

SPECIFICATION FOR APPROVAL

Part name: Microwave sensor moduleModel no.: MW-0172Date: 2020-9-19

Signed by customer

Made by	Signed by R&D dept.	Signed by Sales dept.	Approved by

Huizhou Yuansheng Technology Co.,LtdAddress: Zhongkai High-tech Zones on 16th. HuiFengEast No. 2 road, Building B Room 516,518,
Huizhou city, Guangdong Province, ChinaTel.: +86-752-3133399 Fax: +86-752-3228395 Website: www.cnmicrowavesensor.comTo be the most professional digital switches manufacturer that provides best service!

Revision	Model No.	Modifications	Processing stage	Date
A0	MW-0172	/	MP	2019/09/19

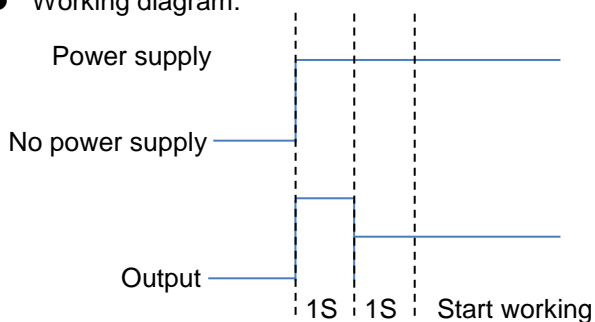
Part picture



Part description

- That Doppler technology helps to catch tiny actions and the lights can turn on or off lights automatically based on your setting. It can be hidden in the lights made from various non-metal materials without damaging the exterior of the lights. This advantage helps to upgrade the traditional light into digital light to achieve the purpose of operation convenience and energy saving.

- Working diagram:



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Electrical parameters

Frequency	5850MHz~5875MHz
Rated Voltage	Input:7-12V~, <50mA Output:5V~, >2mA
Output	PWM
Driving current	40mA
Radiated power	<1mW
Detection range	Frontal 4M±1M
Operating temperature	-25℃~+75℃
Storage temperature	-30℃~+80℃
Environmental protection	IP20
Life time	Minx. 5 years
Criteria	CE/TUV/ETL/FCC
Dimension	20MM*20MM*5MM(±0.5MM)

Wiring:



Ground

PWM

Power supply 5V DC±5%

Pin description

G for Ground

O for PWM

V for Power supply

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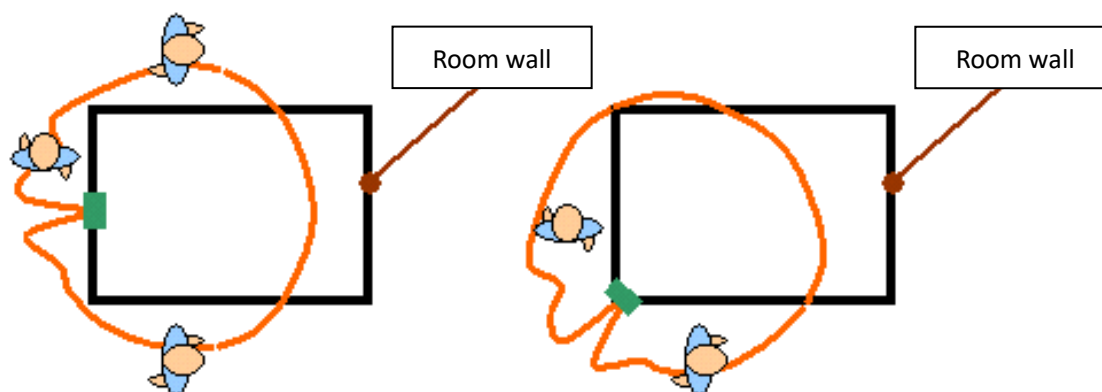
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Product Usage Notes:

1. It is not recommended for outdoor use. It will cause false triggering when it rains.
2. The detection range and angle will be affected by the surrounding environment. Please make the sensor away from working instruments, fans, moving gutter, etc.
3. The greater the density of object at a same size is, the more sensitive is.
4. Induction of objects moving at a uniform speed will deteriorate. Walk and stop is suggested. The most sensitivity is based on the movement with a speed of 0.3-1m/second.
5. The detection performance at front is better than either side of sensor.
6. The installation position cannot have vibration.
7. Requires the power supply ripple is less than 100mV.
8. There is a big tolerance of the lux value for the different standard of light source. The ambient light needs to be under the setting value, and the daylight function can be tested.
9. To avoid the possible interference and ensure the effect of testing, please keep two or more microwave sensors with a distance of over 1m.
10. Microwave can have penetration effect, but cannot penetrate reinforced concrete walls and metal objects. Please make sure the room for testing is sufficient for the detection range.
11. Microwave sensor module for lamps, cameras, billboards, smart mirrors, smart toilets, smart home products.

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FCC Warning

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

As long as the three conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Important Note:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

The final end product must be labeled in a visible area with the following" Contains FCC ID: 2AXVDMW-0172"

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

2.2 List of applicable FCC rules

CFR 47 FCC PART 15 SUBPART C has been investigated. It is applicable to the modular transmitter

2.3 Specific operational use conditions

This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system.

2.4 Limited module procedures

This module is Limited single modular without shielding, host manufacturer have to consult with module manufacturer for the module limiting conditions when integrate the module in the host. module manufacturer should reviews detailed test data or host designs prior to giving the host manufacturer approval.

2.5 Trace antenna designs

Not applicable

2.6 RF exposure considerations

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

2.7 Antennas

The Microwave sensor module is not designed for multiple antenna applications and should not be used to transmit simultaneously with any other transmitter.

The Microwave sensor module is only certified to use the integrated PCB antenna. Antenna Description: PCB Antenna antenna, Max Gain: 2.1dBi.

2.8 Label and compliance information

The final end product must be labeled in a visible area with the following" Contains FCC ID: 2AXVDMW-0172".

2.9 Information on test modes and additional testing requirements

Host manufacturer which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C:15.249 and 15.209 requirement, only if the test result comply with FCC part 15.249 and 15.209 requirement, then the host can be sold legally.

2.10 Additional testing, Part 15 Subpart B disclaimer

Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B.

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