

## Microwave Sensor RF Dimmer

Model No.: ER2

Motion detector/RF Switch with Dimming/RF 2.4G remote/Wireless remote 30m distance



CE RoHS LVD RED

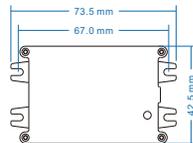
### Features

- Active microwave motion detectors with HF system 10.525GHz, motion can be detected through plastic, glass and thin non-metal materials.
- Built-in motion sensor and daylight sensor.
- Powered by low voltage 12VDC, output RF 2.4G signal.
- Matched with RF LED controller or RF dimmable LED driver use.
- Detection area, time delay and expected brightness level can be set via knob potentiometer.
- Wide detection area, range up to 20m in diameter.
- Support higher mounting height 1.5m Max.

### Technical Parameters

Working voltage	9-24VDC
Output signal	RF 2.4GHz
HF system	10.525GHz
Power consumption	< 0.5W(Standby) , < 1W(Operation)
Detection zone	Max.(DxH) 20 x 15m
Detection sensitivity	10%/25%/50%/75%/100%
Hold time	10s/30s/90s/3min/10min/20min/30min
Daylight sensor	50lux/100lux/150lux/200lux/250lux/300lux/400lux
Mounting height	1.5m Max.
Motion detection	0.53m/s
Detection angle	150° (wall installation), 360° (ceiling installation)
Operation temperature	Ta:-30°C ~ +55°C
IP rating	IP20
Warranty	5 years

### Dimension



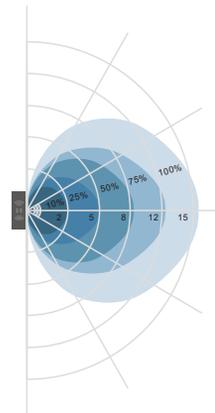
### Functions

This sensor is a motion RF switch with dimming function, which turns on the light and dim up to expected brightness level upon detection of motion, and turns off after a pre-selected hold time when there is no movement.

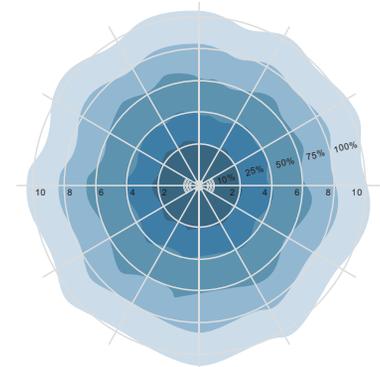


1. The sensor turns on the light and dim up to expected brightness level when motion is detected.
2. After hold time, the light turns off if no motion detected.

### Detection Pattern



Wall mounting pattern(Unit:m)  
Suggested installation height: 1-1.8m



Ceiling mounting pattern(Unit:m)  
Suggested installation height: 2.5-15m

## Sensor Setting

By selecting the combination on knob potentiometer, sensor data can be precisely set for each specific application.



### Detection area:

Detection area can be reduced by rotate knob to fit precisely each application.



### Hold time:

Refers to the time period remains light on state after no motion detected.



### Daylight sensor:

The sensor can be set to allow the lamp to illuminate to expected brightness level.

If the detected brightness is less than the expected brightness, the output will dim up to full brightness[100%].  
If the detected brightness is larger than the expected brightness, the output will dim down to min brightness[1%].

Note that daylight sensor is active only when lamp switches on, and the ambient lux level refers to internal light reaching the sensor.

### Setting on this demonstration:

Detection area: 50%    Hold time: 90S    Daylight sensor: 150lux

## User recommended settings

Scenarios	Settings	Detection distance	Hold time
Passage, staircase		4-6m	10s
Balcony, corridor		4-6m	10s
Cloakroom, storeroom		2-3m	90s
Garage		2-3m	90s
Kitchen		3-4m	90s
Dinning room		3-4m	3min
Toilet		2-3m	3min
Meeting room		2-3m	10min
Indoor public access		4-6m	10min
Underground public access		4-6m	10min

## Match Remote Control (two match ways)

The microwave motion sensor RF dimming switch must be matched with one or multiple RF LED controller or LED driver, including single color, dual color, RGB, RGBW, RGB+CCT or switch light type, turn on or turn off light by motion detection. End user can choose the suitable match/delete ways. Two options are offered for selection:

### Use the controller's Match key

#### Match:

Short press match key on the controller firstly, immediately press match key on the sensor. The LED indicator on th controller fast flash a few times means match is successful.

#### Delete:

Press and hold match key on the controller for 5s to delete all match, The LED indicator fast flash a few times means match were deleted.

### Use Power Restart

#### Match:

Switch off the power of the RF controller or LED driver, then switch on power again, immediately short press the match key on the sensor. The light blinks 3 times means match is successful.

#### Delete:

Switch off the power of the RF controller or LED driver, then switch on power again, immediately long press the match key on the sensor 2s. The light blinks 5 times means match is deleted.

## Application notice

1. The sensor is designed for indoor use only.

The raining or wind blowing may trigger the microwave sensor even if without human motion when outdoor use.

2. The sensor should be installed by a professional electrician, please turn off the power before installing, wiring and changing setting of the knob.

3. The distance between any two sensors should be at least 3m to avoid interference each other.

4. When the microwave sensor is installed in a metal lighting fixture or space with large reflector, for example a warehouse with metal roof, the microwave signal will be reflected and cause the lights permanent illuminated even if without motion signal. Please reduce the detection area to solve the problems.

5. Make sure the sensor not close to or be blocked by high density materials, such as metal, glass, concrete walls etc. The materials will reduce or block microwave signal and cause false trigger.

6. The sensor which installed in the plastic and glass lampshade will reduce th sensitivity.

For every 3mm increase in thickness, the sensitivity will reduced by 20%.

7. The light sensitivity threshold is in a sunny environment, no shadow and ambient light diffuse reflection.

Ambient lux level could be different in different environment, weather, climate, time-of-delay and season.

8. Make sure there are no fans, DC motor, or other vibrating objects in installation area. The movement will trigger sensor as well.