

Specification

Product Name:	Casambi Bluetooth Network Presence Sensor
Product Model:	MC182D 99 B1 (0-10V) MC182D 99 1 B1 (PWM)

Versions	Release/ Change Date	Reason	Released by
V1.0	2025.04.27		James.Guo

【Product Features】

- Built-in installation presence sensor, standard zhaga book20 interface
- Adopt 24GHz patented microwave antenna technology, support 4m max. installation height
- With German RF technology, 5 years product warranty
- Motion, minor-motion and daylight sensor detection
- Applicable for washrooms, living rooms, kitchens and other environments where motion, minor motion detection required
- Casambi Bluetooth module, connected with Casambi IOT platform



ected with CASAMBI

【Parameters】

Input		
Rated Voltage	12±1VDC	
Working Current	77±5mA	
Ripple Voltage	<100mVp-p	
Output		
Output Signal	MC182D 99 B1	MC182D 99 1 B1
	0-10VDC dimming signal	PWM dimming signal
Sensor Parameters		
Working Frequency	24GHz~24.25GHz, ISM band	
Transmitting Power	6dBm Max.	
Detection Area	Casambi APP set	
Hold Time	Casambi APP set “Min. 45sec is suggested for presence detecting”	
Daylight Priority	Casambi APP set	
Daylight Harvesting	Casambi APP set	
Stand-by Dim Level	Casambi APP set	
Detection Range (Radius)	Ceiling installation 3m high Motion and minor motion: r≥2.5m Test condition: 100% sensitivity, 60 ㎡ indoor open space	
Installation Height	3m (4m Max)	
Wireless Parameters		
BLE Module	Casambi Bluetooth	
Working Frequency	2.402-2.480GHz	
Transmitting Power	+7dBm(max)	
Transmitting Distance	Point to point transmit 25m Max	
Fixture ID	38567	
Environment		
Working Temperature (Ta)	-35℃-60℃	
Storage Temperature	-40℃~+80℃ humidity: ≤85% (non-condensing)	
Certification Standards		
Certification	CE	

Environmental Requirements	Comply with RoHS 2.0 , Reach requirements
IP Rating	IP20
Protection Class	Class II
Others	
Wiring	3 pin PH2.0 terminal
Installation Requirements	Zhaga book 20 installation
Packaging Requirements	Clapboard + Carton (K=A)
Net Weight	15.8±3g
Lifetime	5 years warranty @Ta indoor use only

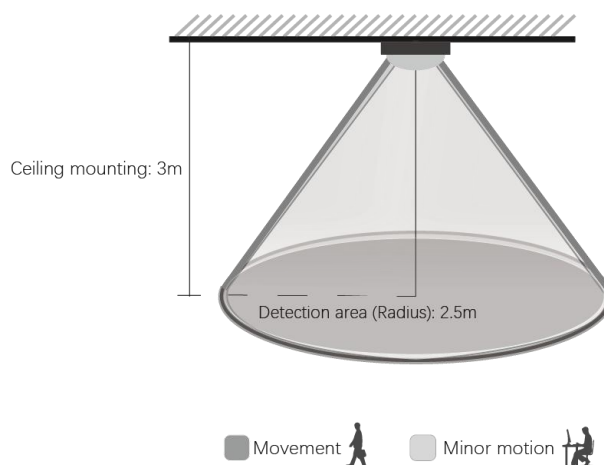
【Function description】

- | | |
|--------------------------|---------------------|
| ☑ON/OFF function | Casambi App setting |
| ☑2-step dimming function | Casambi App setting |
| ☑3-step dimming function | Casambi App setting |
| ☑Daylight harvesting | Casambi App setting |
| ☑Daylight priority | Casambi App setting |
| ☑Network function | Casambi App setting |

Features and operations are detailed:

<https://support.casambi.com/support/solutions/articles/12000074041-presence-sensors>

【Detection Range】



Motion signal



Minor motion signal

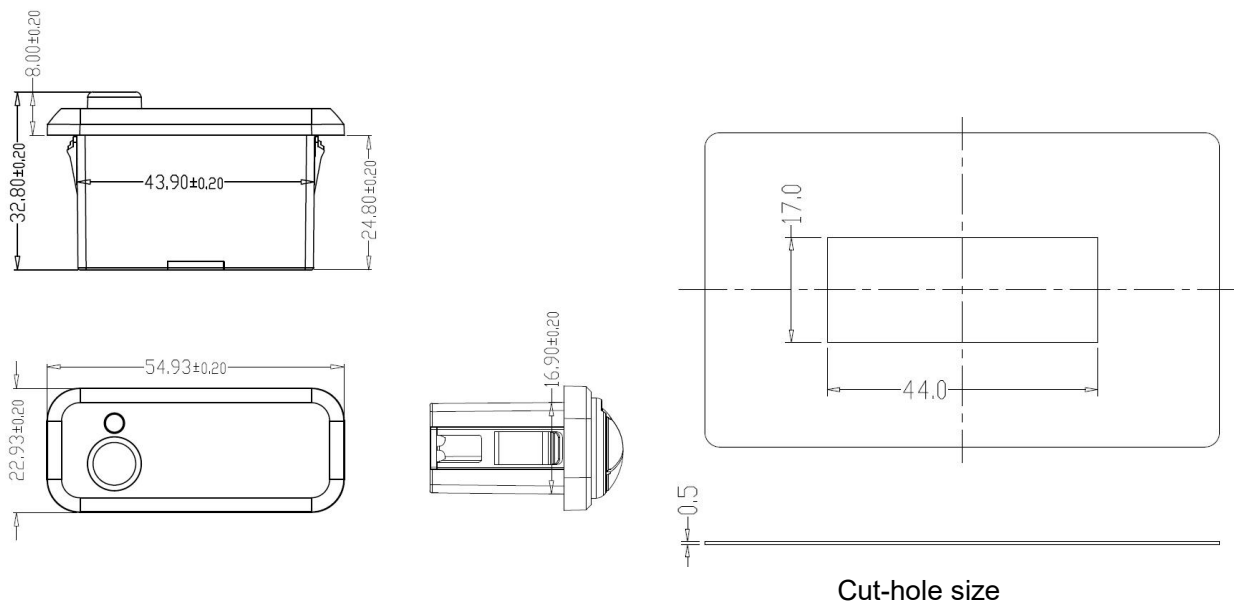
Human presence: detect the human body in the detection area to carry out big movement signals (walking) to trigger the induction and output high level (such as control lights on and off), and then detect minor

motion signals (body leaning forward, backward, limb swinging, shaking the head, typing, playing mobile phones and other minor motions.) as well as the detection of human respiratory vital signs caused by the abdominal cavity, chest expansion etc to maintain output high level (such as control lights always on)

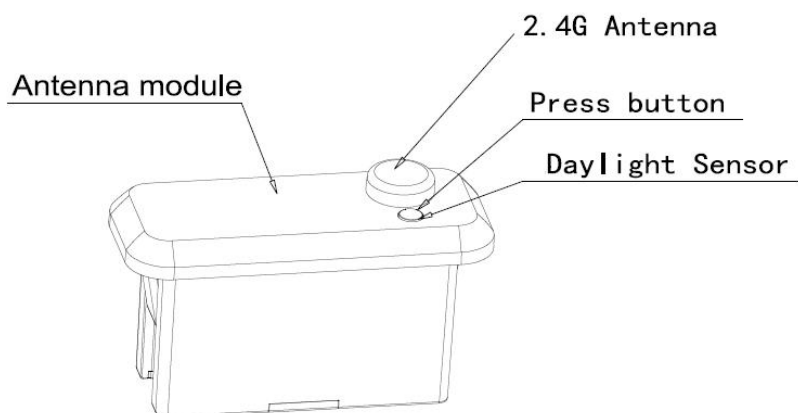
Human absence: no signal detected in the detection area and output low level (control lamp off)

【Dimension】

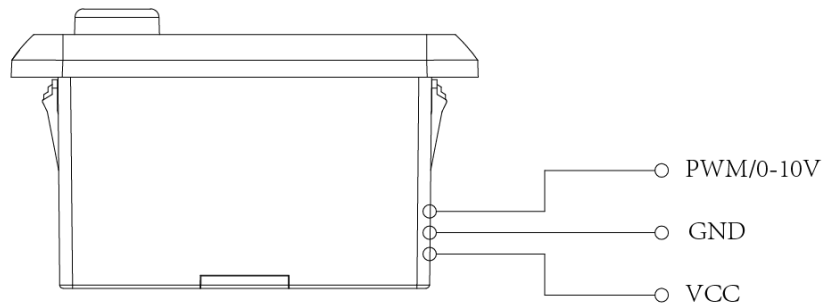
- Dimension (unit: mm)



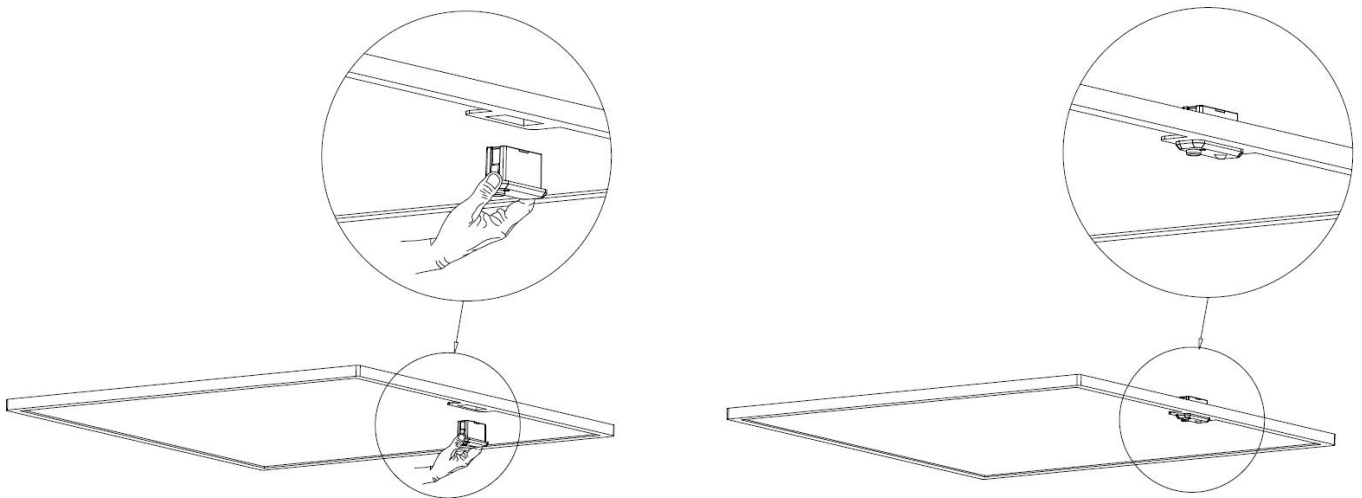
- Product detail



● Wiring



● Installation instruction



【Initialization】

After power on, the sensor automatically turns on light at 100% brightness and self-check for 10s. During the initialization, the sensor is not able to detect movement. It enters sensing mode after initialization, and during which, the lamp maintains at 100% brightness.

【Factory Setting】

Sensitivity: 100%, Hold time: 5s, Daylight sensor: Disable, Stand-by period: 0s, Stand-by dim level: 20%

【Application Notice】

- The sensor should be installed by a professional electrician. Please turn off the power before installing, wiring, changing the configuration.

- The product has good penetration ability to plastic, wood, etc., but the microwave module antenna should not have metal accessories or metal shells, glass shells, etc. in direct front or nearby, otherwise it will affect the antenna transmission and reception.
- The sensing distance will be affected by the installation height, the size of the object to be detected, the speed of movement, the impact of the installation environment, and the sensing distance in different directions will have a certain degree of variability.
- The daylight threshold is in a sunny environment, no shadows, and ambient light diffuse reflection conditions. In different periods, climates, and environments, the daylight value detected by the light sensor may be different.
- The installation distance of the product is recommended to be more than 1.5m; the installation distance between the product and the router should be more than 1.5m, so as not to cause interference to the normal operation of the microwave sensor.
- The mounting plane of the product (e.g. aluminium substrate, PCB board) needs to be at a certain height difference from the antenna plane of the microwave module, and the antenna plane of the microwave module should be higher than the nearby plane by more than 5mm in order to achieve the best detection effect.
- DC regulated power supply with stable output voltage, low current and ripple coefficient must be used, the ripple of the power supply should be less than 50mV, and the minimum load current of the power supply should be more than 120mA, and it is also recommended to set up an electrolytic capacitor of not less than 100uF at input power supply VCC terminal.
- Product installation as far away as possible from large metal equipment, pipelines, air conditioning vents, exhaust vents, smoke machines and other scenes, so as to avoid equipment vibration affect the detection effect.
- Microwave module should avoid close to the AC drive power supply, be away from the drive power supply rectifier bridge, transformer, switching tubes and other high power devices, to avoid high frequency signals interference to normal operation of the microwave module.
- Product design: the antenna surface of the microwave module and its nearby circuits to avoid the flow of large currents, avoiding transformers or high frequency components nearby, distance should be more than 10mm as far as possible.
- When wiring, the antenna side and the component side on the back of the product should not be covered by wires or have large currents flowing through, so as not to affect the normal operation of the sensor.
- The front of the product and nearby can not be equipped with metal accessories or glass block, so as not to affect the normal operation of the sensor, while the thickness of the plastic as far as possible to choose less than 1mm, too thick will affect the detection of microwave modules and directionality; microwave antenna plane and the shell distance should be greater than 3.2mm
- The antenna surface of the product and the metal plane (aluminium substrate, iron shell) need to be a certain height difference, the recommended distance is more than 0.5mm.

When product structure, power supply mode/circuit, sensor antenna front cover, etc. changes, pls notify the sensor manufacturer to confirm, so as not to cause the product to work improperly. Otherwise, the manufacturer does not bear any corresponding responsibility for the abnormality.