

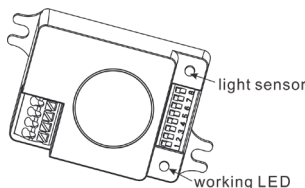
# Microwave Sensor



## Sensor intelligent technology

### Welcome to use ES-M09B Microwave Sensor!

The product is a new saving-energy switch; it adopts microwave sensor mould with high-frequency electro-magnetic wave (5.8GHz), integrated circuit. It gathers automatism, convenience, safety, saving-energy and practicality functions. The wide detection field is consisting of detectors. It works by



receiving human motion. When one enters the detection field, it can start the load at once and identify automatically day and night. Its installation is very convenient and its using is very wide. Detection is possible through doors, panes of glass or thin walls.

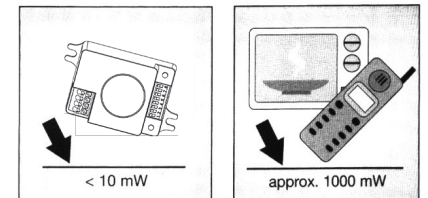
### **SPECIFICATION:**

Power Sourcing: 220V/AC-240V/AC	Detection Range: 360° Ceiling / 180° Wall
Power Frequency: 50/60Hz	Detection Distance: 2-10m (radius) adjustable
Ambient Light: 5LUX/30LUX/100LUX/300LUX/DAY 24H(Adjustable)	
HF System: 5.8GHz CW radar, ISM band	
Time-Delay: 10sec/60sec/5min/12min/30mi (adjustable)	
Transmission Power: <10mW	Installing Height: 1.5m~3.5m
Rated Load: 1200W (incandescent lamp)	Power Consumption: 0.9W
300W (energy-saving lamp)	Detection Motion Speed: 0.6~1.5m/s

### **FUNCTION:**

- Can identify day and night: It can work in the daytime and at night when it is adjusted on the "DAY 24H" position(max). It can work in the ambient light less than 5LUX when it is adjusted on the "5LUX" position (min). As for the adjustment pattern, please refer to the testing pattern.
- SENS adjustable: It can be adjusted according to using location; low sensitivity with only 2m (radius) for detection distance; High sensitivity could up to 10m (radius), it fits for large room.
- Time-Delay is added continually: When it receives the second induction signals after the first induction, it will compute time once more on the basic of the first time-delay rest.
- Time-Delay is adjustable. It can be set according to the consumer's desire. The minimum time is 10sec±3sec. The maximum is 30min±1min.

**NOTE:** the high-frequency output of this sensor is <10mW- that is just one 100<sup>th</sup> of the transmission power of a mobile phone or the output of a microwave oven.



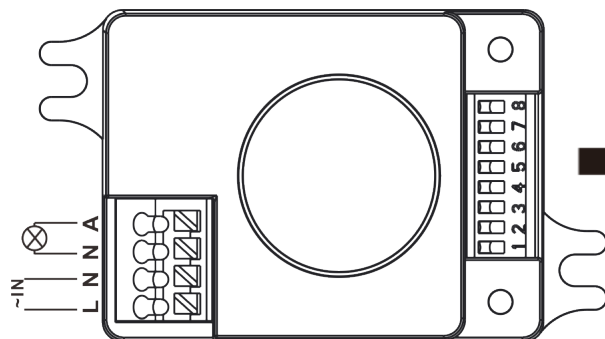
### **INSTALLATION:** (see the diagram)

- Switch off the power.
- Fix the bottom on the selected position with the inflated screw through the screw holes at the side of the sensor.
- Connecting the power and the load to sensor as per the connection-wire sketch diagram.

- Switch on the power and test it.

### Connection illumination

Connect N, L with power;  
Connect N, A with load.



### TEST:

- Turn the LUX knob on the maximum to “DAY24H”. Turn the TIME knob on the minimum to “10sec”, Turn the SENS knob on the maximum to “10M”.
- When you switch on the power, the light will be on at once, and 5-30 seconds later will be off automatically. Then if the light receives induction signal, it can work normally.
- After 5-10sec of the first detection, the light could work again. If there is no induction signal, the load should be stopped working within 5-15sec.

**Note: when testing in daylight, please turn LUX knob to (DAY24H) position, otherwise the sensor lamp could not work!**

### NOTES:

- Electrician or experienced human can install it.
- The unrest objects can't be regarded as the installation basis-face.
- In front of the detection window there shouldn't be hinder or unrest objects affecting detection.
- Avoid installing it near air temperature alteration zones for example: air condition, central heating, etc.
- For your safety. Please don't open the case if you find hitch after installation.

- In order to avoid the unexpected damage of product, please add a safe device of 6A when installing Microwave sensor, for example, fuse, safe tube etc.

### SOME PROBLEM AND SOLVED WAY

- The load don't work:
  - Check the power and the load.
  - Whether the indicator light is turned on after sensing? If yes, please check load.
  - If the indicator light does not turn on after sensing, please check if the working light corresponds to the ambient light.
  - Please check if the working voltage corresponds to the power source.
- The sensitivity is poor:
  - Please check if in front of the detection window there is hinder that has effect on receiving the signals.
  - Please check the ambient temperature.
  - Please check if the signals source is in the detection fields.
  - Please check the installation height.
- The sensor can't shut automatically the load:
  - If there are continual signals in the detection fields.
  - If the time delay is set to the longest.
  - If the power corresponds to the instruction.
  - If the air temperature changes near the sensor, air condition or central heating etc.

SENS		DELAY TIME			DAYLIGHT LUX		
1	2	3	4	5	6	7	8
2 M		10Sec			5Lux		
5 M		60Sec			30Lux		
8 M		5Min			100Lux		
10M		12Min			300Lux		
DIP.Switch		30Min			Day24H		