

SPECIFICATION

Product name: Microwave motion sensor module

Model No. : MW-0238D

Date: 2021-05-17

Customer Signature and Seal

Approval	Sales dept Check	Engineer dept Check	Prepare

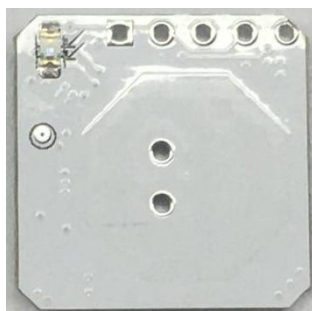
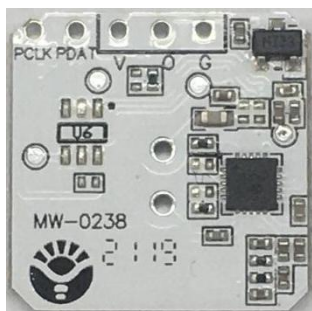
File Name	Induction product specifications		Version	A0
Product	Microwave motion sensor module	Model No. :	MW-0238D	

Ver.	Model No. :	Revise Description	Stage	Date
A0	MW-0238D	First version	MP	2021-05-17

A. Product Features :

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Product picture:



Function introduction:

1. This product uses Doppler technology to detect moving objects, and then automatically turns on or off the lights according to the user's settings to achieve the purpose of intelligence and energy saving.
2. Embedded multiple digital filter algorithm, higher stability and stronger anti-interference, stable output high and low level to control signal.
3. Small size and easy to install.
4. Can penetrate acrylic, glass and thin non-metallic materials.
5. It is not affected by the environment such as temperature, humidity, air flow, dust, noise, brightness and darkness, and has strong anti-interference ability.

B. Product parameters :

Frequency	5.8GHz \pm 75M
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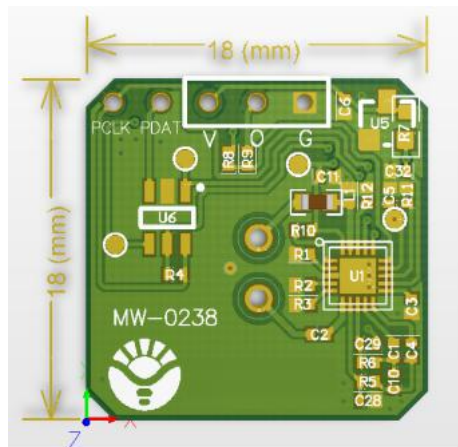
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Input voltage	5-15V DC
Output	0/3.3V
Working Current	10-12mA
Transmitting power	<1mW
Detection angle	360° (Ceiling installation)/120° (Wall installation)
Mounting height	2-4m
Delay time	15S/30S/60S (Three time options)
Detection range	8-10M in Diameter (Mounting height: 3m)
Photosensitive element	Ordinary light
LUX Value	Less than 5 Lux
Operating Temperature	-25℃ ~+75℃
Storage Temperature	-30℃ ~+80℃
IP Class	IP20
Service life	No less than 5 Years
Safety certification	Meet CE/TUV/UL/FCC standard
Product size	18mm*18mm(±0.5mm)

C. Product size drawing and functional pin description

1.Product size

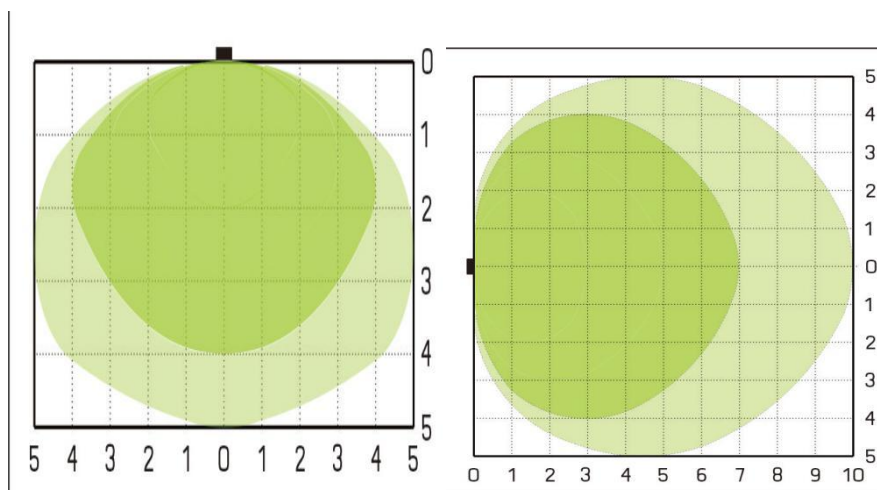
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2. Pin description

- 1 V Power supply pin, input 5-15V
- 2 G Common pin, grounded, the negative pole of the power supply.
- 3 O Output pin, output 0/3.3V high and low level

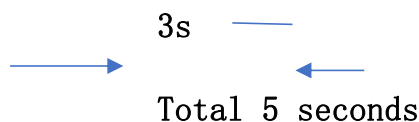
D. Schematic diagram of detection range



E. Boot sequence



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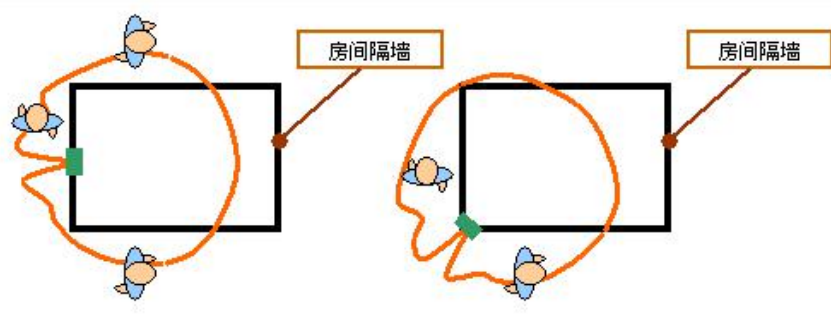


Turn on and output high level for 3 seconds, low level for 2 seconds, and then enter the induction condition. If there is induction, it will be high level, and if not, it will be low level for waiting.

E. Product Usage Notes: :

- 1、Microwave signal cannot penetrate metal objects. So the products cannot be installed in enclosed metal lamps.
- 2、Microwave power supply requires power ripple to be less than 100mv.
- 3、Microwave induction responds to all moving objects, so the test environment should be far away from fans, moving machinery and equipment, flowing water pipes, and so on.
- 4、Microwaves will react differently to objects of different materials, sizes, and moving speeds. The greater the density of object at a same size is, the more sensitive is.
- 5、The antenna surface should be higher than the metal surface, not lower than or flush with the metal.
- 6、Microwave is penetrative, so it cannot be tested in a small room. As shown below:

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- 8、The microwave antenna is directional, and the sensing effect in front of the antenna is the best.
- 9、It is not recommended for outdoor use. It will cause false triggering when it rains. 。
- 10、The installation position cannot have vibration. Make sure that there are no vibrating equipment such as fans, motor ducts, etc. around.
- 11、Two microwave products should be installed more than 0.5m apart, because there is a certain probability that co-frequency interference will occur. So if you test multiple devices in the same room at the same time, they may interfere with each other.
- 11、There is a big tolerance of the lux value for the different standard of light source and different environments.
- 12、Although microwave can penetrate plastic, glass and other materials, it will cause a certain attenuation, which is related to the density of the material.
- 13、It is recommended that a small trial production be carried out before a large number of installations.
- 14、Used in a small enclosed space, where microwaves are reflected multiple times, which may cause false triggering, it is recommended to reduce the sensitivity.
- 15、Microwave is affected by environmental reflection, and the sensing distance and angle are different in different places for testing.