



## 一. 使用之前

1. 本产品应由专业电工安装，在安装、接线前请先断电。产品上电前，请确认输入电压范围符合手册的要求。
2. 使用之前，请仔细阅读本手册的相关内容。
3. 本产品只适合室内安装使用。
4. 确保本产品安装在相对干燥的环境下。
5. 安装时应远离金属板、混凝土墙、横梁，以避免遮挡微波信号。
6. 安装时应远离玻璃、木板、石膏板等易被微波穿透物质，以免误触发。
7. 应避免传感器周边有长期震动设备或者移动物体，震动信号将被视为移动信号触发感应。
8. 如检测区域内有宠物经过，可能触发感应。

1

## 三. 产品介绍

本产品采用24GHz高增益大波束，广域覆盖微波存在传感技术，可检测人的大幅度移动及在静止状态下的微小动作：如，摆手、摇头及呼吸时的胸腹扩张，从而判断是否有人存在。本品内置一继电器控制电路通断，检测到有人时继电器闭合，接通负载（用电器），无人时按照设置的延时后断开。

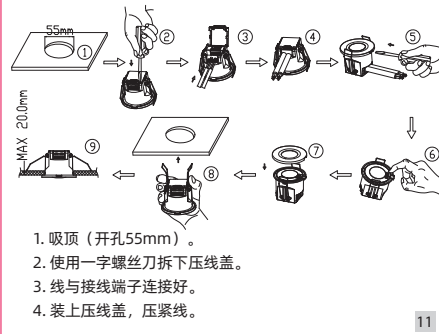
## 四. 规格参数

|            |                                                                                      |
|------------|--------------------------------------------------------------------------------------|
| 工作电压       | 220-240Vac, 50/60Hz                                                                  |
| 待机功耗       | ≤1W                                                                                  |
| 发射功率       | 5mW Max.                                                                             |
| 微波工作频率     | 24-24.25GHz                                                                          |
| 灵敏度设置(备注1) | 25% 50% 75% 100%，通过拨码或遥控设置                                                           |
| 延时设置(备注2)  | 5s/30S /1min / 3min /5min /10min / 20min (遥控器MH10设置)<br>5s/30s/1min/3min/5min (拨码设置) |

1

## 八. 安装示意图

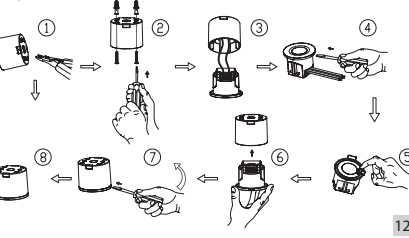
### 1) 嵌入式安装



11

5. 用一字螺丝刀拆下面盖。
6. 调节拨码、设置好参数。
7. 盖上面盖，使扣子都扣紧主体。
8. 向后弯曲弹簧夹推进天花板预先开好的孔。
9. 确保安装后平稳可靠。

### 2) 吸顶式安装



12

## Merrytek 传感器质保凭证

用户信息：

客户姓名 \_\_\_\_\_ (先生/女士)

联系电话 \_\_\_\_\_

客户地址 \_\_\_\_\_

产品信息：

名 称 \_\_\_\_\_ 型 号 \_\_\_\_\_

生产序列号 \_\_\_\_\_ 购机日期 \_\_\_\_\_

购机商店 \_\_\_\_\_ 发票号码 \_\_\_\_\_

商店地址 \_\_\_\_\_

## Merrytek 传感器质保凭证

用户信息：

客户姓名 \_\_\_\_\_ (先生/女士)

联系电话 \_\_\_\_\_

客户地址 \_\_\_\_\_

产品信息：

名 称 \_\_\_\_\_ 型 号 \_\_\_\_\_

生产序列号 \_\_\_\_\_ 购机日期 \_\_\_\_\_

购机商店 \_\_\_\_\_ 发票号码 \_\_\_\_\_

商店地址 \_\_\_\_\_

9. 传感器宜远离交换机、路由器等无线设备，安装间隔至少0.5米，以避免无线电干扰。
10. 为保障存在探测准确度，传感器感应装在人员活动区域，且避免安装于人员背后。具体安装布点规范，请咨询当地购买渠道及服务商。
11. 传感器安装间隔2米以上，以免互相干扰。

2

3. 传感器的探测距离与安装高度、人员身高及移动速度、人员与传感器的相对位置、安装环境大小、是否有遮挡及反射物等因素相关，表中数据为传感器吸顶安装3m高，空旷地带，身高165cm人员，人员胸腹部无遮挡物、人员正对传感器，0.3m/s慢走时测得。
4. 初次通电感应器自检时间为20秒，初始化期间不探测外界移动感应信号，初始化期间遥控器设置无效。
5. 出厂设置：感应灵敏度：100%，延时时间：1分钟，光感照度：关闭，指示灯：打开。

### 人体运动信号解释：



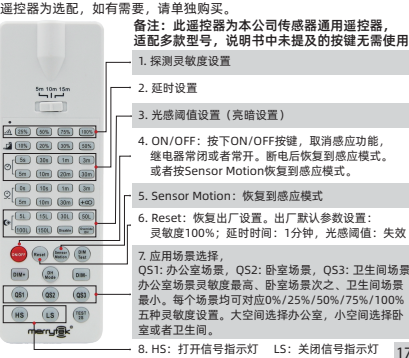
7

\*吸顶座非标配附件，如有需要请联系经销商或者厂家单独购买。

- 1、用工具剪除预留的过线薄壁。
- 2、用匹配的螺丝，把产品固定在需要的安装面上。
- 3、输入线穿过底座接入传感器，接线盖压好线。
- 4、用一字螺丝刀拆下面盖。
- 5、调节拨码、设置好参数再盖上面盖。
- 6、把传感器推进吸顶座，扣紧。
- 7、如果要把传感从吸顶座中取出，用一字螺丝刀插入拆卸缺口，向下撬，传感从吸顶座弹出。
- 8、确保安装后平稳可靠。

13

### 4. 遥控设置



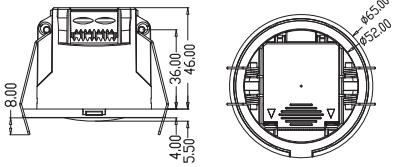
17

## 二. 售后及保修

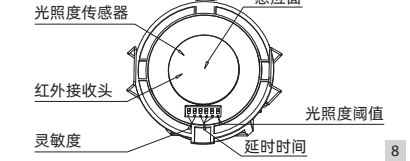
- 1、本产品支持售后7天内无条件退换货。质保期内因产品原因造成的故障提供免费维修服务。
- 2、用户搬运、掉落、安装、使用、维护、保管不当等非因我公司的行为造成的损坏，不在保修范围。
- 3、私自涂抹、篡改标签、型号、产品外观、电路的，不在保修范围内。
- 4、私自开拆、改装而造成的人为损坏不在保修范围内。
- 5、质保期外产品不提供质保服务，可视情况提供有偿维修服务。
- 6、不按说明书使用或者因不可抗力因素（如：火灾、地震等）造成的不良不在保修范围。

3

## 五. 产品尺寸图 (mm)



## 六. 产品示意图



8

## 九. 遥控及拨码使用说明

1. 断电情况下，拨动拨码，设置回到当前拨码状态
2. 拨动任意遥控按键，设置回到遥控器当前设置
3. 拨码设置：

- 1) 灵敏度设置（Detection Area）  
灵敏度设置越高，探测半径越大。

|     | 1  | 2  | 灵敏度  | 移动检测覆盖范围       | 呼吸检测覆盖范围       |
|-----|----|----|------|----------------|----------------|
| I   | ON | ON | 100% | 约36m² (6x6m房间) | 约36m² (6x6m房间) |
| II  | -  | ON | 75%  | 约25m² (5x5m房间) | 约25m² (5x5m房间) |
| III | ON | -  | 50%  | 约16m² (4x4m房间) | 约16m² (4x4m房间) |
| IV  | -  | -  | 25%  | 约4m² (2x2m房间)  | 约4m² (2x2m房间)  |

注：探测灵敏度与被测人员的身高、移动速度、传感器的安装位置、是否有遮挡物、金属或玻璃反射紧密相关。以上数

据为安装高度3米，测试人员身高165cm，移动速度0.3m/S慢走，人体面向传感器安装点，无遮挡时测得，仅作参考。灵敏度选择以现场安装环境适配为准。

### 2) 延时设置（Hold Time）：

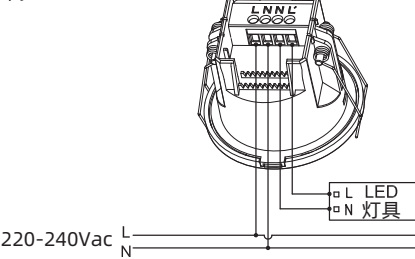
检测到无人时延时时间后断开继电器，5秒仅做大幅度移动传感，无呼吸检测功能。30秒及以上时间方可实现存在传感（呼吸检测）。为保证检测效果，单人空间延时设置1分钟及以上时间。同时，延时时间不建议设置5分钟以上时间，以免探测区域内其他运动信号干扰造成无法关闭。

|     | 3  | 4  | 5  |      |
|-----|----|----|----|------|
| I   | ON | ON | ON | 5S   |
| II  | -  | ON | ON | 30S  |
| III | ON | -  | ON | 1min |
| IV  | ON | ON | -  | 3min |
| V   | -  | -  | -  | 5min |

15

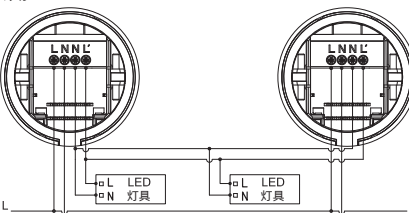
## 七. 接线图

### 单控：



9

### 双控：



### 注意：

1. 本产品建议最多接4个负载，且负载总功率及负载输入端上电瞬间的浪涌电流不能超过传感器的额定要求。
2. 传感器的L、N接入市电火线和零线，L'和N接入负载的火线和零线。不可接反，否则将损毁传感器。

10

### 3) 光感阈值（Daylight Sensor）

有人进入检测区域时，周围环境照度高于设定阈值时继电器不闭合，低于设定值时继电器闭合，自动开灯。设置为Disable时无亮暗检测功能，有人进入则继电器闭合，自动开灯。

|    | 6  | 阈值      | 照度      |
|----|----|---------|---------|
|    |    | 5Lux    | 非常暗     |
|    |    | 25Lux   | 暗       |
| I  | ON | 50Lux   | 微亮      |
| II | -  | Disable | 无亮暗检测功能 |

拨码可设置50lux和Disable档位，其他档位可用遥控设置。

16

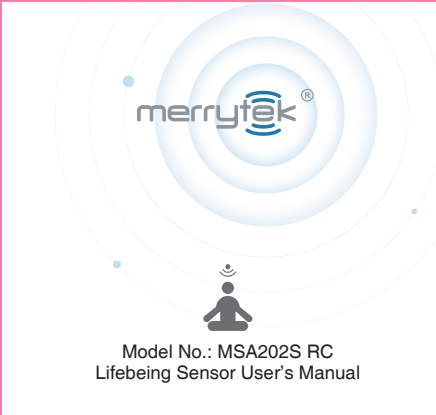
## 十一. 电子信息产品有毒有害物质申明

| 部件名称 | 有毒有害物质或元素 |     |     |           |         |           |
|------|-----------|-----|-----|-----------|---------|-----------|
|      | 铅Pb       | 汞Hg | 镉Cd | 六价铬Cr(VI) | 多溴联苯PBB | 多溴二苯醚PBDE |
| 塑料件  | ○         | ○   | ○   | ○         | ○       | ○         |
| 金属件  | ○         | ○   | ○   | ○         | ○       | ○         |
| PCBA | ○         | ○   | ○   | ○         | ○       | ○         |

本表依据SJ/T 11364-2014的规定编制。  
○：表示该有毒有害物质在该部件中所有均质材料中的含量均在GB/T26572-2011规定的限量要求以下；  
X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超过在GB/T26572-2011规定的限量要求。

本标识内数字表示产品在正常使用状态下的环保使用期限为10年，某些部件也可能有环保使用期限标识，其环保使用年限以标识内的数字为准。

19



Model No.: MSA202S RC  
Lifebeing Sensor User's Manual

## 1. ATTENTION

- The product shall be installed by a professional electrician. Please disconnect the power before installation and wiring. Before the product is powered on, please confirm that the input voltage range meets the requirements of the manual. Please read the relevant contents in this manual carefully
- before using the product. This product is designed for indoor use only.
- Ensure that the product is installed in a relatively dry and ventilated environment. Keep away from metal plates, concrete walls, and beams
- during installation to avoid blocking microwave signals. Install the sensor as far as possible from glass, wood,
- gypsum board and other materials that are easily penetrated by microwaves to avoid false triggering. Avoid long-term vibrating equipment or moving objects
- around the sensor. The vibration signal will be regarded as the motion signal to trigger the sensor.

1

- If a pet passes by in the detection area, it may trigger the sensor.
- The sensor should be installed far away from wireless devices such as network switches and routers, and installation interval should be at least 0.5 meters to avoid radio interference.
- In order to ensure the accuracy of presence detection, the sensor should be installed in the area of personal activity and avoid installing behind the person. For specific product installation locations, please consult local purchase channels and service providers.
- The installation distance between sensors should be at least 2m to avoid interference with each other.

2

## 2. After-sales Services and Warranty

- 1) Free maintenance service is provided for failures caused by the product during the warranty period.
- 2) Damages that are not caused by our company's actions such as handling, dropping, installation, use, maintenance, and improper storage by the user are not covered by the warranty.
- 3) Unauthorized smearing or tampering with labels, model no., product appearances, and circuits are not covered by the warranty.
- 4) Man-made damage caused by unauthorized disassembly and modification is not covered by the warranty.
- 5) Out-of-warranty products do not provide warranty services, and can provide paid maintenance services depending on the situation.

3

- 6) Damage caused by using without following instruction or due to force majeure factors, such as, fire, earthquake, etc., is not covered by the warranty.
- 7) Any exterior decoration and accessories of the body are not warranted, such as connecting cables, cabinets, panels, cabinet accessories, etc.
- 8) Please keep the warranty card in a safe place. Products that are purchased through unauthorized channels are not covered by our warranty.

4



The Model No., parameters and performance of the product in this manual are subject to change without further notice.

Shenzhen Merrytek Technology Co., LTD  
No.17th Building, Dianda Guyuan Industrial Park, Mashantou, Matian, Guangming District, Shenzhen, China, 518106

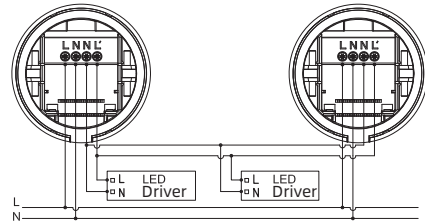
T: +86 (0) 755 2305 7253

F: +86 (0) 755 2786 3012

E: sales@merrytek.com

W: www.merrytek.com www.merryteksensor.com

## Multiple-load:

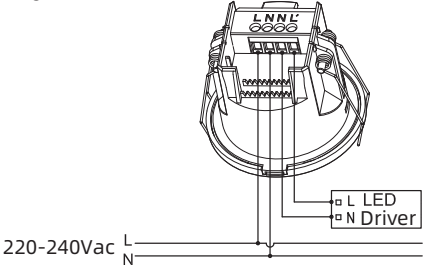


NOTE:  
1) It is recommended that this product be connected to a maximum of 4 loads, and the total power of the load and the surge current generated at the moment when the load input is powered on cannot exceed the rated requirements of the sensor.  
2) The sensor L/N needs to be connected to the mains live and neutral wires, and L' and N need to be connected to the live and neutral wires of the load. Do not reverse the connection, otherwise the sensor will be damaged.

10

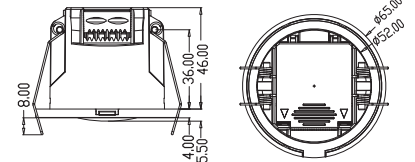
## 7. Wiring

### Single Load:

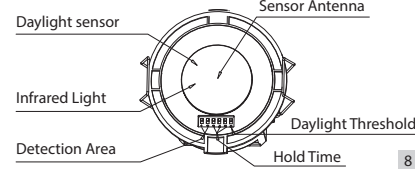


9

## 5. Dimension (mm)



## 6. Structure



8

## 9. Instructions

1. Toggle up or down the DIP switches after powering off, the sensor settings will back to the current DIP settings.
2. Press any buttons on the remote controller, and the sensor settings return to the current settings of the remote controller.
3. DIP Switch settings  
1) Detection Area  
The higher the detection area setting, the larger the detection radius

|     | 1  | 2  | Detection Area | Motion Detection Coverage           | Breathing Detection Coverage |
|-----|----|----|----------------|-------------------------------------|------------------------------|
| I   | ON | ON | 100%           | Approx.36m <sup>2</sup> (6x6m room) |                              |
| II  | -  | ON | 75%            | Approx.25m <sup>2</sup> (5x5m room) |                              |
| III | ON | -  | 50%            | Approx.16m <sup>2</sup> (4x4m room) |                              |
| IV  | -  | -  | 25%            | Approx.4m <sup>2</sup> (2x2m room)  |                              |

14

- Notes:  
1) The higher the sensitivity, the farther the detection range. In case of microwave crossing the wall or false triggering, the sensitivity should be reduced.  
2) In order to make sure the testing effect, please set the "hold time" to more than 1 minute when space is with only 1 person.  
3) The detection range of the sensor is related to the installation height, the height and moving speed of the person, the relative position of the person to the sensor, the size of the installation environment, whether there are obstructions and reflectors and other factors. The data in the table is tested by a 165cm person, facing the sensor with no obstructions on his chest and belly, walking slowly at 0.3m/s in an open area with sensor mounted at 3 meters.  
4) After power on, the sensor will enter into the initialization status, and the indicator light flashes for 20 seconds and then turns off. During initialization, the sensor does not detect external movement signals and the sensor parameters can't be set via remote controller.  
5) Factory default setting: Detection Area:100%;Hold time:1min; Daylight sensor: Disable; Indicator light: Open.

Human motion signal interpretation:



7

\*The surface mounting base is not included in our standard products. If needed, please purchase through the local dealer or the manufacturer separately.

- 1) Cut off the reserved thin wall for the thread.
- 2) Fix the product on the target mounting surface by a matching screw.
- 3) Connect the input wire to the wiring terminal, and close the cover tightly.
- 4) Remove the top cover with a flat-blade screwdriver.
- 5) Adjust the dial code and the parameters, and then cover the top cover. 6. Push the product into the ceiling seat, the buckle will fasten the product to prevent it from falling off.
- 7) To separate the product from the ceiling seat, insert a flat-blade screwdriver to the disassembly gap, lift the screwdriver, and pry down with the tip, the product will pop out of the ceiling seat.
- 8) Ensure stable and reliable after installation.

13

## 10. FAQ

| Fault                                                                 | Cause                                                                                | Remedy                                                                                                                                                        |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The sensor is self-triggered or the load will permanently illuminated | Microwave can penetrate glass, wood and other non-metallic materials.                | Reduce the detection area.                                                                                                                                    |
|                                                                       | The sensor is installed close to the wireless device.                                | Installed the sensor 0.5 meters away from the wireless devices.                                                                                               |
| The load will not illuminate despite movement or breathing            | There are vibration or jitter signals in the installation environment.               | 1. Make sure that there are no other motion signals in the space, such as vibrating equipment, rotate fan, curtain swinging.<br>2. Reduce the detection area. |
|                                                                       | The position of the person exceeds the coverage area of the breath signal detection. | Adjust the installation position.                                                                                                                             |
|                                                                       | The installation position of sensor is behind or to the side of the person.          | Adjust the sensor installation position and make sure to install the sensor above the front of the person.                                                    |
| The sensor is not working                                             | The microwave signal is blocked by obstacles.                                        | Adjust the sensor installation position and keep it away from obstacles.                                                                                      |
|                                                                       | The ambient light level is higher than the threshold value.                          | 1. Check if there are other light-emitting objects or lamps in the environment.<br>2. Increase the threshold value or cancel the daylight sensor function.    |
|                                                                       | Reverse connection of input and output leads to sensor damage.                       | Replace the sensor                                                                                                                                            |
|                                                                       | The load exceeds the rated power of the sensor or exceeds the inrush current limit.  | Replace the sensor                                                                                                                                            |

19

## 3. Product Introduction

This product uses Merrytek 24GHz high-gain wide-beam microwave presence sensing technology, which can detect the large-scale movement and the tiny movements in a static state (such as: Waiving-Waving hands, shaking the head, and chest and abdomen expansion during breathing) of human body to determine whether there are people in the detection area. MSA202S RC has a built-in relay to automatically control the on and off of the circuit. When a person is detected, the relay will be closed and the load (electrical appliance) will be connected. After the person leaves the detection area, the relay will be disconnected after the preset "hold time" elapses.

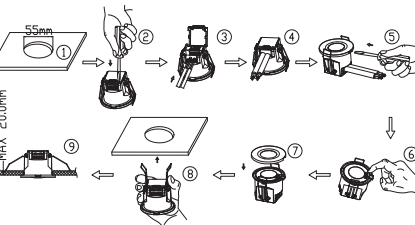
## 4. Parameters

|                     |                     |
|---------------------|---------------------|
| Operating Voltage   | 220-240Vac, 50/60Hz |
| Stand-by Power      | ≤1W                 |
| Transmitting Power  | 5mW Max.            |
| Operating Frequency | 24-24.25GHz         |

5

## 8. Installation Instruction

### 1) Flush Mounting

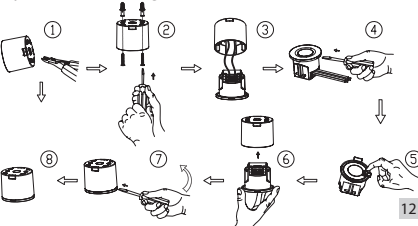


- 1) Ceiling cut size  $\varnothing 55\text{mm}$ .
- 2) Use a flat-blade screwdriver to remove the crimping cover.
- 3) Connect the wires to the wiring terminals.
- 4) Install the crimping cover and crimp the wire.

11

- 5) Use a flat-blade screwdriver to remove the surface cover.
- 6) Adjust the DIP to set the parameters.
- 7) Cover the surface cover back to make sure that it's fastened to the main body.
- 8) Bending the spring clip backwards to pushing to the pre-cut hole in the ceiling.
- 9) Ensure it's stable and reliable after installation.

### 2) Surface Mounting



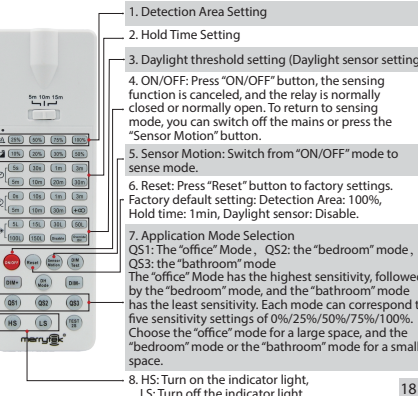
12

### 4. The settings of the remote controller

\* The remote control is optional. If necessary, please purchase it separately.  
Remarks: This remote control is a universal remote control for Merrytek sensors, which is suitable for many models. The buttons not mentioned in the manual do not need to be used.

|    | 6  | Daylight Sensor | Intensity of illumination            |
|----|----|-----------------|--------------------------------------|
|    |    | 5Lux            | Very dark                            |
|    |    | 25Lux           | Dark                                 |
| I  | ON | 50Lux           | Twilight                             |
| II | -  | Disable         | No light and dark detection function |

17



18

