

MClimate Open/Close Sensor LoRaWAN®



User manual

Scan the QR Code
to access MClimate
Open/Close Sensor
LoRaWAN® extended
documentation



**Need
some help?**

For more product information and issues
related to it, visit:

mclimate.eu/lorawan-resources

or write us to:

lorawan-support@mclimate.eu

 **00359 800 3 1010**

Monday-Friday

09:00 - 18:00



Sofia, Bulgaria

Sofia Tech Park,

labs building, floor 1

Bulgarian

За да разберете как се инсталира MClimate Open/Close Sensor LoRaWAN®, сканирайте QR кода или посетете линка до него.

Czech

Chcete-li zjistit, jak nainstalovat MClimate Open/Close Sensor LoRaWAN®, prohlédněte si kód QR nebo navštivte odkaz vedle něj.

Italian

Per installare MClimate Open/Close Sensor LoRaWAN® scannerizzare il codice QR oppure aprire il link al suo lato.

Polish

Aby dowiedzieć się, jak zainstalować MClimate Open/Close Sensor LoRaWAN®, zeskanuj kod QR lub odwiedź link obok niego.

Swedish

För att ta reda på hur du installerar MClimate Open/Close Sensor LoRaWAN®, skanna QR-koden eller besök länken bredvid den.

Finnish

Tutustu MClimate Open/Close Sensor LoRaWAN®-laitteen asentamiseen, skannaa QR-koodi tai vieraila sen vieressä olevassa linkissä.

German

Um herauszufinden, wie man MClimate Open/Close Sensor LoRaWAN® installiert, scannen Sie den QR-Code oder besuchen Sie den Link daneben.

French

Pour savoir comment installer MClimate Open/Close Sensor LoRaWAN®, scannez le code QR ou visitez le lien à côté de celui-ci.

Dutch

Om te weten te komen hoe u MClimate Open/Close Sensor LoRaWAN® installeert, scan de QR-code of bezoek de link ernaast.

Spanish

Para saber cómo instalar MClimate Open/Close Sensor LoRaWAN®, escanee el código QR o visite el enlace al lado.

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What's inside the box?



magnet



main device



MClimate Open/Close
Sensor LoRaWAN®

ER14250
3.6 VDC battery

Technical specifications

Description: MClimate Open/Close Sensor LoRaWAN® is a device detecting the event of opening or closing windows, doors, cabinets and more. It features long battery life, LED, temperature sensor and a button that triggers an uplink. The device sends an uplink for every event of opening/closing and keeps an internal counter of the total number of events. Created by MClimate™

Model: MC-LW-OC-01

Dimensions: Main unit: 72x20x20mm; Magnet: 50x10x15mm

Weight: 26gr

Frequency range: 863÷870MHz (others available on demand)

Power supply: Battery: ER14250 or 1/2 AA (included in the device) 3.6VDC

Expected Battery Life: 5-10 years (depending on configuration and environment)

Sensors: built-in temperature sensor

Work temperature: 0°C to +50°C

Material: ABS Enclosure

Environmental conditions, in which the device is intended to operate:

- Indoor using;
- for altitude up to 2000m;
- for an ambient temperature: 0°C to +60°C;
- for maximum relative humidity of 80% for temperature up to 31°C, decreasing linearly to 25% relative humidity at temperature 50°C;
- for environment with a degree of contamination 2 (PD2).

Storage and transportation conditions:

- for an ambient temperature :-40°C to +85°C;
- for relative humidity 5% to 90% without condensation

Manufacturer

MClimate Jsc, 1784 Sofia, Sofia Tech Park, Labs, Floor 1

Compliance with the WEEE Directive

The appliance marked with this symbol should not be disposed of with other household waste.

It must be handed over to the relevant collection point for the recycling of electrical and electronic equipment.

▲ Safety Instructions

Please read the safety instructions before installing the device! Failure to follow the recommended instructions in this manual may be dangerous or in violation of the law. The manufacturer MClimate Jsc., is not responsible for any loss or damage caused by failure to follow the instructions in the operating manual.

Legal Notices

All information, including but not limited to, features, functionality, and / or other product specifications are subject to change without notice. MClimate retains all rights to review or update its products, software or documentation without being required to notify any natural or legal person. The MClimate and MClimate logo are trademarks of MClimate Jsc. All other brands and product names mentioned herein are trademarks of their respective owners.

EU Declaration of Conformity

This device complies with the essential requirements and other applicable provisions of the following EU directives:

2014/53/EC, EN 50491-3:2009

EEU 300 220-1 V3.1.1:2017

EEU 300 220-2 V3.1.1:2017

EN 60950-1:2006+A11:2009 +A1:2010+A12:2011+
A2:2013 + AC:2015

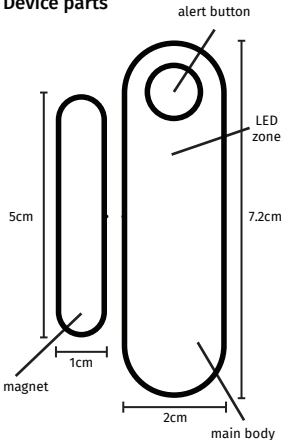
EEU 300 220-2 V3.1.1:2017, EN 301 489-1 V2.1.1:2017

Compatibility

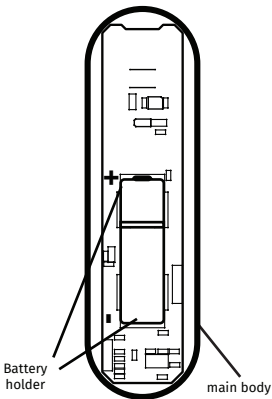
In order to operate MClimate Open/Close Sensor
LoRaWAN®, you will need:
LoRaWAN® network



Device parts



Assembled MClimate Open/Close
Sensor LoRaWAN®, top view

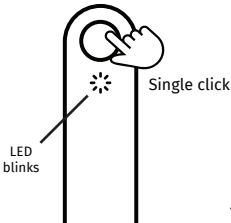


Disassembled MClimate Open/Close
Sensor LoRaWAN®, top view

Button and behaviour

Pressing the button generates a custom uplink event that has a specific code appended to the regular payload you can use to customize your system, for example as a trigger or alarm.

Blink times	Function
Blink once	Keep-alive, change of state, button press.
Blink 3 times	The device is trying to join the network



Commissioning



Before you install the device, we highly recommend that you first commission it on your LNS. Once the battery paper isolator is removed, the device will initiate a LoRaWAN Join Procedure on SF12. Please, make sure you enable ADR in your LNS and/or mark the device as static. The lower the spreading factor, the better the performance of the energy storage will be.

- 1 Open your LoRaWAN® Network provider access panel and add the device using the supplied Serial Number, DevEUI, AppEUI (JoinEUI) and AppKey.

The screenshot shows a web interface for adding a device to a LoRaWAN network. It contains four input fields with example data:

- Serial Number: 12345678901234567890123456789012
- DevEUI: 0000000000000000
- AppEUI: 0000000000000000
- AppKey: 00000000000000000000000000000000

At the bottom right of the form is a button labeled "ADD".



The data is example. Do not use.

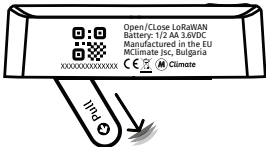
- 2 Continue the Installation with the instructions of your LoRaWAN® Network provider.



You can get DevEUI, AppEUI (JoinEUI) & AppKey information from the LoRaWAN® credentials .csv file we sent you with the fulfillment confirmation.

Start-up behavior

The device starts when you pull out the battery paper insulator from the back, which is signified by a single blink from the LED.

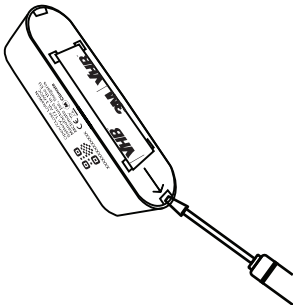


This powers it on and it initiates the join procedure, connecting to the LoRaWAN network (as it has been commissioned in the previous step).

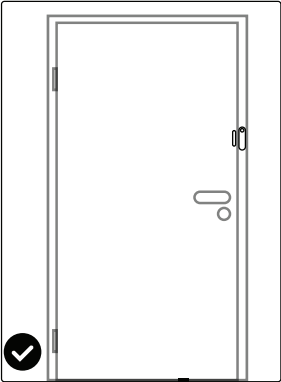
At this point it regularly sends keep-alive messages in addition to sending uplinks whenever there is an open or close event (the magnet being separated from the main body or brought back together).

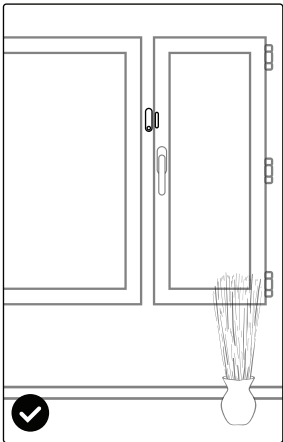
Open the device

If you need to open the device to replace the battery, use the slot indicated in the picture to open the device. Insert the new battery following the direction indicated on the PCB.

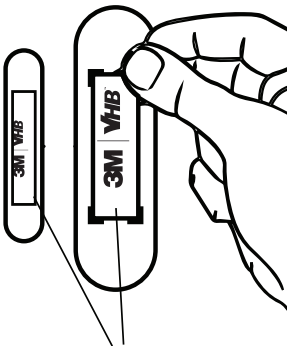


Placement Guidelines





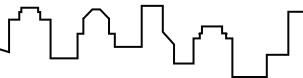
Installation



Double-sided
tape



Installing the device near big metal items will worsen the RF performance. We understand that the main use cases involve installing it on doors/windows that by themselves are in many cases metallic, so expect decreased range if you use it for large metal doors and/or windows.



MClimate



We
make any
building
smart.

www.mclimate.eu

Designed & Manufactured by
MClimate in Europe.

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