



## All-scene spatial sensing sensor

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# Company Profile

## Dedicated to innovation in intelligent lighting and sensing control for 18 years

Merrytek was founded in 2011. Headquartered in Shenzhen, the city of innovation and vitality. We are a leading provider of "Intelligent lighting control and Smart sensing solutions" in China.

As a pioneer in technological innovation of intelligent lighting control components, microwave radar/PIR/environmental sensors, we continue to provide professional products and technical solutions for fields such as intelligent lighting, smart buildings, smart homes, security door control, and health and elderly care.



## Global Market

Merrytek is supported by its Shenzhen headquarters and has multiple offices and channel agents in provinces/cities such as Fujian, Shandong, Henan, Shaanxi, Shanxi, Hangzhou, Suzhou, Zhongshan, Changsha, Wuhan, Chengdu, Chongqing, and Shanghai. In addition to the Chinese market, Merrytek's products are also exported to countries and regions such as Europe, South America, North America, Southeast Asia, and Central Asia, providing high-quality products and services to over 1100 customers in 110 countries/regions.

**INNOVATION**  
**INTEGRITY**

**PROGRESS**  
**HONESTY**

**EFFICIENCY**  
**COOPERATION**



**2011**

Established in Shenzhen



**60+**

R&D Team



**800+**

Authorized Patent



**1100+**

Serve Customers

# Developing Process

## 2011

Merrytek officially established



## 2015

Joined the DALI Association (DiiA) and announce the high installation series of microwave sensors and the leading flicker free dimmable DALI drivers



## 2018

Release low impedance anti-interference antenna series products and establish the industry's first fully automatic microwave sensor production line



## 2013

Released of European regulation series Microwave sensors



## 2016

Released of European standard series emergency power supply



## 2019

Released the first 5.8GHz human presence sensor



## 2020

Released Dual Coupled Dipole Antenna series sensor



## 2023

Released high installation series infrared sensors and Mini Dipole Antenna series sensors



## 2025

We officially launch the 4th Generation Human Presence Senso



## 2024

Passed the review of the national "Little Giant" enterprise; Formally joining the online e-commerce platforms



## 2021

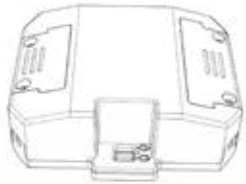
Won the national specialized special new "Little Giant" enterprise



# Development history of engineering products

2015

Merrytek is the first in the industry to launch a human body micro motion detection sensor, which is applied to panel lights for office lighting.



2022

Merrytek launches the second generation: 24GHz millimeter wave human presence sensor, which uses Merrytek's independently designed RF antenna "24GHz millimeter wave half wave folded antenna" with large detection angle and high gain characteristics. The product achieves overlapping detection distances for major motion, minor motion, and presence, becoming a major highlight product in the industry.



2023

We have developed "deep sleep detection sensors", "human occupancy sensors", and "AI posture sensors" for different application scenarios in the industry, enriching and improving the solutions of sensors in the field of intelligent buildings.



2025

Merrytek released its fourth generation human presence sensor - the industry's first plug and play AI human presence sensor. Pioneering AI adaptive spatial matching detection function, automatically configuring sensing parameters, and available immediately upon power on. Built in six major functions+original machine algorithm+AI model, effectively eliminating 99.9% of common indoor interference, bringing more accurate human presence sensing effect.



2018

Merrytek is the first company in the industry to launch the "5.8GHz human presence sensor". This product uses Merrytek's self-developed "low-impedance dual-fed large-beam microwave module". The product is widely used in smart office, smart home, and smart hotel related smart scenes.



2024

Merrytek has upgraded the human presence sensor to the third generation, using German automotive-grade chips and self-developed patented antenna technology. The maximum sensing range can reach 8 meters in diameter approaching a circular detection range. The anti-interference ability is further enhanced and accurate identification is achieved without false alarms.



# Social Recognition



Shenzhen Intellectual Property Advantage Unit



National Intellectual Property Advantage Enterprise



National High Tech Technology Companies



Guangdong Provincial Engineering Technology Research Center for Intelligent Sensors of Human Body Microwave Detection



Famous Brand in Shenzhen



National Level Specialized and Innovative "Little Giant" Enterprise



# Intellectual Property

Since its establishment, Merrytek has accumulated over 600 intellectual property rights.

Intellectual Property

800+

Domestic Invention Patents

86

Foreign Invention Patents

25



# Cutting-edge Detection Technology

## 60GHz Detection Radar

Partition/Presence/Trajectory/headcount/Falls/In bed/Out of bed/Respiratory and heart rate monitoring



## 24GHz Detection Radar Distance

Distance measurement/ Major motion/ Minor motion/ Breath detection/ Partition detection/trajectory



## ToF Ranging Sensor

Distance measurement/occupancy/presence detection



## High Mounting Radar

15m installation height movement detection



## PIR Infrared Pyroelectric

Cost-effective human motion detection with high temperature resistant flat lens



# 60GHz millimeter wave radar

Based on Merrytek's self-developed MIMO antenna array, it can achieve precise four-Cut hole sizeal scanning of targets and generate high-quality point cloud signals for human detection. Combined with deep machine learning and massive model training algorithms, it can accurately detect and output the number, posture (such as falls), presence, and positioning information of indoor personnel.

At the same time, this technology has the advantages of high stability, high accuracy, good security, and no invasion of personal privacy, which can meet various health monitoring needs and overcome the limitations of traditional detection methods (such as infrared and visual systems) in protecting user privacy.



## 24GHz millimeter wave radar

Based on FMCW modulation, 24GHz millimeter wave radar can obtain real-time signal differences in both time and frequency domains between the transmitted and reflected signals.

Merrytek has adopted its self-developed real-time adaptive algorithm for bottom noise, which can accurately identify the weak motion characteristics of the chest and abdominal cavity generated by breathing in combination with the static state of the human body based on the shielding of interference motion signals such as curtains and green plants, thereby achieving precise human presence detection.



## ToF (Time of Flight)

The distance between nodes is mainly measured by the time required for signals to travel back and forth between two asynchronous transceivers (or reflectors).

Traditional ultrasonic ranging has high requirements for reflecting objects and is basically unable to detect small objects such as linear and conical objects. This problem can be completely overcome, and Time of Flight (ToF) ranging has the characteristics of high accuracy, long measurement range, and fast response.



## High Mounting Microwave Sensor

Based on Merrytek's self-developed high gain radar antenna and unique anti-interference algorithm, the Merrytek high mounting installation series millimeter wave radar can support human movement detection at a height of 15m, especially suitable for smart energy-saving applications such as warehouses and lobbies.



## PIR (Passive Infrared)

Pyroelectric infrared (PIR) sensors utilize infrared radiation emitted by the human body (with a wavelength of approximately 10 micrometers). The flat Fresnel lens independently developed and designed by Merrytek divides the detection area more precisely while optimizing the appearance flatness and aesthetics, thereby enabling the pyroelectric detection element to generate high signal-to-noise ratio signals when the human body enters the detection range.

Another, due to Merrytek's high-temperature resistant and anti-interference algorithms, the Merrytek PIR sensors can solve the false triggering in interference environments such as high temperature, high humidity, and high light.



# Wide application

## Full scene coverage

One solution full scene detection needs in home, office, elderly care, hotel, education, and other areas.



Smart lighting



Smart Home



Smart office



Smart Hotel



Smart Elderly Care



Smart Classroom

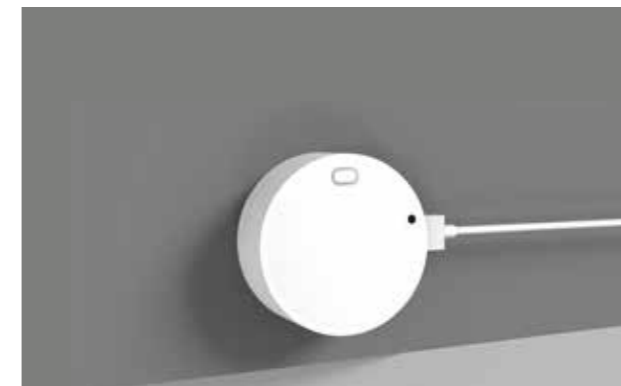
# Different mounting way



Surface mounting



Flush mounting



Wall mounting



European standard European junction box mounting

# Comprehensive system integration






## Multi-protocol integration support

Dry contact/RS485 / ON /OFF/DALI/KNX/PLC/Tuya/Zigbee/WiFi/Bluetooth mesh/Casambi / 0-10V/Mi Home/Control 4 / Crestron



# Product Application Chapter

## Product Classification Table

Detection Technology	Function Application	Appearance Series	Connection Agreement
60GHz Detection Radar	<p>Partition, Presence/Trajectory/-headcount/Falls/in bed/Out of bed/Respiratory and heart rate monitoring</p> <p>Smart home/Smart hotel/ Rehabilitation center/Elderly care institution</p>		RS485/WiFi/ Mi Home/Tuya
24GHz Detection Radar Distance	<p>Distance measurement/ Major motion/ Minor motion/Breath detection/ Partition detection/trajectory</p> <p>Smart Home/Smart Office/Smart Hotel/Smart Security</p>		Dry Contact/RS485/ON /OFF/DALI/KNX /PLC/Tuya/Zig- bee/WiFi/bluetooth mesh/0-10V/Mi Home
ToF Ranging Sensor	<p>Distance measurement/ occupancy/presence detection</p> <p>Smart Office/Smart Public Toilet/Shared Office/Study Room</p>		Dry Contact/RS485
5.8GHz High Mounting Radar	<p>15m installation height movement detection</p> <p>High rise space/lobby/factory/airport/duplex residence</p>		Dry contact/RS485/high voltage switch/DALI/KNX/PLC/Tuya/Zig- bee/WiFi/Bluetooth Mesh/0-10V/Mi Home
PIR Infrared Pyroelectric	<p>Cost-effective human motion detection with high temperature resistant flat lens</p> <p>Entrance hall/Corridor/corridor/stairwell</p>		Dry contact/RS485/high voltage switch/DALI/KNX/PLC/Tuya/Zig- bee/WiFi/Bluetooth mesh/0-10V

# Smart Lighting

- **24GHz millimeter-wave radar**

Human body presence, micro-movement, and movement sensing

Areas where people frequently move around, such as shops, office Spaces, restrooms, and parking lots, or remain stationary for long periods or have relatively small movements during use.

- **PIR infrared curtain**

20° narrow-angle curtain human movement sensor

In scenarios such as staircases and window edges where human movement is detected within a narrow range, the infrared curtain will operate in the form of a sensing surface.

- **PIR infrared pyroelectric**

Human body movement sensing

Scenarios such as corridors and doorways where human movement triggers sensing.

- **TOF occupancy sensing**

Occupying existence sensing

Human movement detection and human presence maintenance detection applications in extremely small Spaces such as workstations, toilet stalls, and telephone halls.

- **Automatic turn on/off light**

Automatic turn on/off light,when there is movement.

24GHz millimeter wave radar can be used in the display area and office area to detect mico movement and prensence.

- **Multi dimming (0-10V, DALI)**

0/1-10V, DALI sensor, supports direct connection to lighting fixtures for multi-stage dimming

When there is no person, the light keeps dim. Once there is movement, light turns on 100%, after the person leaves, the light keep dim.

The unmanned light is turned off, and the sensor detects that someone has passed by and turned on the light to brightness 1. If the person stays for more than 5 minutes, the light brightness will increase. After the person leaves, the light will turn off.

If the unmanned light is turned off for a long time, the sensor senses that someone has passed by and turned on the light, which is brightness 1. After the person leaves, the light decreases to brightness 2, and the unmanned light is turned off for a long time.

- **Daylight harveting function**

Based on the lighting value and human perception, provide automatic dimming for people in the scene to maintain a constant indoor illumination

Set the lights to be constantly on, with people triggering the scene lights, and the lights gradually turning on to the set value.

Set the lights to light up within the threshold, and when people come, determine the ambient lighting conditions and automatically adjust the brightness of the lights to supplement the lighting based on the illuminance.



# Smart Home

- **24GHz millimeter wave radar**

Human presence, micro motion, and motion sensing

It is suitable for home scenarios such as kitchens, studies, bathrooms, and walk-in closets where users will remain stationary for long periods or have relatively small movements.

- **24GHz multi transmitter multi receiver millimeter wave radar**

Detection of human presence, micro movement, movement, trajectory, and number of people

Suitable for large space scenarios such as living rooms and dining rooms, the multi-transmitter and multi-receiver 24GHz radar can divide the space, and a millimeter-wave radar can trigger applications for more precise zoning scenarios in large Spaces

- **PIR infrared Pyroelectric/Low-mounting Human Movement radar**

Human body movement sensing

Scenarios such as corridors and doorways where human movement triggers sensing.

- **PIR infrared curtain**

20 ° Narrow Angle Curtain Type Human Movement Sensing

The aisle, windowsill, etc. need to be used in scenes with narrow detection ranges based on whether people have entered, accurately achieving scene triggering based on boundary control.



- **ON/OFF light**

Turn on/ off light by sensor according to motion signal detected

24GHz millimeter wave radar can be used in restaurants and changing rooms to detect finer motion changes, including the presence of the human body in a stationary state and micro movements.

- **Panel Priority**

Programming with panel on/off as trigger condition, manual control in priority

The panel lights up, sensor isn't inter-connected to the lights - the sensor stops working. The panel lights off, and the sensor starts to communicate with light.

- **Nighttime Mode**

Programming with time and departure/return to bed as triggering conditions, set departure sensing, and automatically turn on the night light when it senses waking up at night

When a person is detected leaving the bed during non rest time, report the departure status without triggering the scene. When a person leaves the bed within the set resting time, the night mode is triggered and the ambient night light is turned on.

- **Rehabilitation Health Monitoring**

Using auxiliary monitoring radar, you can monitor in real time whether the elderly in the home are falling / leaving / leaving the bed, real-time feedback or alarm

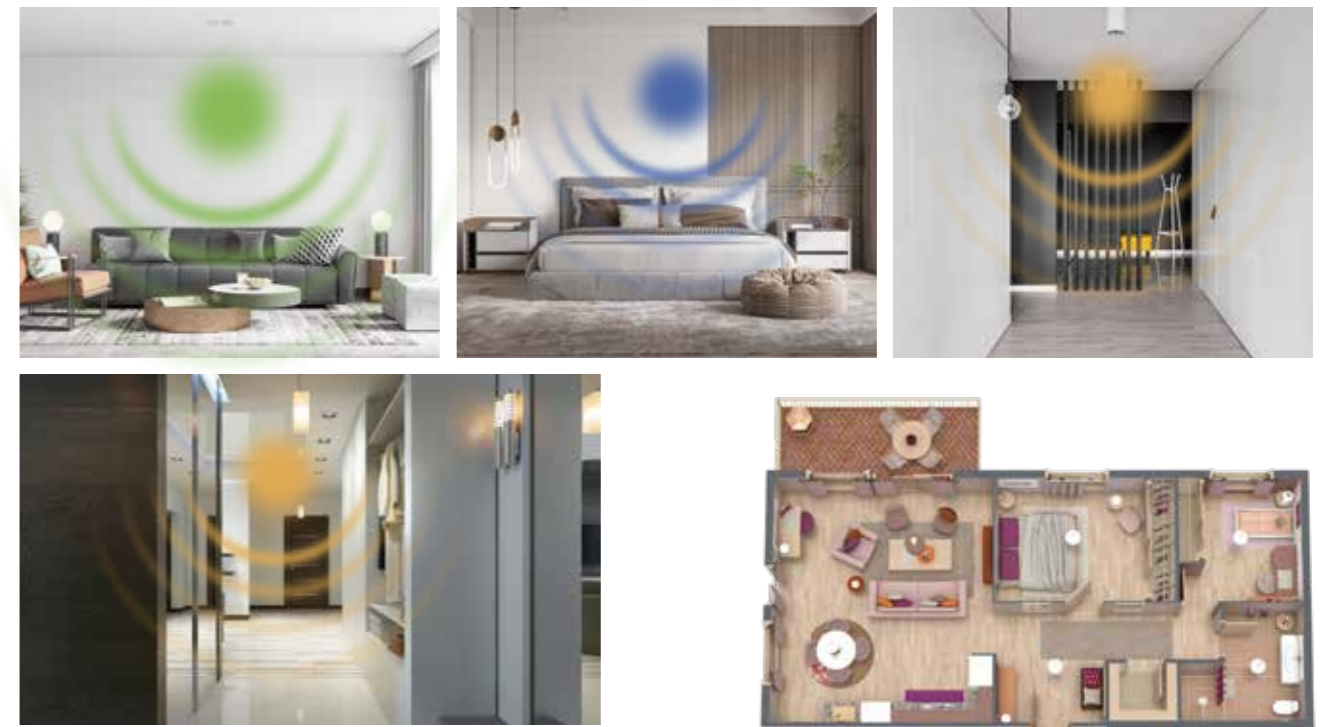
Real-time monitoring of the state of human activity can be used in the elderly room and real-time alarm for abnormal situations. Placed in the shower room and some areas where elderly people are prone to fall, you can also monitor in real time whether there is a fall and overtime.

- **Partition scene triggering**

After dividing the space into multiple areas, trigger/close preset scenes without feeling based on the length of time people enter different areas and stay in corresponding areas

When a person enters the entrance hall, the entrance lighting lights up. After entering the living room, the living room lighting lights up and the security mode is turned on. If the person stays in the living room for more than 10 minutes and the indoor temperature is detected to be above 27 ° C, the central air conditioning will automatically turn on.

When people leave the entrance, the brightness of the entrance lighting decreases to 10%. After no one in the entrance area exceeds 2 minutes, the lighting will automatically turn off. When a person leaves the living room, the central air conditioning adjusts the air volume to the lowest level. If there is no one in the living room for more than 3 minutes, the lights will automatically dim to 20%. If there is no one for more than 5 minutes, the lights will automatically turn off. If there is no one for more than 10 minutes, the air conditioning will automatically turn off.



# Smart Office

- **24GHz millimeter wave radar**

Human presence, micro motion, and motion sensing

Office, conference rooms, and other office scenarios that remain stationary for extended periods of time or have minimal movement.

- **PIR infrared pyroelectric**

Human motion sensing

Scenes triggered by human movement in corridors, front desks, etc

- **PIR infrared curtain sensor**

20° narrow detection angle PIR curtain detection pattern sensor

Applied in places such as stairs, window area with narrow range.

- **TOF distance monitoring sensor**

High precision occupancy sensor

Applied in places like working station, bathroom

- **Workstation occupancy sensing**

Program the presence or absence of personnel on the seat as a triggering condition and output a signal indicating whether the workstation is vacant or not

There is someone on the seat - activate the power supply equipment at the workstation and report the presence signal.  
No one on the seat - automatically turn off all electrical equipment on the workstation and report the absence signal.

- **Turn on/off light automatically**

Turn on/off light automatically according to motion signal detected by sensor

The elevated hall can use high mounting radar for sensing and detecting human movement and micro motion status.  
24GHz millimeter wave radar can be used in dimming room to detect finer motion changes, including the presence of the human body in a stationary state and micro movements.

- **Comfort Scene Linkage**

Using light intensity/weather/temperature and humidity as triggering conditions, linking smart devices to trigger the set scene

When the environmental conditions are sunny/comfortable/with a light intensity greater than 200Lux - open the curtains and do not turn on the lights.

When the environmental conditions are rainy/humid/the light intensity is less than 100Lux - close the curtains, turn on the lights, and turn on the dehumidification equipment.



# Smart Hotel

- **Millimeter-wave radar technology presence detection in 24GHz**

Human presence, micro motion, and motion sensing

Suitable for people who stay still for a long time or have small movements during the use of the master bedroom and bathroom in hotel rooms.

- **24GHz millimeter-wave deep sleep detection**

Detect human movement, micro movement, and sleep status

Suitable for people in hotel rooms, master bedrooms, rest areas, etc. who may enter sleep and be covered with blankets, resulting in extremely weak chest and abdominal movement signals in the scene

- **PIR infrared pyroelectric/low mounting detection radar sensor**

Human motion sensing

Suitable for scenarios where human movement is triggered and sensed in corridors, doorways, and other areas.

- **Auxiliary monitoring radar technology**

Multi functional detection for falls/getting up at night/getting out of bed/leaving, etc

Suitable for high-risk areas such as bedrooms and bathrooms that are prone to falls, report any abnormal situations in a timely manner

- **Realize multi-sensor comprehensive judgment and precise card free power supply**

By detecting the status of people through sensors, accurately judge the presence or absence of people in the guest room, and control the use of electricity in the room, Or report to the customer control system, linking scenarios

Someone in the room - turn on the power in the room.

No one in the room - automatically turn off the electrical equipment inside the room.

- **Implementation - Abnormal Status Monitoring**

Detect any abnormal situations such as falls in certain areas and report them promptly for the hotel to manage and respond timely

When sensing abnormal situations such as falls in the bathroom, report the situation timely.

- **Implementation - Nighttime Mode**

Programming with time and departure/return to bed as triggering conditions, set departure sensing in the auxiliary monitoring radar settings, and automatically turn on the night light when it senses waking up at night

When a person is detected leaving the bed during non rest time, report the departure status without triggering the scene.

When a person leaves the bed within the resting time, the night mode is triggered and the ambient night light is turned on.



# Smart Elderly Care

- **PIR infrared pyroelectric**

Human motion sensing

Scenes triggered by human movement in corridors, doorways, etc.

- **PIR infrared curtain detection pattern sensor**

20 ° Narrow Angle Curtain Type Human Movement Sensing

Used in narrow range scenarios such as stairs and window edges to detect human movement.

- **Auxiliary monitoring radar**

Multi functional detection for falls/getting up at night/getting out of bed/leaving, etc

Report any abnormal situations promptly in high-risk areas such as retirement bedrooms and bathrooms that are prone to slipping.

- **Abnormal State Alarm**

Using auxiliary monitoring radar, it can detect in real time whether the elderly have fallen, got out of bed, woken up at night, or abnormal respiratory and heart rate status

When there are situations such as falls or abnormal retention, report them in real time so that rescue can be provided as quickly as possible.

- **Sleep/Breathing/Heart Rate Assisted Monitoring**

Contactless devices assist in monitoring the sleep, breathing, and heart rate status of the elderly, respond promptly, and provide auxiliary care.

- **Nighttime Mode**

Programming with time and departure/return to bed as triggering conditions, set departure sensing in the auxiliary monitoring radar settings, and automatically turn on the night light when it senses waking up at night

When a person leaves the bed during non rest hours, reporting the departure status does not trigger the scene.

When a person leaves the bed during the set rest time, the night mode is triggered and the ambient night light is turned on.

- **Realization- Intelligent linkage in different scenarios**

Using light intensity/weather/temperature and humidity as triggering conditions, linking smart devices to trigger the scene

When the environmental conditions are sunny/comfortable/with a light intensity greater than 200Lux - open the curtains and do not turn on the lights.

When the environmental conditions are rainy/humid/the light intensity is less than 100Lux - close the curtains, turn on the lights, and turn on the dehumidification equipment.

- **Realization - The light follows the person's activity**

Take on/off lights as conditions for programming, to control lights wirelessly

In areas such as the entrance hall and corridors where people walk but do not stay for a long time, PIR infrared sensors are used to detect human movement and trigger the lights in the area.

Infrared curtain sensor are used at the staircase to detect human movement within a narrow 20° Angle range and reduce false triggers.



# Smart Campus

- **24GHz millimeter wave radar**

Human presence, micro motion, and motion sensing

Campus scenes such as classrooms and libraries that remain stationary for extended periods of time or have minimal movement during use.

- **PIR infrared pyroelectric**

Human motion sensing

Scenes triggered by human movement in corridors, doorways, etc

- **PIR Infrared curtain**

20 ° Narrow Angle Curtain Type Human Movement Sensing

Infrared curtains will work in the form of sensing surfaces when used in narrow range scenarios such as stairwells and doorways to detect human movement.

- **Sensorless on/off light**

The sensor is programmed according to human presence and daylight value change, to achieve auto control.

24GHz millimeter wave radar can be used in display and office areas to detect more subtle motion changes, including the presence of the human body in a stationary state and micro movements.

- **Multi segment dimming**

0/1-10V, DALI sensor, supports direct connection to educational lighting fixtures for multi-stage dimming

Maintain light at half brightness when no one is around, full light when detect human motion, half brightness when people leave. Turn off light when on one is around, and switch on light at light level 1 when someone pass by, light level will be increased if people stay more than 5 minutes, switch off light when people leave.

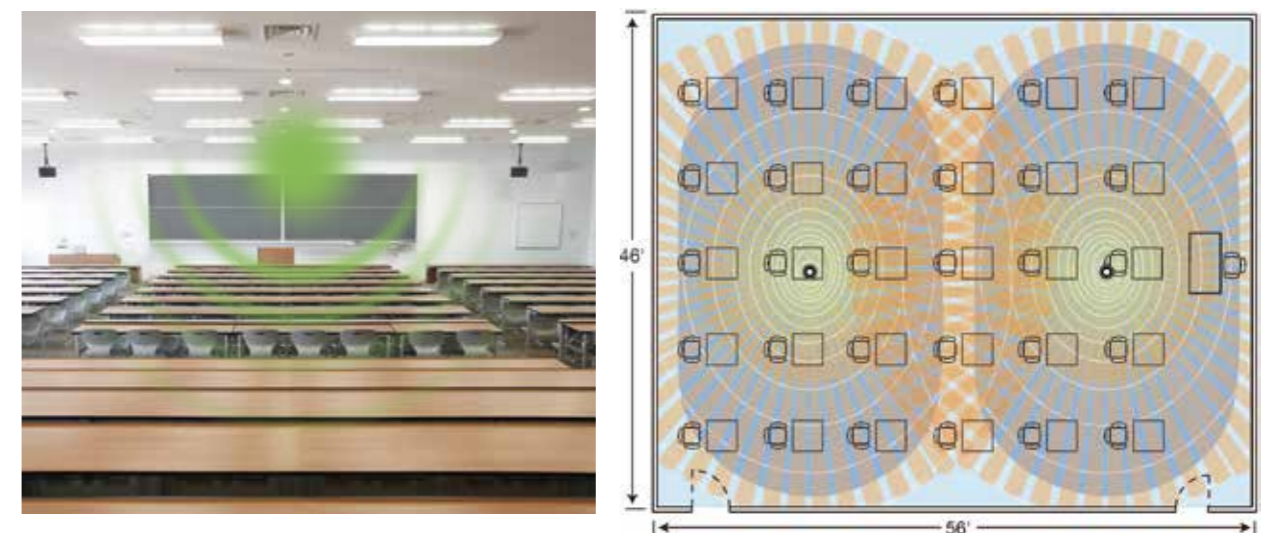
Turn off light when on one is around, and switch on light at light level 1 when someone pass by, dim light to low brightness level 2 after people leave, switch off light after time delay.

- **Constant illumination dimming**

Based on the lighting value and human perception, provide automatic dimming for people in the scene to maintain a constant indoor illumination

Set the light to be constantly on, scene is triggered by occupancy of people, automatically dim up or dim down light to maintain preset lux value.

Set daylight threshold working mode, sensor will measure ambient brightness level when detect motion of people automatically dim up or dim down light to maintain preset lux value.



# Product Section

## Product Selection

## Structural Accessories



# Product Selection

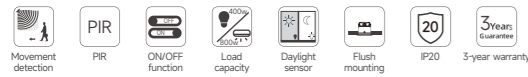
	PIR high-mounting sensing	PIR low mounting sensing	TOF occupancy sensing	Radar high-mounting sensing	Radar low mounting sensing	Radar space presence sensor	Radar sleeping presence sensor	Radar occupancy presence sensor
ON/OFF	MSA015S IR MSA050S IR MSA050S IR V MSA227S IR B1 MSA250S IR	MSA221 IR MSA222 IR MSA069S IR MSA246S IR A		MSA003S RC MSA224 RF	MSA001S 1	MSA202S RC MSA235S 99 MSA065S 99 MSA063S 99 MSA050S 99 Z MSA227S 99 B1 MSA219 RF A MSA246S 99		MSA215 99
0-10V	MSA050S IR V					MSA246S 99 V		
Passive dry contact	MSA015D IR MSA050D IR	MSA221D IR MSA222D IR MSA236D IR MSA238D IR MSA246S IR A2 MSA070D IR	MSA245D 99	MSA003D RC	MSA001D MSA001D E	MSA200D RC MSA237D 99 MSA219D 99	MSA219D 99 B	MSA215D 99
DALI	MSA050 IR MSA227 IR B1					MSA063 99 MSA227 99 B1		
DALI 2.0	MSA059DIR	MSA017D IR MSA070 IR			MSA055	MSA205		
KNX	MSA237K 99 IR	MSA017K IR MSA070K IR			MSA056K IR MSA237K 99 D MSA237K 99 E	MSA206 K MSA219K 99 A MSA237K 99 A MSA237K 99 C	MSA219K 99 B	
Casambi	MSA227S IR B1 MSA227 IR B1	MSA246S IR B1 MSA246 IR B1				MSA211 B MSA227S 99 B1 MSA227 99 B1 MSA246S B1		
RS485		MSA236D IR 485 MSA238D IR 485 MSA070D IR 485	MSA245D99 485			MSA203D 485 MSA237D 99 485		
Tuya		MSA053 Z				MSA201 Z MSA201 B4 MSA219 Z1 MSA050S 99 Z	MSA219 Z MSA220 Z	
MIJIA						MSA223 A MSA223 C1		
Merrytek 2.4G RF				MSA224 RF		MSA219 RF A		

# High mounting Pir motion sensor

## MSA015S IR



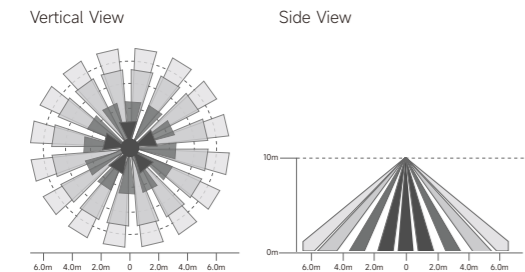
- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output ON/OFF signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority is given to mobile sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support surface mounting and flush mounting
- ◆ The maximum installation height is 10 meters
- ◆ One channel 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)



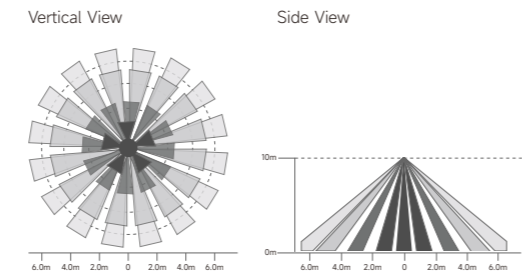
## MSA050S IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output relay switch signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for mobile sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support surface mounting and flush mounting, exposed ceiling installation, and European junction mounting
- ◆ The maximum installation height is 10 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)



【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	φ85x56mm
【Cut hole size】	φ65-70mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	ON /OFF (maximum load capacity 800w incandescent lamp/400w LED)
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting
【Product Category】	PIR high mounting motion sensing (ON/OFF)
【Level】	IP20

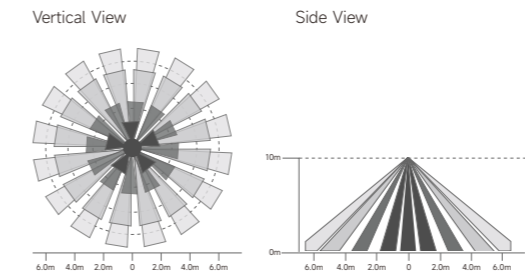


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	ON /OFF (maximum load capacity 800w incandescent lamp/400w LED)
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting / European standard European junction set
【Product Category】	PIR high mounting motion sensing (ON/OFF)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA050S IR V



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output one ON/OFF and one 0-10V control signal
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support surface mounting, flush mounting and European junction box mounting
- ◆ The maximum installation height is 10 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ One channel 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

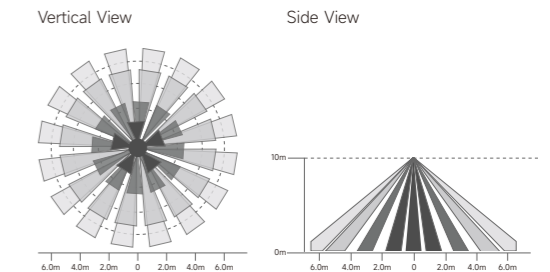
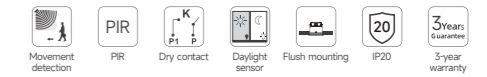


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	One ON/OFF+One 0-10V
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (ON/OFF+0-10V)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA015D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority is given to sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support surface mounting and flush mounting
- The maximum installation height is 10 meters
- ◆ Supports IP20
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

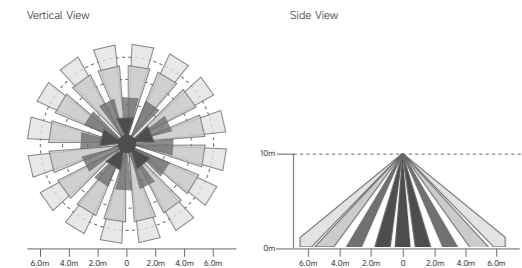
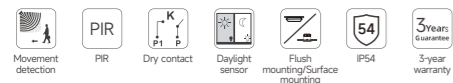


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ85x56mm
【Cut hole size】	φ65-70mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	Normally open/normally closed dry contact (default normally open)
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting
【Product Category】	PIR high mounting motion sensing ((passive dry contact)
【Level】	IP20

## MSA050D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority is given to sensing detection in high mounting places such as warehouses and lobbies
- ◆ Supports Flush mounting/surface mounting/European standard European junction mounting
- ◆ The maximum installation height is 10 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

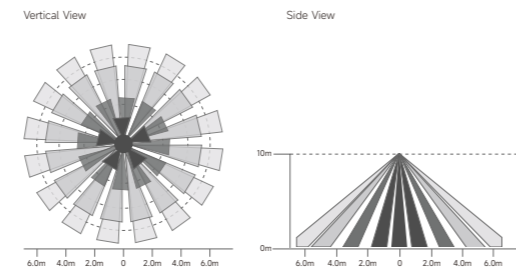


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	Normally open/normally closed dry contact (default normally open)
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting / European standard European junction set
【Product Category】	PIR high mounting motion sensing (passive dry contact)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA050 IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output DALI control signals
- ◆ Support environmental daylight sensor control
- ◆ Support light compensation dimming
- ◆ Support surface mounting and flush mounting, exposed ceiling installation, and European junction mounting
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ The maximum installation height is 10 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support external PUSH switch for lighting switch and dimming

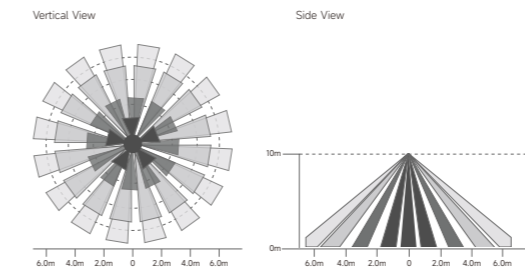


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	DALI+PUSH
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (DALI+PUSH)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA059D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and transmit DALI 2.0 signals
- ◆ Support ambient light intensity detection
- ◆ Supports DALI bus power supply
- ◆ Support surface mounting and flush mounting, exposed ceiling installation, and European junction mounting
- ◆ Support remote control to set sensing range and hold time
- ◆ The maximum installation height is 10 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ Priority recommendation for sensing detection in conference halls, lobbies, and other places

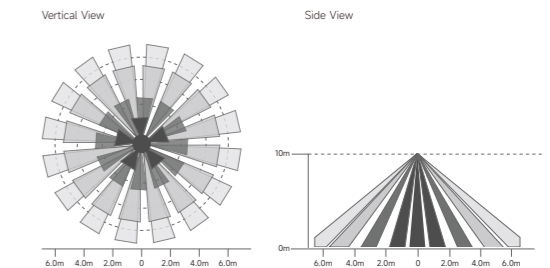


【Working Voltage】	9.5-22.5V DC (powered by DALI bus)
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Light Sensing Range】	2-65000 Lux
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	DALI 2.0
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation/Ceiling visible installation/European junction set
【Product Category】	PIR high mounting motion sensing (DALI2.0)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA237K 99 IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output KNX signals
- ◆ Support light compensation dimming and daylight sensor function
- ◆ Support remote control/ETS setting of sensing range, hold time, and daylight sensor
- ◆ Support surface mounting and flush mounting, exposed ceiling installation, and European junction mounting
- ◆ Supports KNX wired communication
- ◆ Support master-slave network control
- ◆ Supports two light channels and one HVAC channel control
- ◆ Supports a maximum installation height of 10 meters
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies

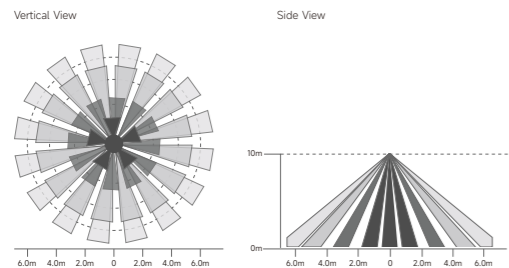


【Working Voltage】	21-30V DC (KNX bus power supply)
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Light Sensing Range】	2-65000 Lux
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	KNX
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (KNX)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA227S IR B1



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output Casambi control signals with a relay
- ◆ Support light compensation dimming and daylight sensor function
- ◆ Support Casambi app/remote control to set sensing range, hold time, and daylight sensor
- ◆ Support surface mounting, flush mounting and European junction box mounting
- ◆ Supports a maximum installation height of 10 meters
- ◆ relay: supporting a maximum load capacity of 800w (resistive)/400w (capacitive)
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies

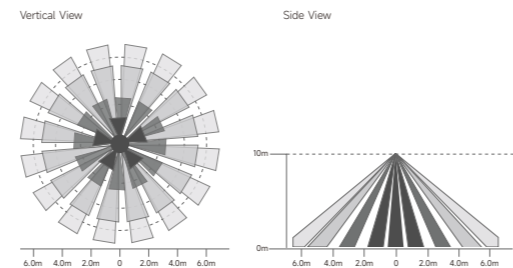
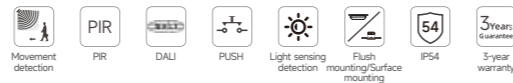


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-1200 Lux
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	Relay Switch+Casambi
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (ON/OFF+Casambi)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA227 IR B1



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Connect to Casambi Bluetooth wireless control system
- ◆ Support light compensation dimming and daylight sensor function
- ◆ Accurately sense human movement and output Casambi control signals and one DALI dimming signal
- ◆ Support PUSH panel switch/dimming
- ◆ Support Casambi app/remote control to set sensing range, hold time, and daylight sensor
- ◆ Supports a maximum installation height of 10 meters
- ◆ Support surface mounting, flush mounting and European junction box mounting
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies

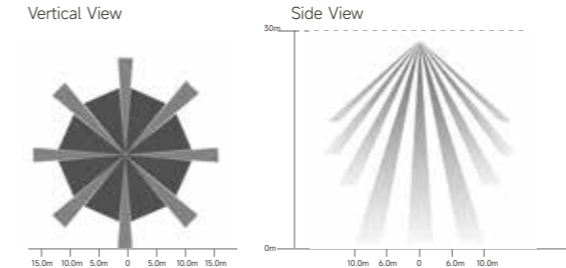


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	105x105x80.8mm (Flush mounting) 105x105x65.8mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2.5-10m (Typical Value: 8m)
【Output Signal】	DALI+PUSH+Casambi
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (DALI+PUSH+Casambi)
【Level】	IP54 (Surface Mounting) / IP20 (Flush mounting)

## MSA250S IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output one ON/OFF control signal
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support surface mounting, flush mounting and European junction box mounting
- ◆ The maximum installation height is 30 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ One channel 27A relay output: supports a maximum load capacity of 4000w (resistive)/2000w (capacitive)



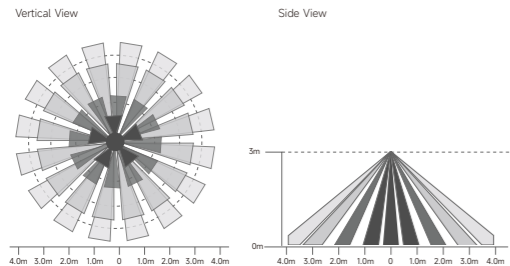
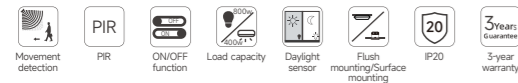
【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	120x120x64mm
【Cut hole size】	Surface Mounting
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-30m
【Output Signal】	One ON/OFF
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (ON/OFF)
【Level】	IP54 (Surface Mounting)

# Low mounting Pir motion sensor

## MSA221 IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output ON/OFF signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The maximum installation height is 6 meters
- ◆ Built in Mairui high-temperature resistant and anti-interference algorithm
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

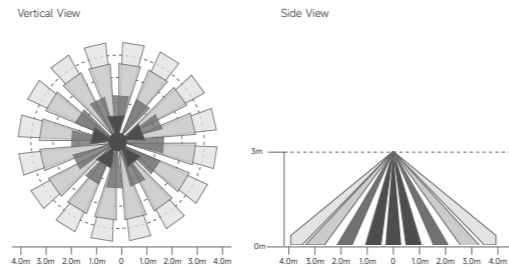
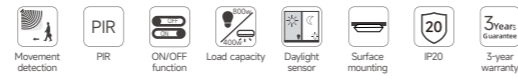


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	φ52.5x34mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	5-50 Lux / Disable
【Mounting Height】	2-6m (Typical Value: 3m)
【Output Signal】	ON /OFF
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	PIR low mounting motion sensing (ON/OFF)
【Level】	IP20

## MSA222 IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output ON/OFF signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support ceiling mounting installation
- ◆ The maximum installation height is 6 meters
- ◆ Built in Mairui high-temperature resistant and anti-interference algorithm
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

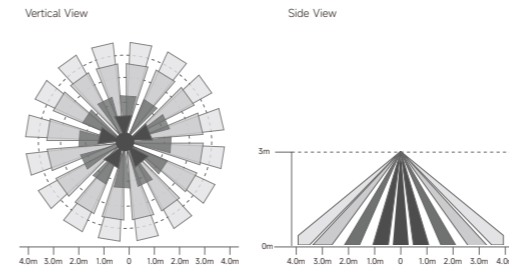
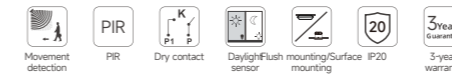


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	φ105x32.4mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	5-150 Lux / Disable
【Mounting Height】	2-6m (Typical Value: 3m)
【Output Signal】	ON /OFF
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Surface Mounting
【Product Category】	PIR low mounting motion sensing (ON/OFF)
【Level】	IP20

## MSA221D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The maximum installation height is 6 meters
- ◆ Built in Mairui high-temperature resistant and anti-interference algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

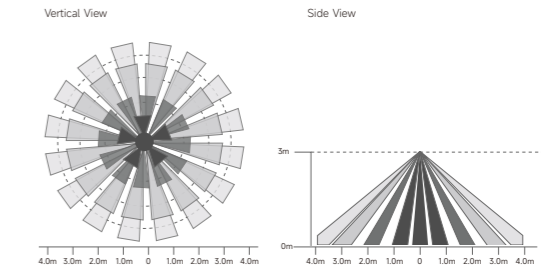
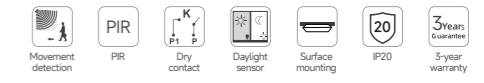


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ52.5x34mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	5-50 Lux / Disable
【Mounting Height】	2-6m (Typical Value: 3m)
【Output Signal】	passive dry contact
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	PIR low mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA222D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support ceiling mounting installation
- ◆ The maximum installation height is 6 meters
- ◆ Built in Mairui high-temperature resistant and anti-interference algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

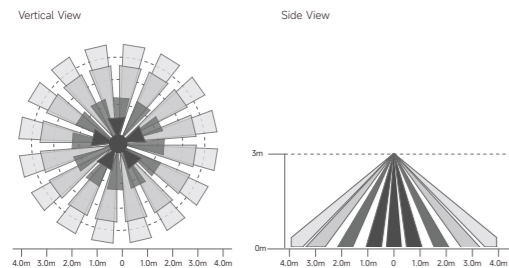
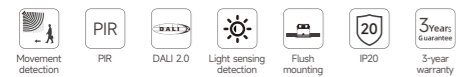


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ105x32.4mm
【Cut hole size】	N/A
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	5-150 Lux / Disable
【Mounting Height】	2-6m (Typical Value: 3m)
【Output Signal】	passive dry contact
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Surface Mounting
【Product Category】	PIR low mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA017D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output DALI2.0 signals
- ◆ Support remote control to set sensing range and hold time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Supports ceiling mounting and European junction mounting
- ◆ The maximum installation height is 6 meters
- ◆ Built in Mairui high-temperature resistant and anti-interference algorithm
- ◆ Supports DALI bus power supply

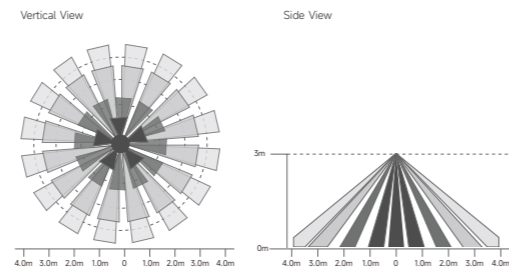
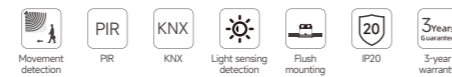


【Working Voltage】	9.5-22.5V DC (powered by DALI bus)
【Working Current】	20mA max
【Products Size】	φ89x50mm
【Cut hole size】	φ60mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2-6m (Typical Value: 3m)
【Output Signal】	DALI2.0
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / European junction set (compatible with 86 sided cover)
【Product Category】	PIR low mounting motion sensing (DALI2.0)
【Level】	IP20

## MSA017K IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Flat lens, exquisite appearance
- ◆ Accurately sense human movement and output RS485 protocol
- ◆ Supports RS485 protocol/remote control to set device ID, sensing range, hold time, etc
- ◆ Priority recommendation for entrance hall and bathroom mobile sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ Ultra small size, embedded in the ceiling and integrated with the ceiling after installation
- ◆ It is recommended to deploy no more than 12 sensors and the bus distance should not exceed 300m for the 485 bus

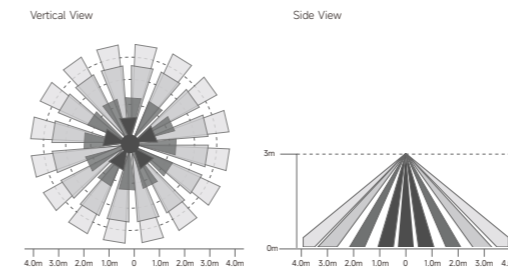


【Working Voltage】	21-30V DC powered by KNX bus
【Working Current】	10mA max
【Products Size】	φ89x34mm
【Cut hole size】	φ60mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2-6m (Typical Value: 3m)
【Output Signal】	KNX
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / European junction set (compatible with 86 sided cover)
【Product Category】	PIR low mounting motion sensing (KNX)
【Level】	IP20

## MSA236D IR



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Flat lens, exquisite appearance
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for entrance hall and bathroom mobile sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ Ultra small size, embedded in the ceiling and integrated with the ceiling after installation
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

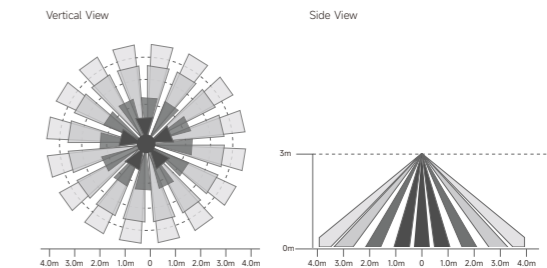


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ58x34.5mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	0-50 Lux / Disable
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	passive dry contact
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	PIR low mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA236D IR 485



- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Flat lens, exquisite appearance
- ◆ Accurately sense human movement and output RS485 protocol
- ◆ Supports RS485 protocol/remote control to set device ID, sensing range, hold time, etc
- ◆ Priority recommendation for entrance hall and bathroom mobile sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ Ultra small size, embedded in the ceiling and integrated with the ceiling after installation
- ◆ It is recommended to deploy no more than 12 sensors and the bus distance should not exceed 300m for the 485 bus

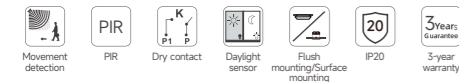


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ58x34.5mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Light Sensing Range】	0-1200 Lux (switchable daylight sensor mode through protocol)
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	RS485
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	PIR low mounting motion sensing (RS485)
【Level】	IP20

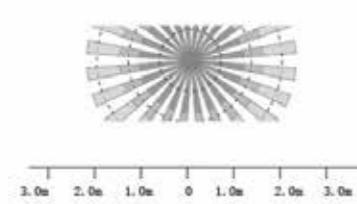
## MSA238D IR



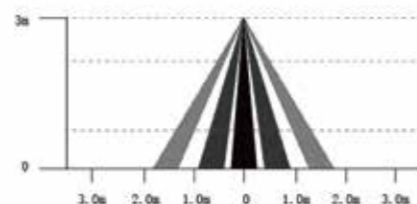
- ◆ PIR motion detection
- ◆ Exquisite appearance with planar rectangle fresnel lens
- ◆ Accurate NO/NC dry contact output
- ◆ Daylight sensor detection available
- ◆ Detection area, hold time and daylight threshold can be set by remote
- ◆ Max detection range: 0-4m diameter from detection long side, 0-1m diameter from detection short side,
- ◆ Factory setting is NO dry contact, yet can switch to NC by remote
- ◆ Hallway and Toilet motion detection highly recommended
- ◆ Flush mounting and surface mounting available
- ◆ Compacted mini size for perfect ceiling mounting



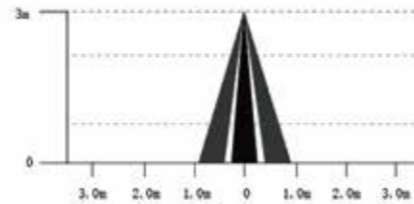
Vertical View



Detection long-side view



Detection short-side view



【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ58x36mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 2m for the long side and 0.5m for the short side at a height of 3m
【Lighting Threshold】	0-50 Lux / Disable
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	passive dry contact
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	PIR low mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA238D IR 485



- ◆ PIR motion detection
- ◆ Exquisite appearance with planar rectangle fresnel lens
- ◆ RS485 protocol output
- ◆ Daylight sensor detection available
- ◆ Detection area, hold time and daylight threshold can be set by remote
- ◆ Max detection range: 0-4m diameter from detection long side, 0-1m diameter from detection short side,
- ◆ Factory setting is NO dry contact, yet can switch to NC by remote
- ◆ Hallway and Toilet motion detection highly recommended
- ◆ Flush mounting and surface mounting available
- ◆ Compacted mini size for perfect ceiling mounting



【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ58x36mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 2m for the long side and 0.5m for the short side at a height of 3m
【Light Sensing Range】	0-1200 Lux (switchable daylight sensor mode through protocol)
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	RS485
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	PIR low mounting motion sensing (RS485)
【Level】	IP20

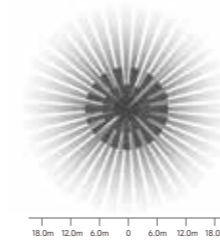
## MSA069S IR



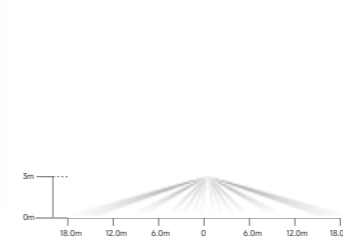
- ◆ Adopting PIR infrared pyroelectric sensing and light sensing dual sensing technology
- ◆ Accurately sense human movement and output one ON/OFF and one 0-10V control signal
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support surface mounting, flush mounting and European junction box mounting
- ◆ The maximum installation height is 10 meters
- ◆ Supports IP54 high-performance waterproofing
- ◆ One channel 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)



Vertical View



Side View



【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	90x90x73.7mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 6m and a height of 8m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-6m (Typical Value: 3m)
【Output Signal】	One ON/OFF
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Hidden embedded ceiling installation / Surface Mounting / European junction set
【Product Category】	PIR high mounting motion sensing (ON/OFF)
【Level】	IP54 (Surface Mounting)

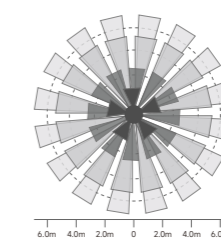
## MSA246S IR A



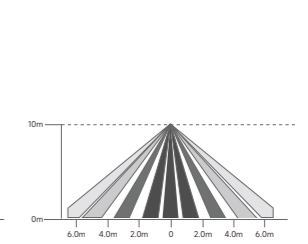
- ◆ PIR motion detection
- ◆ Connect to casambi BLE ecosystem
- ◆ Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆ Daylight sensor detection available
- ◆ Detection area, hold time can be set by casambi app
- ◆ Max detection range: 10-14m in diameter
- ◆ 2.5-4m mounting height
- ◆ Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆ Max 2kV surge capacity
- ◆ Office, passageway etc motion detection highly recommended
- ◆ Flush mounting and surface mounting available



Vertical View



Side View



【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C~+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

## MSA246S IR A2



- ◆PIR motion detection
- ◆Connect to casambi BLE ecosystem
- ◆Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆Daylight sensor detection available
- ◆Detection area,hold time can be set by casambi app
- ◆Max detection range: 10-14m in diameter
- ◆2.5-4m mounting height
- ◆Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆Max 2kV surge capacity
- ◆Office,passageway etc motion detection highly recommended
- ◆Flush mounting and surface mounting available

## MSA246S IR B1



- ◆PIR motion detection
- ◆Connect to casambi BLE ecosystem
- ◆Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆Daylight sensor detection available
- ◆Detection area,hold time can be set by casambi app
- ◆Max detection range: 10-14m in diameter
- ◆2.5-4m mounting height
- ◆Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆Max 2kV surge capacity
- ◆Office,passageway etc motion detection highly recommended
- ◆Flush mounting and surface mounting available

## MSA246 IR B1

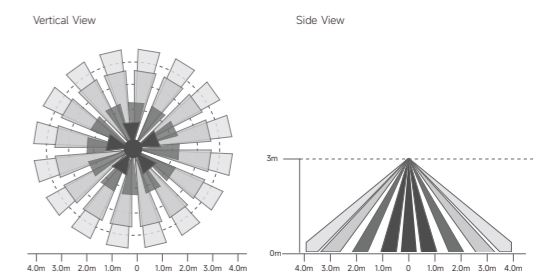
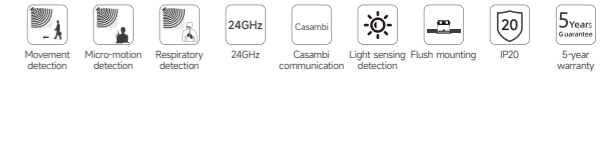
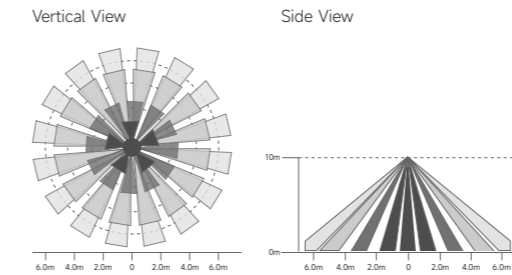
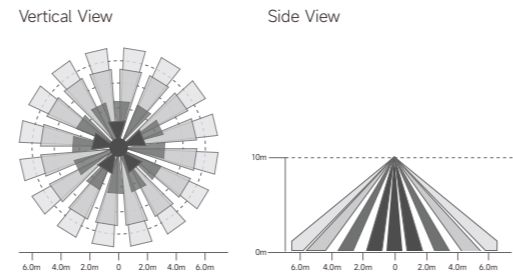
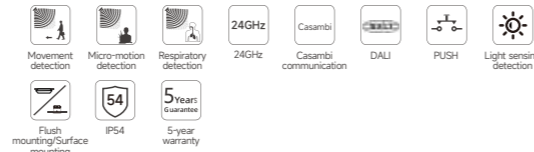
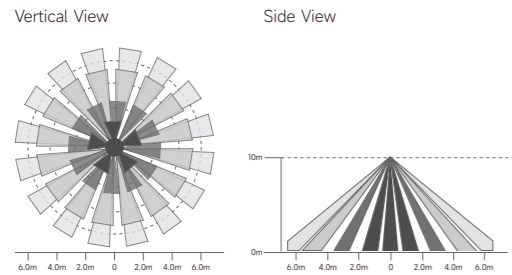
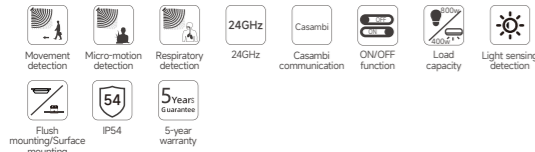


- ◆PIR motion detection
- ◆Connect to casambi BLE ecosystem
- ◆Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆Daylight sensor detection available
- ◆Detection area,hold time can be set by casambi app
- ◆Max detection range: 10-14m in diameter
- ◆2.5-4m mounting height
- ◆Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆Max 2kV surge capacity
- ◆Office,passageway etc motion detection highly recommended
- ◆Flush mounting and surface mounting available

## MSA070D IR



- ◆PIR motion detection
- ◆Super mini case with planar fresnel lens
- ◆Accurate NO/NC dry contact output
- ◆Daylight sensor detection available
- ◆Detection area,hold time and daylight threshold can be set by remote
- ◆Max detection range: 8-10m in diameter
- ◆Factory setting is NO dry contact,yet can switch to NC by remote
- ◆Hallway and Toilet motion detection highly recommended
- ◆Flush mounting available
- ◆Compacted mini size for perfect ceiling concealed mounting



【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C~+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C~+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C~+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

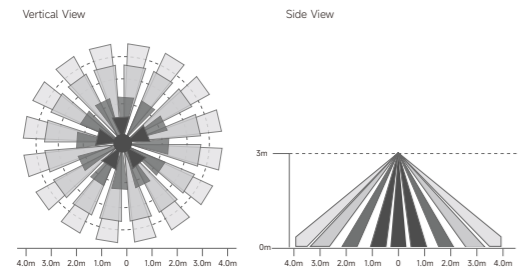
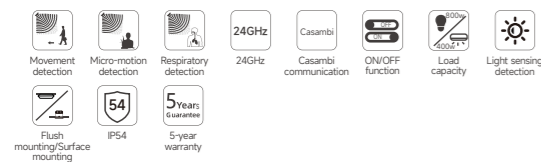
【Working Voltage】	9.5-22.5V DC (powered by KNX bus)
【Working Current】	7mA
【Products Size】	φ34x40mm
【Cut hole size】	φ35mm
【Wire standard】	Wire diameter: 0.2-2.5mm,Stripping length: 7-8mm
【Output signal】	DALI2.0
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Remote control】	Available
【Function】	PIR motion detection+ daylight sensor
【Working Temperature】	-25°C...+50°C
【Certificate】	Compliant to CE
【Level】	IP20

## MSA070D IR 485



**NEW**

- ◆ PIR motion detection
- ◆ Super mini case with planar fresnel lens
- ◆ RS485 protocol output
- ◆ Daylight sensor detection available
- ◆ Daylight threshold and daylight report mode available
- ◆ Detection area, hold time and device ID etc can be set by remote
- ◆ Max detection range: 8-10m in diameter
- ◆ Hallway and Toilet motion detection highly recommended
- ◆ Flush mounting available
- ◆ Compacted mini size for perfect ceiling concealed mounting



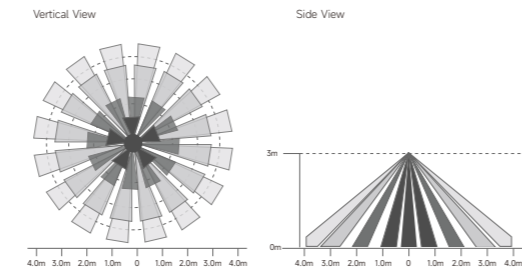
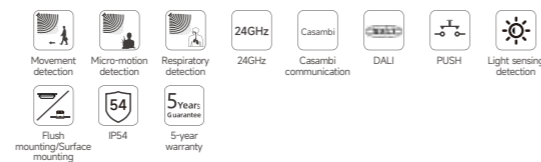
[Working Voltage]	92-24V DC
[Working Current]	20mA max
[Products Size]	φ34x40mm
[Cut hole size]	φ35mm
[Wire standard]	Wire diameter: 0.2-2.5mm, Stripping length: 7-8mm
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	RS485
[Function]	PIR motion detection+ daylight sensor
[Working Temperature]	-25°C...+50°C
[Product Category]	Compliant to CE
[Level]	IP20

## MSA070 IR



**NEW**

- ◆ PIR motion detection
- ◆ Super mini case with planar fresnel lens
- ◆ Dali2.0 output
- ◆ Dali bus power and communication available
- ◆ Daylight sensor detection available
- ◆ Detection area, hold time can be set by remote
- ◆ Max detection range: 8-10m in diameter
- ◆ Factory setting is NO dry contact, yet can switch to NC by remote
- ◆ Hallway and Toilet motion detection highly recommended
- ◆ Flush mounting available
- ◆ Compacted mini size for perfect ceiling concealed mounting



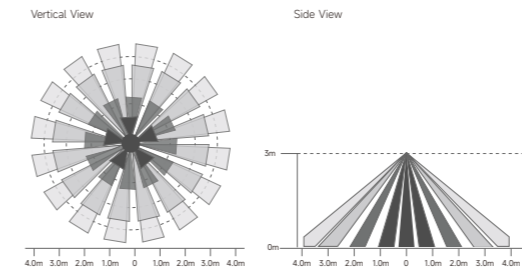
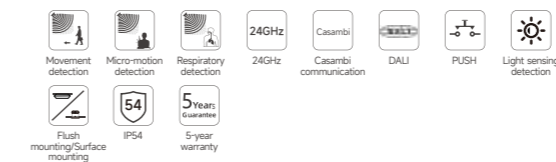
[Working Voltage]	9.5-22.5V DC (powered by DALI bus)
[Working Current]	7mA
[Products Size]	φ34*40mm
[Cut hole size]	φ35mm
[Wire standard]	Wire diameter: 0.2-2.5mm, Stripping length: 7-8mm
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	DALI2.0
[Function]	PIR motion detection+ daylight sensor
[Working Temperature]	-25°C...+50°C
[Certificate]	Compliant to CE
[Level]	IP20

## MSA070K IR



**NEW**

- ◆ Adopting 5.8GHz microwave radar human sensing technology
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output KNX signals
- ◆ Support ETS/remote control to set sensing range, hold time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ Support access to EASY Bluetooth control ecosystem
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support daylight sensor control
- ◆ Supports KNX bus power supply



[Working Voltage]	12-24V DC
[Working Current]	20mA
[Products Size]	φ34*40mm
[Cut hole size]	φ35mm
[Wire standard]	Wire diameter: 0.2-2.5mm, Stripping length: 7-8mm
[Power consumption]	≤0.5W @12/24V DC
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Function]	PIR motion detection+ daylight sensor
[Working Temperature]	-25°C...+50°C
[Certificate]	Compliant to CE
[Level]	IP20

# TOF occupancy sensing series

## MSA245D 99

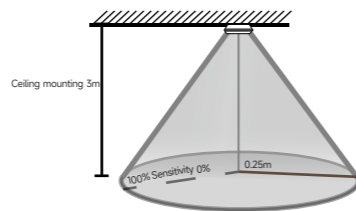
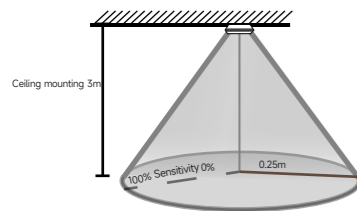
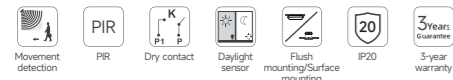


- ◆ Adopting TOF distance measurement dual sensing technology for human and light perception
- ◆ Accurately sense the presence of the human body and output dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for recommending workstations, toilets, tea stands, and other locations that require precise small-scale distance control for presence sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ Ultra small size, embedded in the ceiling and integrated with the ceiling after installation
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

## MSA245D 99 485



- ◆ Adopting TOF distance measurement and dual sensing technology for human perception and light perception
- ◆ Accurately sense the presence of the human body and output RS485 protocol
- ◆ Supports RS485 protocol/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for recommending workstations, toilets, tea stands, and other locations that require precise small-scale distance control for presence sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ Ultra small size, embedded in the ceiling and integrated with the ceiling after installation
- ◆ It is recommended to deploy no more than 12 sensors and the bus distance should not exceed 300m for the 485 bus



【Working Voltage】	12-24V DC
【Working Current】	40mA max
【Products Size】	φ58x34.5mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 0.25m and a height of 3m
【Light Sensing Range】	0-50 Lux / Disable
【Mounting Height】	2.5-3m (Typical Value: 3m)
【Output Signal】	passive dry contact
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	TOF occupancy sensing (passive dry contact)
【Level】	IP20

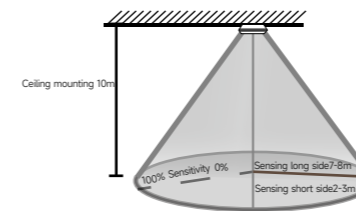
【Working Voltage】	12-24V DC
【Working Current】	40mA max
【Products Size】	φ58x34.5mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 0.25m and a height of 3m
【Light Sensing Range】	0-50 Lux / Disable
【Mounting Height】	2.5-3m (Typical Value: 3m)
【Output Signal】	RS485
【Detection Technology】	PIR infrared pyroelectric+photosensitive detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	TOF occupancy sensing (RS485)
【Level】	IP20

# High mounting Radar motion sensor

## MSA003S RC



- ◆ Adopting 5.8GHz radar dual sensing technology for human and light perception
- ◆ Accurately sense human movement and output relay switch signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority is given to recommending warehouse corridors and long corridor areas for mobile sensing detection
- ◆ Support ceiling mounting installation
- ◆ The maximum installation height is 10 meters
- ◆ The maximum sensing radius for the long side is 7-8m, and for the short side it is 2-3m
- ◆ One way 17A relay output: supports 800w (resistive)/400w (capacitive) maximum load capacity

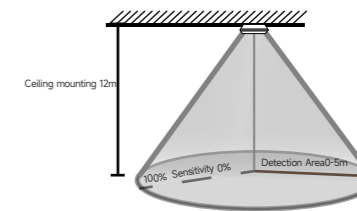
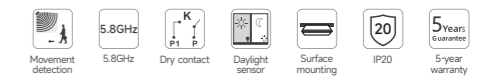


【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	110x110x32mm
【Maximum Sensing Distance】	Installation with a radius of 8m for the long side and 3m for the short side at a height of 3m
【Lighting Threshold】	5-150 Lux / Disable
【Mounting Height】	2-10m (Typical Value: 3m)
【Output Signal】	ON /OFF
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Surface Mounting
【Product Category】	Radar high mounting motion sensing (ON/OFF)
【Level】	IP20

## MSA003D RC



- ◆ Adopting 5.8GHz radar dual sensing technology for human and light perception
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for mobile sensing detection in high mounting places such as warehouses and lobbies
- ◆ Support ceiling mounting installation
- ◆ The maximum installation height is 15 meters
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

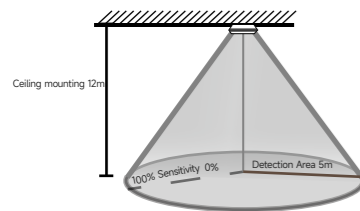


【Working Voltage】	12-24V DC
【Working Current】	50mA max
【Products Size】	110x110x32mm
【Maximum Sensing Distance】	Installation with a radius of 5m and a height of 12m
【Lighting Threshold】	5-150 Lux / Disable
【Mounting Height】	3-15m (Typical Value: 3m/12m)
【Output Signal】	Normally open/normally closed dry contact
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Surface Mounting
【Product Category】	Radar high mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA224 RF



- ◆ Adopting 5.8GHz radar dual sensing technology for human and light perception
  - ◆ Accurately sense human movement and output 2.4G RF and one ON/OFF signal
  - ◆ Support dialing/remote control to set sensing range, Hold time, and daylight sensor
  - ◆ Priority recommendation for mobile sensing detection in high mounting places such as warehouses and lobbies
  - ◆ Support ceiling mounting installation
- The maximum installation height is 15 meters
- ◆ Supports 2.4G RF group sensing control
  - ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

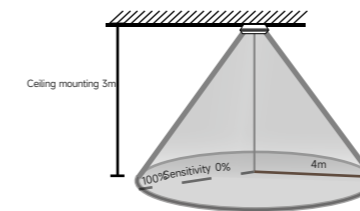


【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	110x110x32mm
【Maximum Sensing Distance】	Installation with a radius of 5m and a height of 12m
【Lighting Threshold】	5-150 Lux / Disable
【Mounting Height】	3-15m (Typical Value: 3m/12m)
【Output Signal】	2.4G RF+One way Relay Switch (400w capacitive/800w resistive)
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Surface Mounting
【Product Category】	Radar high mounting motion sensing (ON/OFF)
【Level】	IP20

## MSA001D



- ◆ Adopting 5.8GHz microwave radar dual sensing technology for human and light perception
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support dialing/remote control to set sensing range, hold time, light sensitivity threshold
- ◆ Priority recommendation for entrance hall and bathroom mobile sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

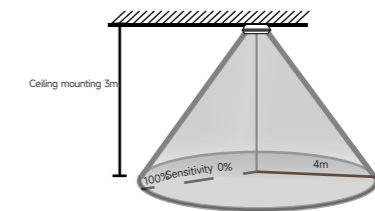
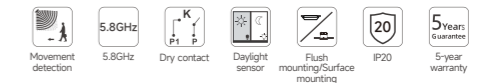


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ65x51.5mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	0-150 Lux/Disable
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	Normally open/normally closed dry contact (default normally open)
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	Radar low mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA001D E



- ◆ Adopting 5.8GHz microwave radar dual sensing technology for human and light perception
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority recommendation for entrance hall and bathroom mobile sensing detection
- ◆ Support hidden embedded installation and exposed ceiling installation
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

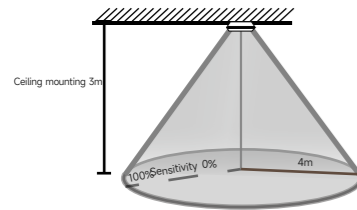


【Working Voltage】	12-24V DC
【Working Current】	20mA max
【Products Size】	φ52.5x34.5mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	Normally open/normally closed dry contact (default normally open)
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	Radar low mounting motion sensing (passive dry contact)
【Level】	IP20

## MSA001S 1



- ◆ Adopting 5.8GHz microwave radar dual sensing technology for human and light perception
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output ON/OFF signals
- ◆ Support dialing/remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

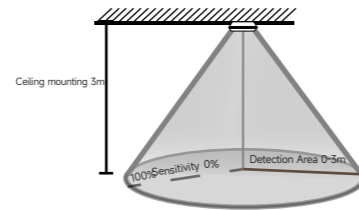
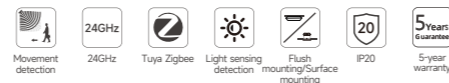


【Working Voltage】	100-240V AC
【Working Current】	20mA max
【Products Size】	φ65x51.5mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Maximum load power】	400w capacitive / 800w resistive
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	Radar low mounting motion sensing (ON/OFF)
【Level】	IP20

## MSA053 Z



- ◆ Adopting 24GHz millimeter wave radar human sensing technology
- ◆ Adopting the independently designed 24GHz half wave folded radar antenna by Merrytek
- ◆ Accurately sense human movement and output graffiti ZigBee signals
- ◆ Support graffiti app/remote control to set sensing range and hold time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ Support integration with graffiti app for scene automation control

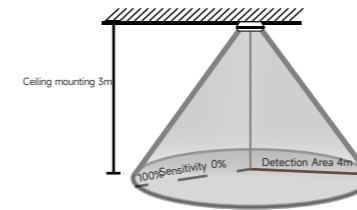
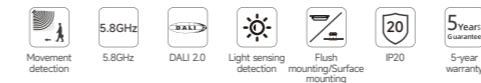


【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	φ65x51.5mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Light Sensing Range】	0-1200 lux
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	Tuya Zigbee Wireless Communication
【Detection Technology】	24GHz millimeter wave radar for human movement detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	Radar low mounting motion sensing (Tuya Zigbee)
【Level】	IP20

## MSA055



- ◆ Adopting 5.8GHz microwave radar human sensing technology
- ◆ Adopting Mairui's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output graffiti DALI2.0 signal
- ◆ Support remote control setting of sensing range, hold Time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ Supports DALI bus power supply

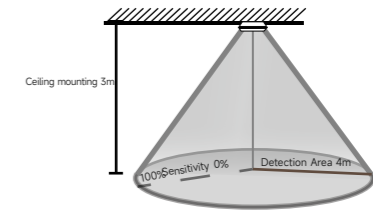
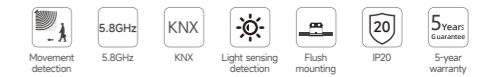


【Working Voltage】	9.5-22.5V DC (powered by DALI bus)
【Working Current】	10mA max
【Products Size】	φ65x49.5mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	DALI 2.0
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	Radar low mounting motion sensing (DALI2.0)
【Level】	IP20

## MSA056K 99



- ◆ Adopting 5.8GHz microwave radar human sensing technology
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output KNX signals
- ◆ Support ETS/remote control to set sensing range, hold time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting and European junction installation
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ Support access to EASY Bluetooth control ecosystem
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support light compensation and constant light control
- ◆ Supports KNX bus power supply



【Working Voltage】	21-30V DC (powered by KNX bus)
【Working Current】	30mA max
【Products Size】	φ89x34mm
【Cut hole size】	φ60-65mm
【Maximum Sensing Distance】	Installation with a radius of 4m and a height of 3m
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	KNX
【Detection Technology】	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
【Mounting】	Flush mounting / European junction set (compatible with 86 sided cover)
【Product Category】	Radar low mounting motion sensing (KNX)
【Level】	IP20

## MSA237K 99 D



- ◆ Adopting 5.8GHz microwave radar human sensing technology
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output KNX signals
- ◆ Support ETS/remote control to set sensing range, hold time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ Support access to EASY Bluetooth control ecosystem
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support daylight sensor control
- ◆ Supports KNX bus power supply

## MSA237K 99 E



- ◆ Adopting 5.8GHz microwave radar human sensing technology
- ◆ Adopting Merrytek's independently designed high gain low impedance 5.8GHz radar antenna
- ◆ Accurately sense human movement and output KNX signals
- ◆ Support ETS/remote control to set sensing range, hold time
- ◆ Priority corridors, hallways, stairwells, elevator halls, and other public area scenes with motion sensing detection
- ◆ Support surface mounting and flush mounting
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ Support access to EASY Bluetooth control ecosystem
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support light compensation and constant light control
- ◆ Supports KNX bus power supply
- ◆ Support light compensation and constant light control
- ◆ Supports KNX bus power supply

## MSA202S RC

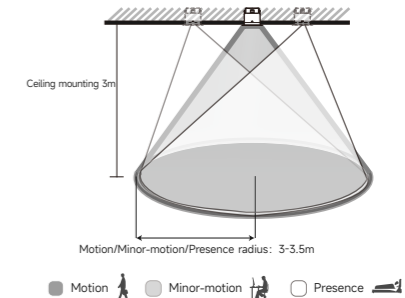
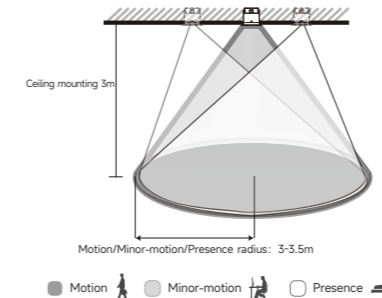
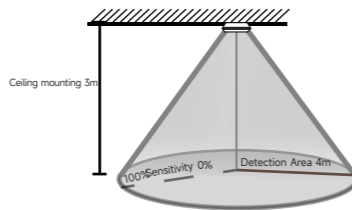
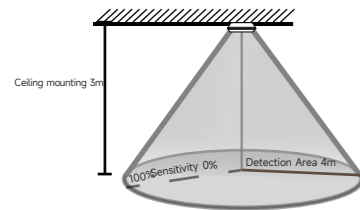
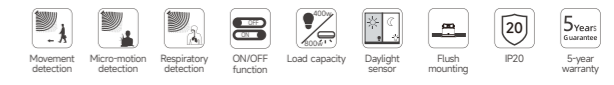
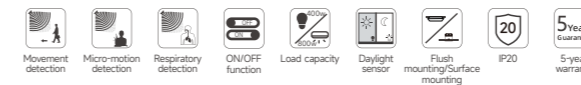


- ◆ Adopting dual sensing technology of human and light perception using 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output ON/OFF signals
- ◆ Support dialing/remote control to set detection area, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support surface mounting and flush mounting
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Mairui AI based ultra strong anti-interference live breathing detection algorithm
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

## MSA235S 99



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output ON/OFF signals
- ◆ Support dialing/remote control to set detection area, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support surface mounting and flush mounting
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)



[Working Voltage]	21-30V DC (powered by KNX bus)
[Working Current]	30mA max
[Products Size]	φ63x35mm
[Cut hole size]	φ50-55mm
[Maximum Sensing Distance]	Installation with a radius of 4m and a height of 3m
[Light Sensing Range]	0-65535 Lux
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	KNX
[Detection Technology]	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
[Mounting]	Flush mounting
[Product Category]	Radar low mounting motion sensing (KNX)
[Level]	IP20

[Working Voltage]	21-30V DC (powered by KNX bus)
[Working Current]	30mA
[Products Size]	φ63x35mm
[Cut hole size]	φ50-55mm
[Maximum Sensing Distance]	Installation with a radius of 4m and a height of 3m
[Light Sensing Range]	0-65535 Lux
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	KNX
[Detection Technology]	5.8GHz Microwave Human Movement Detection+Light Sensing Detection
[Mounting]	Flush mounting
[Product Category]	Radar low mounting motion sensing (KNX)
[Level]	IP20

[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	φ65x51.5mm
[Cut hole size]	φ55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux / Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	ON /OFF
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
[Product Category]	Radar space has induction (ON/OFF)
[Level]	IP20

[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	φ85x52.5mm
[Cut hole size]	φ65-70mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux / Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	ON /OFF
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting
[Product Category]	Radar space has induction (ON/OFF)
[Level]	IP20

## MSA065S 99



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output ON/OFF signals
- ◆ Support dialing/remote control to set detection area, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

## MSA063S 99



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output ON/OFF signals
- ◆ Support dialing/remote control to set detection area, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support surface mounting and flush mounting, exposed ceiling installation, and European junction mounting
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)
- ◆ Support one-way PUSH switch control
- ◆ Supports IP54 high-performance waterproofing

## MSA200D RC

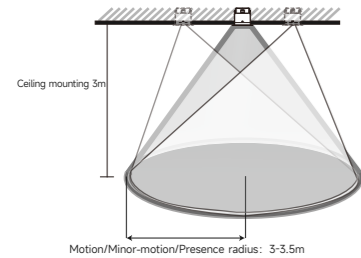
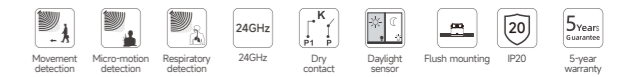
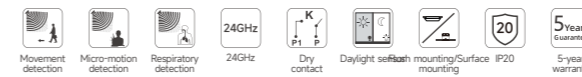
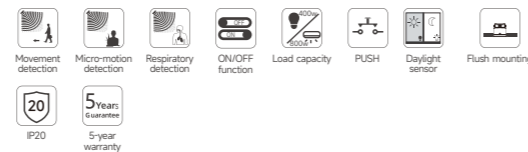
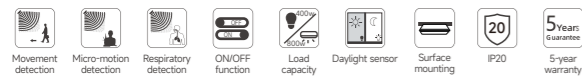


- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting and ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

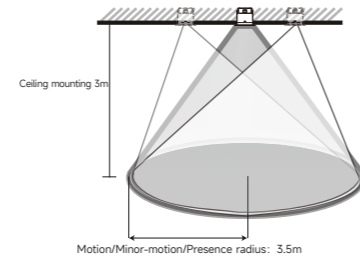
## MSA237D 99



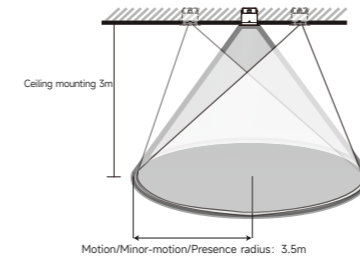
- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA
- ◆ Support Mairui mini program to adjust sensing parameters and OTA



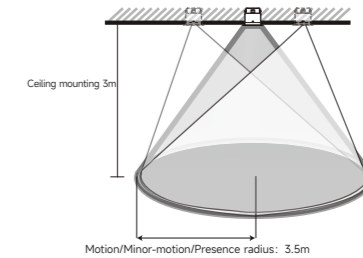
● Motion ● Minor-motion ○ Presence



● Motion ● Minor-motion ○ Presence



● Motion ● Minor-motion ○ Presence



● Motion ● Minor-motion ○ Presence

[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	110x110x32mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux / Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	ON /OFF
[Detection Technology]	24GHz millimeter wave radar for living body detection: breathing & static presence sensing
[Mounting]	Surface Mounting
[Product Category]	Radar space has induction (ON/OFF)
[Level]	IP20

[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	105x105x60.6mm (Flush mounting) 105x105x45.6mm (Surface Mounting)
[Cut hole size]	φ55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux / Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	ON/OFF+PUSH
[Detection Technology]	24GHz millimeter wave radar for living body detection: breathing & static presence sensing
[Mounting]	Hidden embedded ceiling installation / Surface Mounting / European junction set
[Product Category]	Radar space has induction (ON/OFF+PUSH)
[Level]	IP54(Surface Mounting) / IP20(Flush mounting)

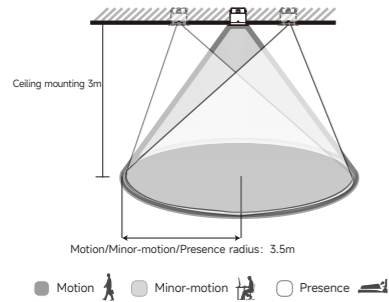
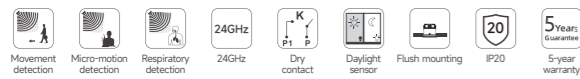
[Working Voltage]	12-24V DC
[Working Current]	50mA max
[Products Size]	φ65x51.5mm
[Cut hole size]	φ45mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux / Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	Normally open/normally closed dry contact (factory default normally open)
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
[Product Category]	Radar space has induction (passive dry contact)
[Level]	IP20

[Working Voltage]	12-24V DC
[Working Current]	50mA max
[Products Size]	φ63x35mm
[Cut hole size]	φ50-55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux / Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	Normally open/normally closed dry contact (factory default normally open)
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting
[Product Category]	Radar space has induction (passive dry contact)
[Level]	IP20

## MSA021D RC



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

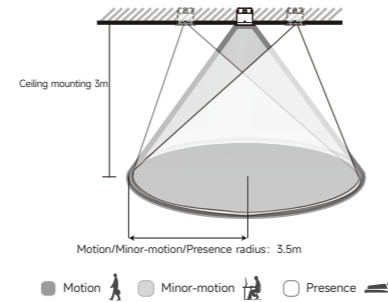


【Working Voltage】	12-24V DC
【Working Current】	50mA max
【Products Size】	φ85x52.5mm
【Cut hole size】	φ65-70mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Lighting Threshold】	0-150 Lux / Disable
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	Normally open/normally closed dry contact (factory default normally open)
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (passive dry contact)
【Level】	IP20

## MSA203D 485



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support RS485/remote control to set sensing range, hold time, daylight sensor, and set ID
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling embedding and ceiling visible installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ It is recommended to deploy no more than 12 sensors and the bus distance should not exceed 300m for the 485 bus

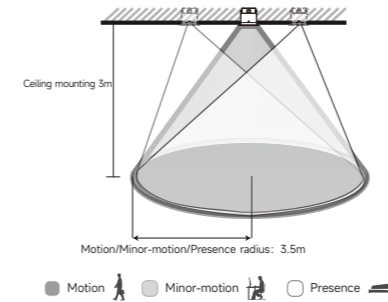


【Working Voltage】	12-24V DC
【Working Current】	50mA max
【Products Size】	φ65x51.5mm
【Cut hole size】	φ45mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	RS485
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
【Product Category】	Radar space has induction (RS485)
【Level】	IP20

## MSA219D 99



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA
- ◆ The sensing angle can be adjusted from -30° to 30°

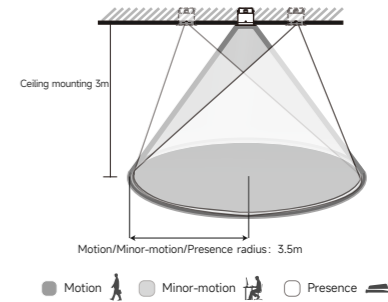


【Working Voltage】	12-24V DC
【Working Current】	50mA max
【Products Size】	φ80x43.5mm
【Cut hole size】	φ70mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Lighting Threshold】	0-150 Lux/Disable
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	Normally open/normally closed dry contact (factory default normally open)
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (passive dry contact)
【Level】	IP20

## MSA237D 99 485



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control setting of sensing range, hold time, device ID
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ It is recommended to deploy no more than 12 sensors and the bus distance should not exceed 300m for the 485 bus
- ◆ Support Merrytek mini program to adjust sensing parameters and OTA

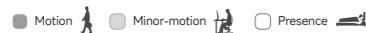
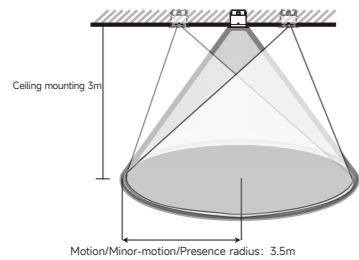
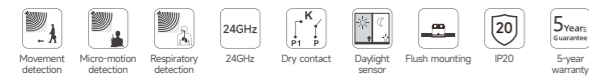


【Working Voltage】	12-24V DC
【Working Current】	50mA max
【Products Size】	φ63x35mm
【Cut hole size】	φ50-55mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	RS485
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (RS485)
【Level】	IP20

## MSA219D 99



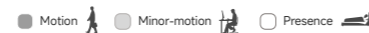
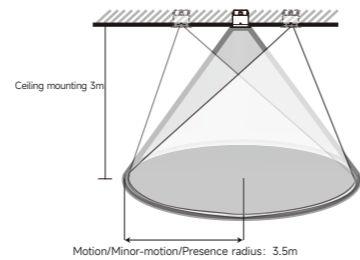
- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control to set sensing range, hold time, and daylight sensor
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA
- ◆ The sensing angle can be adjusted from -30° to 30°



## MSA237D 99 485



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output passive dry contact signals
- ◆ Support remote control setting of sensing range, hold time, device ID
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ It is recommended to deploy no more than 12 sensors and the bus distance should not exceed 300m for the 485 bus
- ◆ Support Merrytek mini program to adjust sensing parameters and OTA



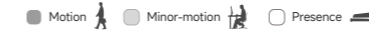
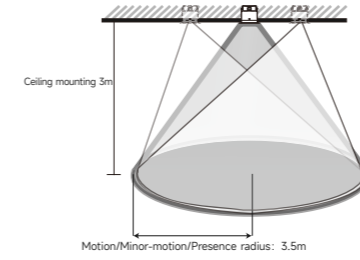
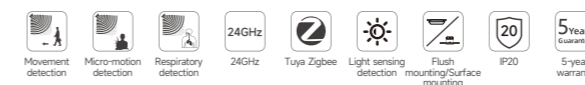
[Working Voltage]	12-24V DC
[Working Current]	50mA max
[Products Size]	φ80x43.5mm
[Cut hole size]	φ70mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Lighting Threshold]	0-150 Lux/Disable
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	Normally open/normally closed dry contact (factory default normally open)
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting
[Product Category]	Radar space has induction (passive dry contact)
[Level]	IP20

[Working Voltage]	12-24V DC
[Working Current]	50mA max
[Products Size]	φ63x35mm
[Cut hole size]	φ50-55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	0-1200 Lux
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	RS485
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting
[Product Category]	Radar space has induction (RS485)
[Level]	IP20

## MSA201 Z



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Tuya Zigbee signals
- ◆ Support tuyaApp/remote control to set detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling embedding and ceiling visible installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the Tuya ecosystem for scene automation control

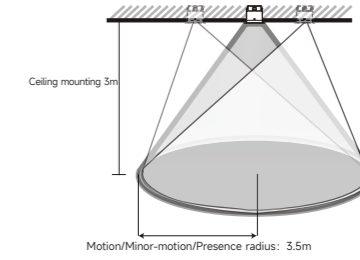
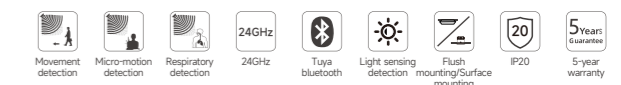


[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	φ65×49.5mm
[Cut hole size]	φ55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	0-1200 Lux
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	Tuya Zigbee 3.0
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
[Product Category]	Radar space has induction (Tuya Zigbee)
[Level]	IP20

## MSA201 B4



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Tuya Bluetooth signals
- ◆ Support tuyaApp/remote control to set detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling embedding and ceiling visible installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the Tuya ecosystem for scene automation control

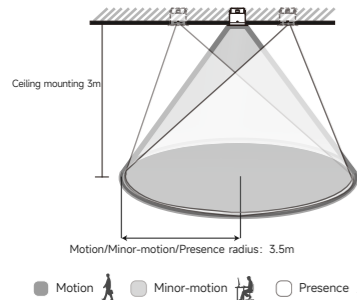


[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	φ65x49.5mm
[Cut hole size]	φ55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	0-1200 Lux
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	Tuya Bluetooth
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting / Surface Mounting (needs to be compatible with surface mounting kit)
[Product Category]	Radar space has induction (Tuya BLE)
[Level]	IP20

## MSA219 Z1



- ◆ Adopting dual sensing technology of human and light perception using 24GHz millimeter wave radar
- ◆ Accurately sense human presence and output Tuya Zigbee signals
- ◆ Support tuya app/remote control to set detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the Tuya ecosystem for scene automation control
- ◆ Induction angle -30 ° -30 ° adjustable

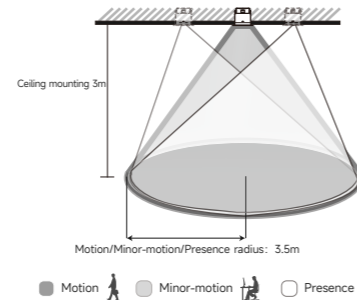


【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	φ85 × 43.5mm
【Cut hole size】	φ70mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	Tuya Zigbee 3.0
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (Tuya BLE)
【Level】	IP20

## MSA050S 99 Z



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Tuya Zigbee signal and one ON/OFF signal
- ◆ Support tuya App/remote control to set sensing range, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support surface mounting and flush mounting, exposed ceiling installation, and European junction mounting
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the Tuya ecosystem for scene automation control
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)
- ◆ Supports IP54 high-performance waterproofing

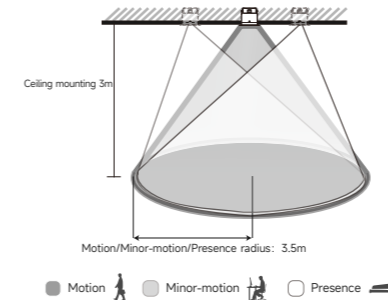
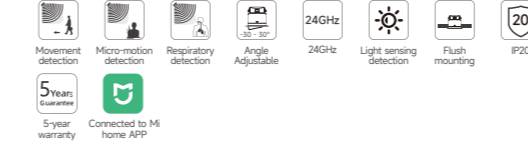


【Working Voltage】	100-240Vac
【Working Current】	50mA max
【Products Size】	105x105x60.6mm (Flush mounting) 105x105x45.6mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	Relay Switch (Max 800w/resistive load, 400w capacitive load) / Tuya Zigbee
【Detection Technology】	24GHz millimeter wave radar for human presence detection+light sensing detection
【Mounting】	Flush mounting / Surface Mounting
【Product Category】	Radar space has induction (ON/OFF+Tuya Zigbee)
【Level】	IP54(Surface Mounting) / IP20 (Flush mounting)

## MSA223 A



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Mijia Bluetooth signals
- ◆ Support MI home app/remote control to set detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the Mi Home ecosystem for scene automation control

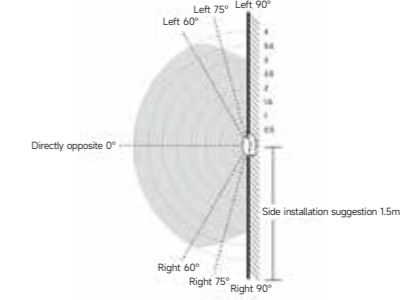


【Working Voltage】	100-240Vac
【Working Current】	50mA max
【Products Size】	φ70x48mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-2000 Lux
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	MIJIA Bluetooth5.0/MIJIA Mesh1.0
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (Xiaomi Bluetooth)
【Level】	IP20

## MSA223 C1



- ◆ Adopting dual sensing technology of human and light perception using 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Mi Home Bluetooth signals
- ◆ Support Mi HomeApp/remote control to set sensing range, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support wall side installation and ceiling visible installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the Mi Home ecosystem for scene automation control

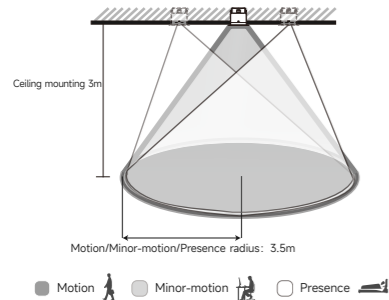


【Working Voltage】	5V DC (Type C power supply)
【Working Current】	50mA max
【Products Size】	φ60x25.8mm
【Cut hole size】	N/A
【Maximum Sensing Distance】	Radial movement/micro movement/existing 4m @ 1.5m high installation
【Light Sensing Range】	0-2000 Lux / Disable
【Mounting Height】	1-2m (Typical Value: 1.5m)
【Output Signal】	MIJIA Bluetooth5.0/MIJIA Mesh1.0
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Wall mounting (supporting magnetic suction, 3m adhesive, screw holes)
【Product Category】	Radar space has induction (Xiaomi Bluetooth)
【Level】	IP20

## MSA205



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output DALI2.0 signals
- ◆ Support remote control to set parameters such as detection area and hold time
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the DALI2.0 ecosystem for scene automation control

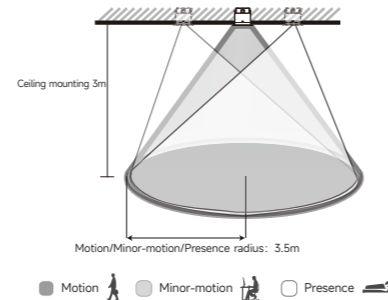


【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	φ105x85mm
【Cut hole size】	φ75mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	DALI2.0
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (DALI2.0)
【Level】	IP20

## MSA206K 99



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output KNX signals
- ◆ Support ETS/remote control/mini program settings for detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Supports ceiling mounting and European junction mounting
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the KNX ecosystem for scene automation control
- ◆ Support access to EASY Bluetooth control ecosystem
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support light compensation and constant light control

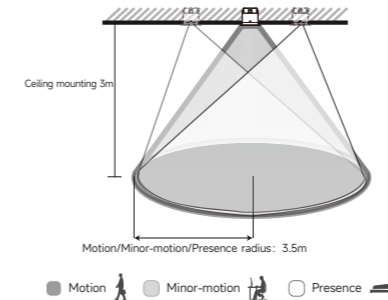


【Working Voltage】	Auxiliary ports 12-24V DC/KNX ports 21-30V DC
【Working Current】	50mA max
【Products Size】	φ89 x34mm
【Cut hole size】	φ60mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	KNX
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting / European junction set (compatible with 86 sided cover)
【Product Category】	Radar space has induction (KNX)
【Level】	IP20

## MSA219K 99 A



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output KNX signals
- ◆ Support ETS/remote control/mini program settings for decay area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Supports ceiling mounting and European junction mounting
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the KNX ecosystem for scene automation control
- ◆ The sensing angle can be adjusted from -30 ° to 30 °

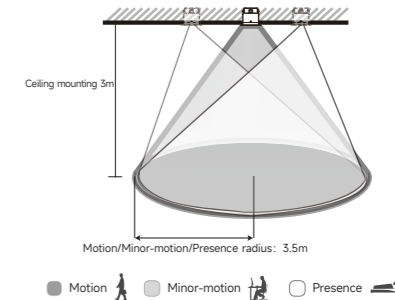


【Working Voltage】	Auxiliary ports 12-24V DC/KNX ports 21-30V DC
【Working Current】	50mA max
【Products Size】	φ80x45mm
【Cut hole size】	φ70mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	KNX
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (KNX)
【Level】	IP20

## MSA237K 99 A



- ◆ Adopting dual sensing technology of human and light perception using 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output KNX signals
- ◆ Support ETS/remote control to set detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the KNX ecosystem for scene automation control
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support daylight sensor control

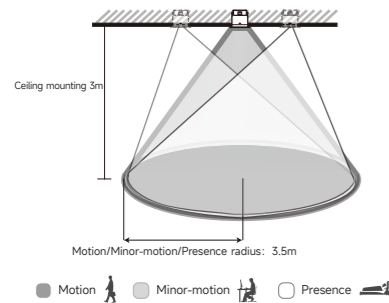


【Working Voltage】	Auxiliary ports 12-24V DC/KNX ports 21-30V DC
【Working Current】	12V: 55±3mA Max 24V: 30±3mA Max
【Products Size】	φ63x35mm
【Cut hole size】	φ50-55mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	KNX
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (KNX)
【Level】	IP20

## MSA237K 99 C



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output KNX signals
- ◆ Support ETS/remote control/mini program settings for detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support integration into the KNX ecosystem for scene automation control
- ◆ Support access to EASY Bluetooth control ecosystem
- ◆ Support master-slave network control
- ◆ Supports two sets of light channels and one set of HVAC channel control
- ◆ Support light compensation and constant light control

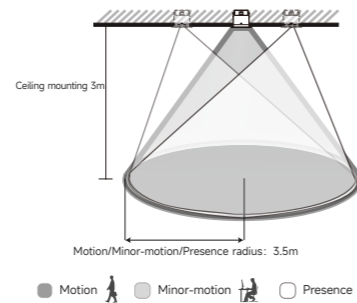
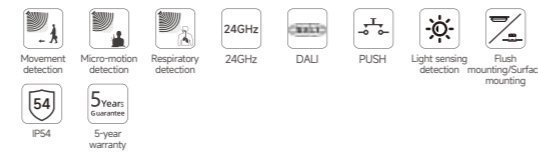


[Working Voltage]	Auxiliary ports 12-24V DC/KNX ports 21-30V DC
[Working Current]	12V: 55±3mA Max 24V: 30±3mA Max
[Products Size]	φ63x35mm
[Cut hole size]	φ50-55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	0-65535 Lux
[Mounting Height]	2-4m (Typical Value: 3m)
[Output Signal]	KNX
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting
[Product Category]	Radar space has induction (KNX)
[Level]	IP20

## MSA063 99



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output DALI signals
- ◆ Support remote control to set parameters such as detection area and hold time
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Supports ceiling mounting, ceiling mounting, and European junction sets
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ Support access to PUSH switch control
- ◆ Supports IP54 high-performance waterproofing

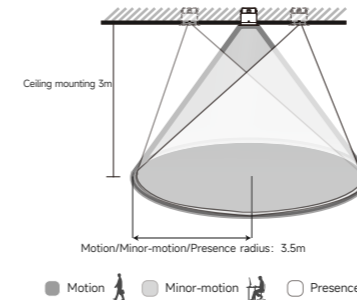


[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	105x105x60.6mm (Flush mounting) 105x105x45.6mm (Surface Mounting)
[Cut hole size]	φ55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	50 Lux / Disable
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	DALI+PUSH
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting / Surface Mounting / European junction
[Product Category]	Radar space has induction (DALI+PUSH)
[Level]	IP54(Surface Mounting)/IP20(Flush mounting)

## MSA211 B



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Casambi signals
- ◆ Support Casambi/remote control to set parameters such as detection area ,hold time Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm

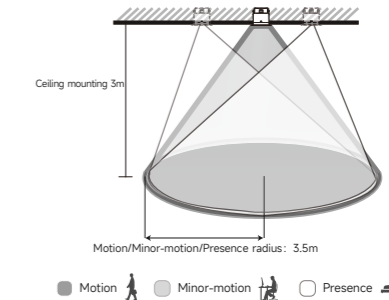
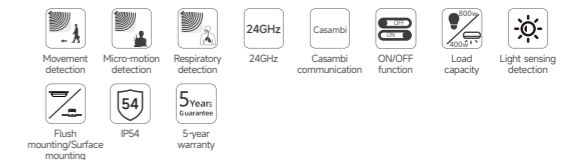


[Working Voltage]	100-240V AC
[Working Current]	50mA max
[Products Size]	φ90x80mm
[Cut hole size]	φ75mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	0-65535 Lux
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	Casambi
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting
[Product Category]	Radar space has induction (ON/OFF+Casambi)
[Level]	IP20

## MSA227S 99 B1



- ◆ Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆ Accurately sense the presence of the human body and output Casambi signal and one ON/OFF signal
- ◆ Support Casambi/remote control to set detection area, hold time and other parameters
- ◆ Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆ Supports ceiling mounting, ceiling mounting, and European junction sets
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Mairui AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The maximum load capacity of the relay can reach 800w (resistive load) and 400w (capacitive load)
- ◆ Supports IP54 high-performance waterproofing



[Working Voltage]	100-240V AC
[Working Current]	50mA
[Products Size]	105x105x60.6mm (Flush mounting) 105x105x45.6mm (Surface Mounting)
[Cut hole size]	φ55mm
[Maximum Sensing Distance]	Radius movement/micro movement/existing 3.5m @ 3m high installation
[Light Sensing Range]	0-1200 Lux
[Mounting Height]	2.5-4m (Typical Value: 3m)
[Output Signal]	Relay Switch+Casambi
[Detection Technology]	24GHz millimeter wave radar for human presence detection+Light sensing detection
[Mounting]	Flush mounting / Surface Mounting / European junction
[Product Category]	Radar space has induction (ON/OFF+Casambi)
[Level]	IP54(Surface Mounting)/IP20(Flush mounting)

## MSA227 99 B1



- ◆Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆Accurately sense the presence of the human body and output Casambi signals and one DALI signal
- ◆Support Casambi/remote control to set detection area, hold time and other parameters
- ◆Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆Supports ceiling mounting, ceiling mounting, and European junction sets
- ◆Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆Supports IP54 high-performance waterproofing
- ◆Support access to PUSH switch control

## MSA219 RF A



- ◆Adopting dual sensing technology of human and light with 24GHz millimeter wave radar
- ◆Accurately sense the presence of the human body and output 2.4G RF signal and one ON/OFF signal
- ◆Support remote control to set parameters such as detection area and hold time
- ◆Priority Recommendations for human presence sensing detection in public office areas, offices, bathrooms, etc
- ◆Supports ceiling mounting, ceiling mounting, and European junction sets
- ◆Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆The maximum load capacity of the relay can reach 800w (resistive load) and 400w (capacitive load)
- ◆Supports IP54 high-performance waterproofing
- ◆Supports 2.4G RF networking control

## MSA246S 99

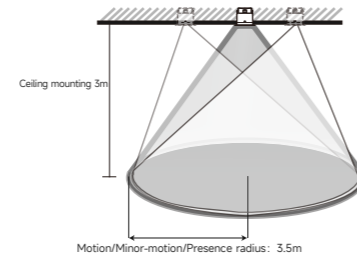
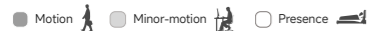
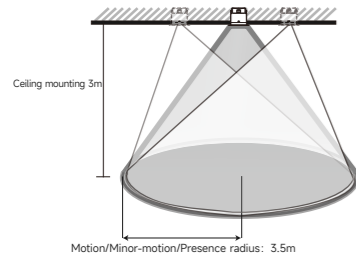
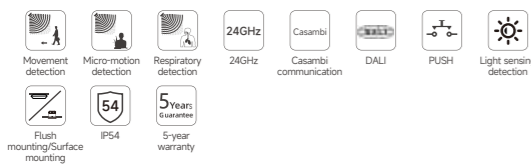


- ◆PIR motion detection
- ◆Connect to casambi BLE ecosystem
- ◆Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆Daylight sensor detection available
- ◆Detection area,hold time can be set by casambi app
- ◆Max detection range: 10-14m in diameter
- ◆2.5-4m mounting height
- ◆Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆Max 2kV surge capacity
- ◆Office,passageway etc motion detection highly recommended
- ◆Flush mounting and surface mounting available

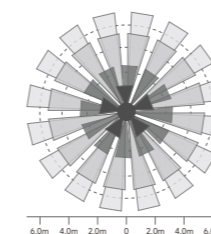
## MSA246S 99 V



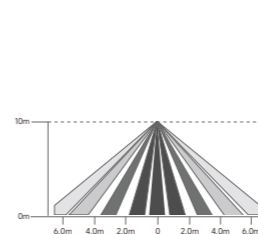
- ◆PIR motion detection
- ◆Connect to casambi BLE ecosystem
- ◆Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆Daylight sensor detection available
- ◆Detection area,hold time can be set by casambi app
- ◆Max detection range: 10-14m in diameter
- ◆2.5-4m mounting height
- ◆Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆Max 2kV surge capacity
- ◆Office,passageway etc motion detection highly recommended
- ◆Flush mounting and surface mounting available



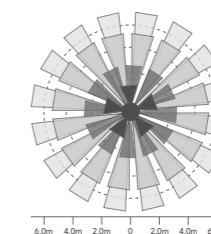
Vertical View



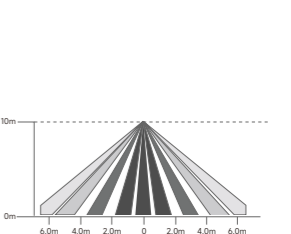
Side View



Vertical View



Side View



【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	105x105x60.6mm (Flush mounting) 105x105x45.6mm (Surface Mounting)
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Output Signal】	DALI+PUSH+Casambi
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting / Surface Mounting / European junction set
【Product Category】	Radar space has induction (DALI+PUSH+Casambi)
【Level】	IP54(Surface Mounting)/IP20(Flush mounting)

【Working Voltage】	100-240V AC
【Working Current】	50mA max
【Products Size】	φ80x66.5mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Radius movement/micro movement/existing 3.5m @ 3m high installation
【Light Sensing Range】	0-150 Lux / Disable
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	2.4G RF+ON /OFF
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar space has induction (2.4G RF+ON/OFF)
【Level】	IP20

【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C--+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C--+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

## MSA246S B1

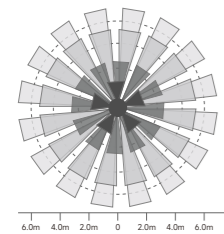


**NEW**

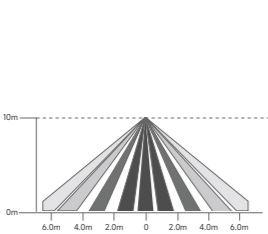
- ◆PIR motion detection
- ◆Connect to casambi BLE ecosystem
- ◆Accurate motion detection with one channel ON/OFF output and casambi communication
- ◆Daylight sensor detection available
- ◆Detection area,hold time can be set by casambi app
- ◆Max detection range: 10-14m in diameter
- ◆2.5-4m mounting height
- ◆Max loading capacity :1200w resistive loading and 600w inductive loading
- ◆Max 2kV surge capacity
- ◆Office,passageway etc motion detection highly recommended
- ◆Flush mounting and surface mounting available



Vertical View



Side View



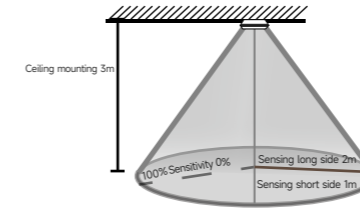
【Working Voltage】	220-240V AC
【Working Current】	20mA
【Products Size】	φ63x80mm
【Cut hole size】	φ65mm
【Output signal】	1 channel ON/OFF+casambi BLE
【Power consumption】	≤0.5W @230V AC
【Mounting Height】	2.5-4m (Typical Value: 3m)
【Function】	PIR motion detection+ daylight sensor
【Daylight Sensor value】	0-1200lux
【Storage temperature】	-40°C~+80°C
【Warranty】	5 year (available based on product quality under indoor application)
【Level】	IP20

## Radar sleep detection sensor

### MSA219D 99 B



- ◆Adopting multi array high gain 24GHz millimeter wave planar antenna technology, dedicated for deep sleep detection
- ◆Within the confines of a bed, the sensor can detect the human presence with zero signal loss
- ◆Accurately detecting human presence and outputting a passive dry contact signal
- ◆Support remote control to set parameters such as detection area and hold time
- ◆Priority bedroom detection of human presence during deep sleep
- ◆Support ceiling mounting installation
- ◆Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆The sensing angle can be adjusted from -30 ° to 30 °
- ◆The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA

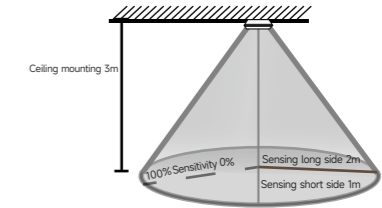


【Working Voltage】	12-24V DC
【Working Current】	50mA max
【Products Size】	φ85x45mm
【Cut hole size】	φ70mm
【Maximum Sensing Distance】	Radius movement/micro movement/with a long side of 2m and a short side of 1m @3m high installation
【Light Sensing Range】	5-150 Lux / Disable
【Mounting Height】	2-3.5m (Typical Value: 3m)
【Output Signal】	Normally open/normally closed (adjustable) Dry contact
【Detection Technology】	24GHz millimeter radar sleeping presence sensor +Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar Sleep Presence Sensing (passive dry contact)
【Level】	IP20

### MSA219 Z



- ◆Adopting multi array high gain 24GHz millimeter wave planar antenna technology, dedicated for deep sleep detection
- ◆Within the confines of a bed, the sensor can detect the human presence with zero signal loss
- ◆Accurately detecting human presence and outputting a passive dry contact signal
- ◆Support TUYA app/remote control to set detection area, hold time and other parameters
- ◆Priority bedroom detection of human presence during deep sleep
- ◆Support ceiling mounting installation
- ◆Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, the maximum coverage of a single machine is 40 square meters for detection
- ◆Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆The sensing angle can be adjusted from -30 ° to 30 °



【Working Voltage】	100-240Vac
【Working Current】	50mA max
【Products Size】	φ80x66.5mm
【Cut hole size】	φ70mm
【Maximum Sensing Distance】	Radius movement/micro movement/with a long side of 2m and a short side of 1m @3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2-3.5m (Typical Value: 2.5m)
【Output Signal】	Tuya Zigbee
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar Sleep Presence Sensing (Tuya Zigbee)
【Level】	IP20

## MSA219K 99 B



- ◆ Adopting multi array high gain 24GHz millimeter wave planar antenna technology, dedicated for deep sleep detection
- ◆ Within the confines of a bed, the sensor can detect the human presence with zero signal loss
- ◆ Accurately sense the presence of the human body and output a KNX signal
- ◆ Support ETS/remote control to set parameters such as detection area and hold time
- ◆ Priority bedroom detection of human presence during deep sleep
- ◆ Support ceiling mounting installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm
- ◆ The sensing angle can be adjusted from -30 ° to 30 °

## MSA220 Z



- ◆ Adopting multi array high gain 24GHz millimeter wave planar antenna technology, dedicated for deep sleep detection
- ◆ Within the confines of a bed, the sensor can detect the human presence with zero signal loss
- ◆ Accurately sense the presence of the human body and output a Tuya ZigBee signal
- ◆ Support Tuya APP/remote control to set detection area, hold time and other parameters
- ◆ Priority bedroom detection of human presence during deep sleep
- ◆ Support ceiling embedding and ceiling visible installation
- ◆ Adopting Merrytek's patented 24GHz binary orthogonal radar antenna, with a maximum coverage of 40 square meters per unit for detection
- ◆ Built in Merrytek AI based ultra strong anti-interference live breathing detection algorithm

## MSA215 99

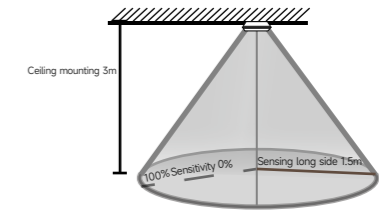
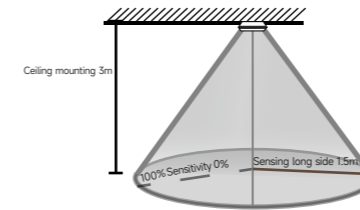
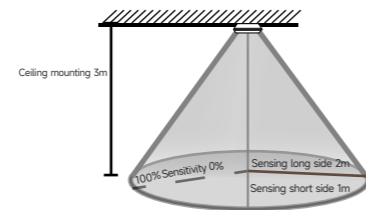
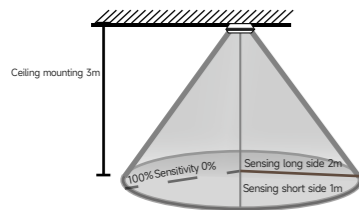


- ◆ Adopting multi array high gain 24GHz millimeter wave planar antenna technology, dedicated for detecting human body occupancy
- ◆ Adopting dual sensing technology of 24GHz presence and light sensing
- ◆ Accurately sense the presence of a person and output an ON/OFF signal
- ◆ Support remote control to set detection area, hold time, and daylight sensor
- ◆ Priority Recommendations for recommending workstations, toilets, tea stands, and other locations that require precise small-scale distance control for presence sensing detection
- ◆ Support hidden embedded installation
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ One 16A relay output: supports a maximum load capacity of 800w (resistive)/400w (capacitive)

## MSA215D 99



- ◆ Adopting multi array high gain 24GHz millimeter wave planar antenna technology, dedicated for detecting human body occupancy
- ◆ Adopting dual sensing technology of 24GHz presence and light sensing
- ◆ Accurately sense the presence of people and output dry contact signals
- ◆ Support remote control to set detection area, hold time, and daylight sensor
- ◆ Priority Recommendations for recommending workstations, toilets, tea stands, and other locations that require precise small-scale distance control for presence sensing detection
- ◆ Support hidden embedded installation
- ◆ The ceiling is embedded and integrated with the ceiling after installation
- ◆ The maximum withstand voltage of the passive dry contact port is 24V, and the maximum current is 50mA



【Working Voltage】	Auxiliary ports 12-24V DC/KNX ports 21-30V DC
【Working Current】	55mA max
【Products Size】	φ89x45mm
【Cut hole size】	φ60mm
【Maximum Sensing Distance】	Radius movement/micro movement/with a long side of 2m and a short side of 1m @3m high installation
【Light Sensing Range】	0-65535 Lux
【Mounting Height】	2-3.5m (Typical Value: 3m)
【Output Signal】	KNX
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar Sleep Presence Sensing (KNX)
【Level】	IP20

【Working Voltage】	100-240Vac 50Hz/60Hz
【Working Current】	50mA max
【Products Size】	φ65x49.5mm
【Cut hole size】	φ55mm
【Maximum Sensing Distance】	Radius movement/micro movement/with a long side of 2m and a short side of 1m @3m high installation
【Light Sensing Range】	0-1200 Lux
【Mounting Height】	2-3.5m (Typical Value: 3m)
【Output Signal】	Tuya ZigBee Wireless Communication
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar Sleep Presence Sensing (Tuya Zigbee)
【Level】	IP20

【Working Voltage】	100-240V AC
【Working Current】	125mA max
【Products Size】	φ85x52.5mm
【Cut hole size】	φ65-70mm
【Maximum Sensing Distance】	Radius movement/micro movement/with a long side of 1.5m @3m high installation
【Light Sensing Range】	50 Lux / Disable
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	ON /OFF
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar occupancy presence sensor (ON/OFF)
【Level】	IP20

【Working Voltage】	12-24V DC
【Working Current】	125mA max
【Products Size】	φ85x52.5mm
【Cut hole size】	φ65-70mm
【Maximum Sensing Distance】	Radius movement/micro movement/with a long side of 1.5m @3m high installation
【Light Sensing Range】	50 Lux / Disable
【Mounting Height】	2-4m (Typical Value: 3m)
【Output Signal】	passive dry contact
【Detection Technology】	24GHz millimeter wave radar for human presence detection+Light sensing detection
【Mounting】	Flush mounting
【Product Category】	Radar occupancy presence sensor (passive dry contact)
【Level】	IP20

# Intelligent switching actuator seriesr

## MSA058 Z



- ◆Quick access to Tuya ecosystem, supports remote control
- ◆Supports Tuya APP control and timed switch function
- ◆Support Tuya ecological scene linkage
- ◆Supports wireless modification of 86 panel switches
- ◆Supports rail installation
- ◆Supports over temperature and overload protection
- ◆Output of two 16A relays: maximum load capacity of a single circuit: 1200W (resistive load), 600W (capacitive load)

【Working Voltage】	220-240V AC
【Products Size】	46x48x22mm
【Output Signal】	Two-way ON /OFF
【Maximum load power】	Single channel 600W capacitive/1200W resistive
【Product Category】	Intelligent switch (Tuya)
【Level】	IP20

## MSA058 B5



- ◆Quick access to MI Home ecosystem, supports remote control
- ◆Supports MI Home APP control and timed switch function
- ◆Support MI HOME ecological scene linkage
- ◆Supports wireless modification of 86 panel switches
- ◆Supports rail installation
- ◆Supports over temperature and overload protection
- ◆16A relay output: maximum load capacity: 1200W (resistive load) 600W (capacitive load)

【Working Voltage】	220-240V AC
【Products Size】	46x48x22mm
【Output Signal】	ON /OFF
【Maximum load power】	600W capacitive/1200W resistive
【Product Category】	Intelligent switch (MIJIA)
【Level】	IP20

## MSA058 RF



- ◆Quick access to Merrytek 2.4G RF ecosystem
- ◆Support Merrytek 2.4G RF sensor networking linkage
- ◆Support wireless modification of 86 panel switch
- ◆Support rail installation
- ◆Supports over temperature and overload protection
- ◆Two relay outputs: Maximum load capacity of a single relay: 1200w (resistive load) 600w (capacitive load)

【Working Voltage】	220-240V AC
【Products Size】	46x48x22mm
【Output Signal】	Two-way ON /OFF
【Maximum load power】	Single channel 600W capacitive/1200W resistive
【Product Category】	Intelligent switch (Merrytek 2.4G RF)
【Level】	IP20

## Structural accessories

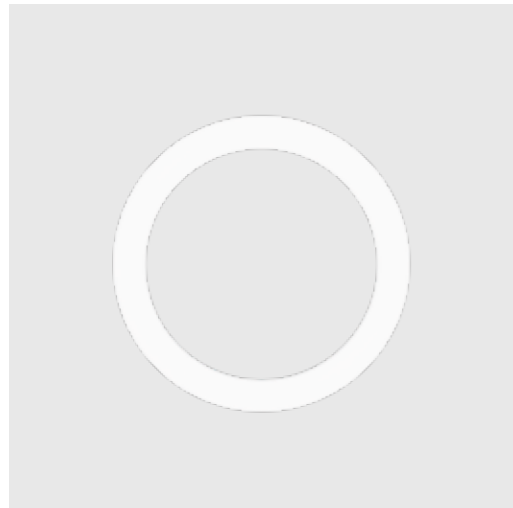
■ 45mm exposed sleeve



■ 55mm exposed sleeve



■ 45mm to 55mm compensation ring



■ 86 sided cover



# Remote

## MH10

Button	Remarks																												
	Press the "ON/OFF" button, the load light enters the constant on/off mode, and the sensing function is Closed. In constant on/off mode, the DIM+/DIM- function is workable. After power is reapplied, the sensor maintains the brightness set by DIM+/DIM- in constant-on mode, if power is disconnected and then restored, the load lamp will return to constant-on mode. However, if power is cycled again while in constant-on mode, the lamp will turn on for 2 seconds and then switch to constant-off mode.																												
	Press the "RESET" button, the parameters will return to DIP switch setting or default setting of factory. Note: When sensor with DIP switches only, the parameters will return to DIP switch setting.																												
	Press the "sensor motion" button to switch from constant on/off mode to sensing mode (the function returns to the last setting)																												
	Press the "DIM Test" button, and the 0-10VDC dimming port will automatically dim to test whether the connection line of the port is Connected properly? After a delay of 2 seconds, it will automatically return to the last set state																												
	Short press DIM+/DIM-, adjust the brightness of the lamp by adding or subtracting 2% each time; long press to DIM+/DIM-, adjust the brightness of the lamp by adding or subtracting 1% as a unit; Dimming range: 10% -100%. (daylight harvesting and constant light mode function) Note: In constant/sensing mode, the maximum brightness can be set through this button.																												
	Long press>s to enter the light control priority/light control adaptive mode. Attention: Short press the "Disable" key or long press the "Override DH" key for 3 seconds to exit the light control priority Mode/light control adaptive, light control uncontrolled.																												
	<table border="1"> <thead> <tr> <th>Scene options</th> <th>Detection area</th> <th>Hold time</th> <th>Stand-by period</th> <th>Stand-by period</th> <th>Light sensitivity value</th> <th>Sensing mode</th> </tr> </thead> <tbody> <tr> <td>QS1</td> <td>100%</td> <td>5min</td> <td>10min</td> <td>10%</td> <td>30Lux</td> <td>HS</td> </tr> <tr> <td>QS2</td> <td>100%</td> <td>10min</td> <td>30min</td> <td>10%</td> <td>Disable</td> <td>HS</td> </tr> <tr> <td>QS3</td> <td>100%</td> <td>20min</td> <td>30min</td> <td>10%</td> <td>Disable</td> <td>HS</td> </tr> </tbody> </table> <p>Note: Users can adjust parameters by pressing any key, based on the last setting. The sensor does not have the above parameters. When the sensitive skill is triggered, the parameter failure setting is invalid. (Waiting time, dimming ratio inactive for switch type activation) Device: Induction mode is not suitable for low installation products</p>	Scene options	Detection area	Hold time	Stand-by period	Stand-by period	Light sensitivity value	Sensing mode	QS1	100%	5min	10min	10%	30Lux	HS	QS2	100%	10min	30min	10%	Disable	HS	QS3	100%	20min	30min	10%	Disable	HS
Scene options	Detection area	Hold time	Stand-by period	Stand-by period	Light sensitivity value	Sensing mode																							
QS1	100%	5min	10min	10%	30Lux	HS																							
QS2	100%	10min	30min	10%	Disable	HS																							
QS3	100%	20min	30min	10%	Disable	HS																							
	Enter the testing mode as below : Detection area is 100%, hold time is 2s, Standby dimming level 10%, Standby time 0s. Daylight sensor is disable. The function is for testing only. Quit the test mode by pressing "RESET" or any other buttons. This mode does not have memory function. After power off and power on,the parameters will resume to the last setting. Note: When the sensor has wireless grouping function. The button function is " entering the pairing mode"																												
	Set the detection range to high sensitivity using the "HS" key: Press the "LS" key to set the detection range to a low sensitivity value. The sensitivity adjustment is made within the set detection range. Note: Under low installation products, this button is invalid																												

Light sensitivity value  
Can set light sensitivity value: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable

Stand-by time  
Stand-by time can be set: 0s/10s/1min/3min/5min/10min/30min/+∞  
Note: Stand-by period is not applicable to ON-OFF Sensor.

Hold time  
Set the duration for maintaining 100% brightness: 5s/30s/1min/3min/5min/10min/20min/30min

Stand-by dim level  
Stand-by dim level can be set : be set:10%/20%/30%/50%  
Note: Dimming level is not applicable to ON-OFF function.

Detection area  
Can set the Detection area: 25%/50%/75%/100%

Remote control distance  
By toggling, the distance range of the remote control sensor can be set.

### Conversion between remote control and dialing settings

- Switch from DIP setting to remote control setting  
Press any button on the remote control except for "RESET" to activate the sensor. The settings will switch to the currently selected function on the remote control.(Non functional button settings are invalid)
- Switch from control settings to dialing settings
  - Press the "RESET" button on the remote control to access all settings cover back Cover back to the dialing setting of the sensor.
  - Turn off the power, toggle any DIP switch, connect to the power, and all settings return to the DIP switch settings when supply power again.

Note: In combination with different products, The button functions of the remote control may vary, please refer to the remote control instructions on the specific product acceptance certificate for accuracy!

## MH18

Button	Remarks																		
	Disable sense function																		
	Distribution network																		
	<table border="1"> <thead> <tr> <th>Push-button</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>Distance</td> <td>0.5m</td> <td>1.0m</td> <td>1.5m</td> <td>2.0m</td> <td>2.5m</td> <td>3.0m</td> <td>3.5m</td> <td>4.0m</td> </tr> </tbody> </table>	Push-button	1	2	3	4	5	6	7	8	Distance	0.5m	1.0m	1.5m	2.0m	2.5m	3.0m	3.5m	4.0m
Push-button	1	2	3	4	5	6	7	8											
Distance	0.5m	1.0m	1.5m	2.0m	2.5m	3.0m	3.5m	4.0m											
	Long press>3s to enter single mode																		
	Enter ID setting mode																		
	NO: Constant open NC: Constant close																		
	Enter light compensation mode																		
	Enable sense function																		
	Short press enable presence detection, long press More than 3 S disable presence detection																		
	Short press to switch high/medium/low sensitivity																		
	Short press to switch 10s/30s/60s hold time																		
	Short press to switch 15lux/50lux/disable																		
	All parameters are back to the default setting of factory Indicator: short press to open indicator, long press to close indicator Enhance: short press to enter self-learning mode																		

# Case Section

## Smart hotel series



## Smart office series



# Case Section

## Smart home series

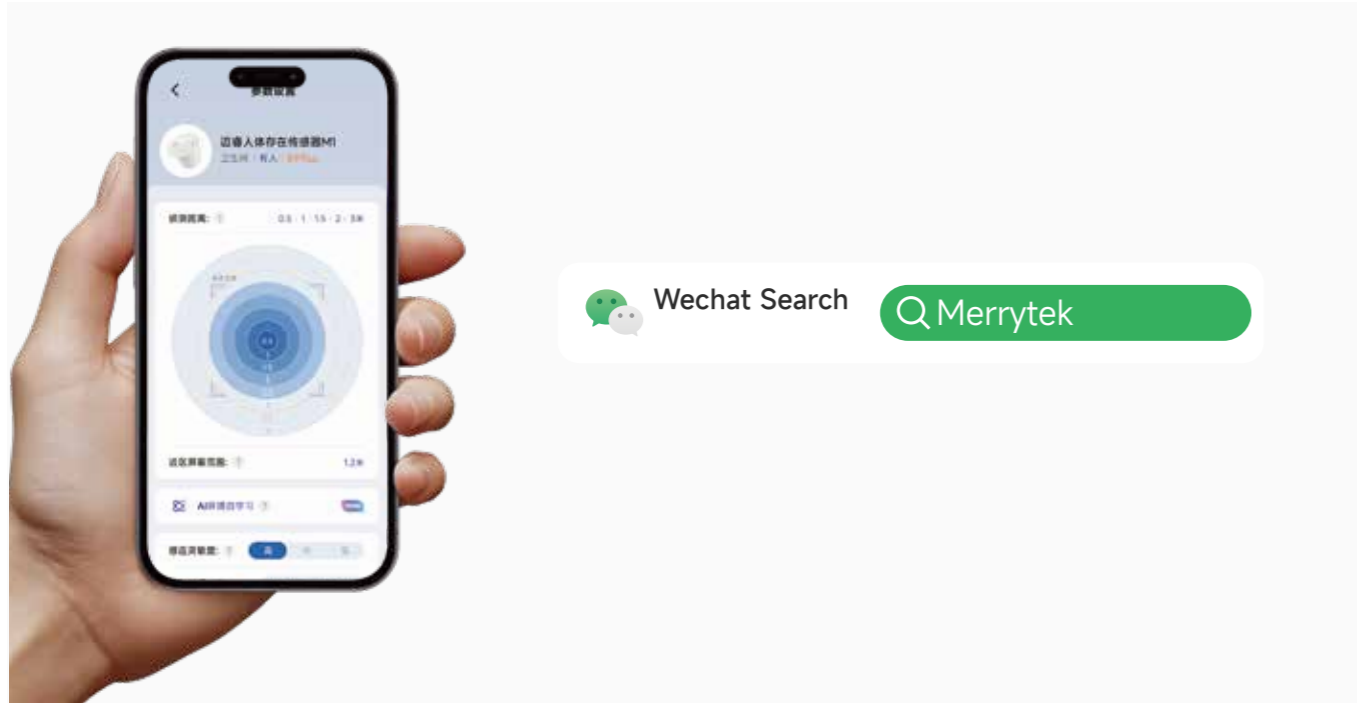


## Smart campus series

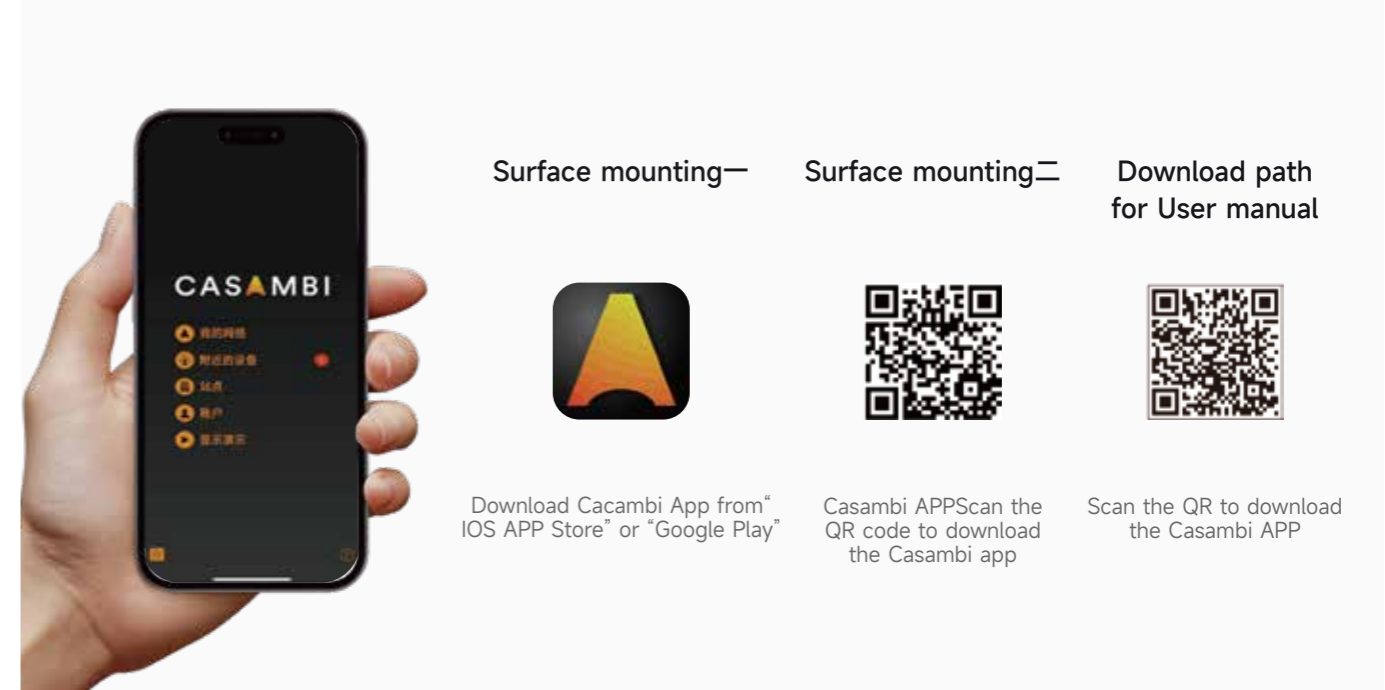


# APP Download

## Merrytek Mini App



## Casambi APP



## Easy systematic Mini App

