

## Description

MClimate CO2 + PIR lite LoRaWAN is a stand-alone sensor powered by 2xAA batteries lasting for up to 15 years with the default configuration. The device features NDIR CO2 sensor, PIR (occupancy) sensor, as well as temperature and humidity sensors. The data from the CO2 + PIR lite can be used in any LoRaWAN compatible system, incl. Building Management Systems to control demand-based ventilation. Sensor information can be exposed as datapoints in Modbus, BACnet and KNX systems through the use of a special gateway.

SKU: MC-LW-LITE-CO2+PIR-01

## Device specifications

### Mechanical specifications

|                        |   |
|------------------------|---|
| WEIGHT EXCL. BATTERIES | 75gr  |
| DIMENSIONS             | 122mm x 58mm x 22mm   |
| ENCLOSURE              | PC/ABS  |
| MOUNTING OPTIONS       | Screws and dowels or double-sided tape (included); Anti-theft bracket with secure screw |

### Operating conditions

|             |                           |
|-------------|---------------------------|
| TEMPERATURE | 0° - +50°C                |
| HUMIDITY    | 0-80% RH (non-condensing) |

### Power supply

|                       |  |
|-----------------------|--|
| POWER SUPPLY          | 2xAA batteries (each 1.5VDC)   |
| OPERATING VOLTAGE     | 3.0VDC   |
| EXPECTED BATTERY LIFE | Up to 15 years with default configuration (depending on radio environment) |

## Product features

- PIR (occupancy) sensor
- NDIR CO2 sensor
- Temperature and Humidity sensor
- Firmware Update Over The Air (FUOTA)
- Ultra low power consumption
- Sends message on occupancy
- Counts total amount of movements
- Double-sided tape on the back

## Applications

- Smart Buildings
- Residential buildings
- Commercial buildings
- Hotels

Radio/Wireless

|                            |   |
|----------------------------|---|
| WIRELESS TECHNOLOGY        | LoRaWAN® 1.0.3  |
| WIRELESS SECURITY          | LoRaWAN® End-to-End encryption (AES-CTR)                            |
| LORAWAN DEVICE TYPE        | Class A End-device  |
| SUPPORTED LORAWAN FEATURES | OTAA, ADR, Adaptive Channels setup                                  |
| SUPPORTED LORAWAN REGIONS  | EU863 – 870; Other LoRaWAN regional settings available upon request |
| LINK BUDGET                | 130dB   |
| RF TRANSMIT POWER          | 14dB  |

## Sensors

CO2

|          |                         |
|----------|-------------------------|
| ACCURACY | ±(30ppm +3% of reading) |
| RANGE    | 400-5000ppm             |

Temperature

|            |                |
|------------|----------------|
| RESOLUTION | 0,1° C         |
| ACCURACY   | ±0,2 - ±0,3° C |

Humidity

|            |          |
|------------|----------|
| RESOLUTION | ±2       |
| ACCURACY   | ±3% r.H. |

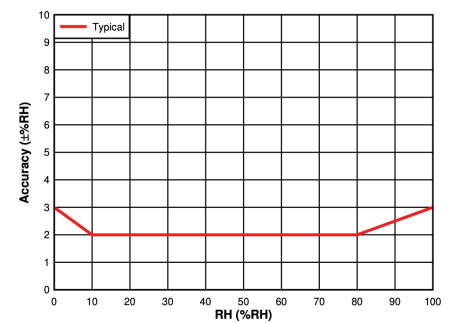
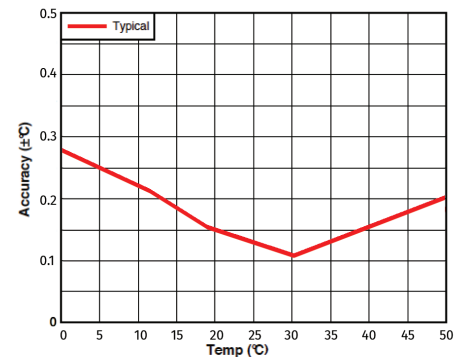
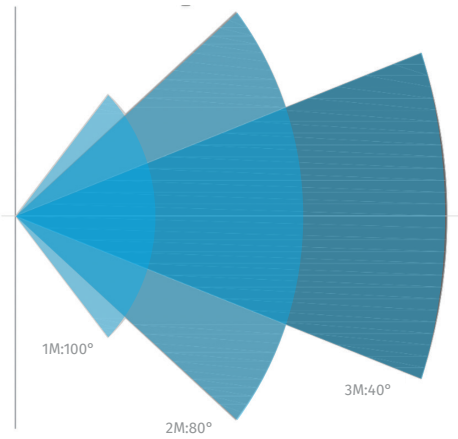


Figure 6-1. RH Accuracy vs. RH

PIR

VIEW OF ANGLE

X=100° ; Y = 90°



Placement guidelines

