# HUMMER

Microwave Sensor

Sensor intelligent technology

MODE NO:HU-SR2458

Welcome to use ES-M12 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.
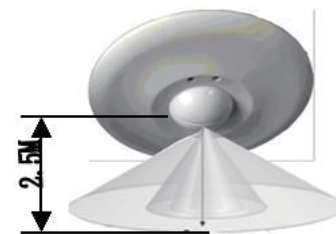
SPECIFICATION:

|	
Power Sourcing: 220V/AC-240V/AC	Detection Range: 360°
Power Frequency: 50Hz	Detection Distance: 2-10m (radius) adjustable
Ambient Light: 10-500LUX (Adjustable)	HF System: 5.8GHz CW radar, ISM band
Time-Delay: min.:10sec±3sec	Transmission Power: <10mW
Max.:30min±5min	Installing Height: 1.5m~3.5m
Rated Load: 3000W (incandescent lamp)	Power Consumption: 0.9W
800W (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 "sun" position (max). It can work in the ambient light less than 10LUX when it is adjusted on the "moon" 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 1m (radius) for detection distance; High sensitivity could up to 8m (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±5min.
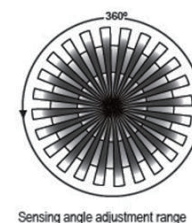
Sensing angle adjustment range

< 10 mW

approx. 1000 mW
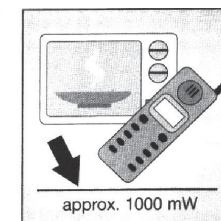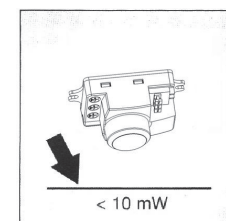
NOTE: the high-frequency output of this sensor is <10Mw- that is just one 100th of the transmission power of a mobile phone or the output of a microwave oven.

INSTALLATIION:

- Unclip the upper cover.
- Adjust the sensitivity ,time,daylight on DIP board.
- Connect the main power cable and load wires to the terminal block (see the relative symbols).
- Refit the cover in terminal block.After finishing the installation you can adjust the detection area and working state of microwave sensor.

WIRE CONNECTION DIAGRAM

- Connect N, L with power;
- Connect N, L' with load.
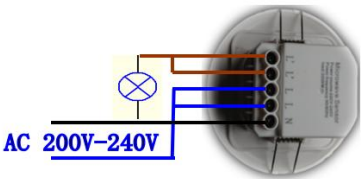
Specifications Adjustment

- See figure. S1, S2 for sensitivity, S3, S4, S5 for time S6, S7, S8 for the lux.

Distance setting (sensitivity)

switch to the on is "1", switch to the off is "0";The corresponding file of switch location and detection distance as follow:

**NOTE: The sensor is designed for optimum performance when mounted 1.8-2.5 meters above ground level.**
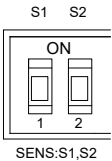
S1	S2	distance	S1	S2	distance
0	0	2m	1	0	8m
0	1	5m	1	1	10m

Time setting

Time can be set 10s to 30min.Any movement detected before this time elapse will re-start the timer. It is recommended to test on the shortest time for adjusting the detection zone.

Switch to the on is "1", switch to the off is "0"; the corresponding file of switch location and detection distance as follow:
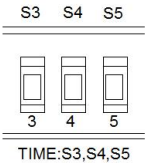
S3	S4	S5	time	S3	S4	S5	time
0	0	0	10S	1	0	0	15min
0	0	1	1min	1	0	1	20min
0	1	0	5min	1	1	0	25min
0	1	1	10min	1	1	1	30min

NOTE: after the light switches OFF, it takes approx. 1sec before it is able to start detecting movement again. The light will only switch on in response to movement once this period has elapsed.

LUX setting

The point at which the detector can be activated so that it can detect can be adjust between 10lux to whole day.
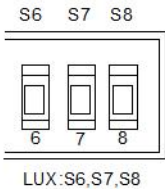
S6	S7	S8	LUX	S6	S7	S8	LUX
0	0	0	24H	1	0	0	100 LUX
0	0	1	10 LUX	1	0	1	200 LUX
0	1	0	20 LUX	1	1	0	300 LUX
0	1	1	50 LUX	1	1	1	500 LUX

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

MADE IN CHINA