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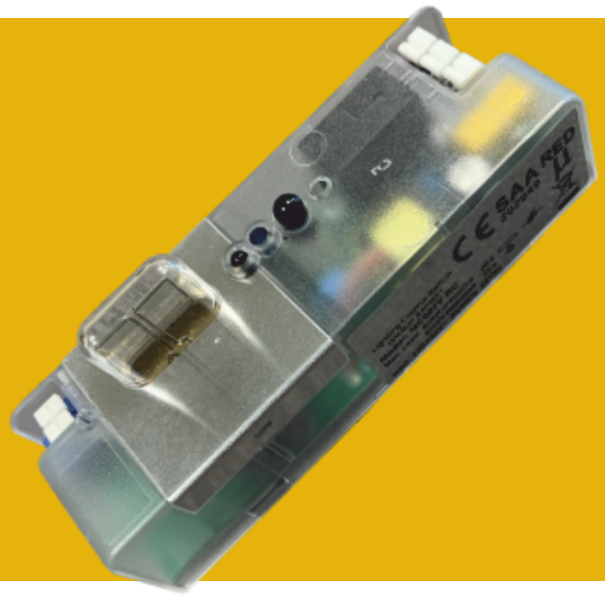
Smart Lifestyle Solutions

# Triproof Sensor

## ON-OFF & Dimming Sensor

**PRODUCT DESCRIPTION**

- Use patented 5.8GHz Low Impedance Microwave Antenna, anti wireless interference, such as Wi-Fi, Bluetooth, 5G etc
- ON/OFF & Dimming function.
- Parameters can be set by DIP switch.
- Compact size for Independent flush mounting.
- 2 years warranty.



Item Number: **QRSR-TP-HF-OF-DIM**

## INPUT

| | |
|---|---|
| Rated voltage | 220-240V AC |
| Operating frequency | 50/60Hz |

## OUTPUT

| | |
|---|---|
| Working Mode | ON/OFF function, 1-10V step dimming |
| Type of Load | LED, Inductive or resistive Load |
| Load Capacity | 200W@230Vac (Inductive) 400W@230Vac (Resistive) |
| Load Current | 1.1A Max |

## SENSOR PARAMETERS

| | |
|---|---|
| Operating frequency | 5.8 GHz ±75 MHz, ISM band. |
| Transmitting power | 1mW Max. |
| Hold time | 5S/30s/1Min/3Min/5Min/10Min/20Min/30Min |
| Stand-by DIM Level | 10%(1.4-1.6V), 20%(1.9-2.1V), 30%(2.9-3.1V) , 50% (4.9-5.1V) |
| Stand-by Period | 0s/10s/1min/3min/5min/10min/30min/+∞ |
| Detection Area | 100%/75%/50%/25% |
| Daylight Sensor | 5lux/15Lux/30Lux/50Lux/100lux/15 0lux/ Disable |
| Detecting Area (radius) | ≥3m(mount height 3m, moving speed 1m/s) |
| Mounting height | 6m Max |
| Detecting Angle | 150° |

## OPERATING ENVIRONMENT

| | |
|---|---|
| Operating Temperature | 25°C...+60°C |
| Storage Temperature/humidity | Temperature: - 40°C...+80°C; Humidity: 10%-95% (non-condensing) |

## CERTIFICATE STANDARDS

| | |
|---|---|
| Safety Standards | EN61058-1, UL60703-1 |
| EMC standards | EN300440; EN301489-1; EN55015; EN61547; EN61000-3-2; EN61000-3-3; En62479 |
| Environmental Requirement | Compliant to RoHS |
| Certificate | Compliant to CE |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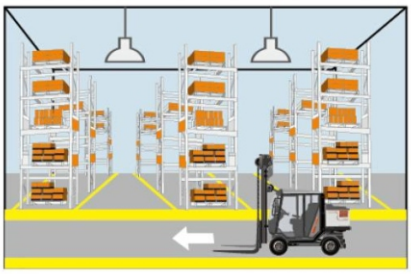
## OTHERS

| | |
|---|---|
| Wiring | Push-type terminal block; I/P wire dia: 0.75-1.5mm2 O/P wire dia: 0.5-1mm2 |
| IP Rating | IP20 |
| Protection Class | Class II |
| Installation | Built-in installation |
| dimension | See mechanical details |
| Net Weight | 55g |
| Warranty | 2 years warranty. |

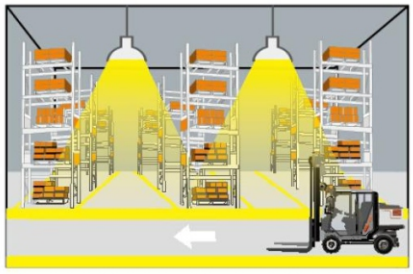
**Note**
Detection area is affected on volume of motion object and motion speed. The detection area is tested by a 165cm height person and walking speed is 0.3m/s.

## FUNCTION

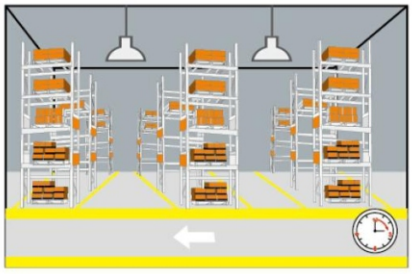
**1) On/OFF Function (stand-by period be set to "0"s)**



1 With sufficient ambient light, the light will not be switched on even if with motion signal.

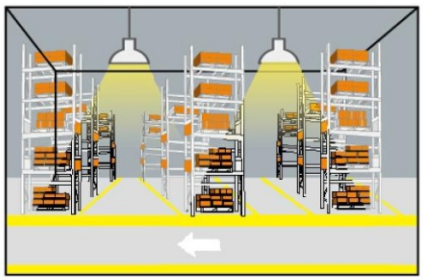


2 With insufficient ambient light, the sensor switches on the light when motion is detected.

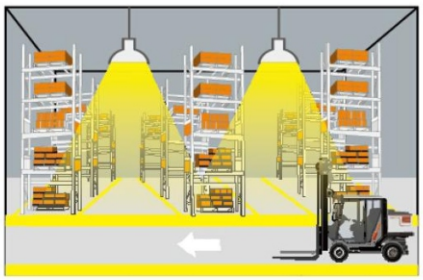


3 After elapse of hold time, the sensor switches off the light when no motion is detected.

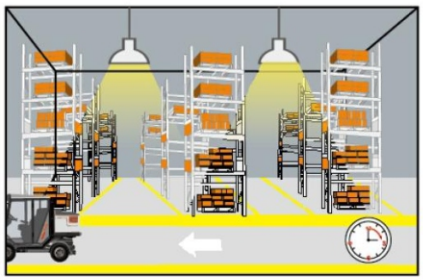
**2) step dimming function (stand-by period be set to "+∞)**



1 If there is no motion detected, the light will be remained at a low light level all the time.

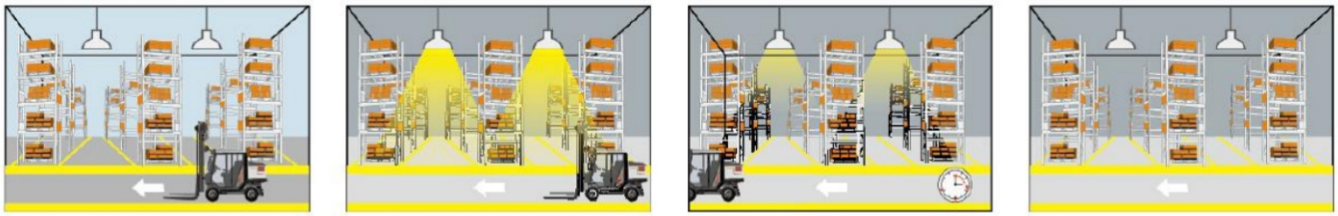


2 When motion is detected, the sensor will switch on the light to 100% brighteness



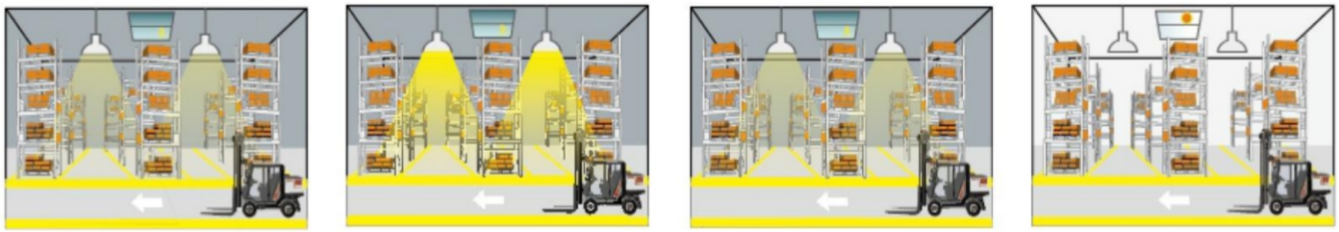
3 After elapse of hold time, the sensor dims the light at the present low light level if no motion is detected.

**3) 3-step dimming function (stand-by period "10S/1min/3min/5min/10min/30min")**



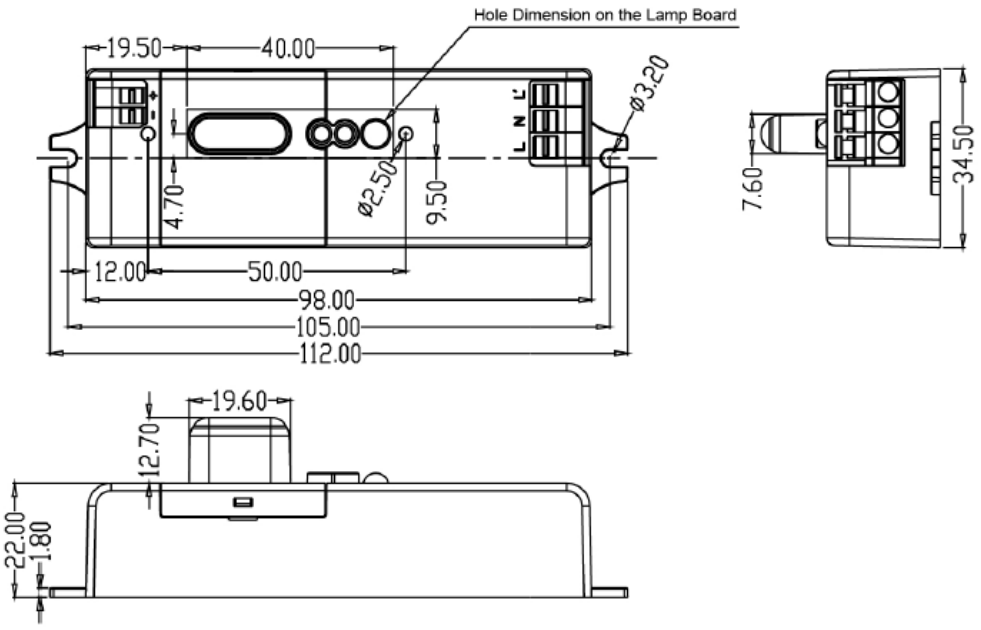
1. With insufficient ambient light, the light will not be switched on even if motion is detected.
2. With insufficient ambient light, the sensor switches on the light when motion is detected.
3. After elapse of hold time, the sensor dims the light at low light level if no motion is detected.
4. After elapse of standby period, the sensor switches off the light if no motion is detected.

**4) Daylight priority (daylight sensor be set to "5lux /15lux/ 30lux/ 50lux/ 100lux/ 150lux")**



1. Lamp turns on at low light level of 10% in the night.
2. Motion detected, lamp automatically lights up to 100% brightness.
3. After hold time, the lamp gradually dims to a low light level 10% if no movement detected.
4. Lamp turns off after Dawn.

## DIMENSION DRAWING



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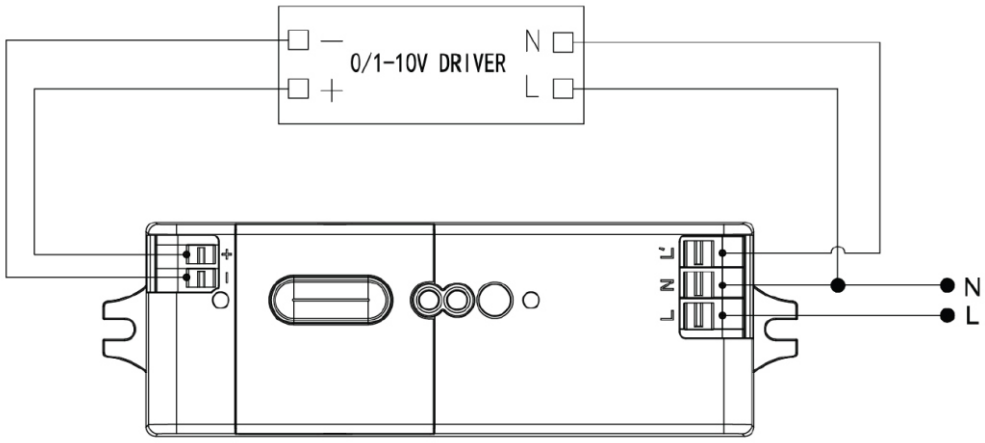
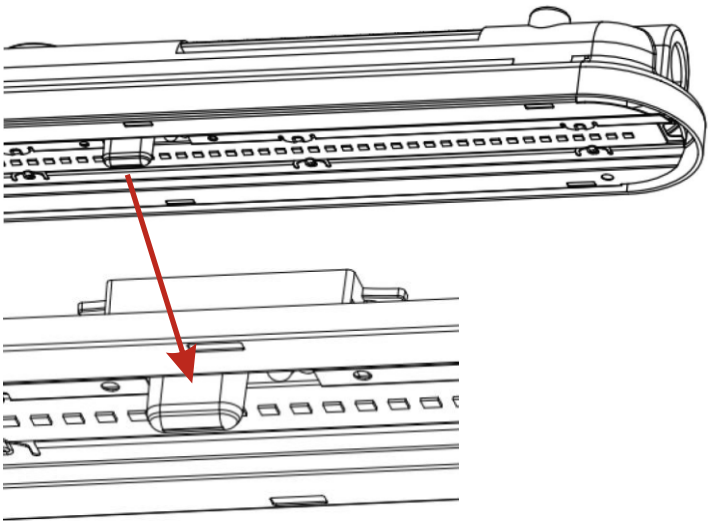
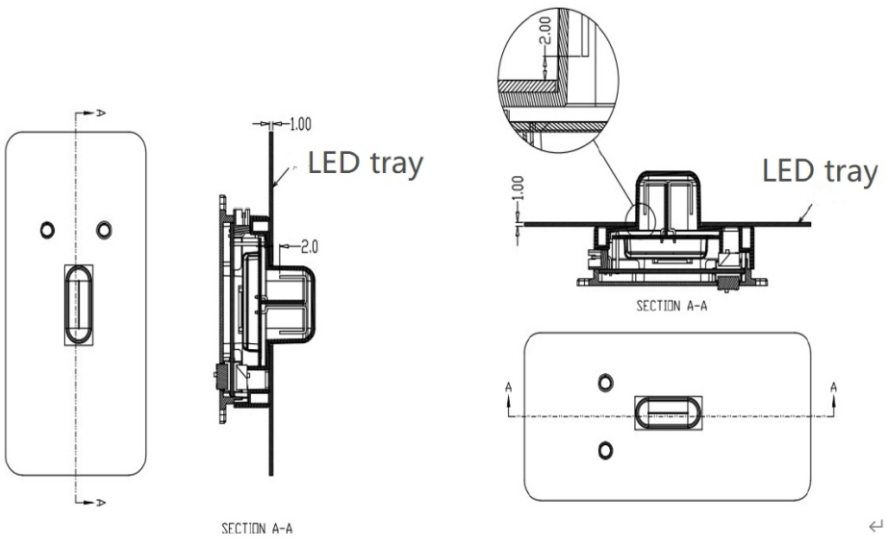
## WIRING




## INSTALLATION INSTRUCTION

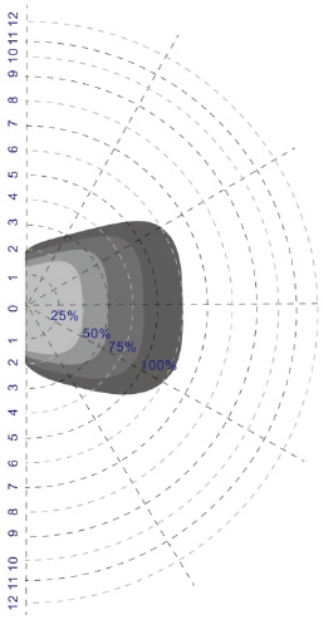





**Note: Sensor antenna should be above LED tray at least 2mm.**

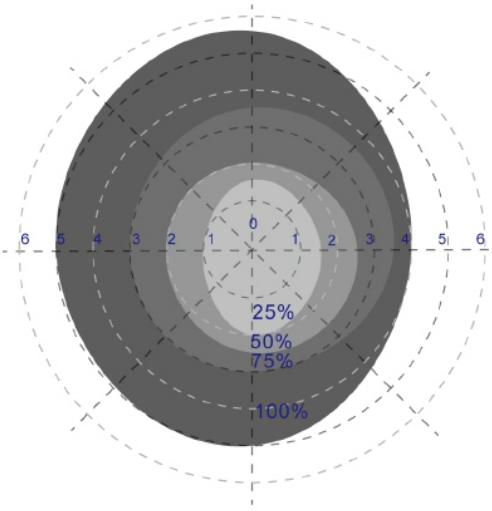
## RADIATION PATTERN

Wall Mounting height: 2m
Detection area:
100%/75%/50%25%



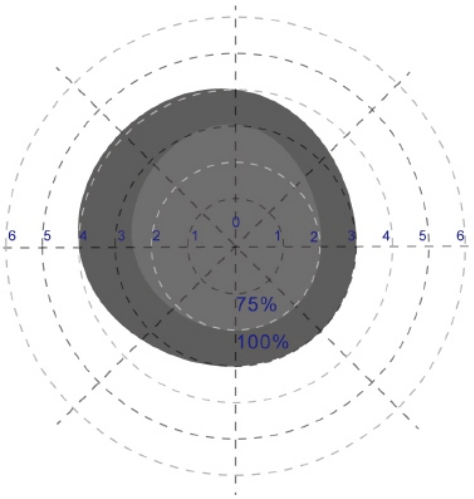

Moving speed: 1m/s

Ceiling Mounting height: 3m
Detection area:
100%/75%/50%25%

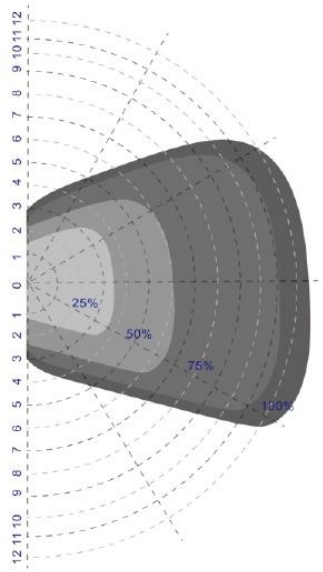



Moving speed: 1m/s

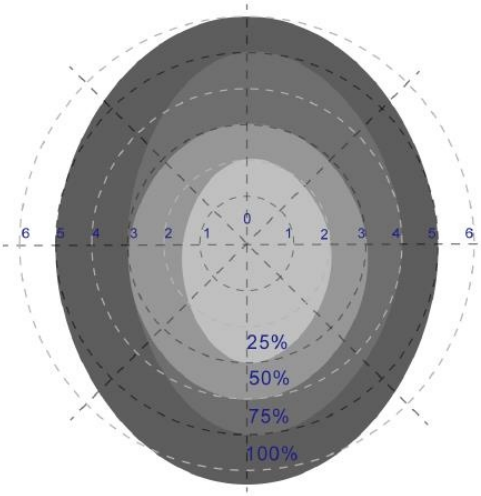
Mounting height: 6m(*)
Detection area: 100%/75%



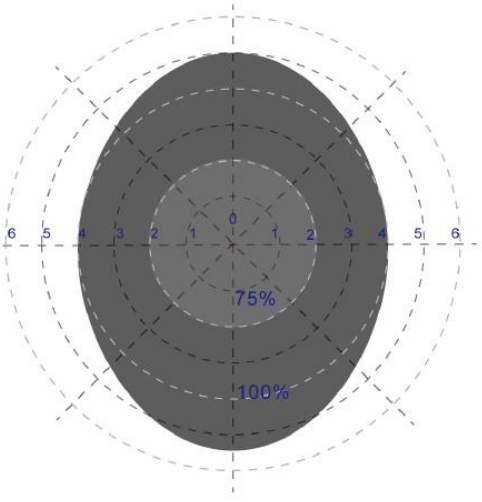

Moving speed: 1m/s




Moving speed: 0.3m/s




Moving speed: 0.3m/s




Moving speed: 0.3m/s

***When mount 6m in height, sensor can detect motion sensor @100%/75%**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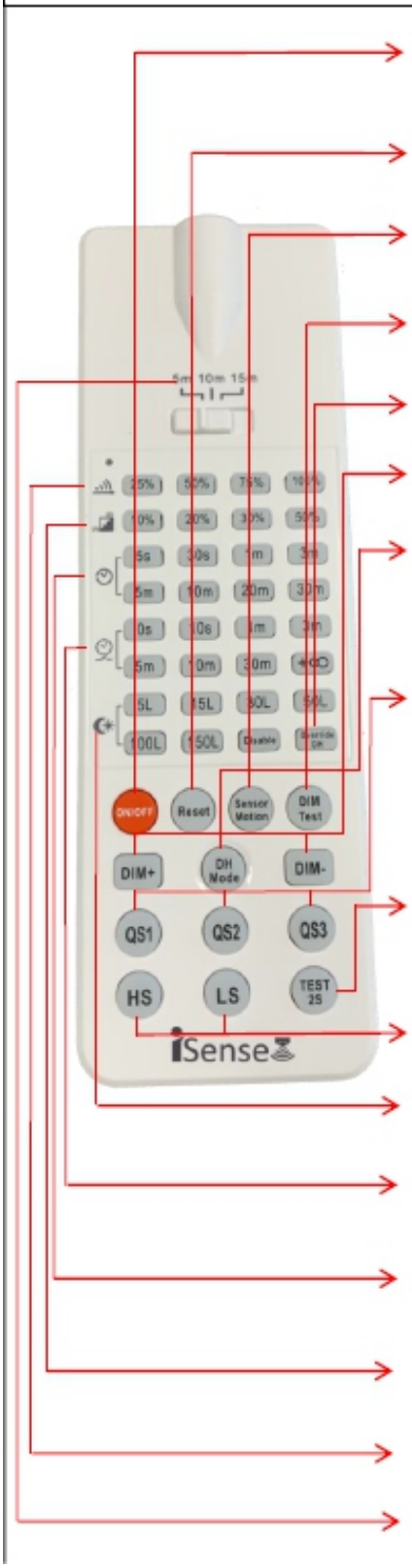
## REMOTE CONTROL

| Remote Control Setting | Buttons | Remarks |
|---|---|---|
|  | ON/OFF | Press the "ON/OFF" button, the light goes to constant on/off mode, sensor is disabled. Press any button to quit from this mode and the sensor starts to work. No memory for ON-OFF setting after power off. Sensor mode will auto resume after restart power supply. |
| | Reset | Press "Reset" button, all parameters are same as setting of DIP switch or factory settings. |
| | Sensor Motion | Press "Sensor motion" button, the light quits from the constant on/ off mode,and the sensor starts to work ( The latest setting stays in validity ) |
| | DIM Test | Press"DIM Test" button,the 1-10 V dimming works to test whether the 1-10Vdc dimming ports are connected properly.After 2s, it returns to the latest setting automatically. |
| | Over ride DH | NA |
| | DIM + DIM - | Set occupancy light level in a range of 50%-100%, dim level is 2% each time press Dim+/Dim- |
| | DH Mode | NA |
| | QS1 QS2 QS3 | Scene Options / Detection Area / Hold time / Stand-by period / Stand-by dim level / Daylight Sensor / Induction Model<br>QS1 / 100% / 5 min / 10 min / 10% / 30 Lux / HS<br>QS2 / 100% / 10 min / 30 min / 10% / Disable / HS<br>QS3 / 100% / 20 min / 30 min / 10% / Disable / HS<br>Note: Detection area / Hold time /Stand-by period /Stand-by dim level / Daylight sensor can be adjusted by pressing the corresponding button. The latest setting will stay valid. |
| | Test 2S | Press the "TEST 2S" bottom can enter the test mode anytime.At the mode, the sensor parameters as below:Detection Area is 100%, Hold Time is 2s, Stand-by Dim Level is 10%, Stand-by Period is Os, daylight sensor disable. This function only for testing. Quit the mode by pressing "RESET" or any other function buttons. |
| | HS LS | Press"HS" button to set the detection area to be high sensitive.<br>Press"LS" button to set the detection area to be low sensitive.<br>The adjustment bases on the "Detection Area" parameter you set. |
| | | Daylight Sensor<br>Set up daylight threshold:<br>5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/ Disable |
| | | Stand-by period<br>Set up stand-by time: 0S/10S/1 min/3min/5min/10min/30min/+ ∞ |
| | | Hold time<br>Set up hold time: 5S/30S/1 min/3min/5min/10min/20min/30min |
| | | Stand-by dim level<br>Set up stand-by dim level: 10%/20%/30%/50% |
| | | Detection Area<br>Set up detection area: 25%/50%/75%/100% |
| | | Remote Distance<br>Toggle bottom can set the remote distance of remote control and sensor. |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## FACTORY SETTING

Detection area: 100%, Hold Time: 5S, Stand-by Period: 0S, Stand-by dim level: 10%, Daylight Sensor: Disable

## APPLICATION NOTICE

1) The sensor should be installed by professional electricians. Please turn off power before installing, wiring, and setting parameters.
2) Microwaves cannot penetrate metal. Do not place product in a closed or a half-closed metal lamp. Neither metal nor glass is not allowed to cover the product. If antenna needs to pass through the metal flat, please ensure that the top of sensor is close to the metal flat.
3) The distance among sensors should be greater than 3 meters. Keep sensor at least 1.5 meters away from switches, routers and other wireless devices to avoid interference. The antenna surface of microwave sensor should be away from input AC and output DC to avoid low or high frequency signals affecting the normal operation of microwave sensor's antenna.
4) Vibration signals will be regarded as moving signals to trigger sensor. Installing sensor should be away from the object that vibrates for a long time, such as large metal equipment, pipes, air conditioning outlets, exhaust vents, smoke exhaust machine ports, shaking fans, etc. Pets in detecting area may trigger sensing.
5) Sensor is for indoor use only. When installed outdoor or half-outdoor, the waterproof effect will be affected. Wind, rain, and moving objects may cause false triggering. When the sensor is installed in a metal lamp, on a metal reflective surface, or in a narrow-enclosed device, microwave will be reflected repeatedly and cause false triggering. Please reduce the sensitivity of sensor or contact manufacturer for technical support.
6) This product is suitable for ceiling mounting. If wall mounting, the detecting area will enlarge which makes microwave penetrate wall or light not turn off. Please change sensitivity to 25%. If 25% is useless, please avoid wall mounting or contact the manufacturer for technical support.
7) Due to continuous improvement, the contents of this instruction will be changed without prior notice.
8) The effect of low brightness will be different when connecting to different 1-10V drivers. The daylight thresholds are measured on a sunny day without shadow and in an ambient light diffuse reflection status. Different environment and climate cause different brightness values that daylight sensor measures.
9) Sensitivity area is related to moving speed of objects, size of moving objects, mounting height, mounting angle, installation environment, reflecting materials and others.
10) Given detecting area is typical value that is measured by 165cm high testers in an indoor open environment.
11) When installing in new environment, please install and test at least 5pcs product firstly before mass installation.
12) This product is only suitable for surface mounting


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