



Energy Power Save CO.,LTD

Thailand Distributor Sales & Service

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# **R24-D Microwave Sensor Operating Instructions**



## 1.Features

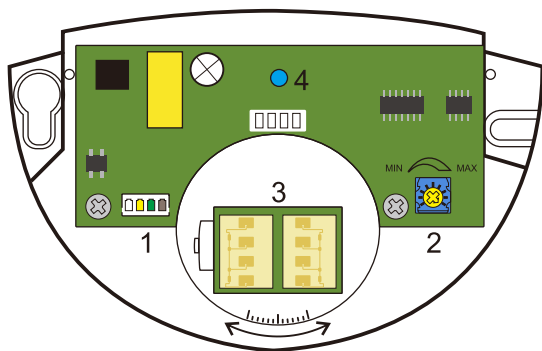
This product is a direction-detecting microwave sensor developed based on 24G integrated chips, which can detect approaching signals and ignore away-away signals to shield unnecessary door opening actions. It can also be switched to bi-directional detection mode. Compared with the microwave sensor of the module antenna on the market, it has extremely obvious advantages as follows:

- ▶ Object moving direction recognition: it can accurately judge whether a person or object is approaching or moving away.
- ▶ Uper shock resistance: the algorithm can eliminate the reciprocating vibration in a certain range.
- ▶ Excellent product consistency: MMIC monolithic microwave integrated integrated antenna ensures that the receiving sensitivity of each product is extremely close.

## 2.Packing list

Name	Remark	Quantity	Remark
R24-D		1	
User manual		1	
Data cable		1	
Screws	Φ 3.5mmx20mm	3	Used for fixing
Wall plugs		3	Used for fixing

## 3.Internal Structure



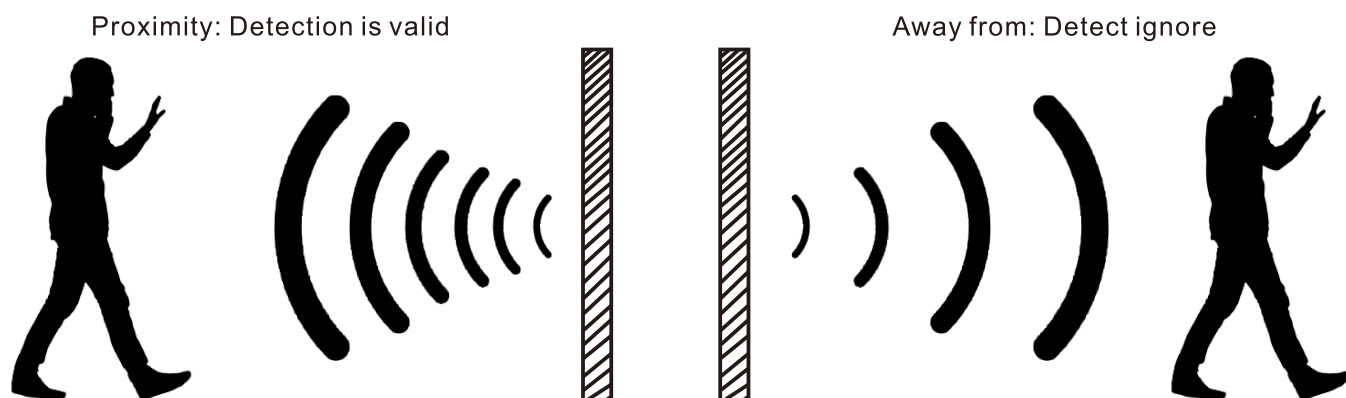
1.Four-core plug-in connector  
(White and Yellow:12V-30VAC/DC , Green:NO,  
Brown:COM)

2.Sensitivity adjustment knob

3.MMIC Integrated Planar Antenna

4.Show status

## 4.Working Principle



## 5. Technical Parameters

Realization of technology	Microwave and Microwave Processors
Transmitting frequency	24.125GHz
Maximum installation height	Below 4.5m
Detection mode	Unidirectional movement
Minimum detection speed	5cm/s(Along the sensor vertical axis)
Range of tests	3.2m (Wide) , 45° (Angle)
Hold time	0.5 s
Wire length	2.2m
Temperature range	-20℃ ~ +55℃
Relay output (No initial potential)	COM , NO
Housing material	ABS plastic
Power supply voltage	12-30VAC/DC ± 10% (50~60Hz)
Dimensions	120mm (Width) X80mm (Height) X52mm (Height)
Mounting inclination	0~90°(Vertical),-30°~30°(Horizontal)

## 6. Installation Wiring

(1) Install the bottom plate.

Stick the installation template to the appropriate installation position, fix the rubber plug and open the cable hole according to the hole position of the template, uncover the outer cover and fix the bottom plate with two matching self-tapping screws.

(2) Insert the signal end into the readhead, and connect the other end to the power supply and control terminals of the automatic door.

1-2 (White and Yellow): Power input 12V-30VAC/DC

3-4 (Green and Brown): NO , COM

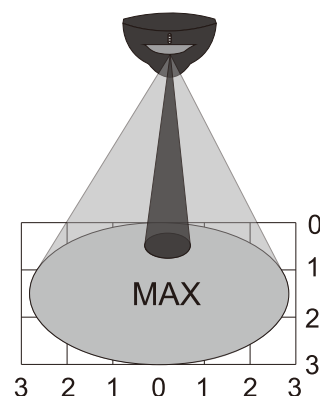
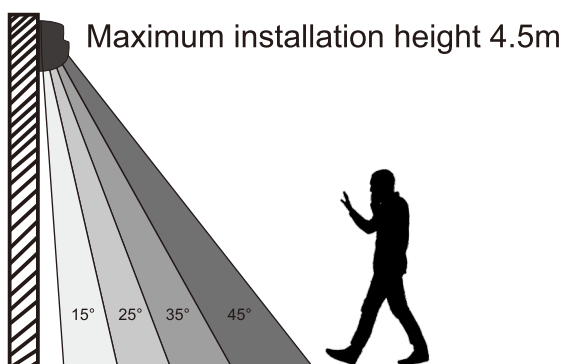
(3) Power on the sensor, adjust the angle of the panel antenna according to the actual needs of the scene, and adjust the sensitivity to the best effect .

(4) Close the outer cover and verify the debugging results.

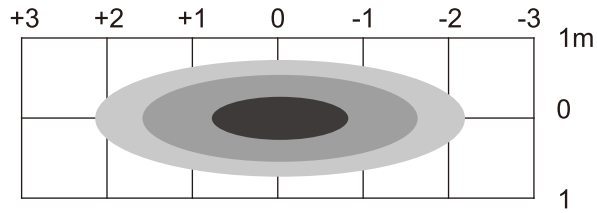
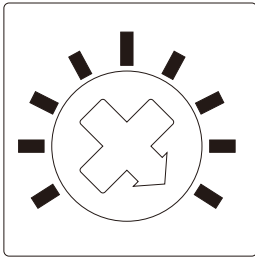
## 7. Detection Orientation And Sensitive Adjustment

(1) Detection azimuth adjustment (panel antenna can be adjusted forward, backward, left and right).

Adjust the plane antenna angle to get different detection distances and different detection areas as shown in the figure below.



## (2)Adjust the sensitivity



MAX: Weaker microwave reflection signal and shorter detection time

MIN: Stronger microwave reflection signal and longer detection time

## 8.Installation Precautions



Prevent rain and snow from directly falling on the surface of the sensor



Shaking or moving objects cannot be placed in the detection area



The sensor should be installed firmly to avoid shaking



There should be no obstructions and fluorescent sources in the detection area



Do not touch the antenna and electronic components directly with your hands

## 9.Troubleshooting

Fault phenomenon	Possible Causes	Method of exclusion
Unable to move	If the input voltage does not meet the requirements	Replace the power supply
	Poor contact or wrong wiring	Check the wires and terminals
Abnormal movement	The sensor housing is covered with dirt	Clean the surface
	Detect sudden changes in the environment in the area	Check the installation and on-site environment
Unprovoked action (repetition)	There is a moving object in the detection area	Remove the object
	There are water droplets on the mask	Stay away from water droplets
	The installation surface shakes a lot	Re-fix the installation surface
	The detection area overlaps with the door	Adjust the angle of the sensor to keep it away from the door