Specification

Product Name: **Networking controller（Microwave）**

Product Model: **MC087D 99 B1**

Versions	Release/ change Date	Reason	Publishing
V1.0	2025.04.09	First version	James.Guo

【Product Features】

- 12Vdc Input, suitable for DC systems or LED driver with 12V DC 100mA auxiliary power output.
- 0--10V dimming terminal, 3-step or 2-step is optional, detection area adjustable
- Mini size MW motion detection sensor
- Indoor maximum mounting height is 6m
- All sensor parameters can be set by Casambi App setting



CONNECTED WITH CASAMBI

【Parameter】

Input		
Rated voltage	12±1VDC	7.5--13VDC
Working current	32±5mA	32±5mA
Ripple voltage	< 100mVp-p	
Output		
Output signal	◯0-10V Dimming Signal	◯PWM Dimming Signal
Sensing parameters		
Working frequency	5.8GHz ±75MHz, ISM band	
Transmit power	1mW Max.	
Sensor sensitivity	Casambi App setting	
Daylight Priority	Casambi App setting	
Stand-by dim level	Casambi App setting	
Detection range (radius)	Ceiling Mounting(height: 3m): 0.3m/s ≥3m, 1m/s ≥2.5m Wall Mounting(height: 2m): 0.3m/s ≥5m, 1m/s ≥3m Test conditions : the product is set to 100% sensitivity , and there is no obvious occlusion in the room of 60 ㎡	
Installation height	3m (6m Max)	
Wireless Module		
BLE Module	Casambi Bluetooth	
Working frequency	2.402-2.480GHz	
Transmitting power	+7dBm(max)	
Transmission distance	25m(Visible distance)	
Environment		
Working temperature	Built-in: -35~60℃	
Storage temperature	-40℃~80℃, humidity ≤85% (non-condensing)	
Certification Standards		
Certified	CE	
Environmental requirements	Comply with RoHS 2.0 , Reach requirements	

Degree of protection	IP20
Other	
Wiring	3pin 2.0mm terminal
Installation requirements	built-in installation
Packaging requirements	Clapboard + paper carton(K=A)
Net weight	25.5±3g
Life	5 Years Warranty@Ta

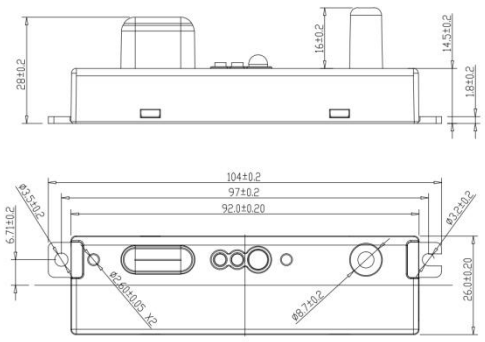
【Function description】

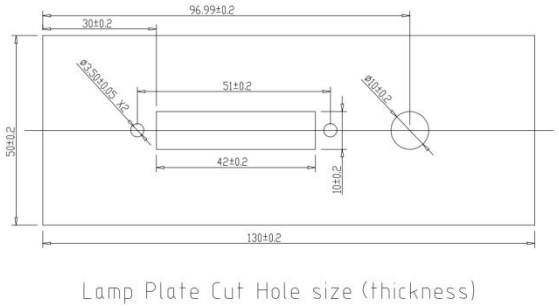
ⓥON-OFF function	Casambi App setting
ⓥ2-step dimming	Casambi App setting
ⓥ3-step dimming	Casambi App setting
◯Daylight harvesting	Casambi App setting
ⓥDaylight priority	Casambi App setting
ⓥGrouping	Casambi App setting

Features and operations are detailed:
https://support.casambi.com/support/solutions/articles/12000074041-presence-sensors

【Diagram】

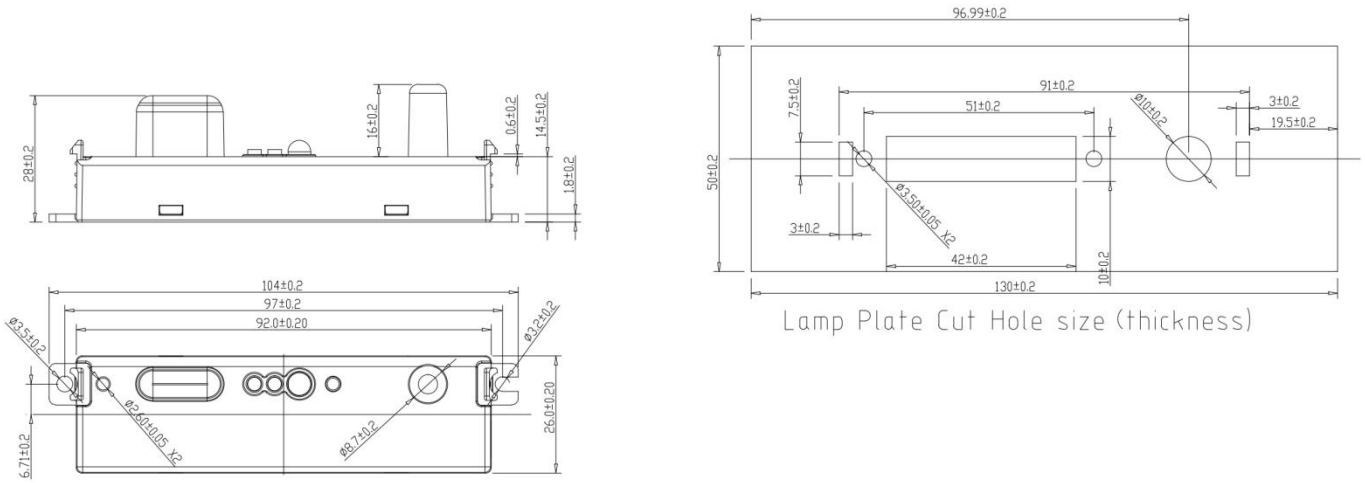
- **Dimension**





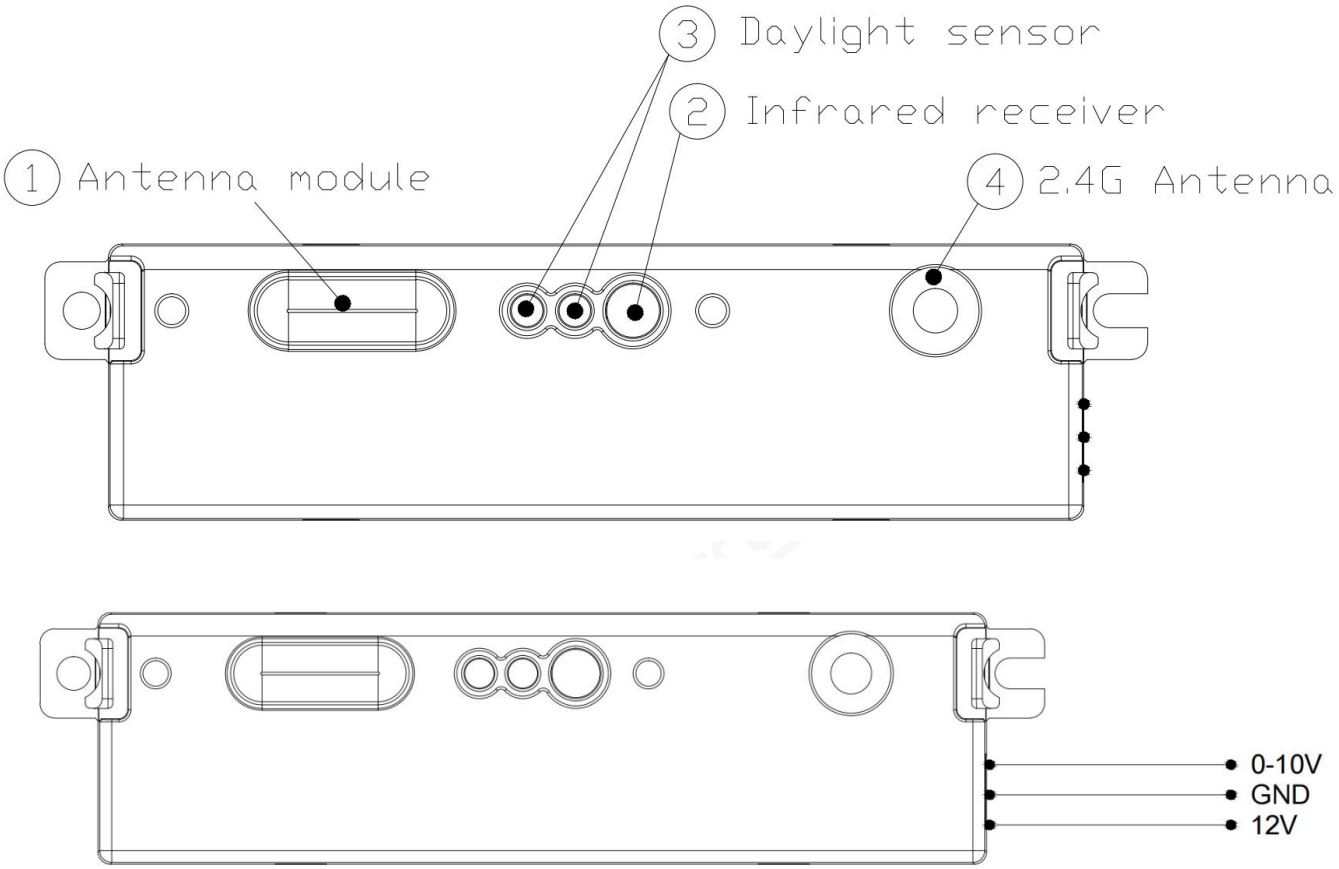
Lamp Plate Cut Hole size (thickness)

Screw installation

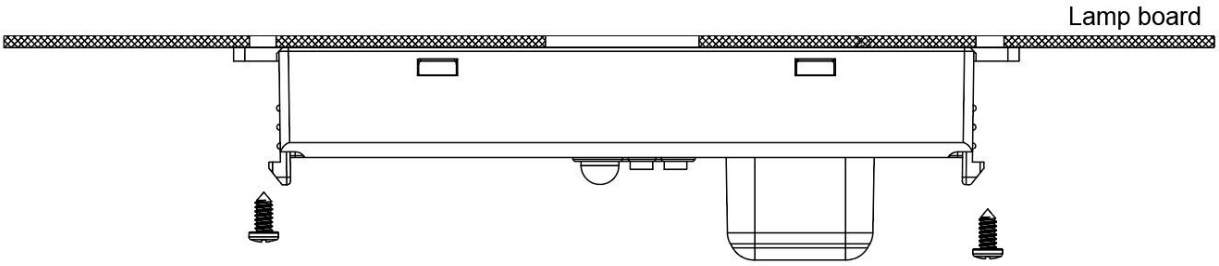


Clasp structure installation

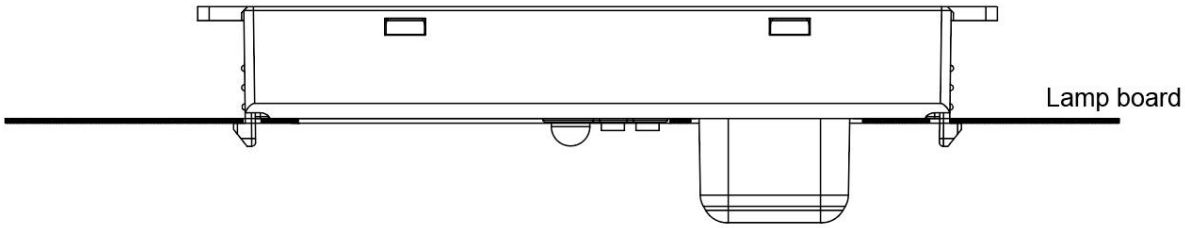
- **Wiring, Function**



- Installation

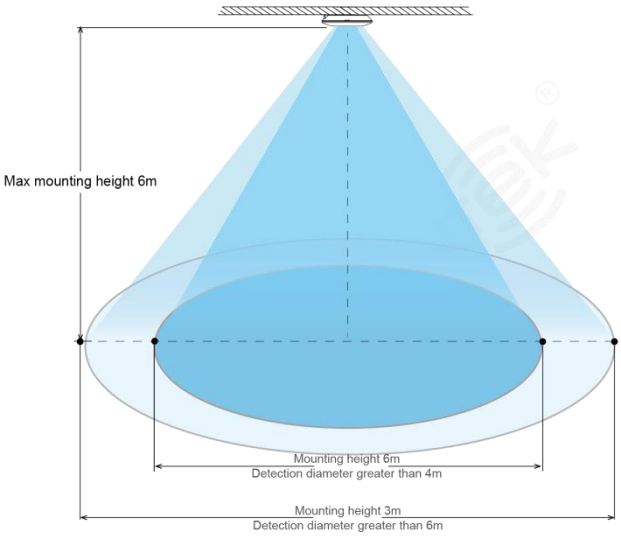


Screw installation



Clasp structure installation

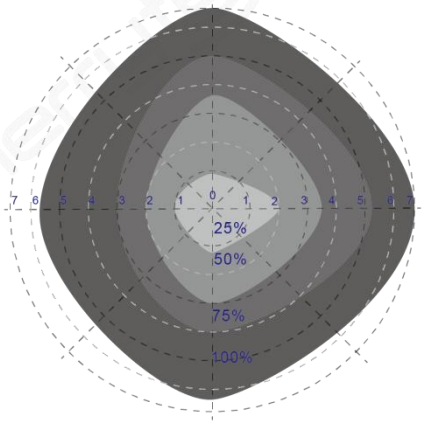
- **radiation diagram**



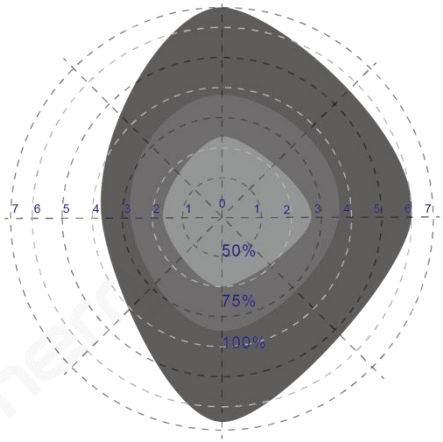
Ceiling mounting

Ceiling mounted height: 3m

Sensitivity: 100%/75%/50%/25%



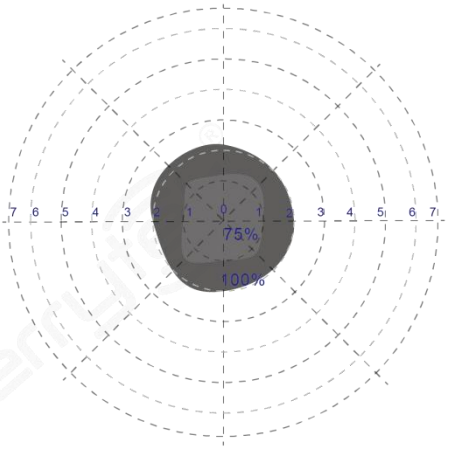
Normal moving (Speed:1m/s)



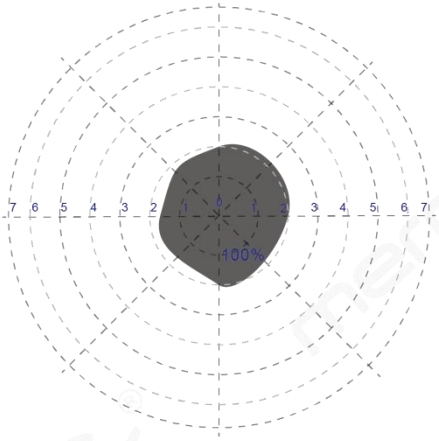
Slow moving (Speed 0.3m/s)

Ceiling mounted height: 6m

Sensitivity:100%/75%



Normal moving (Speed:1m/s)

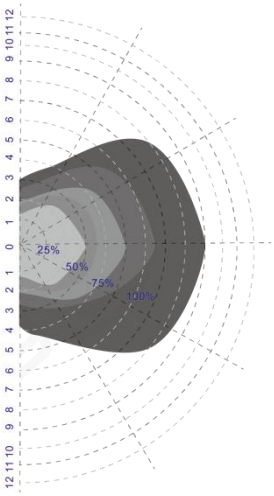


Slow moving (Speed: 0.3m/s)

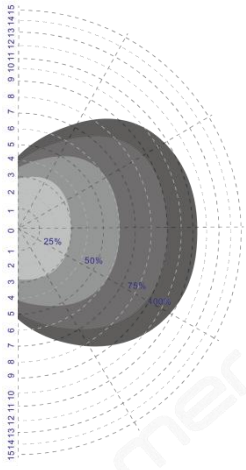
Wall mounting:

Wall mounted height: 2m

Sensitivity: 100%/75%/50%/25%



Normal moving (Speed：1m/s)



Slow moving (Speed 0.3m/s)

【Initialization】

When powering on for the first time, the sensor will turn the light on to 100% brightness, and the light will be turned off after 10 seconds. During initialization, movement signal will not be detected.

【Default setting】

Detection area: 100%; Hold Time: 5s; Stand-by Period: 0s; Daylight Sensor: Disable;
Stand-by Dim Level: 10%.

【Application Notice】

- The sensor should be installed by a professional electrician. Please cut off the power before installing, wiring etc.
- The detection distance is related to factors such as the moving speed of the moving object, the size of the moving object, the installation height, the installation angle, whether the installation environment is open, and the material of the reflector. The detection distance given in the specification is a typical value, which is 165cm/65kg tester, and it is tested in an open indoor environment
- When the microwave sensor is installed on the wall, the detection distance will be greatly increased compared with that installed on the ceiling. If you use the wall installation method, please reduce the sensitivity to use or contact our company to confirm the use settings. The light sensitivity threshold is in a sunny environment, no shadows, and ambient light diffuse reflection conditions. In different time periods, climates, and environments, the illuminance value detected by the light sensor may be different
- Sensor parameters may need to be reconfigured in different installation environments, please refer to the following instructions or contact the manufacturer
- This sensor is only for indoor use, outdoor wind and rain, and surrounding moving objects will cause false triggering
- The installation height of the sensor product cannot exceed 6 meters, and the optimal height is 3 meters; the distance between the two sensors should be greater than 3 meters
- When the sensor is installed in a metal lamp, on a metal reflective surface, or in a narrow closed environment, microwaves will be reflected multiple times and cause false triggering. Please reduce the sensor sensitivity or contact the manufacturer for technical support.
- Please make sure that there are no moving signals such as fans, DC motors, sewer pipes, air outlets, etc. around the sensor, otherwise the sensor may cause false triggering.
- Microwaves cannot penetrate metal, avoid installing in closed or semi-closed metal lamps, and there should be no metal or glass blocking the product
- Sensor with different 0-10V / PWM driver, LOW light effect may be different

- DC regulated power supply with stable output voltage and LOW ripple coefficient must be used. The ripple of the power supply should be less than 100mV ; the load current should be greater than 100 mA
- Product specifications and parameters may be optimized without prior notice
- For the new installation environment, it is recommended to test 5pcs samples before installation.