



**LIFE*BEING***<sup>®</sup> sensor  
2024 **V1.0**

# About Merrytek

Facing the sensor technology, which is one of the three pillars of modern information technology, **together with communication technology and computer technology**, we have only worked hard for 15 years from focusing on the microwave sensor market to the frontier exploration of space management, but it never stops.....

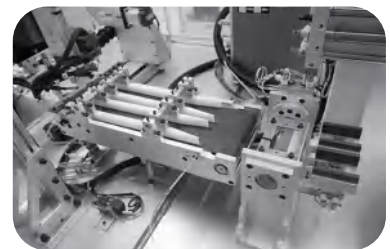
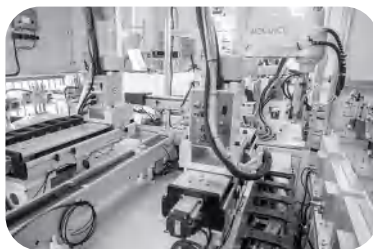
Merrytek was founded in 2011. It is an internationally renowned professional technology company that focused microwave sensor, research and development, manufacturing and sales.

In 2021, it won the qualification of 'National Specialized and Special New Little Giant Enterprise'

In 2022, it won the qualification of 'National Intellectual Property Advantage Enterprise'

In 2023, it won the qualification of 'Shenzhen Famous Brand'

The R&D team which is more than one-third of its personnel has been authorized more than 350 patents at home and abroad, and more than 150 patents have been applied in transit.



# Leading innovation · sensing infinite

Fine cultivation microwave radar detection technology and application for 15 years.

Low impedance antenna international patent, crack the industry problem that traditional microwave sensor is vulnerable to WiFi, 5G, Bluetooth and other wireless signal interference environmental adaptability.

The international patent 5.8GHz microwave sensor is used for biological detection such as motion, minor-motion and breath signal.

24GHz millimeter wave human body Lifebeing sensor series is used for heartbeat signal detection, and unlocks microwave sensing.Used in many fields such as smart homes, smart buildings, smart elderly care, security monitoring, etc.



R&D team: 95



Pre-research preparation: 7



Number of enterprises: 268



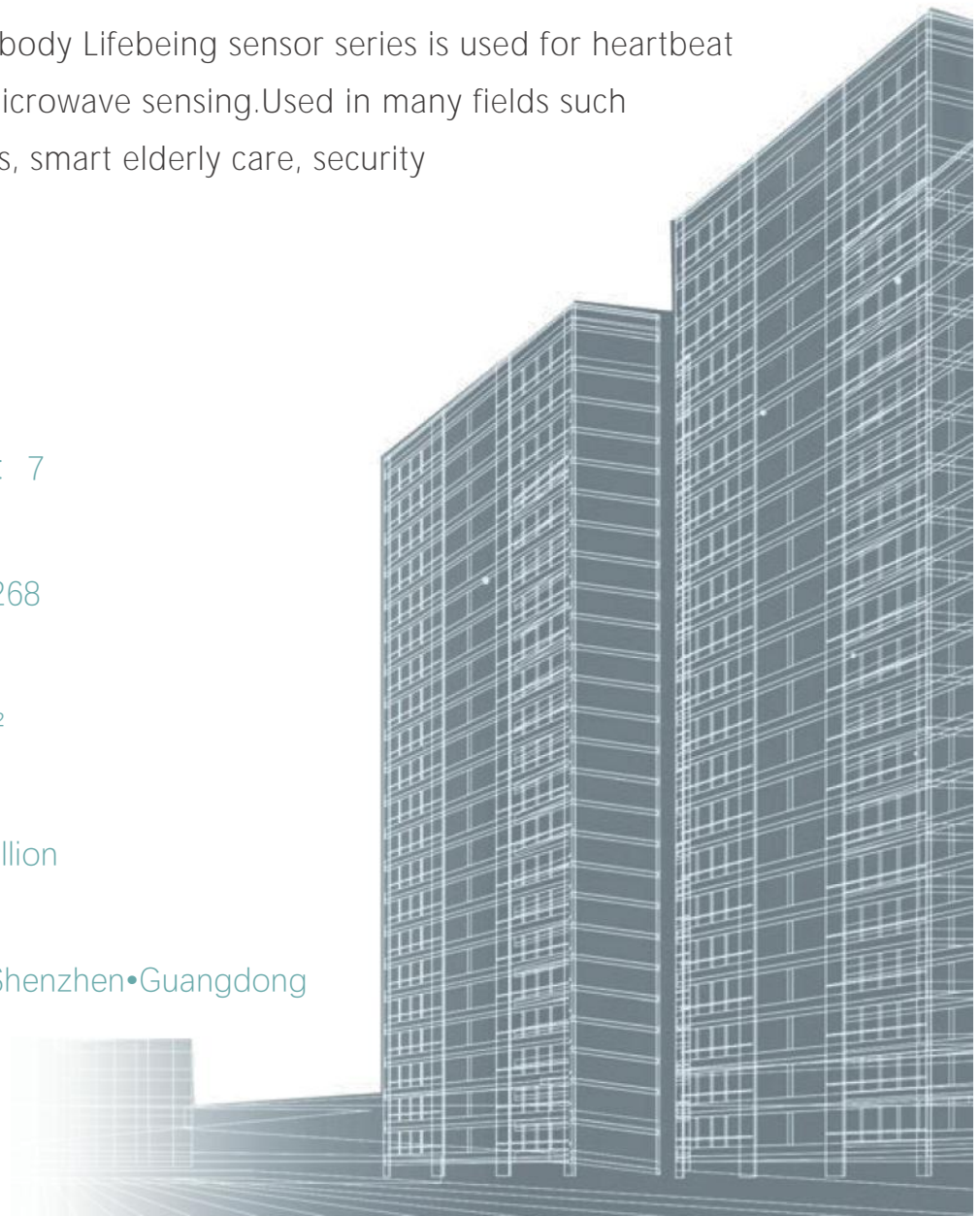
Company size: 11,000m<sup>2</sup>



Registered capital: 15 million



Headquarters Address: Shenzhen•Guangdong

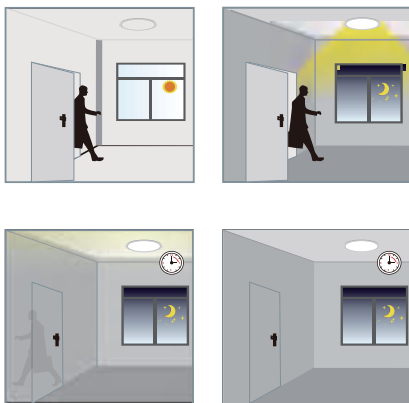


# Technological Evolution

2008

## The first generation planar antenna microwave detection technology

It takes the lead in unlocking 5.8GHz planar micro-band antenna scheme in China to replace infrared induction matching luminaries and solve the problems of complex structure, short life and easy interference from environmental changes of induction luminaries.



2015

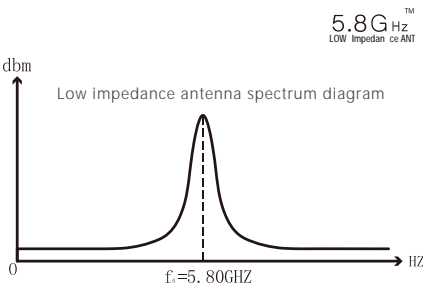
## The first generation planar antenna high-mounted microwave detection technology

It is the first in the industrial and mining luminaries that supports 15m installation height, promoting the application of microwave induction energy saving schemes in high-roof environments such as warehouses, halls and museums.



## The second generation planar antenna microwave detection technology

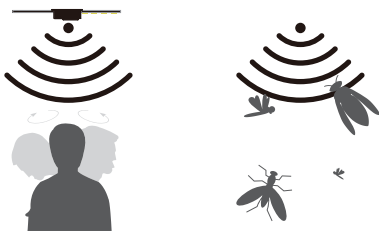
Resistance-capacitance step-down power supply, output positive and negative control relay, reduce stand-by power consumption, optimize product volume, reduce raw material cost.



2014

## Minor-motion technique

It is the first microwave sensing in the industry that uses microwave to detect minor movement ( head up, head shaking, body movement, etc.), laying a technical foundation for the presence of induction.



## Minor-motion technique

Using the core patent algorithm to resist the breeze, drizzle, birds and mosquitoes caused by the false trigger, laying the foundation for outdoor application of microwave technology.

2017

2018

**Narrow planar microwave antenna**

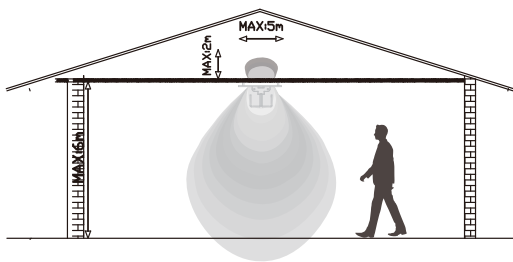
Miniaturized planar microwave induction antenna suitable for small size luminaries.



2020

**Dipole antenna technology**

Using dipole antenna, small opening size, high gain, large beam angle, widely used in tri-proof light, line lights, etc, to solve the problem that detection area is short and the performance is unstable in parking lot application



**Daylight harvesting control technology  
Low impedance planar antenna technology  
Hybrid detection technology  
(Algorithm Breakthrough)  
5.8GHz microwave breath presence  
detection technique**

The industry is the first to use 5.8GHz, ISM microwave frequency band to detect the stationary presence of human body. The product adopts the 'dual-feed high-gain large-beam angel' low-impedance antenna independently developed by Merrytek. The product can resist 2.4GHz Bluetooth, WiFi, ZigBee and other wireless interference signals, and also has the ability to detect breathing signals when the human body is at rest to realize the human presence detection function.



**The second generation planar antenna high-mounted microwave detection technology**

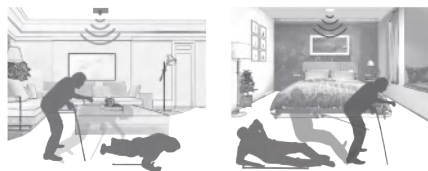
2019

**Human body Lifebeing and posture  
recognition and detection technology**

Adopt 60GHz millimeter wave radar 4D imaging technology and adopt AI algorithm and deep self-learning, adaptive algorithm! Identify human walking track and posture detection(fall detection)and human Lifebeing detection! Become the star product of the pension industry!

**Differential antenna and new disturbance  
rejection algorithm technology**

New antenna and differential balance mixing circuit, close to 0.1MW weak power current transmission, to achieve the compatibility of the same frequency band equipment, no interference, no wall, no glass, no self-excitation, suitable for indoor environment accurate detection and interval definition.

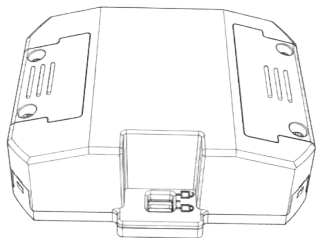


2022

# Engineering control products development history

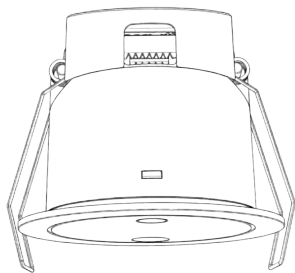
2015

Merrytek Technolgy is the first in the industry to launch human body micro-movement detection sensors, which are used in panel lights for office lighting.



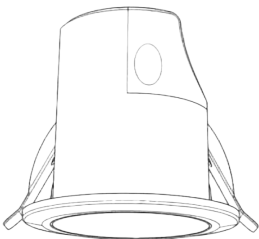
2021

Merrytek issue second generation: 24GHz millimeter wave human presence sensor, adopts Merrytek independently designed radio frequency antenna '24GHz millimeter wave half-wave folding antenna' which with large detection angle and high gain. The product realizes the overlap of motion, micro-motion and presence detection distances, making it a highlight product in the industry.



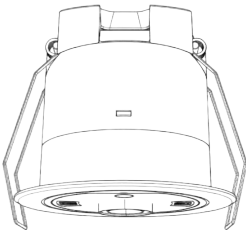
2018

Merrytek Technolgy is the first in the industry to issue '5.8GHz human body lifebeing sensor' product, adopts Merrytek independently designed 'Low impedance dual-feed large-beam micro-wave module'. With technological breakthroughs and innovations, these products are widely used in smart offices, smart homes, and smart hotels related smart scenarios. With technological breakthroughs and innovations.



2023

Targeting different application scenarios in the industry, we have developed 'deep sleep sensors', 'human body occupancy sensors' and 'AI posture sensors'to enrich and improve sensor solutions in the field of smart buildings.





Leading innovation · sensing infinite

## Certification



# Content

## lifebeing presence sensor

### Large-space presence sensor

MSA015S RC	01
MSA202S RC	02
MSA021D RC	03
MSA219D 99 A	04
MSA021 RC	05
MSA200D RC	06
MSA200RC	07
MSA025S	08
MSA012R	09
MSA201 Z	10
MSA201 B4	11
MSA035 Z1	12
MSA050 Z1	13
MSA201	14
MSA219 Z1	15
MSA203D 485	16
MSA206K 99	17
MSA205	18
MSA017K RC	19
MSA043D 485	20
MSA036D 485	21
MSA219D 485 A	22
Medium-space presence sensor	
MSA219D 99 B	23
MSA220Z	24
MSA219Z	25
MSA219D 485 B	26

### Small-space presence sensor

MSA215D 99	27
MSA215 99	28
MSA300D 99	29
MSA300 Z	30
MSA300D 485	31

### AI presence sensor

MSA219 W	32
----------	----

## Human motion sensor

### Low-installation motion sensor

MSA001S 1	33
MSA001D E	34
MSA012	35
MSA053Z	36
MSA053	37
MSA055	38
MSA056K 99	39

### High-installation motion sensor

MSA003D RC	40
MSA003S RC	41
MSA054 RF	42

### Remote control series

MH10	43
------	----

In follow page, Large-space presence sensor will be abbreviate as LS presence sensor; Medium-space presence sensor will be abbreviate as MS presence sensor; Small-space presence sensor will be abbreviate as SS presence sensor; Low-installation motion sensor will be abbreviate as LI motion sensor; High-installation motion sensor will be abbreviate as HI motion sensor



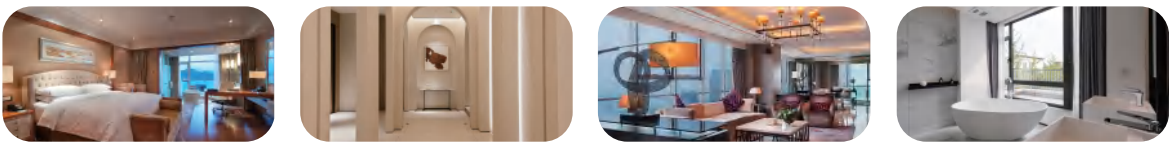
Product Selection Guide

ON/OFF	MSA015S RC MSA202S RC MSA025S	MSA215 99 MSA001S 1 MSA003S RC
Dry Contact	MSA219D 99 A MSA021D RC MSA200D RC MSA200 RC MSA219D 99 B	MSA215D 99 MSA300D 99 MSA001D E MSA003D RC
Tuya Wireless Signal	MSA201 Z MSA201 B4 MSA035 Z1 MSA050 Z1 MSA219 Z1	MSA300 Z MSA219 W MSA053Z MSA220Z MSA219Z
KNX	MSA056K 99	MSA206K 99 MSA017K RC
DALI	MSA205	MSA055
RS485	MSA203D 485 MSA043D 485 MSA036D 485	MSA219D 485 A MSA219D 485 B MSA300D 485
UART Protocol	MSA053	MSA201
0-10V	MSA054 RF	MSA012 MSA012R

# Application scenario guide

## Smart Hotel

MS presence sensor+LS presence sensor



Master bedroom: MS presence sensor



Entrance: LS presence sensor



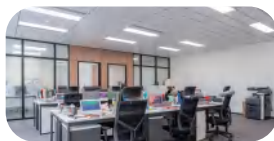
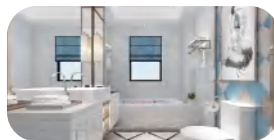
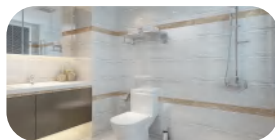
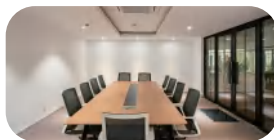
Bathroom wet and dry area: LS presence sensor



Rest area & Independent office area: MS presence sensor

Smart Office

LS presence sensor+SS presence sensor+AI presence sensor



Conference Room:  
LS presence sensor



The third bathroom:  
AI presence sensor



Public toilet seats:  
SS presence sensor



Private toilet:  
LS presence sensor



Public office areas:  
LS presence sensor



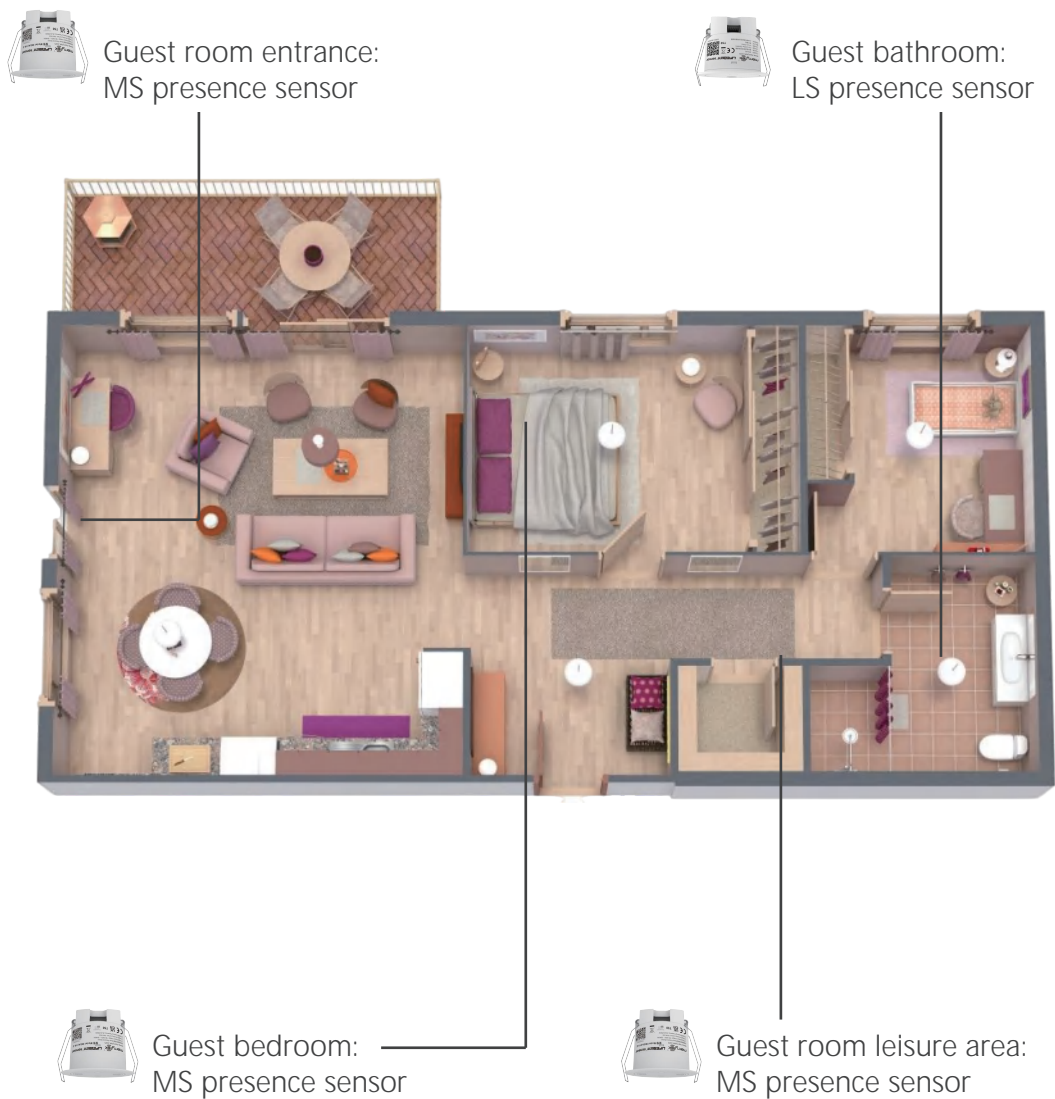
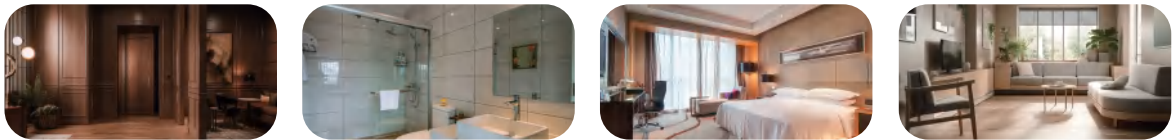
Audio-visual training room:  
LS presence sensor



Public corridors:  
HI motion sensor

Smart home

LS presence sensor+MS presence sensor



---

## Leading innovation · sensing infinite

The human body lifebeing detection solution is based on 24GHz micro-wave breath detection technology. It uses patented low-impedance antenna+exclusive lifebeing sensing algorithm to realize human body lifebeing detection by detecting the expansion of the chest and abdomen when the human body breathes. At the same time, it can effectively avoid airflow interference from air conditioners, exhausts, etc., through algorithms and micro-wave detection, and then accurately identify the presence of human breathing.



# Human body lifebeing sensor

---

Through radar detection of the weak ups and downs of the chest and abdomen of the human body when breathing, then determine whether the human body exists in the corresponding space:

Based on key technologies such as half-wave folding antennas and multi-array high-gain planar antennas created by Merrytek, we have launched five major LifeBeing sensor application technologies in response to the application problem of LifeBeing sensor in the market:

- Deep sleep sensor (Suitable for presence detection in deep sleep state)
- LifeBeing sensor (Suitable for presence detection in big space)
- Occupancy sensor (Suitable for presence detection in small space)
- AI posture sensor (Suitable for posture detection such as falling, standing, sitting, etc.)
- Human body location sensor (Suitable for human body trajectory and presence detection)

We are committed to providing more comprehensive and reliable human LifeBeing sensor combination solutions for various application scenarios such as smart homes, smart hotels, smart offices and smart elderly care.

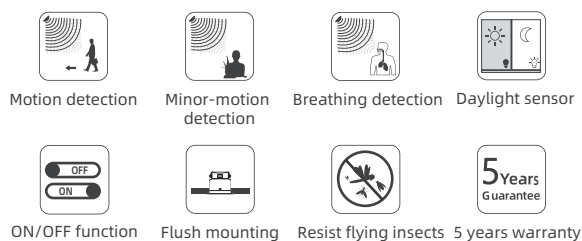


# Presence sensor

ON/OFF Version  
MSA015S RC

## Product Features

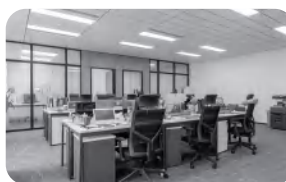
- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Flush mounting, can highly integrated with space ceiling



## Parameter

【Working Voltage】	220V - 240V AC 50Hz / 60Hz
【Product Size】	φ85 × 52mm
【Cut-size】	φ70mm
【Max Detection Area】	motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	5 -150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	ON/OFF
【Max Rated Load】	400W(Inductive)/800W(Resistive)
【Detection Technology】	5.8GHz microwave presence detection + daylight detection
【Installation Mode】	Flush mounting

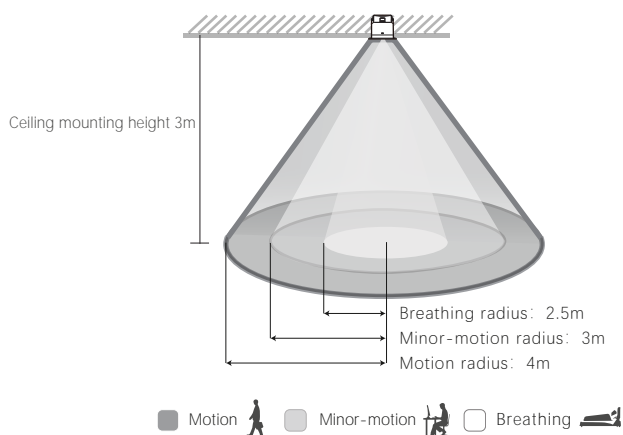
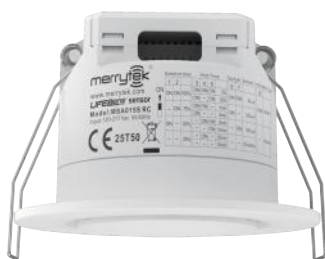
## Application



Open office area



Office conference room




# Presence sensor


ON/OFF Version  
MSA202S RC

## Product Features


- 24GHz millimeter wave presence detection technology, accurately realize space presence detection
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Original half-wave folding antenna, the maximum detection coverage of a single unit reaches 40m<sup>2</sup>
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Flush mounting, can highly integrated with space ceiling




Motion detection




Minor-motion detection




Breathing detection




Daylight sensor




ON/OFF function



Flush/Surface mounting



Resist flying insects



5 years warranty

## Parameter

【Working Voltage】	220 - 240V AC 50Hz / 60Hz
【Product Size】	φ65 × 51.5mm
【Cut-size】	φ55mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	50 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	ON/OFF
【Max Rated Load】	400W(Inductive)/800W(Resistive)
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

## Application



Kitchen

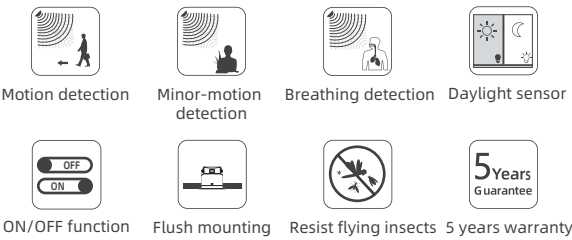
bathroom

Dry Contact Version  
MSA021D RC

Presence sensor

Product Features

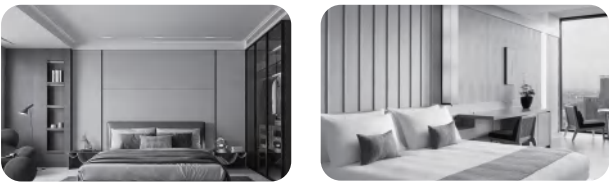
- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Dry contact signal output, connect to various integrated control systems in seconds
- High-frequency microwave radar detection technology, which is not affected by light, heat, and water vapor, and can easily penetrate glass to detect



Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ85 × 52.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2 - 4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush mounting

Application



Bedroom

Guest room master bedroom




# Presence sensor


## Dry Contact Version MSA219D 99 A

### Product Features


- 24GHz millimeter wave presence detection technology, accurately realize real human body presence detection
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Original half-wave folding antenna, the maximum detection coverage of a single unit reaches 40m²
- Sensor parameters can be set by MH10 remote control, it is convenient for pre-installation/post-installation debugging
- The sensor angle can be flexibly adjusted and is conveniently suitable for various home and commercial ceiling application scenarios.




Motion detection




Minor-motion detection




Breathing detection




Daylight sensor




Dry contact



Flush mounting



Angle adjustable

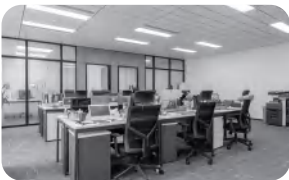


5 years warranty


### Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ85 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	5 -150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

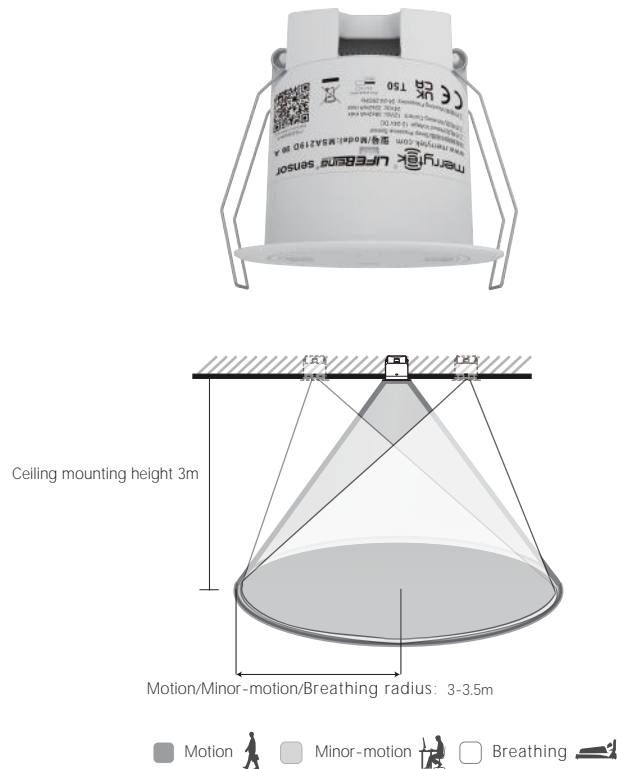
### Application



Independent office



Office conference room

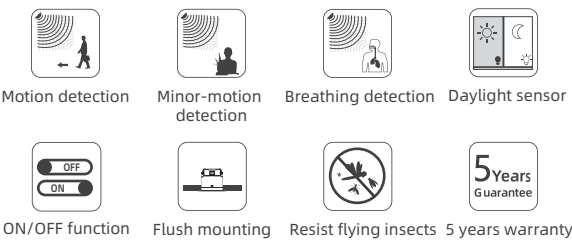


Dry Contact Version  
MSA021 RC

Presence sensor

Product Features

- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Dry contact signal output, connect to various integrated control systems in seconds
- High-frequency microwave radar detection technology, which is not affected by light, heat, and water vapor, and can easily penetrate glass to detect



Parameter

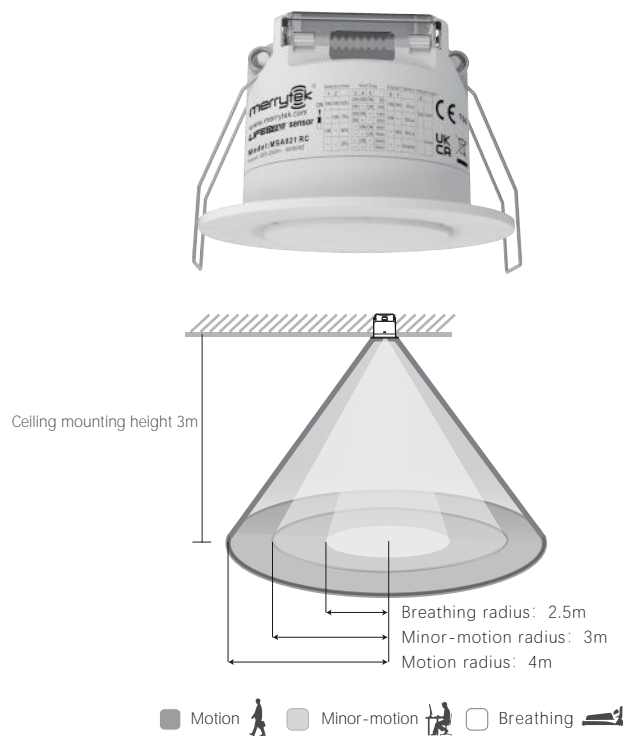
【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 50mA
【Product Size】	φ85 × 52.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush mounting

Application



Bedroom

Guest room master bedroom




# Presence sensor


## Dry Contact Version MSA200D RC

### Product Features


- 24GHz millimeter wave presence detection technology, accurately realize real human body presence detection
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Original half-wave folding antenna, the maximum detection coverage of a single unit reaches 40m²
- Sensor parameters can be set by MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Dry contact signal output, connect to various integrated control systems in seconds




Motion detection




Minor-motion detection




Breathing detection




Daylight sensor




Dry contact



Flush/Surface mounting



Resist flying insects

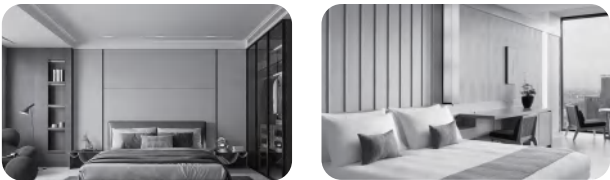


5 years warranty

### Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ52.5 × 34.5mm
【Cut-size】	φ45mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	5 -150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

### Application



Bedroom

Guest room master bedroom




Dry Contact Version  
MSA200 RC


Presence sensor

Product Features


- 24GHz millimeter wave presence detection technology, accurately realize real human body presence detection
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Original half-wave folding antenna, the maximum detection coverage of a single unit reaches 40m²
- Sensor parameters can be set by MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Dry contact signal output, connect to various integrated control systems in seconds




Motion detection




Minor-motion detection




Breathing detection




Daylight sensor




Dry contact



Flush/Surface mounting



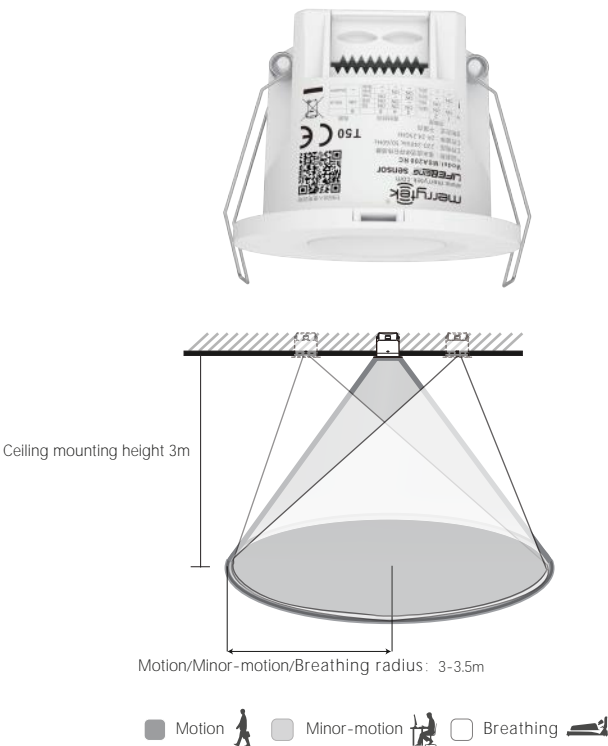
Resist flying insects



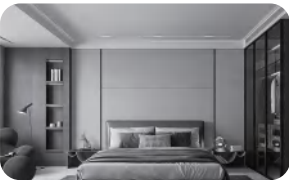
5 years warranty

Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 50mA
【Product Size】	φ65 × 51.5mm
【Cut-size】	φ55mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)



Application



Bedroom




Guest room master bedroom


# Presence sensor


ON/OFF Version  
MSA025S


## Product Features


- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Ultra-thin size, highly integrated integration of ceiling mounting and space ceiling


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight sensor

  
ON/OFF function

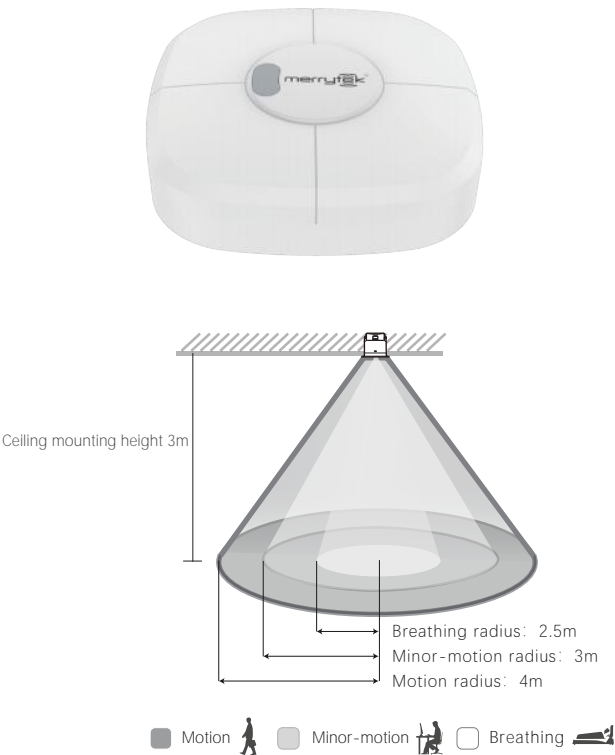
  
Surface mounting

  
Resist flying insects

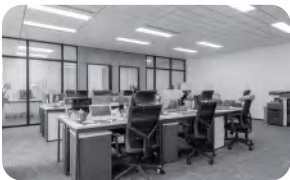
  
5 years warranty

## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Product Size】	φ110 × 110 × 32mm
【Max Detection Area】	Motion 4m/minor-motion 3m /Breathing 2.5m (radius)
【Daylight Sensor】	5 -150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	ON/OFF
【Max Load Capacity】	400W Inductive/800W Resistive
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Surface mounting



## Application



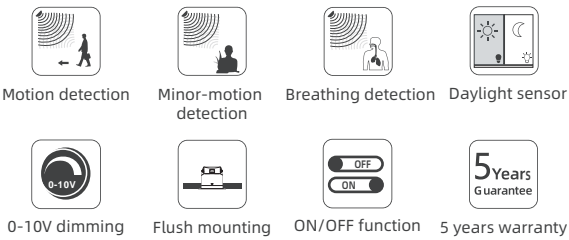
Independent office



Office conference room

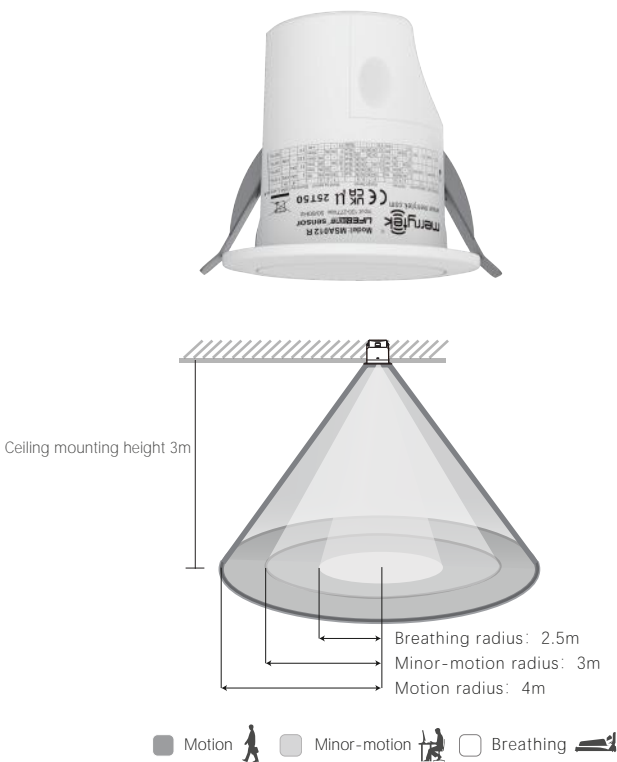
Product Features

- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- It has daylight harvesting function to realize complementary adjustment of light and natural light.
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Support ON/OFF sensor and 0-10V dimming signal output

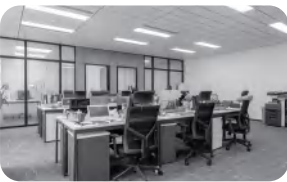


Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Product Size】	φ105 × 85mm
【Cut-size】	φ75mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	ON/OFF /0-10V
【Max Load Capacity】	800W Inductive / 1000W Resistive (@277V)
【Detection Technology】	5.8GHz microwave presence detection + daylight harvesting
【Installation Mode】	Flush mounting



Application



Independent office




Office conference room


# Presence sensor


Tuya ZigBee Version  
MSA201 Z


## Product Features


- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- Microsecond linkage with Tuya ZigBee 3.0 ecosystem to quickly switch intelligent application scenarios


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
Tuya ZigBee

  
Flush/Surface mounting

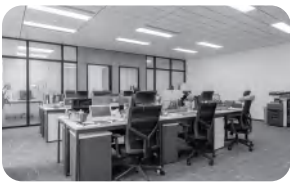
  
Resist flying insects

  
5 years warranty

## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ65 × 49.5mm
【Cut-size】	φ55mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0-1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	Tuya ZigBee 3.0
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

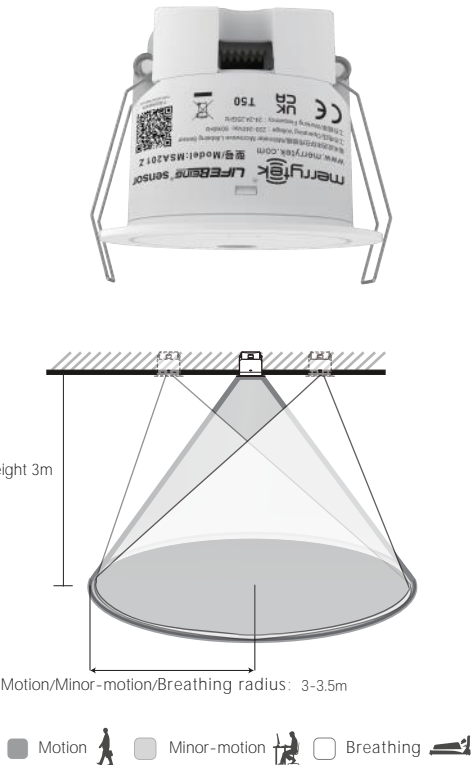
## Application



Independent office

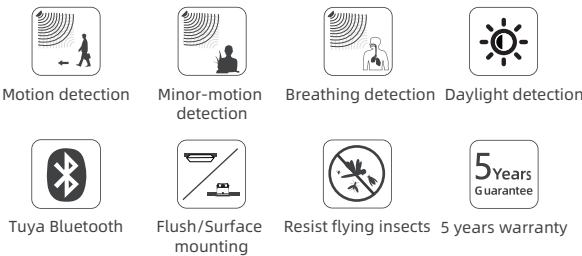


Office conference room



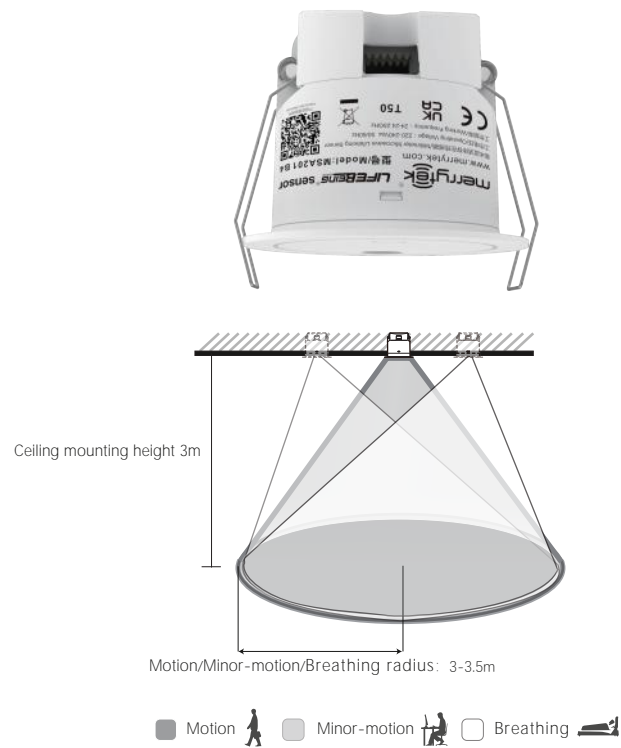
## Product Features

- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- Microsecond linkage with Tuya Bluetooth ecosystem to quickly switch intelligent application scenarios

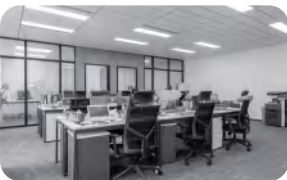


## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ65mm × 49.5
【Cut-size】	φ55mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0-1200Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	Tuya Bluetooth
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)



## Application



Independent office




Office conference room


# Presence sensor


Tuya ZigBee  
MSA035 Z1


## Product Features


- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Supported by digital light detection technology, personalized definition of multiple application scenarios linkage
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Microsecond linkage with Tuya ZigBee ecosystem to quickly switch intelligent application scenarios


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
Tuya ZigBee

  
Flush mounting

  
Resist flying insects

  
5 years warranty

## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ105 × 85mm
【Cut-size】	φ75mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	0-1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	Tuya ZigBee 3.0
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush mounting

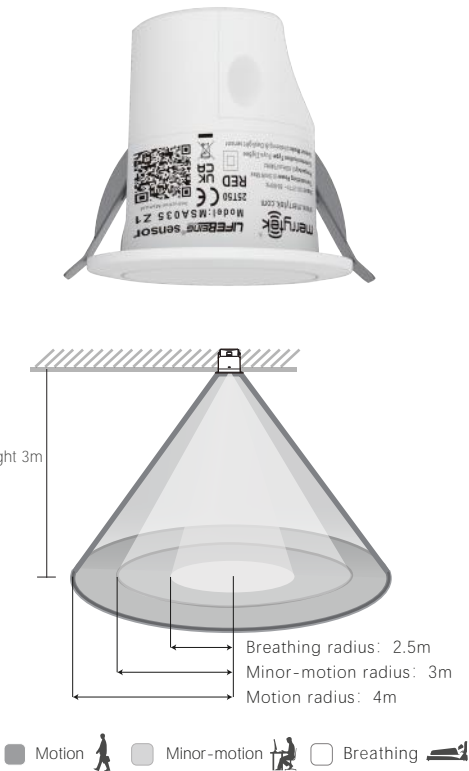
## Application



Kitchen



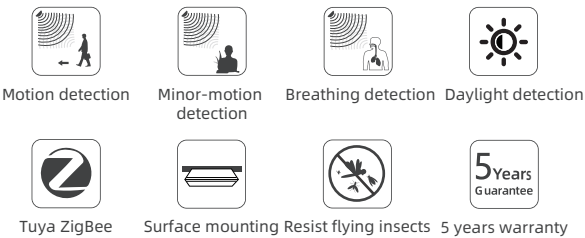
Bathroom





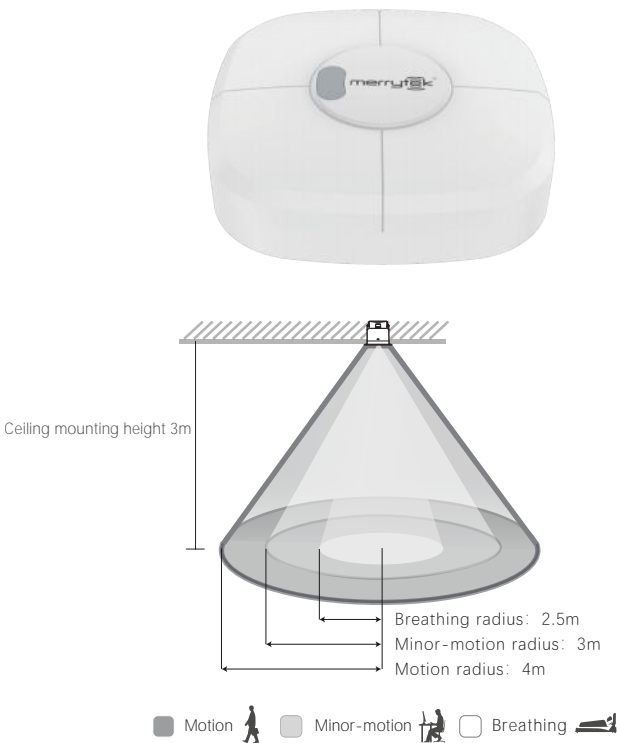
## Product Features

- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Microsecond linkage with Tuya ZigBee ecosystem to quickly switch intelligent application scenarios



## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ110 × 32mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	Tuya ZigBee 3.0
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Surface mounting



## Application



Independent office




Office conference room


# Presence Sensor


UART Protocol  
MSA201


## Product Features


- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- Serial port signal output, supports docking with any communication module


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
Smart linkage

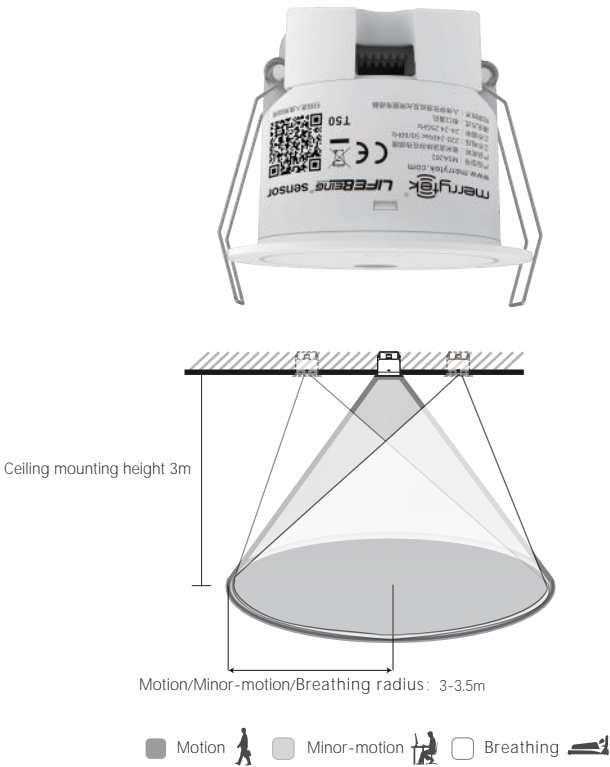
  
Flush/Surface mounting

  
Resist flying insects

  
5 years warranty

## Parameter

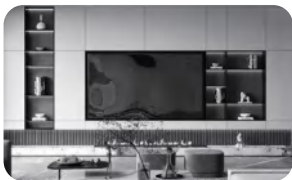
【Working Voltage】	100 - 240V AC 50 / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ65 × 49.5mm
【Cut-size】	φ55mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	UART serial port, support customer- supplied communication module docking
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)



## Application




Independent office




Living room

Product Features


- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- The sensor angle can be flexibly adjusted, making it suitable for all types of home, commercial ceilings and application scenarios




Motion detection




Minor-motion detection




Breathing detection




Daylight detection




Tuya ZigBee



Flush mounting



Angle adjustable  
-30° - 30°



5 Years  
Guarantee

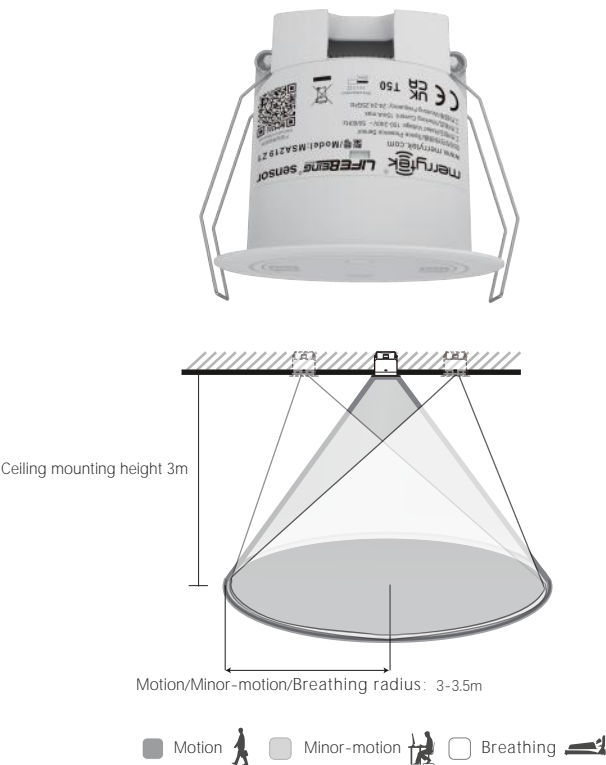
Parameter

【Working Voltage】	100 - 240V AC 50 / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ85 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	Tuya ZigBee 3.0
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

Application



Hotel bedroom      Guest room leisure area





# Presence Sensor


RS485  
MSA203D 485


## Product Features


- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- RS485 signal output, support docking with any RS485 system


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
RS485 communication

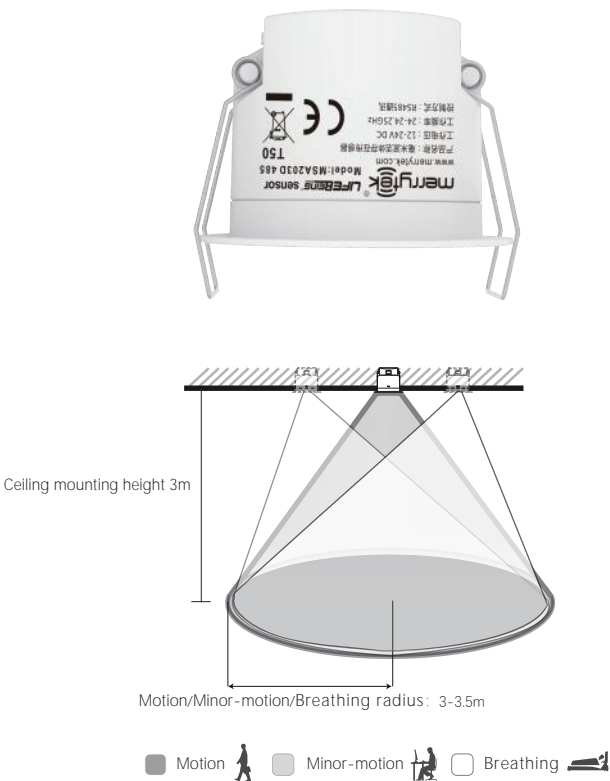
  
Flush/Surface mounting

  
Resist flying insects

  
5 years warranty

## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ52.5 × 34mm
【Cut-size】	φ45mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	RS485
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)



## Application



Independent office

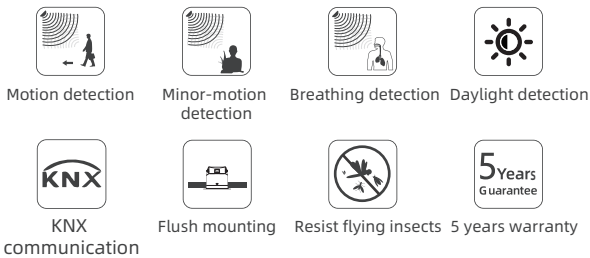
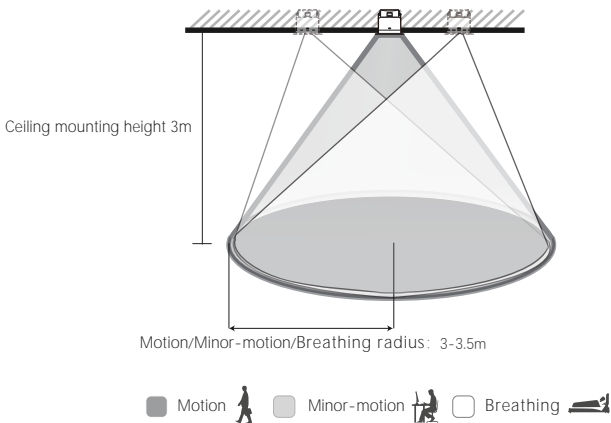


Office conference room



## Product Features

- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- KNX signal output, microsecond linkage with KNX ecosystem to quickly switch smart application scenarios
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management



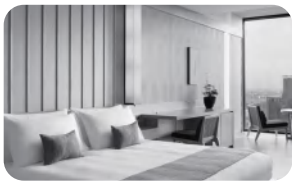
## Parameter

【Working Voltage】	Auxiliary power port: 12 - 24V DC
【Working Current】	≤ 55mA
【Product Size】	φ89 × 34mm
【Cut-size】	φ60mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0 - 65535 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	KNX communication
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Guest bathroom




Guest room leisure area


# Presence Sensor


DALI 2.0  
MSA205


## Product Features


- 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- Integrated digital light detection, combined with DALI 2.0 host, can realize light adaptive function
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping.
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- DALI 2.0 communication, microsecond linkage DALI lighting control scene


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
DALI 2.0

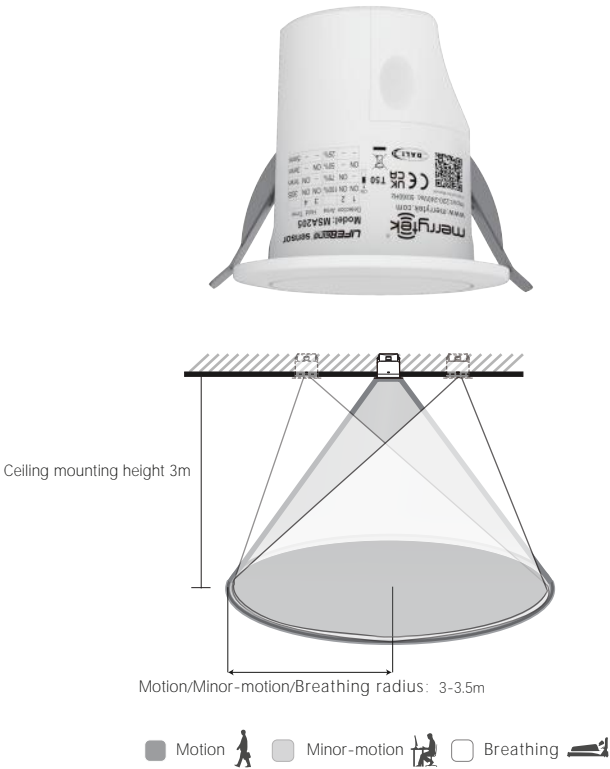
  
Flush mounting

  
Resist flying insects

  
5 Years Guarantee

## Parameter

【Working Voltage】	100-240V AC 50Hz / 60Hz
【Product Size】	φ105 × 85mm
【Cut-size】	φ75mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	DALI 2.0 communication
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting



## Application

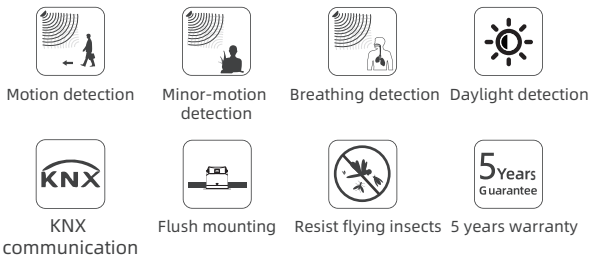
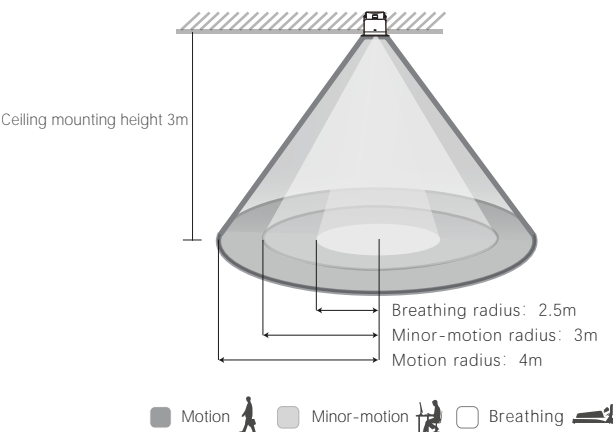


Independent office      Large conference room



## Product Features

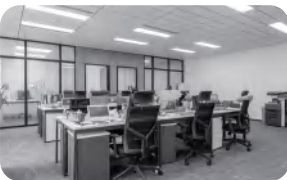
- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Supported by digital light detection technology, personalized definition of multiple application scenarios linkage
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Supports ETS setting of sensor parameters, portable pre-installation/post-installation debugging
- Microsecond linkage with KNX ecosystem to quickly switch automation scenarios
- Compatible with flush mounting and 86 bottom box installation



## Parameter

【Working Voltage】	21 - 30V DC
【Working Current】	≤ 15mA
【Product Size】	φ89 × 34mm
【Cut-size】	φ60mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	0 - 65535 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	KNX bus communication
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Independent office




Large conference room


# Presence Sensor


RS485  
MSA043D 485


## Product Features


- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Supported by digital light detection technology, personalized definition of multiple application scenarios linkage
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Supports RS485 protocol, remote control (MH10) to set sensor parameters, it is convenient for pre-installation/post-installation debugging
- RS485 signal output, supports docking with any RS485 system
- Compatible with flush mounting and 86 bottom box installation


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
RS485

  
Flush mounting

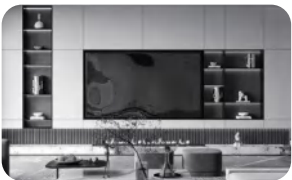
  
Resist flying insects

  
5 years warranty

## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 30mA
【Product Size】	φ89 × 34mm
【Cut-size】	φ60mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	RS485
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush mounting

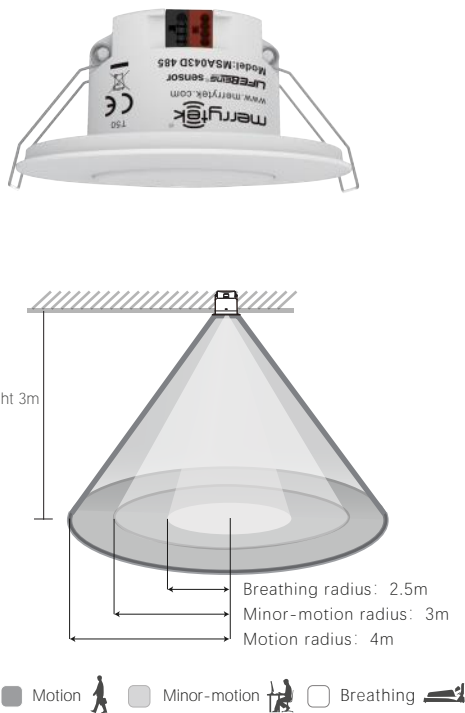
## Application



Living room

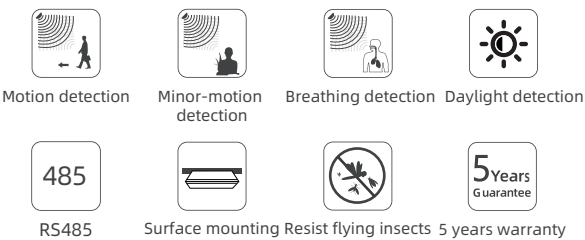


Bathroom



## Product Features

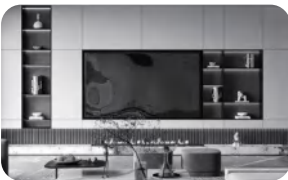
- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Supported by digital light detection technology, personalized definition of multiple application scenarios linkage
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Supports RS485 protocol, remote control (MH10) to set sensor parameters, it is convenient for pre-installation/post-installation debugging
- RS485 signal output, supports docking with any RS485 system



## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 30mA
【Product Size】	φ105 × 23mm
【Max Detection Area】	Motion 4m/minor-motion 3m/ Breathing 2.5m (radius)
【Hold Time】	2s - 7200s
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	RS485
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Surface mounting

## Application



Living room



Bathroom





# Presence Sensor


RS485  
MSA219D 485 A


## Product Features

- Autonomous driving level 24GHz millimeter wave radar detection technology, the first choice for presence detection in large spaces
- The human body LifeBeing sensor range is up to 40m<sup>2</sup>, effectively realizing one sensor for full-space management
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- RS485 signal output, supports docking with any RS485 system
- The sensor angle can be flexibly adjusted, making it suitable for all types of home, commercial ceilings and application scenarios

  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

485

RS485

  
Flush mounting

  
Angle adjustable -30° - 30°

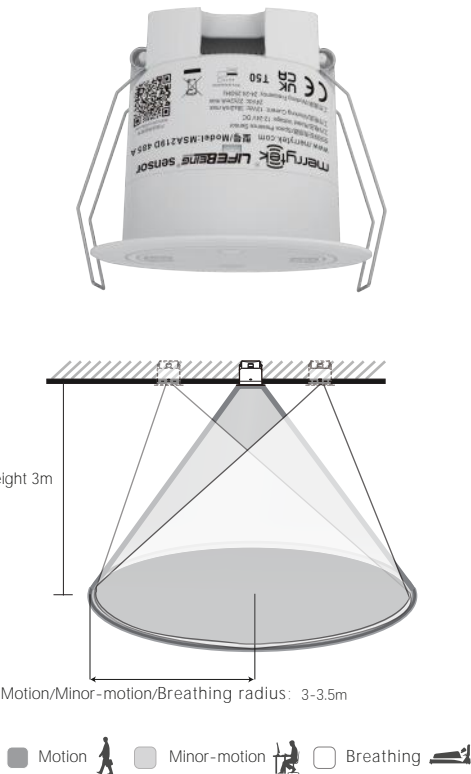
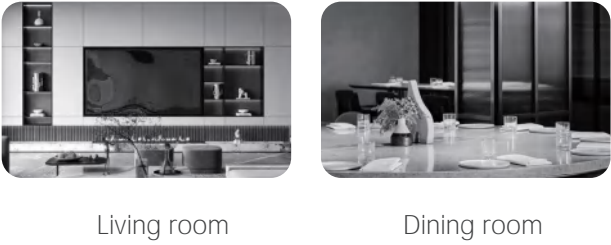
5 Years  
Guarantee

5 years warranty

## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ85 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 3.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communicate Mode】	RS485
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application

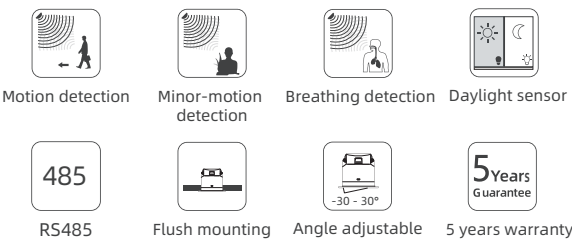


Dry Contact Version  
MSA219D 99 B

# Deep Sleep Sensor

## Product Features

- Multi-array high-gain 24G millimeter wave planar antenna technology, dedicated for deep sleep Presence detection
- Within the confines of one bed and presence detection area, No loss of human presence signal
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- Dry contact signal output, connected to various integrated control systems in seconds
- The sensor angle can be flexibly adjusted and is conveniently suitable for various home and commercial ceiling application scenarios.



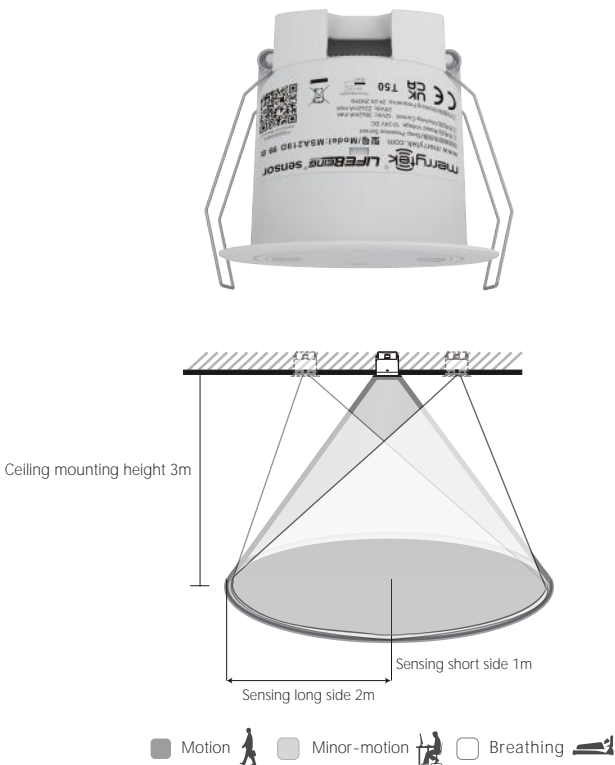
## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ85 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 2m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	24GHz millimeter wave human body sleep Presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Guest room master bedroom    Guest room leisure area

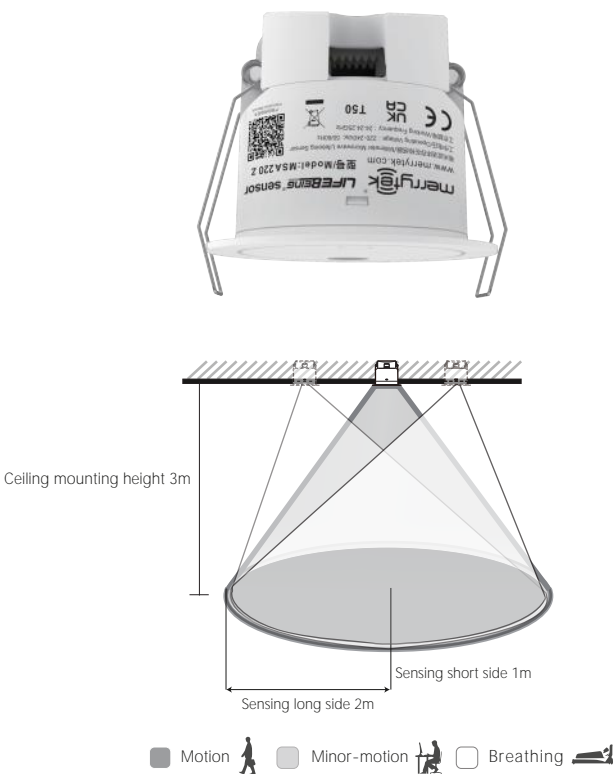


# Deep Sleep Sensor

Tuya ZigBee  
MSA220Z

## Product Features

- Multi-array high-gain 24G millimeter wave planar antenna technology, dedicated for deep sleep Presence detection
- Within the confines of one bed and presence detection area, No loss of human presence signal
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- Microsecond linkage with Tuya ZigBee ecosystem to quickly switch automation scenario



Motion detection

Minor-motion detection

Breathing detection

Daylight detection

Tuya ZigBee

Flush/Surface mounting

Resist flying insects

5 years warranty

## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ65 × 49.5mm
【Cut-size】	φ55mm
【Max Detection Area】	Motion/minor-motion/ Breathing 2m (radius)
【Daylight Sensor】	0-1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Mode】	Tuya ZigBee3.0
【Detection Technology】	24GHz millimeter wave human body sleep Presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

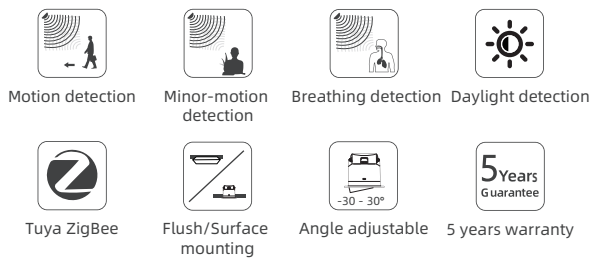
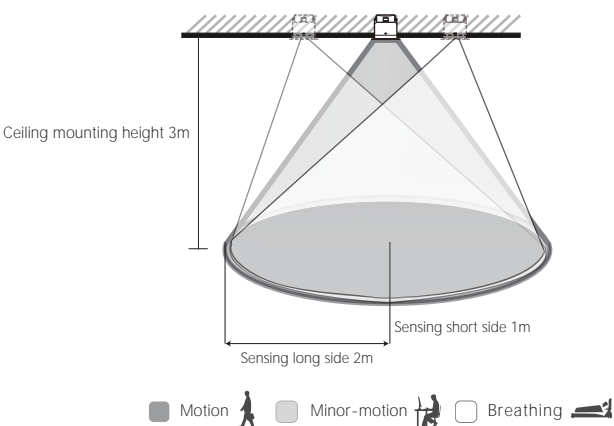
## Application



Guest room master bedroom    Guest room leisure area

## Product Features

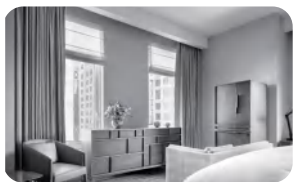
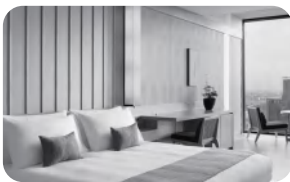
- Multi-array high-gain 24G millimeter wave planar antenna technology, dedicated for deep sleep Presence detection
- Within the confines of one bed and presence detection area, No loss of human presence signal
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- Supported by light detection technology, personalized definition of multiple application scenarios linkage
- The sensor angle can be flexibly adjusted and is conveniently suitable for various home and commercial ceiling application scenarios.



## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ80 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 2m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Mode】	Tuya ZigBee3.0
【Detection Technology】	24GHz millimeter wave human body sleep Presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

## Application



Guest room master bedroom    Guest room leisure area

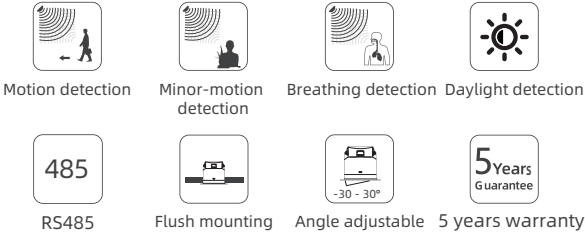
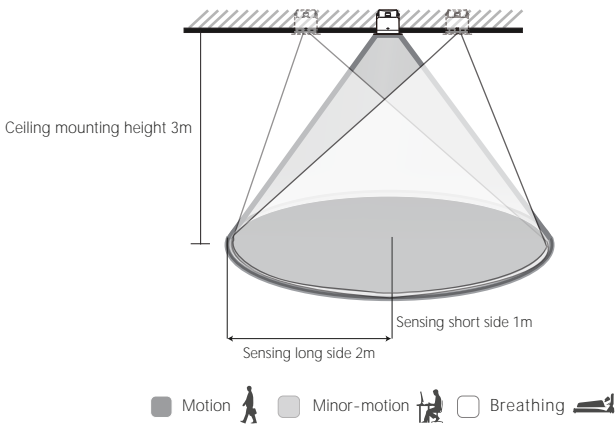


# Deep Sleep Sensor

RS485  
MSA219D 485 B

## Product Features

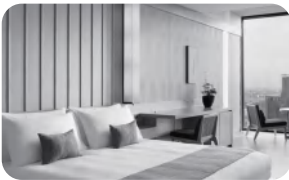
- Multi-array high-gain 24G millimeter wave planar antenna technology, dedicated for deep sleep Presence detection
- Within the confines of one bed and presence detection area, No loss of human presence signal
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- RS485 signal output, support docking with any RS485 system
- The sensor angle can be flexibly adjusted and is conveniently suitable for various home and commercial ceiling application scenarios.



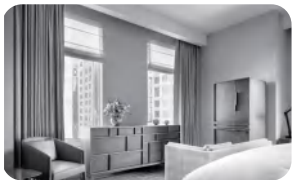
## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 50mA
【Product Size】	φ80 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 2m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	RS485
【Detection Technology】	24GHz millimeter wave human body sleep Presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Guest room leisure area



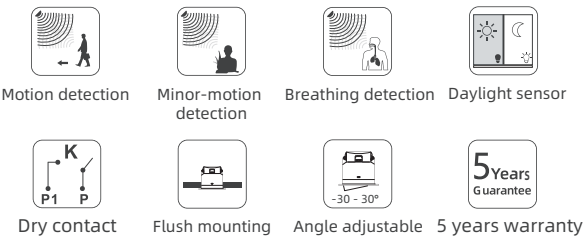
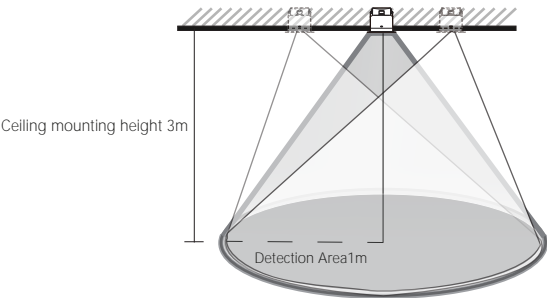
Guest room leisure area

Dry Contact Version  
MSA215D 99

# Occupancy Sensor

## Product Features

- Accurate detection of human body occupancy status, No loss of human presence signal
- Detection diameter  $\leq 1\text{m}$ , dedicated for presence detection
- The first choice for work station/toilet station detection needs
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- Dry contact signal output, connected to various integrated control systems in seconds



## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	$\leq 50\text{mA}$
【Product Size】	$\varnothing 85 \times 52.5\text{mm}$
【Cut-size】	$\varnothing 70\text{mm}$
【Max Detection Area】	Motion/minor-motion/ Breathing 1m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Shared workstations



Public toilet


# Occupancy Sensor


ON/OFF Version


MSA215 99


## Product Features


- Accurate detection of human body occupancy status, No loss of human presence signal
- Detection diameter  $\leq 1\text{m}$ , dedicated for presence detection
- The first choice for work station/toilet station detection needs
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- 400W inductive/800W resistive load carrying capacity


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight sensor

  
ON/OFF function

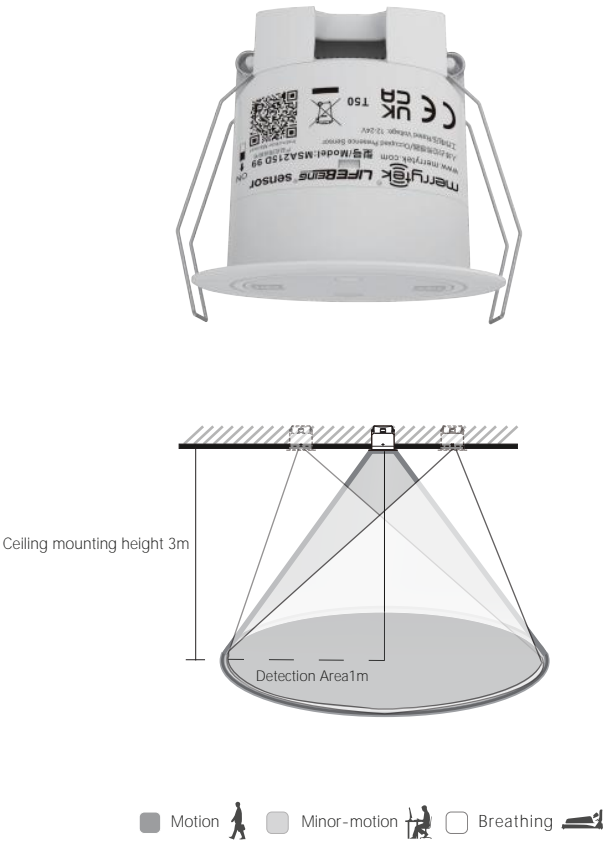
  
Flush mounting

  
Resist flying insects

  
5 years warranty

## Parameter

【Working Voltage】	220 - 240V AC 50Hz / 60Hz
【Product Size】	φ85 × 52.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 1m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting



## Application



Shared workstations

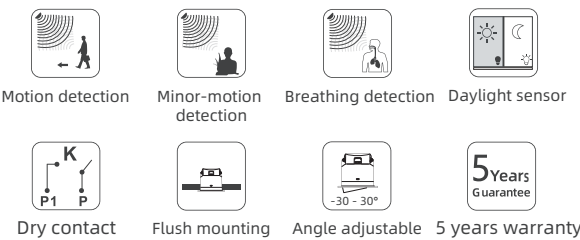
Public toilet

Dry Contact Version  
MSA300D 99

# Occupancy Sensor

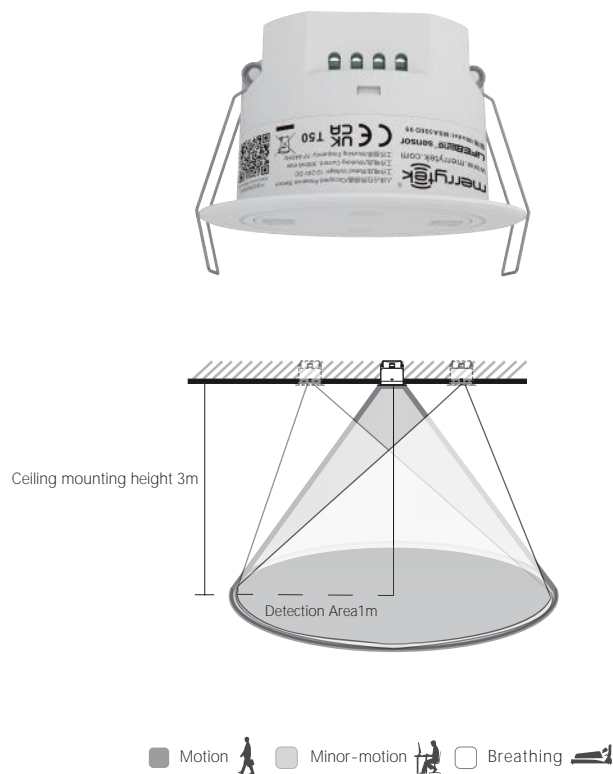
## Product Features

- Precision medical grade 60GHz radar detection technology, No loss of human presence signal
- Detection diameter  $\leq 1\text{m}$ , dedicated for presence detection
- The first choice for work station/toilet station detection needs
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- The sensor boundary is clear, "zero false trigger" and "zero missed"
- The sensor angle can be flexibly adjusted, making it suitable for all types of home, commercial ceilings and application scenarios



## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	$\leq 300\text{mA}$
【Product Size】	$\phi 80 \times 43.5\text{mm}$
【Cut-size】	$\phi 70\text{mm}$
【Max Detection Area】	Motion/minor-motion/ Breathing 1m (radius)
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	60GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting



## Application



Shared workstations



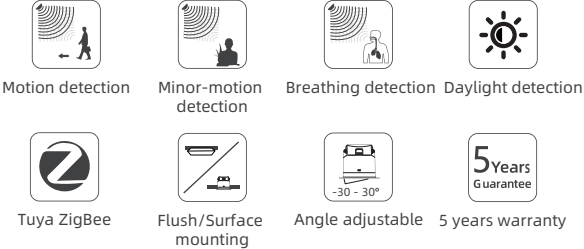
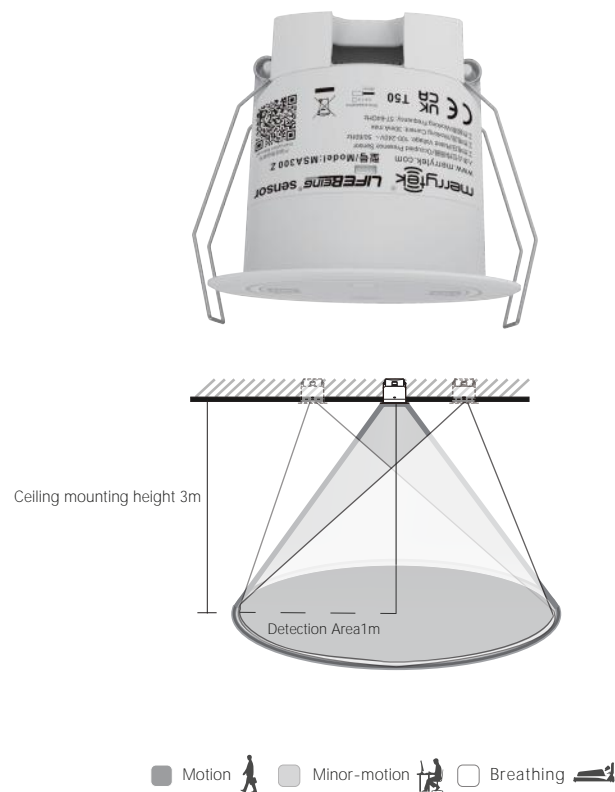
Public toilet

# Occupancy Sensor

Tuya ZigBee  
MSA300 Z

## Product Features

- Precision medical grade 60GHz radar detection technology, No loss of human presence signal
- Detection diameter ≤1m, dedicated for presence detection
- The first choice for work station/toilet station detection needs
- Microsecond linkage with Tuya ZigBee ecosystem to quickly switch automation scenarios
- The sensor angle can be flexibly adjusted, making it suitable for all types of home, commercial ceilings and application scenarios
- The sensor boundary is clear, “zero false trigger” and “zero missed”



## Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 30mA
【Product Size】	φ80 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 1m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Mode】	Tuya ZigBee 3.0
【Detection Technology】	60GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Shared workstations


Public toilet


# Occupancy Sensor


RS485 Version  
MSA300D 485


## Product Features


- Precision medical grade 60GHz radar detection technology, No loss of human presence signal
- Detection diameter  $\leq 1\text{m}$ , dedicated for presence detection
- The first choice for work station/toilet station detection needs
- RS485 signal output, support docking with any RS485 system
- The sensor angle can be flexibly adjusted, making it suitable for all types of home, commercial ceilings and application scenarios
- The sensor boundary is clear, "zero false trigger" and "zero missed"


  
Motion detection


  
Minor-motion detection


  
Breathing detection

  
Daylight detection

  
RS485

  
Flush mounting

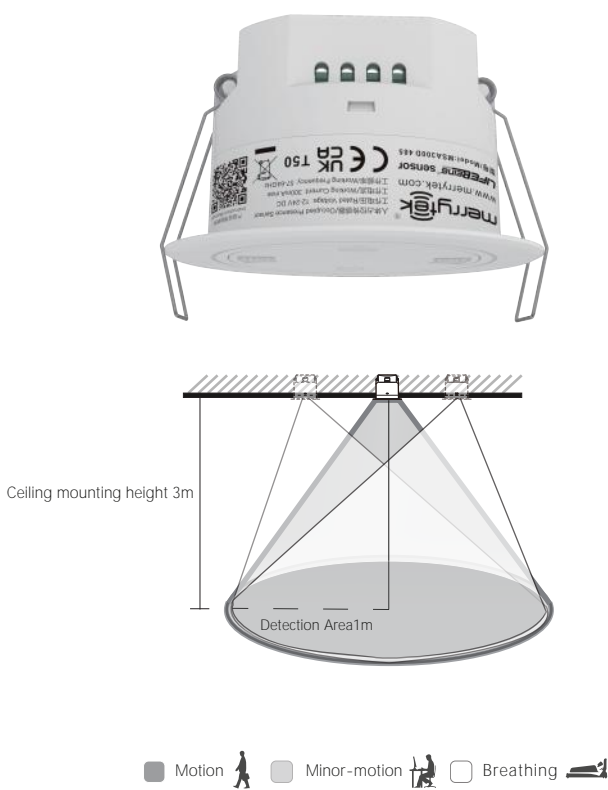
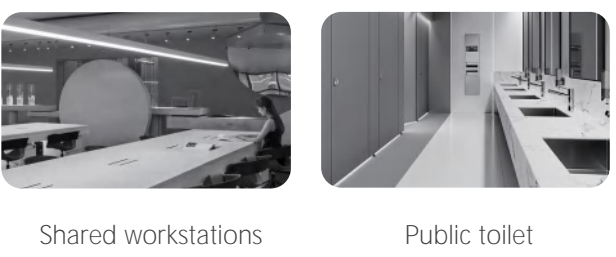
  
Angle adjustable -30° - 30°

  
5 years warranty

## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	$\leq 300\text{mA}$
【Product Size】	$\phi 80 \times 43.5\text{mm}$
【Cut-size】	$\phi 70\text{mm}$
【Max Detection Area】	Motion/minor-motion/ Breathing 1m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	RS485
【Detection Technology】	60GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application

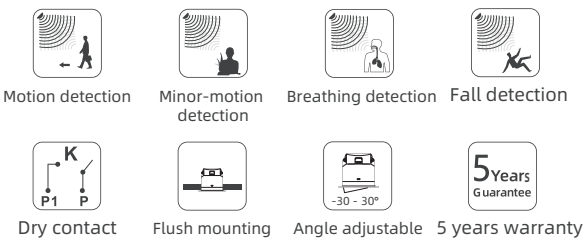
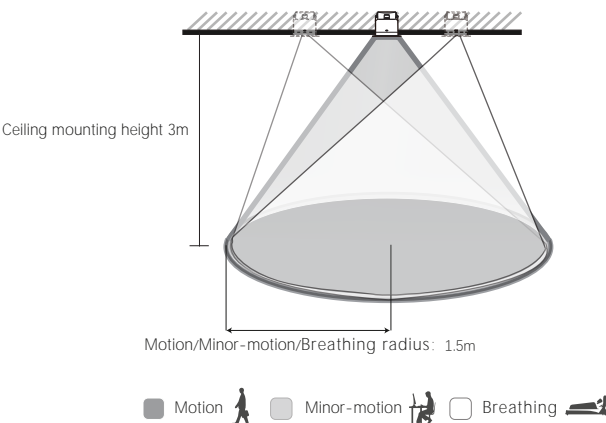


# AI Posture Sensor

Tuya WiFi  
MSA219 W

## Product Features

- Precision medical grade 60GHz radar detection technology, with fall alarm function
- The fall detection accuracy is as high as 99.9%,No loss of human presence signal
- The first choice for health and elderly care monitoring detection
- The detection ranges of motion, minor-motion, and presence sensors are highly overlapping
- The sensor angle can be flexibly adjusted, making it suitable for all types of home, commercial ceilings and application scenarios



## Parameter

【Working Voltage】	100 - 240V AC
【Working Current】	≤ 30mA
【Product Size】	φ80 × 43.5mm
【Cut-size】	φ70mm
【Max Detection Area】	Motion/minor-motion/ Breathing 1.5m (radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Mode】	Tuya Wi-Fi
【Detection Technology】	60GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting

## Application



Nursing home bathroom



Nursing home single room



# Microwave Motion Sensor

---

Through radar detection of the human body's motion in space, the presence or absence of the human body in the corresponding space can be determined. Based on the key technologies of low-impedance anti-interference antenna and high-gain planar antenna pioneered by Merrytek, we have issued two major mobile sensor application technologies in response to the application problem of mobile sensor in the market:

[Low Mounting Motion Sensor](#) (Suitable for sites with an installation height of 3mt);

[High mounting motion sensor](#) (Suitable for scenarios with installation heights above 6m)


Committed to application scenarios from home to business, providing reliable human movement sensor solutions with stronger anti-interference capabilities.

# Low Mounting Motion Sensor


ON/OFF Version  
MSA001S 1

## Product Features


- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Sensor parameters can be set by dip switch MH10 remote control, it is convenient for pre-installation/post-installation debugging
- 400W inductive/800W resistive load carrying capacity
- High-frequency microwave radar detection technology is not affected by light, heat, and water vapor, and can easily penetrate glass for detection




Motion detection




Parameter adjustment




Load capacity




Daylight sensor




Resist flying insects



Flush/Surface mounting



ON/OFF function



5 years warranty

## Parameter

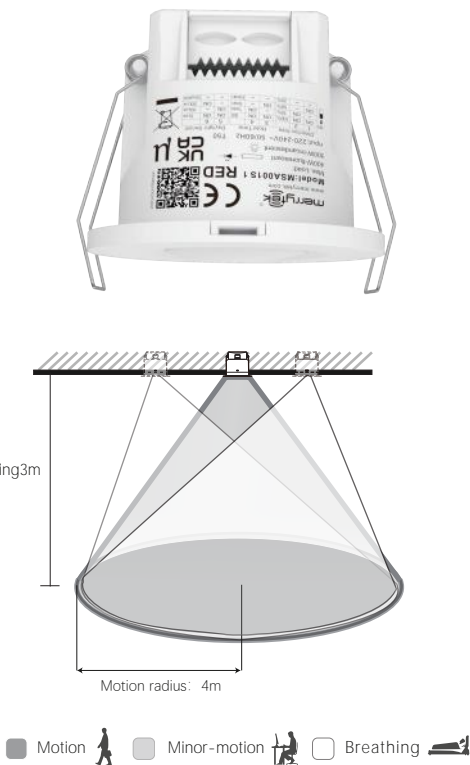
【Working Voltage】	220 - 240V AC 50Hz / 60Hz
【Product Size】	φ65 × 51.5mm
【Cut-size】	φ55mm
【Max Detection Area】	Motion 4m (Radius)
【Daylight Sensor】	5 - 50Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	ON/OFF
【Max Rated Load】	400W Inductive/800W Resistive
【Detection Technology】	5.8GHz microwave human body motion detection + daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

## Application



Entrance

Corridor




Dry Contact Version  
MSA001D E


Low Mounting  
Motion Sensor

Product Features


- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal  
Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Sensor parameters can be set by MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Dry contact signal output, connects to various integrated control systems in seconds
- High-frequency microwave radar detection technology is not affected by light, heat, and water vapor, and can easily penetrate glass for detection
- Ultra-small opening size allows for hidden ceiling installation




Motion detection




Dry contact




Parameter adjustment




Daylight sensor




Resist flying insects



Flush/Surface mounting



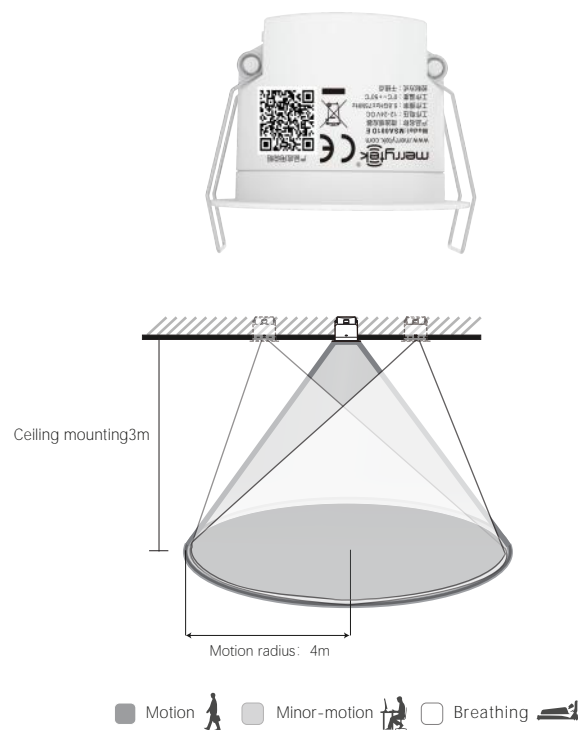
Not affect by environment



5 years warranty

Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 30mA
【Product Size】	φ52.5 × 34.5mm
【Cut-size】	φ45mm
【Max Detection Area】	Motion 4m (Radius)
【Daylight Sensor】	5 - 50 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	5.8GHz microwave human body motion detection + daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)



Application



Entrance


Corridor


# Low Mounting Motion Sensor


0-10V Version  
MSA012


## Product Features


- With daylight harvesting function, the lamp can automatically adjust to external light.
- Patent low impedance antenna, which can effectively resist the interference such as 5G, Wi-Fi and other wireless signal
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Support ON/OFF sensor and 0-10V dimming signal output
- 5.8GHz microwave presence detection technology, accurately detects human body's motion, minor-motion and breath signal


  
Motion detection


  
Minor-motion detection


  
0-10V

  
Daylight harvesting

  
400 - 800W

  
Flush mounting

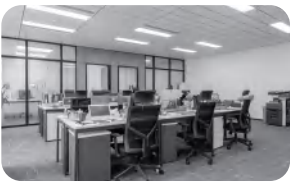
  
Resist flying insects

  
5 years warranty

## Parameter

【Working Voltage】	100 - 277V AC 50Hz / 60Hz
【Product Size】	φ105 × 85mm
【Cut-size】	φ75mm
【Detection Area】	Motion 4m /Minor-motion 3m(Radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Stand-by dimming】	10% / 20% / 30% / 50%
【Max Rated Load】	800W(Inductive)/1000W(Resistive)
【Output Signal】	ON/OFF sensor /0-10V
【Detection Technology】	5.8GHz microwave human body motion detection + daylight detection
【Installation Mode】	Flush mounting

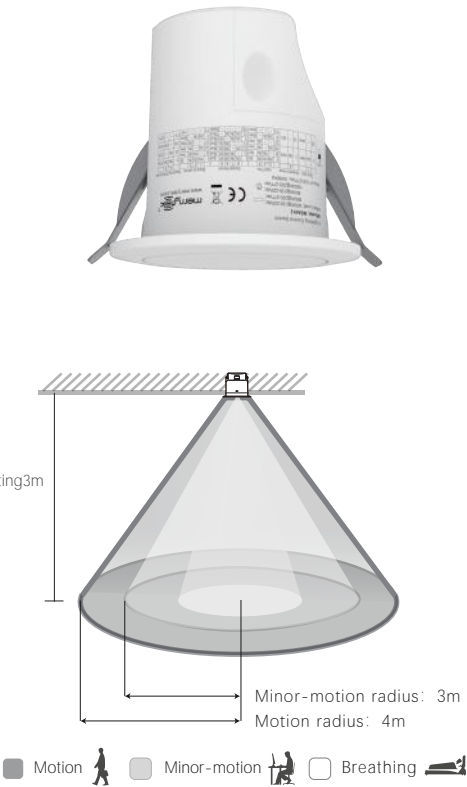
## Application



Open office area

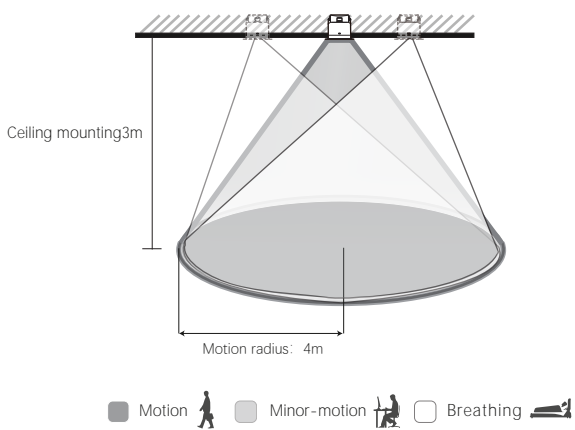



Large conference room





## Product Features


- 24GHz millimeter wave detection technology, achieve precise mobile detection
- Sensor parameters can be set by APP and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Flush mounting can highly integrated with space ceiling
- Millimeter wave radar detection technology is not affected by light and hot water vapor
- Microsecond linkage with Tuya ZigBee ecosystem to quickly switch automation scenarios





  
Motion detection


  
Resist flying insects


  
Parameters adjustment

  
Daylight detection

  
Tuya ZigBee

  
Flush/Surface mounting

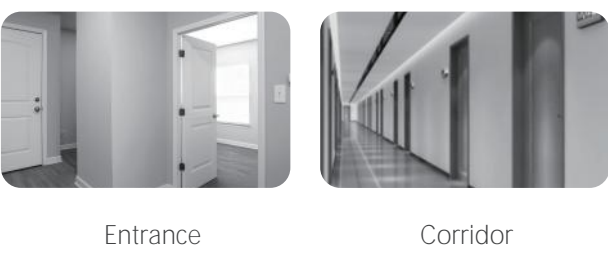
  
Not affect by environment

  
5 years warranty

## Parameter

【Working Voltage】	220 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ65 × 46mm
【Cut-size】	φ55mm
【Detection Area】	Motion 4m (Radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Mode】	Tuya ZigBee 3.0
【Detection Technology】	24GHz millimeter wave human body motion detection + daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)

## Application




# Low Mounting Motion Sensor


## UART Protocol MSA053

### Product Features


- 24GHz millimeter wave detection technology, achieve precise mobile detection
- Sensor parameters can be set by APP and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Flush mounting can highly integrated with space ceiling
- Millimeter wave radar detection technology is not affected by light and hot water vapor
- Microsecond linkage with Tuya ZigBee ecosystem to quickly switch automation scenarios




Motion detection




UART serial port




Parameters adjustment




Daylight detection




Resist flying insects



Flush/Surface mounting



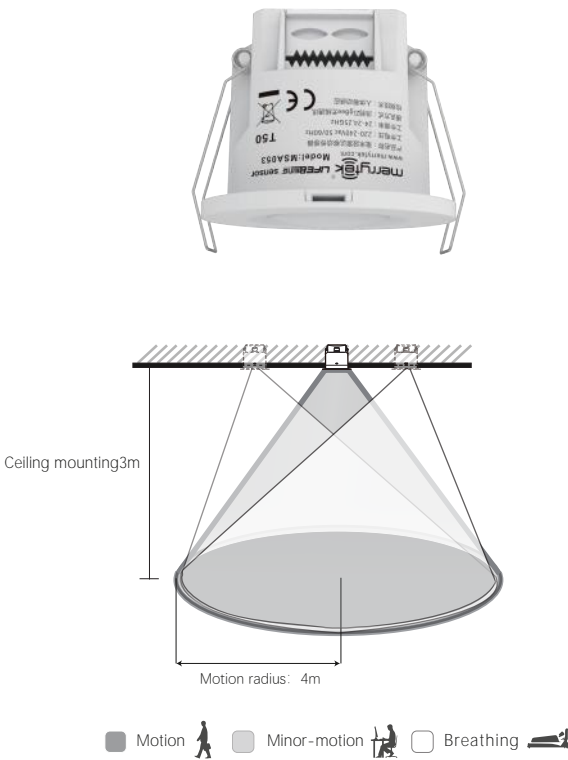
Not affect by environment



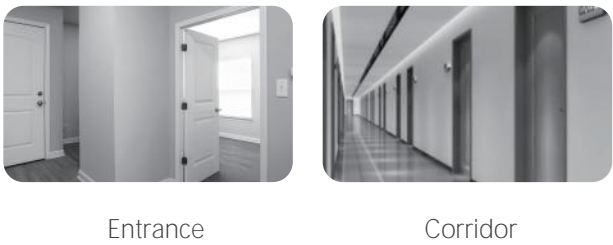
5 years warranty

### Parameter

【Working Voltage】	220 - 240V AC 50Hz / 60Hz
【Working Current】	≤ 20mA
【Product Size】	φ65 × 46mm
【Cut-size】	φ55mm
【Detection Area】	Motion 4m (Radius)
【Daylight Sensor】	0 - 1200 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Interface】	UART serial port, support customer-supplied communication module docking
【Detection Technology】	24GHz millimeter wave human body motion detection + daylight detection
【Installation Mode】	Flush/Surface mounting (Need to choose surface-mounting box)



### Application

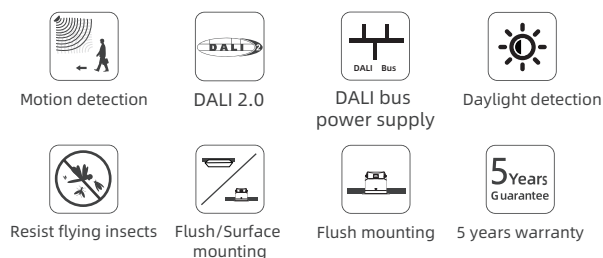
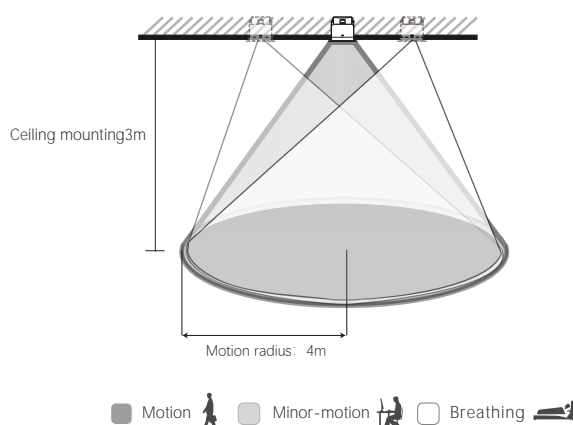


Entrance

Corridor

## Product Features

- 5.8GHz radar detection technology, achieve precise human body motion detection signal
- DALI bus power supply, support DALI 2.0 wired communication
- Flush mounting can highly integrated with space ceiling
- High-frequency microwave radar detection technology is not affected by light and hot water vapor
- Supported by digital light detection technology, personalized definition of multiple application scenarios linkage



## Parameter

【Working Voltage】	DALI bus power supply
【Working Current】	≤ 10mA
【Product Size】	φ65 x 49.5mm
【Cut-size】	φ55mm
【Detection Area】	Motion 4m (Radius)
【Daylight Sensor】	0 - 1200Lux
【Mounting Height】	2-4m (typical value: 3m)
【Output Signal】	DALI 2.0
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush/Surface mounting(Need to choose surface-mounting box)

## Application



Entrance



Corridor




# Low Mounting Motion Sensor


KNX  
MSA056K 99

## Product Features


- 5.8GHz radar detection technology, achieve precise human body motion detection signal
- KNX bus power supply, support KNX wired communication
- Flush mounting can highly integrated with space ceiling
- High-frequency microwave radar detection technology is not affected by light and hot water vapor
- Supported by digital light detection technology, personalized definition of multiple application scenarios linkage
- Compatible with ceiling recessed installation and 86 bottom box installation




Motion detection




KNX




KNX bus power supply




Daylight detection




Resist flying insects



Flush mounting



Not affect by environment



5 years warranty

## Parameter

【Working Voltage】	21 - 30V DC
【Working Current】	≤ 10mA
【Product Size】	φ89 × 34mm
【Cut-size】	φ60mm
【Detection Area】	Motion 4m (Radius)
【Daylight Sensor】	0 - 65535 Lux
【Mounting Height】	2-4m (typical value: 3m)
【Communication Interface】	KNX bus communication
【Detection Technology】	5.8GHz microwave presence detection+ daylight detection
【Installation Mode】	Flush mounting

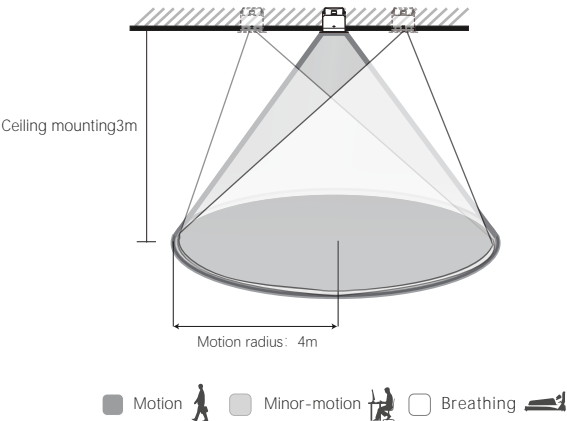
## Application



Hotel hallway



Guest room entrance




0-10V  
MSA054 RF


Low Mounting  
Motion Sensor

Product Features


- 24GHz microwave motion detection technology, achieve precise human body motion detection signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Adopts 868 RF wireless communication, can easily realize master-slave group control
- Sensor parameters can be set by dip switch, it is convenient for pre-installation/post-installation debugging
- Support ON/OFF sensor and 0-10V dimming signal output




Motion detection




868 RF




0-10V




Daylight sensor




Resist flying insects



ON/OFF function



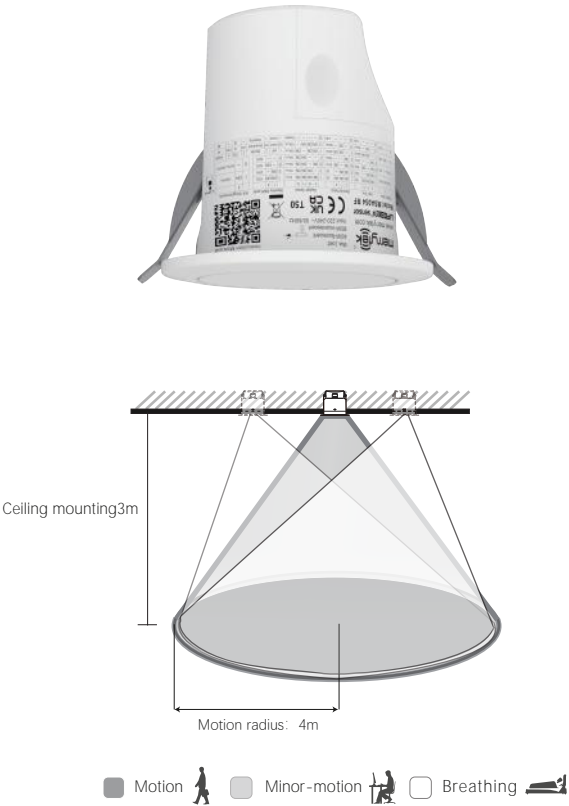
Flush mounting



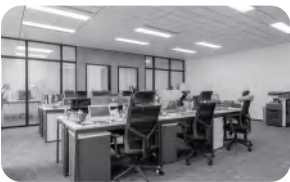
5 years warranty

Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Product Size】	φ105 × 85mm
【Cut-size】	φ75mm
【Max Detection Area】	Motion 4m (Radius)
【Stand by dimming】	10% / 20% / 30% / 50%
【Daylight Sensor】	50 Lux / Disable
【Mounting Height】	2-4m (typical value: 3m)
【Max Rated Load】	400W Inductive/800W Resistive
【Output Signal】	Strong current/0-10V
【Detection Technology】	24GHz millimeter wave presence detection+ daylight detection
【Installation Mode】	Flush mounting



Application



Open office area




Warehouse storage area

# High mounting motion sensor


Dry Contact Version  
MSA003D RC

## Product Features


- 5.8GHz microwave detection technology, achieve precise human body motion detection signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Support 3-12m high-altitude mounting height motion detection
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- Dry contact output, connect to various integrated control systems in seconds




Motion detection




KNX




KNX bus power supply




Daylight sensor




Resist flying insects



Flush mounting



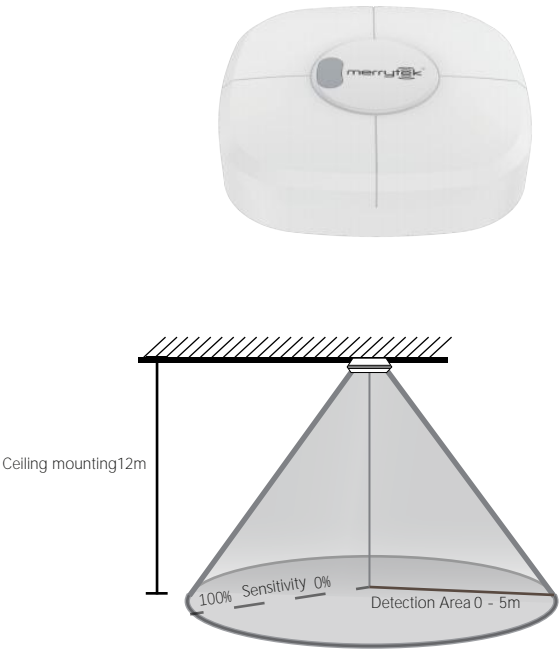
Not affect by environment



5 years warranty

## Parameter

【Working Voltage】	12 - 24V DC
【Working Current】	≤ 60mA
【Product Size】	110 x 110 x 32mmx
【Max Detection Area】	Motion 5m
【Daylight Sensor】	5-150 Lux/Disable
【Mounting Height】	3-12m (typical value: 10m)
【Output Signal】	NO/NC dry contact
【Detection Technology】	5.8GHz microwave presence detection
【Installation Mode】	Flush mounting



## Application




Warehouse




Factory

Product Features


- 5.8GHz microwave detection technology, achieve precise human body motion detection signal
- Integrated light detection technology to effectively identify day and night and achieve on-demand sensing
- Sensor parameters can be set by dip switch and MH10 remote control, it is convenient for pre-installation/post-installation debugging
- 400W inductive/800W resistive load carrying capacity
- Supports a long and narrow detection range of 15m long side and 3m short side, which is the first choice for corridor detection




Motion detection




Long and short side sensor




ON/OFF function




Daylight sensor




Resist flying insects



Load capacity



Surface mounting



5 years warranty

Parameter

【Working Voltage】	100 - 240V AC 50Hz / 60Hz
【Product Size】	110 × 110 × 32mm
【Max Detection Area】	Sensor long side 15m, sensor short side 3m
【Daylight Sensor】	5 - 150 Lux / Disable
【Mounting Height】	2-10m (typical value: 9m)
【Output Signal】	ON/OFF
【Max Rated Load】	400W Inductive/800W Resistive
【Detection Technology】	5.8GHz microwave presence detection
【Installation Mode】	Surface mounting

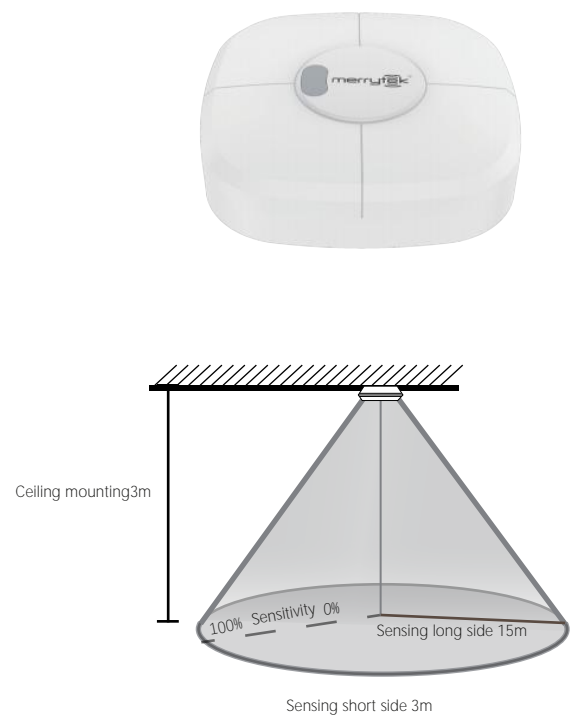
Application



Corridor

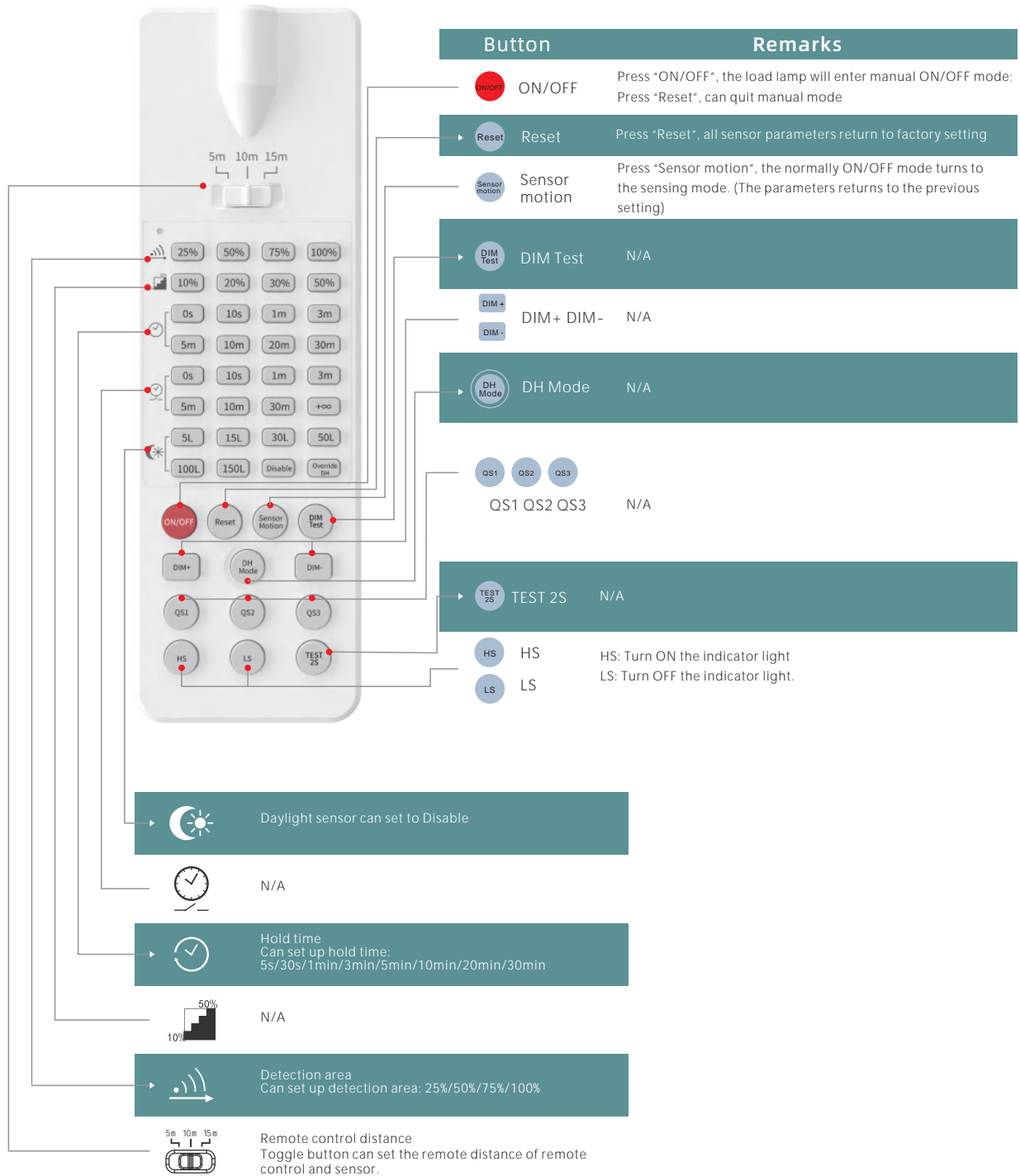


Aisle



## Remote control series

## Remote control MH10



Note: With different products, the remote control button function is different, please refer to the remote control instructions in the specification of products



+86 (0) 755 2305 7253/59



+86 (0) 755 2786 3012



[sales@merrytek.com](mailto:sales@merrytek.com)



[www.merrytek.com](http://www.merrytek.com)



17th Building, Dianda Guyuan Industrial Park,  
Matian Street, Guangming District, Shenzhen,  
China, 518106