

# Specification

**Product Name:** AC Controller

**Product Model:** MC095S

Versions	Release/ Change Date	Reason	Publishing
V1.0	2023.02.14		James Guo

## 【Product Feature】

- Low impedance planar antenna
- Ultra-slim design for Tri-proof LED light, no shading
- Ultra-low RF power output, harmless to human health
- Support set sensor parameters by dip switch
- Low stand-by power consumption  $\leq 0.15W$
- Not affected by temperature, humidity, noise, airflow, dust, light etc.

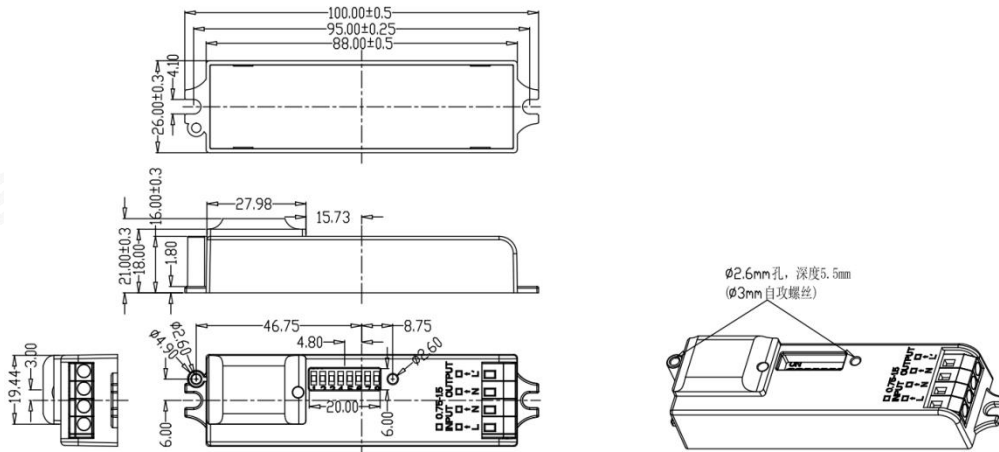


## 【Function】

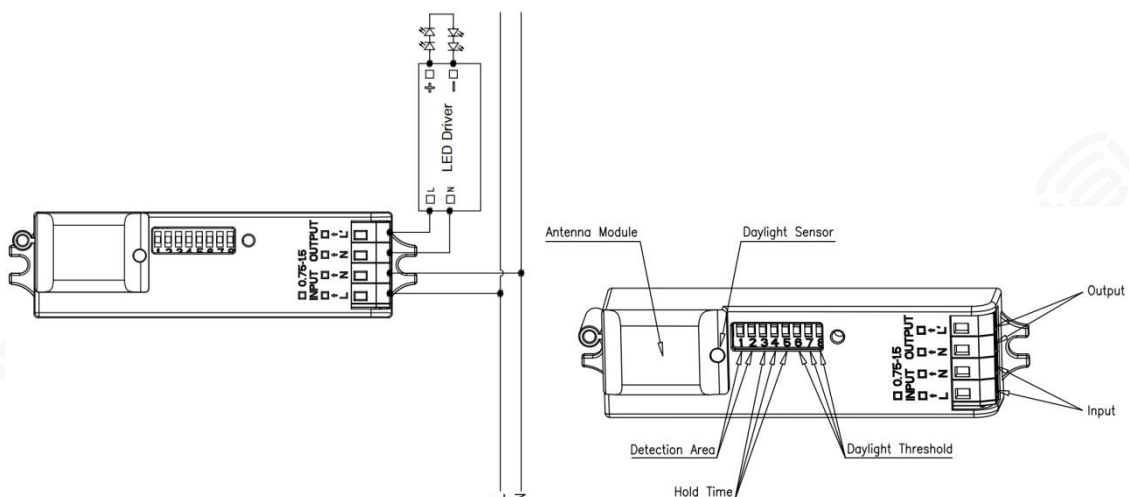
- |   |   |
|---|---|
| <input checked="" type="radio"/> ON/OFF function  | <input checked="" type="radio"/> Override function (switch 5 times) |
| <input type="radio"/> Two-step dimming function   | <input type="radio"/> Daylight priority                             |
| <input type="radio"/> Three-step dimming function | <input type="radio"/> Daylight harvesting                           |

## 【Product Information】

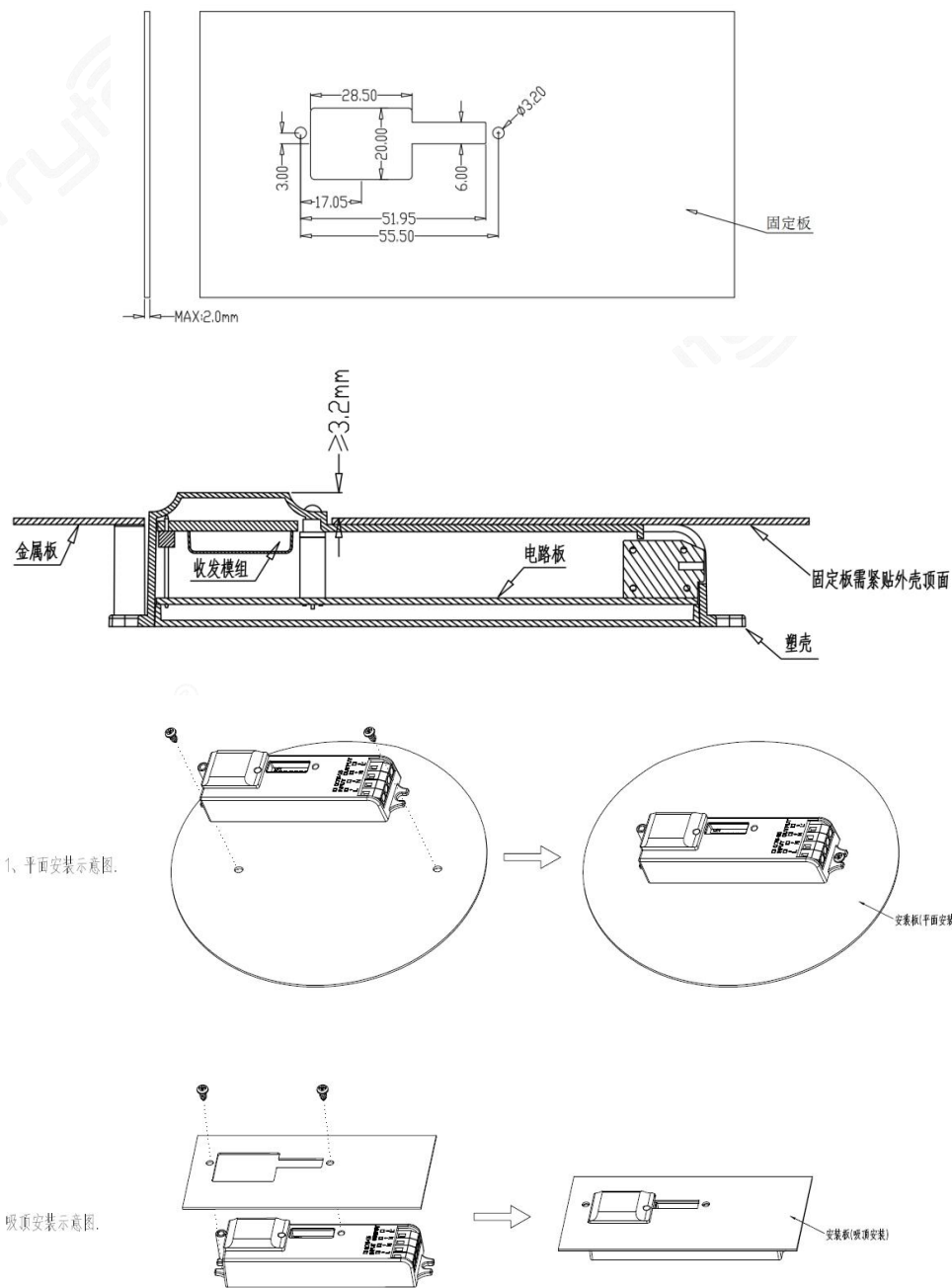
- Dimension (Unit: mm)



- Wiring



## ● Installation Instruction



### Note

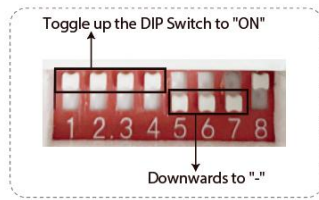
The sensor is designed for connect one load only. Connect more than one loads may damage the sensor.

When installing, please pay attention to the distance between the microwave antenna and the metal frame.

## 【Parameter】

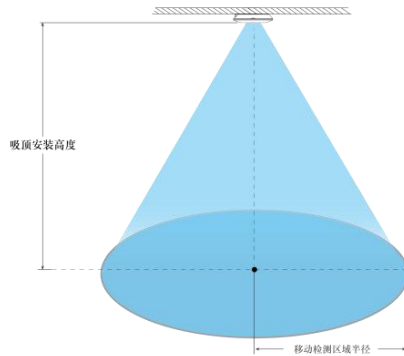
Input	
Rated Voltage	220-240VAC 50/60Hz
Stand-by Power	≤0.15W
Surge Test	1KV(L/N,EN61000-4-5)
Output	
Output Signal	☑ON/OFF
Load Capacity	400W@230VAC(Inductive Load), 800W @230VAC(Resistive Load)
Load Surge Current	60A(50% Ipeak, twidth 200us @230Vac full load, cold start)
Sensor Parameters	
Operating Frequency	5.8 GHz ±75MHz, ISM wave band
Transmitting Power	1mW Max.
Detection Range(Radius)	Ceiling Mounting at 3m high: 0.3m/s ≥3.5m, 1m/s ≥2.5m ; Wall Mounting at 2m high: 0.3m/s ≥8m, 1m/s ≥4m Test condition: 100% sensitivity, 60 m² no visible obstruction indoors
Mounting Height	3m (5m Max )
3db Beam Angle	90°@XZ
	95°@YZ
Operating Environment	
Operating Temperature	Built-in installation: 20T60
Storage Temperature	-40℃…80℃, Humidity≤85% (Non-condensing)
Certificate Standards	
Certificates	CE、RED、UKCA、SAA、CB、TUV
Environmental Requirement	Compliant to RoHS 2.0, Reach
Safety (LVD) standard	EN61058-1-2
EMC Standards	EN61000-3-2,EN61000-3-3,EN62479, EN301489-1, EN55015, EN300440
IP Rating	IP20
Product classification	Class II
Others	
Wiring	Press-in Type Terminals, wire diameter: 0.5-1.0mm2
Installation	Built-in
Package	bubble pack + cardboard + outer carton (K=A)
Net Weight	38±5g
Lifetime	5 years warranty @Ta 230V full load

## 【DIP Switch Setting】



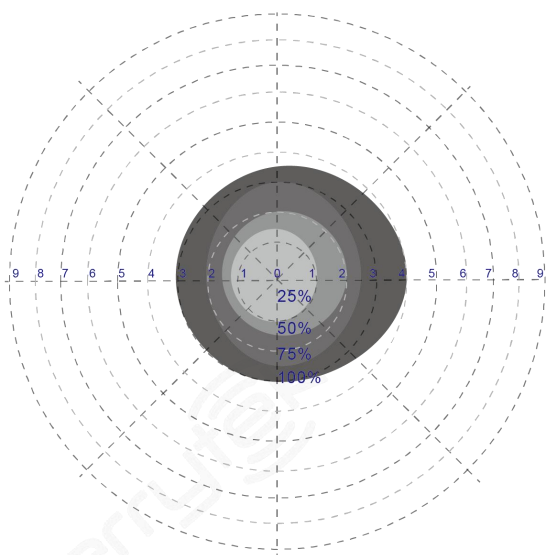
Detection Area				Hold Time				Daylight Sensor			
1	2		Detection Radius	3	4	5		6	7	8	
ON	ON	100%	Around 2.5 meters	ON	ON	ON	5s	ON	ON	ON	2 Lux
ON	-	75%	Around 2 meters	ON	ON	-	30s	ON	ON	-	10Lux
-	ON	50%	Around 1.5 meters	ON	-	ON	1min	-	ON	-	25Lux
-	-	25%	Around 1 meters	-	ON	ON	3min	ON	-	-	50Lux
-	-	-	-	-	ON	-	5min	-	-	-	-
-	-	-	-	-	-	ON	10min	-	-	-	-
-	-	-	-	-	-	-	20min	-	-	-	-
-	-	-	-	-	-	-	30min	-	-	-	-

### ● Radiation Pattern



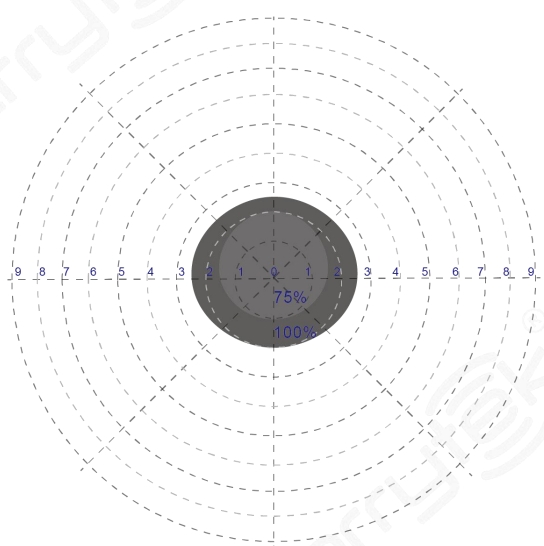
### Ceiling mounting

Ceiling mounted height: 3m  
Sensitivity: 100%/75%/50%/25%

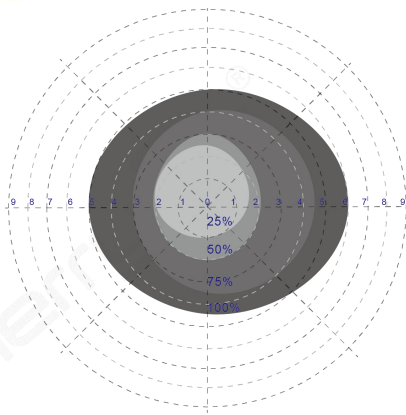


Normal moving (Speed:1m/s)

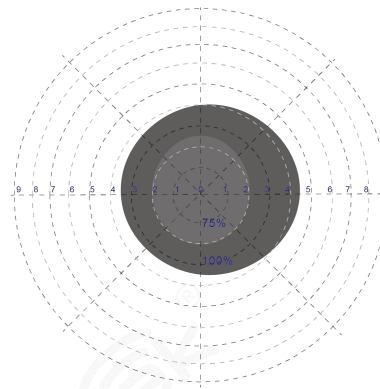
Ceiling mounted height: 6m  
Sensitivity: 100%/75%/50%



Normal moving (Speed:1m/s)



Slow moving (Speed 0.3m/s)



Slow moving (Speed: 0.3m/s)

## 【Initialization】

After power on, the sensor automatically turns on light to 100% brightness and turns off light in 10 seconds. During initialization, sensor is not able to detect movement.

## 【Factory Setting】

Sensitivity: 100%    Hold-time: 5s    Daylight threshold: Disable

## 【Application Notice】

- Sensor should be installed by a professional electrician. Please turn off power before installing, wiring, or setting the DIP switches.
- microwave sensor has good penetration ability to plastic, wood, etc., but metal accessory, metal casing, glass casing, etc could not be placed directly in front of or close to microwave sensor antenna, otherwise it will affect the microwave antenna transmission and reception.
- Sensor is for indoor use only. The waterproof effect for outdoor or half-outdoor use will be affected. Wind, rain, and moving objects may cause false triggering.
- Sensitivity area is related to moving speed of objects, size of moving objects, mounting height, mounting angle, working environment, reflecting materials and etc. Given detecting area is a typical value that was measured by 165cm high testers in an indoor open environment.
- The detection distance for wall mounting is significantly increased compared to ceiling mounting. If wall mounting, please reduce the sensitivity or contact us to confirm the settings.
- Vibration signals will be regarded as moving signals to trigger sensor. Installing sensor should be away from the object that vibrates for a long time, such as large metal equipment, pipes, air conditioning outlets, exhaust vents, smoke exhaust machine ports, shaking fans, etc. Pets in detecting area may trigger sensing.
- The daylight thresholds are measured on a sunny day without shadow and in an ambient light diffuse reflection status. The illuminance value may differ in different time periods, climates and environments.
- The distance among sensors should be more than two meters. Keep sensor away from switches, routers and other wireless devices to avoid radio interference, more than two meters.
- To achieve the best detection results, the antenna surface of microwave sensor should be at least five

millimeters higher than surrounding plates, such as aluminum substrate, glass fiber board and so on.

- The antenna surface of microwave module should be away from input AC and output DC to avoid low or high frequency signals.