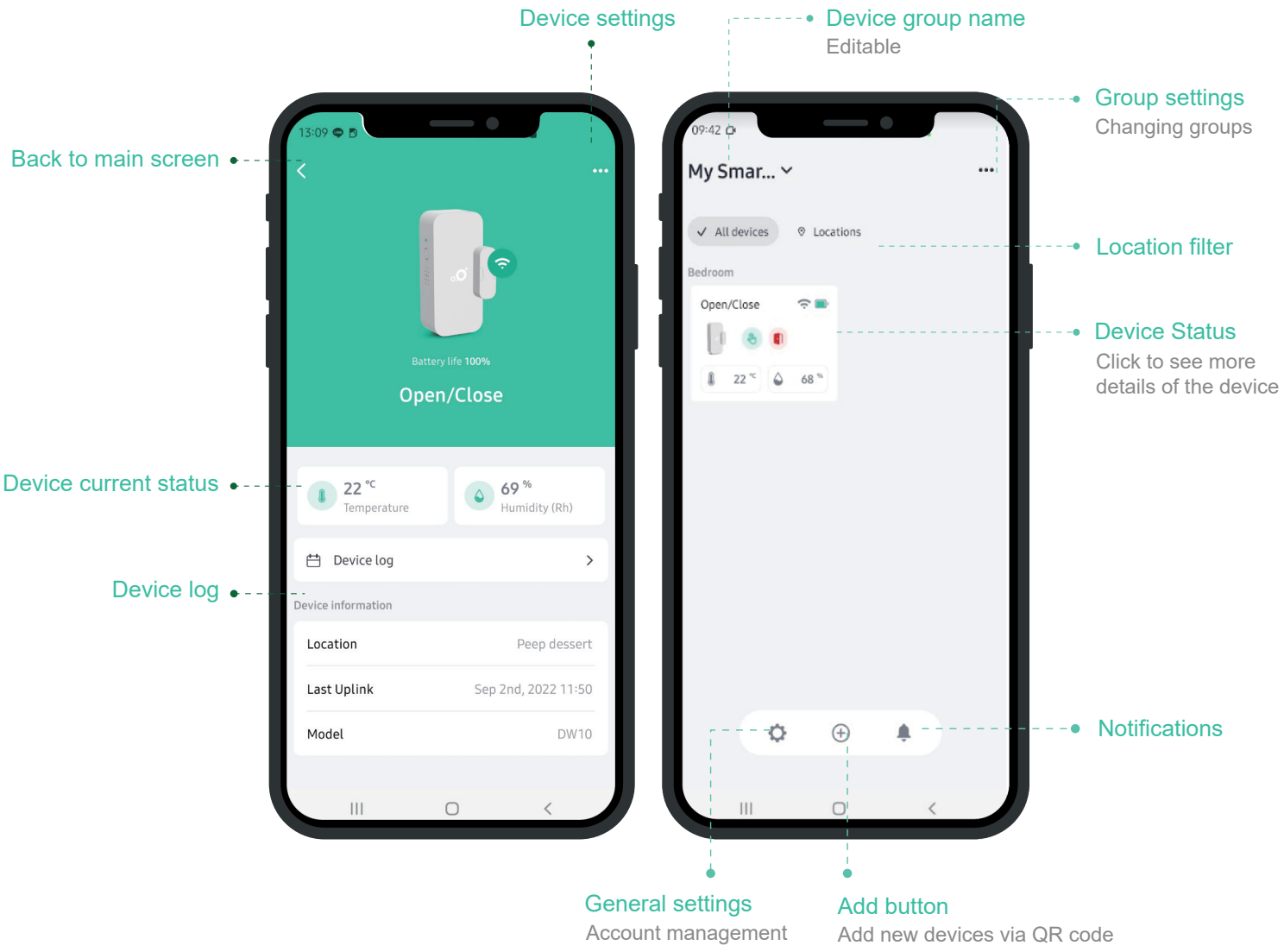
Button pressed
This icon will be displayed on your app dashboard when you press the device's test button, also the CO2 level, temperature and humidity will be updated at the same time.

Motion detected
This icon will be displayed on your app dashboard immediately when the device detect a human motion, and the icon will disappear if there is no human detection in the last 5 minutes.

Device is being tampered
This icon will be displayed on your app dashboard immediately when the device is been moved or tampered.

Chapter 6 - APP Functions

MerryIoT Open/Close (DW10)



Icons

Battery status
Sufficient (green): >3.0V
Low (yellow): >2.6V
Exhausted (red): ≤2.6V

LoRaWAN Connection status
On/off

22°C Temperature (°C/°F)

50% Relative Humidity (%)

Both the icons of Temperature and Relative Humidity will be updated by 2 situations:
1. Periodically every 1 hour
2. Press the device's test button

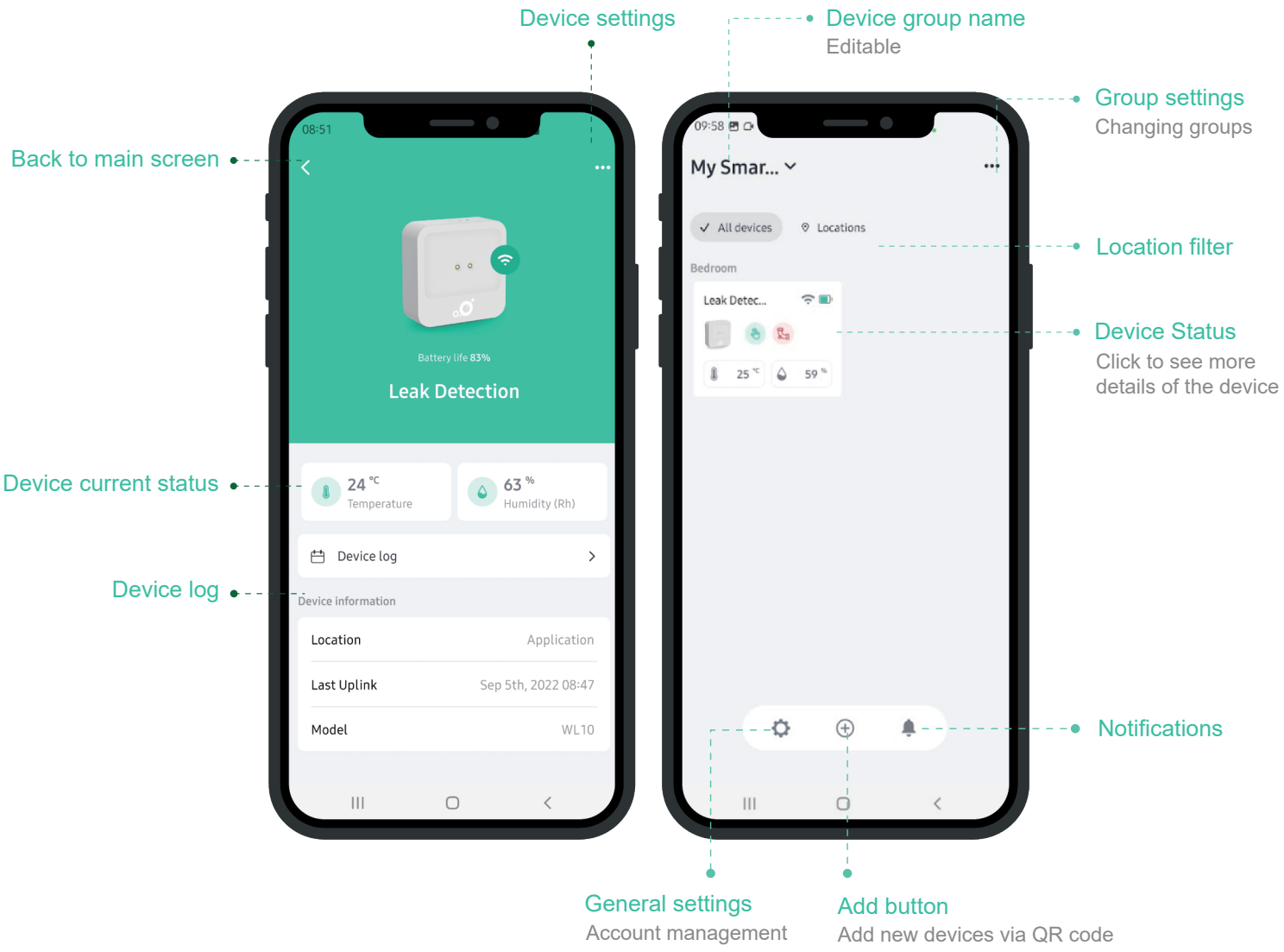
Button pressed
This icon will be displayed on your app dashboard when you press the device's test button, also the CO2 level, temperature and humidity will be updated at the same time.

Door or window status
This icon will be updated every 6 hours, and when each door/window opens/closes.

Device is being tampered
This icon will be displayed on your app dashboard immediately when the device is been moved or tampered.

Chapter 6 - APP Functions

MerryIoT Leak Detection (WL10)



Icons

Battery status
Sufficient (green): >2.6V
Low (yellow): >2.5V
Exhausted (red): ≤2.5V

LoRaWAN Connection status
On/off

22°C Temperature (°C/°F)

50% Relative Humidity (%)

Both the icons of Temperature and Relative Humidity will be updated by 2 situations:
1. Periodically every 1 hour
2. Press the device's test button

Button pressed
This icon will be displayed on your app dashboard when you press the device's test button, also the CO2 level, temperature and humidity will be updated at the same time.

Water leak detected
This icon will be displayed on your app dashboard immediately when the device detect a leak/flooding event, and the icon will disappear when the water dry up.

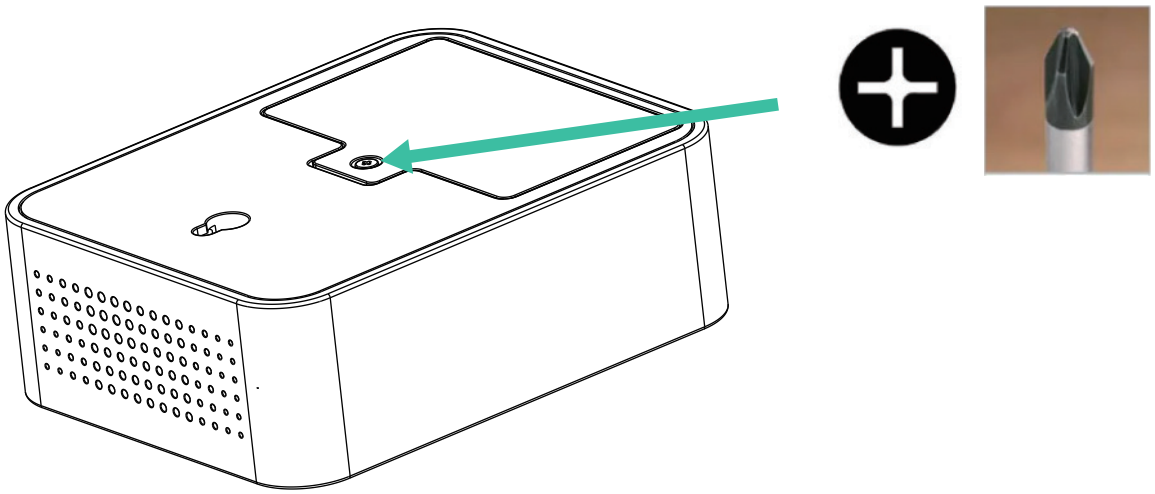
Device is being tampered
This icon will be displayed on your app dashboard immediately when the device is been moved or tampered.

Chapter 8 - Battery Replacement

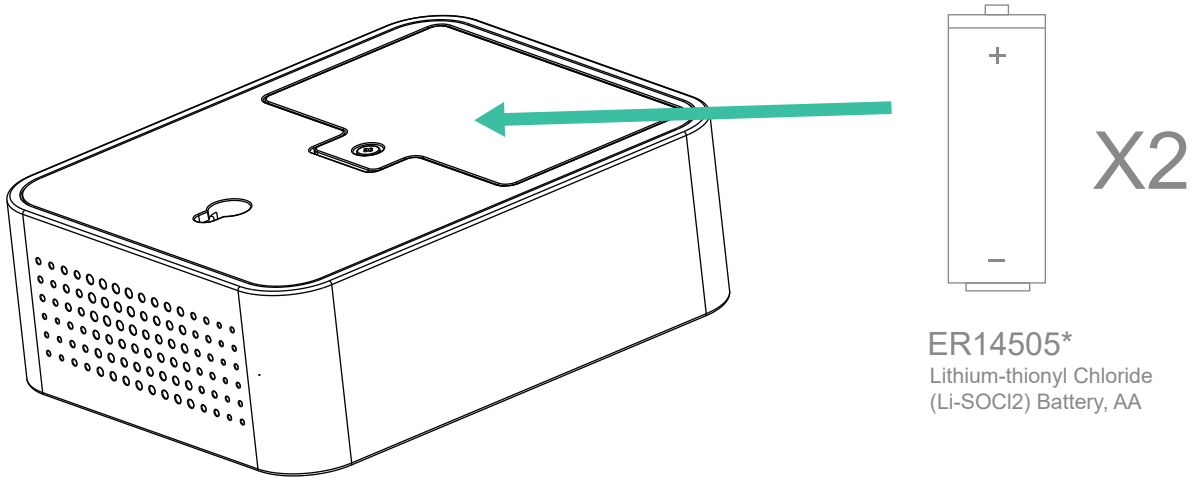
MerryIoT Air Quality CO2 (CD10)

1. Tools: Cross-type screwdriver x1 (PH0).

2. Remove the battery cover of the sensor with a cross-type screwdriver (PH0 size).



3. Replace the battery with new ones (Li-SiO2 battery, "ER14505", AA size x2 pcs).
*Caution: Using batteries other than the ones provided may lead to performance loss, reduced battery life, and device damage.
Ensure proper disposal according to environmental regulations. Mixing of cells can result in battery leakage and suboptimal device performance.



ER14505*
Lithium-thionyl Chloride
(Li-SOCl2) Battery, AA

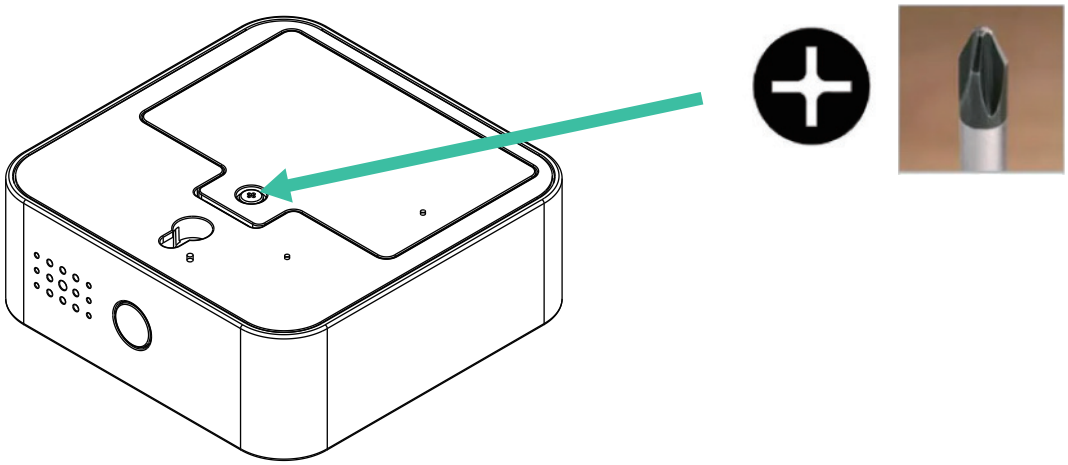
4. Re-assemble the battery cover.

Chapter 8 - Battery Replacement

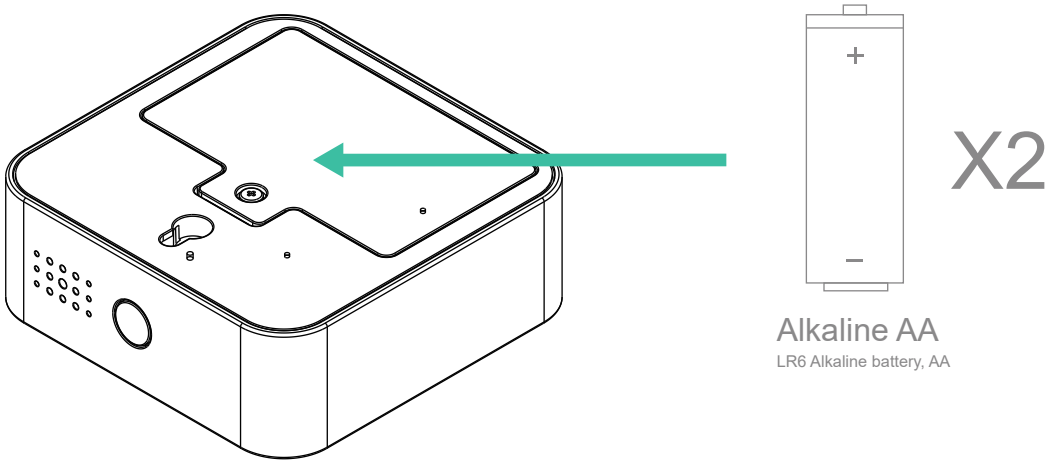
MerryIoT Motion Detection (MS10)

1. Tools: Cross-type screwdriver x1 (PH0).

2. Remove the battery cover of the sensor with a cross-type screwdriver (PH0 size).



3. Replace the battery with new ones (Alkaline Battery, "LR6", AA size x2 pcs).
*Caution: Using batteries other than the ones provided may lead to performance loss, reduced battery life, and device damage.
Ensure proper disposal according to environmental regulations. Mixing of cells can result in battery leakage and suboptimal device performance.



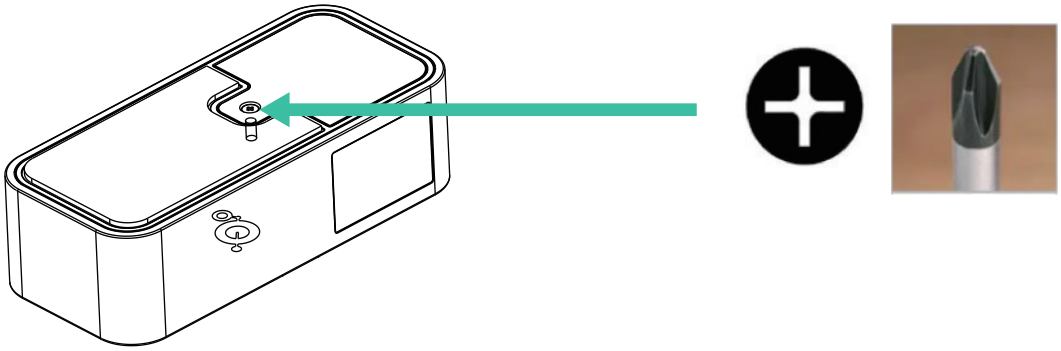
4. Re-assemble the battery cover.

Chapter 8 - Battery Replacement

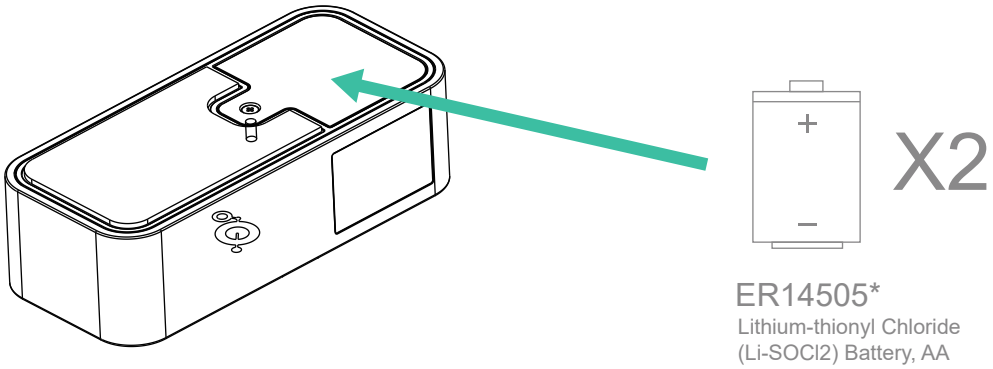
MerryIoT Motion Detection (MS10)

1. Tools: Cross-type screwdriver x1 (PH0).

2. Remove the battery cover of the sensor with a cross-type screwdriver (PH0 size).



3. Replace the battery with new ones (Li-SiO2 battery, "ER14250", 1/2 AA size x2 pcs).
*Caution: Using batteries other than the ones provided may lead to performance loss, reduced battery life, and device damage.
Ensure proper disposal according to environmental regulations. Mixing of cells can result in battery leakage and suboptimal device performance.



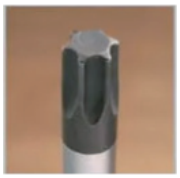
ER14505*
Lithium-thionyl Chloride
(Li-SOCl2) Battery, AA

4. Re-assemble the battery cover.

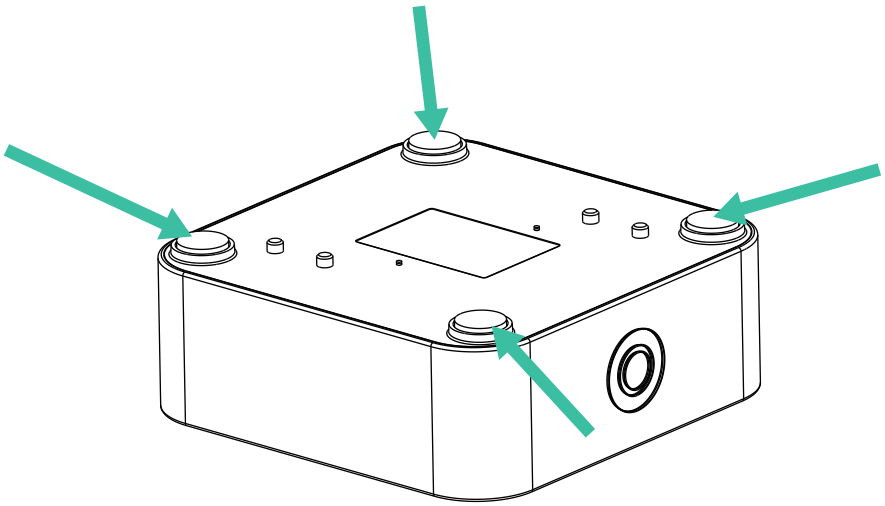
Chapter 8 - Battery Replacement

MerryIoT Leak Detection (WL10)

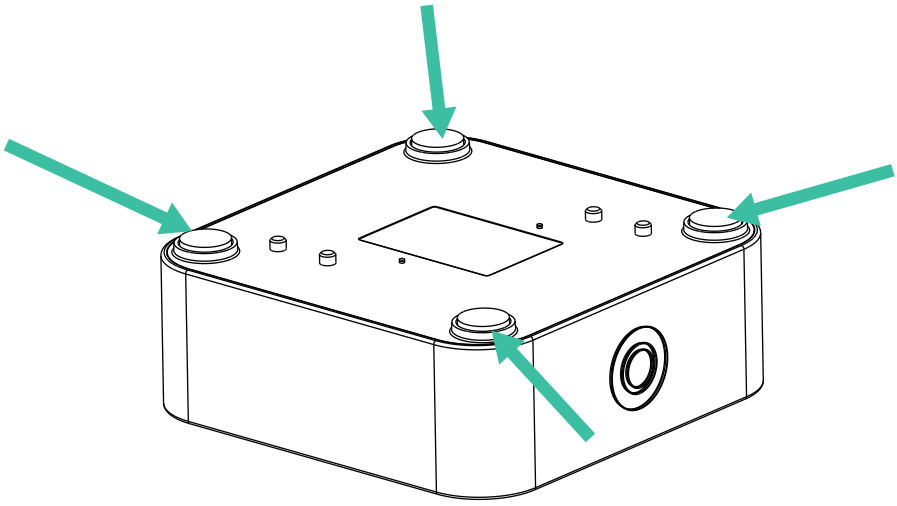
1. Tools: Cross-type screwdriver x1 (PH1), Star-type screwdriver x1 (T8H), Plastic disassembly stick (recommended).

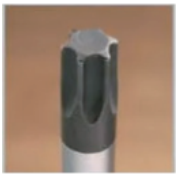




2. Remove 4 rubber stands of the sensor with disassembly stick.




3. Remove the bottom cover of the sensor with a star-type screwdriver (T8H size).
*Caution: Removing the bottom cover may affect the water-tightness. Please get help from Browan team before you do so.

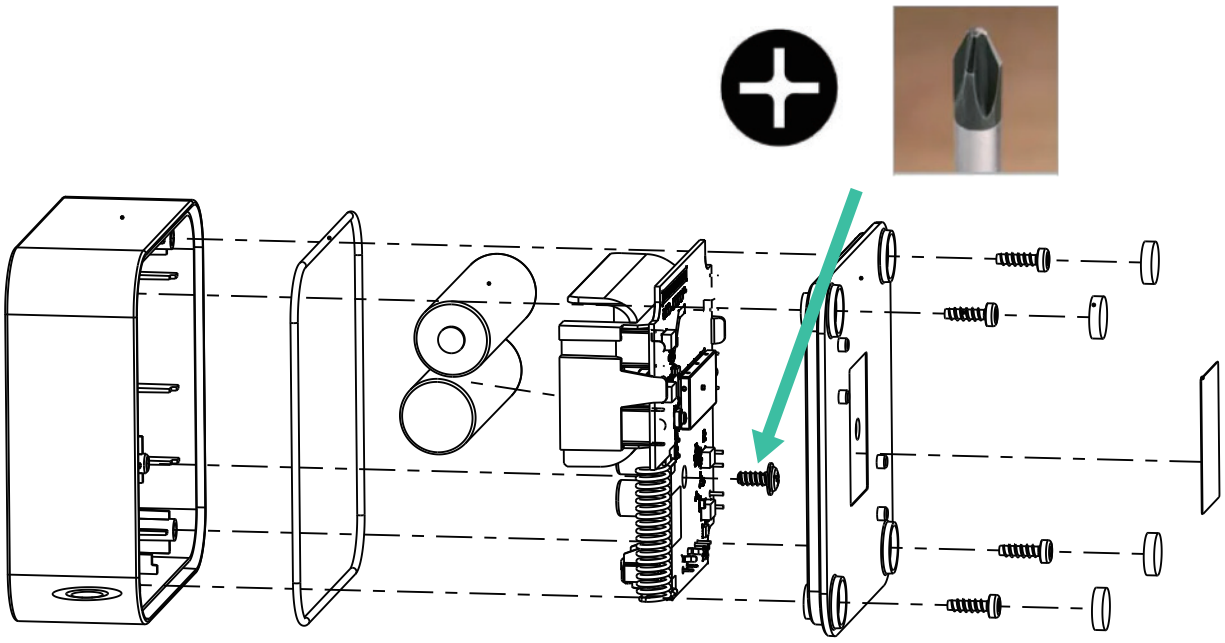




Chapter 8 - Battery Replacement

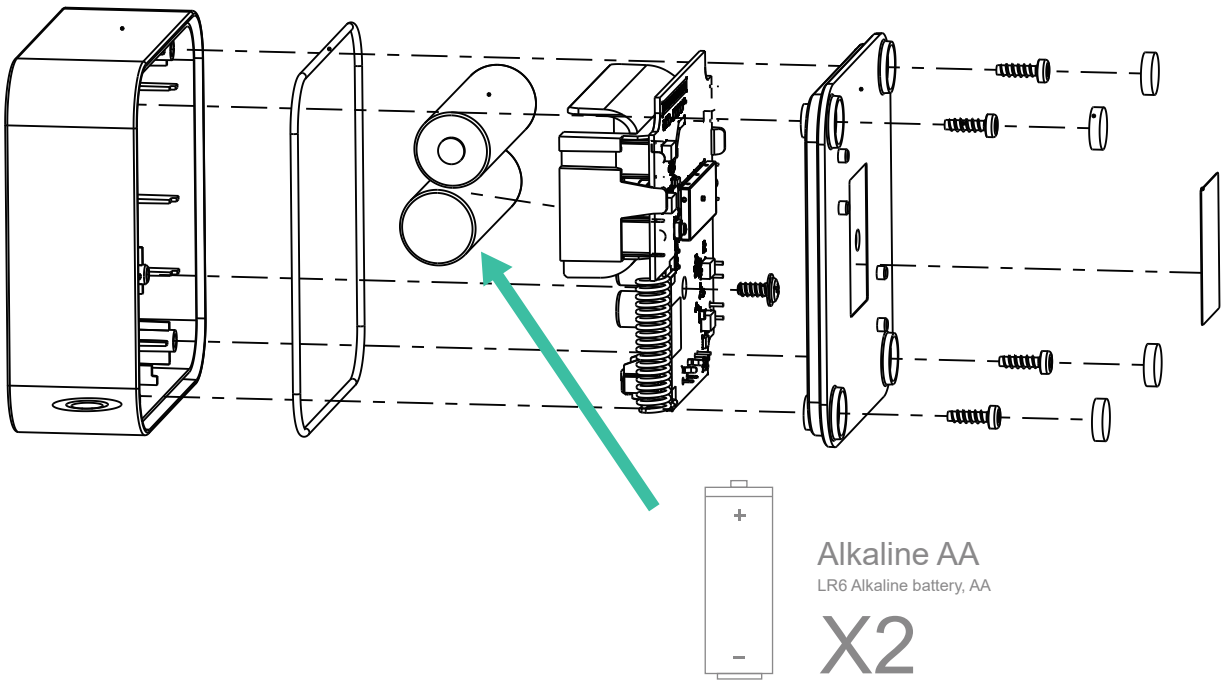
4 Remove the circuit board of the sensor with a cross-type screwdriver x1 (PH1).

*Caution: Avoid touching the circuit board with bare hand. Touching boards can release static discharge. Please wear a plastic/rubber glove.



5 Replace the battery with new ones (Alkaline Battery,"LR6", AA x2 pcs).

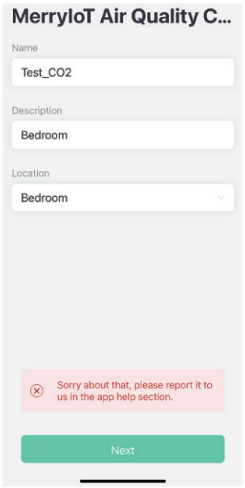
*Caution: DO NOT remove the battery holder.
*Caution: Using batteries other than the ones provided may lead to performance loss, reduced battery life, and device damage.
Ensure proper disposal according to environmental regulations. Mixing of cells can result in battery leakage and suboptimal device performance.



6 Re-assemble the battery cover.

Chapter 9 - FAQ

1.
Why do I get the error message "Sorry about that, please report it to us in the app help section" while binding the MerryIoT sensor through the MerryIoT sensor APP?



Answer:
Since the MerryIoT sensor APP is only for a specific batch number of MerryIoT sensors, kindly check with your supplier whether the one you purchase is for using with the MerryIoT sensor APP.

2.
How long will it take to get the CO2 value?

Answer:
It takes at least 20 minutes to get the CO2 value by manually activation, or 1 hour automatically.

3.
Why do I have to "sign in" via Google/Apple ID twice?

Answer:
The first "sign in" is identified as a presign-up process in AWS Cognito which the MerryIoT Sensor uses to manage third-party social media registration. Once the presign-up is complete, the mobile App page will redirect you to the "sign in" page again, then, you can sign in to the mobile APP successfully.

For more FAQs please visit https://www.merryiot.com/FAQ

Chapter 10 - Copyright Notice

Copyright

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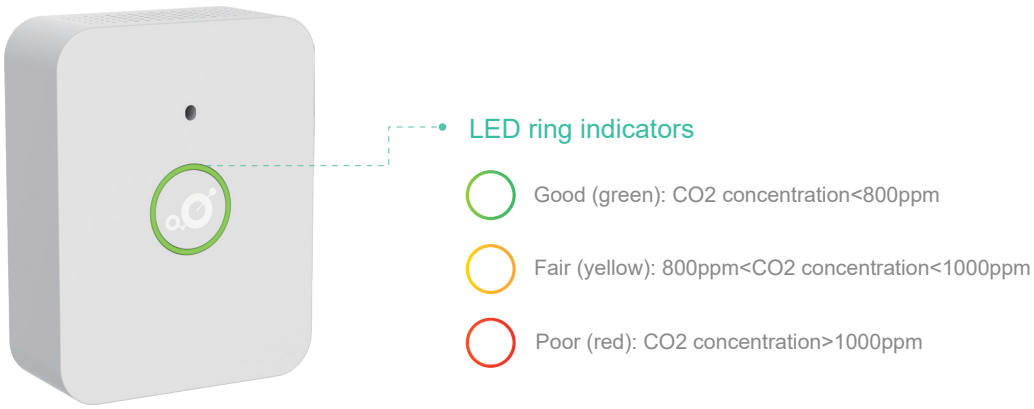
Chapter 7 - Operation

MerryIoT Air Quality CO2 (CD10)

When the environmental CO2 concentration is below 1000ppm, the device is set in inactive state and periodically updates the temperature, relative humidity, and CO2 values on APP every 60 minutes. If the environmental CO2 concentration surpasses 1000ppm or the button is pressed, APP will generate a notification.

To recalibrate the CO2 value, take the device outdoors into fresh air and press and hold the button for more than 10 seconds until the Green LED begins to blink. After 10 minutes, the recalibration process will be complete.

The LEDs show the CO2 status for 5 seconds when waving in front of the device.



MerryIoT Motion Detection (MS10)

The device will send a message indicating it has been inactive for every hour. When the device detects motion, it triggers a notification with APP. During the motion detection state, APP will refresh the status every 10 minutes without pushing notifications. If no motion is detected for 5 consecutive minutes from last refreshing, the state will revert to inactive.

If the device is moved or the button is pressed, the app will push a notification.

MerryIoT Open/Close (DW10)

The device will send a message indicating it has been inactive for every 6 hours. When the device detects the transition of the magnet, it triggers an open/close notification with APP. If the device is moved or the button is pressed, the app will also push a notification.

MerryIoT Leak Detection (WL10)

The device will send a message indicating it has been inactive for every hour. When the device detects the state changes from dry to wet, it triggers a water leakage notification with APP. During the wet state, prompt notification will be pushing every 5 minutes. If no water leakage is detected for 5 consecutive minutes from last notification, the state will revert to inactive.

If the device is moved or the button is pressed, the app will also push a notification.