

# Specification

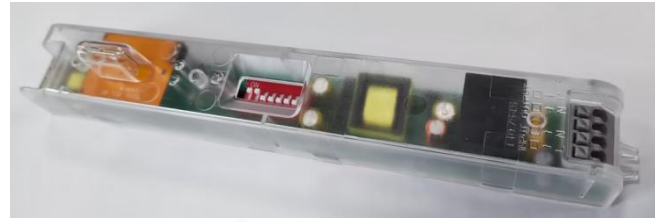
**Product Name:** AC dimming sensor

**Product Model:** MC188V 99

Versions	Release/ change Date	Reason	Publishing
V1.0	26th DECE, 2024		James Guo

## 【Product Feature】

- Patented coupling dipole antenna design, suitable to built-in metal LED tray without false trigger.
- Transparent shell, not effect light distribution.
- Low sidelobe, no false trigger in metal reflection space.
- Low transmitting power, no harm to human.
- Sensor data can be set by DIP switch & remote control.
- Not affected by temperature, humidity, noise, dust etc..
- With 1-10V dimming signal , SYNC function



## 【Parameter】

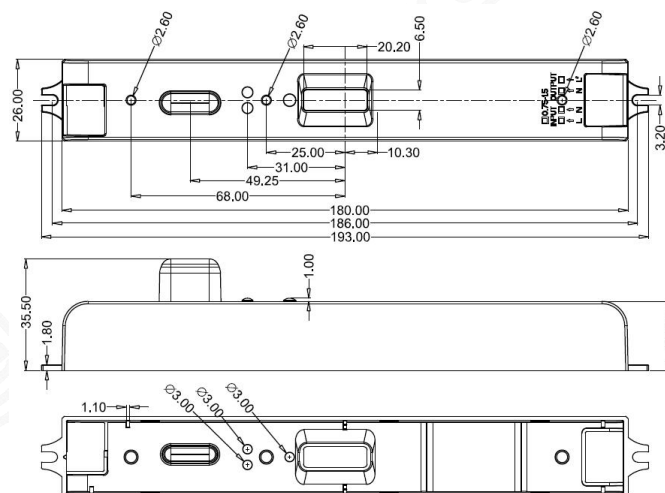
Input			
Rated Voltage	120/277V AC 50/60Hz（US）； 220-240VAC 50/60Hz（Europe）		
Stand-by Power	≤0.5W		
Surge Test	1kV(L/N,EN61000-4-5)		
Output			
Output Control	ON-OFF		0-10VDC Dimming Signal
Load Capacity	2A @120Vac		2A @277Vac
Load Capacity	200W@110VAC(Inductive/LED), 400W @110VAC(Resistive). 400W@230VAC(Inductive/LED), 800W @230VAC(Resistive).		
Max. Surge Capacity	30A (50% Ipeak, twidth =200us, 230Vac full load, cold start);		
0-10VDimming	< 50mA（Non-constant current source） 10%（1.4-1.6V） 20%（1.9-2.1V） 30%（2.9-3.1V） 50%（4.9-5.1V）		
Sensor Parameter			
Operating Frequency	5.8 GHz ±75MHz, ISM wave band.		
Transmitting power	1mW Max.		
Hold time	5S/1min/5min/10min（setting by DIP） 5s/30s/1min/3min/5min/10min/20min/30min (setting by remote）		
Stand-by dim Level	10%(1.4-1.6V)//30%（2.9-3.1V）（setting by DIP） 10%(1.4-1.6V)/20%(1.9-2.1V)/30%（2.9-3.1V）/50%(4.9-5.1V)(setting by remote）		
Hold time	5S/1min/5min/10min（setting by DIP） 5s/30s/1min/3min/5min/10min/20min/30min (setting by remote）		
Stand-by Period	0S/1min/10min/+∞（setting by DIP） 0s/10s/1min/3min/5min/10min/30min/+∞ (setting by remote）		
Detection	100%/75%/50%/25%（setting by DIP） 100%/75%/50%/25%（setting by remote）		
Daylight Sensor	Daylight threshold	5lux/30lux/100lux/Disable（setting by DIP） 5lux/15lux/30lux/50lux/100lux/150lux/Disable（setting by remote）	
		ON	Off
	Daylight priority	5lux/15lux/30lux/50lux	Turn on Value+（50-150Lux）
		100lux	Turn on Value+（50-150Lux）
		150lux	Turn on Value+（50-150Lux）

Detecting Radius	ceiling mounting3m r≥3m@1m/s, wall mounting 2m r≥3.5m@1m/s Motion speed: 100% sensitivity, open 60 m² indoor area.
Mounting Height	3m（6m Max）
<b>Environment</b>	
Operating Temperature	-20~60℃
Storage Temperature	-40℃~80℃, Humidity: ≤85%(Non-condensing)
<b>Certificate Standard</b>	
Certificate	CE, RED, UKCA, SAA
Environmental Requirement	Compliant to RoHS 2.0, Reach
Safety standards	EN61058-1,UL60703-1
EMC standards	EN300440; EN301489-1; EN55015; EN61547; EN61000-3-2; EN61000-3-3; EN62479
IP Rating	IP20
Product Class	Class II
<b>Other</b>	
Wiring	Press-in type terminal block, wiring 0.5-0.75mm²
Installation	Built-in
Package	Bubble bag + Clapboard + Carton(K=A)
Net Weight	71.5±2g
Lifetime	5 years warranty @Ta full load

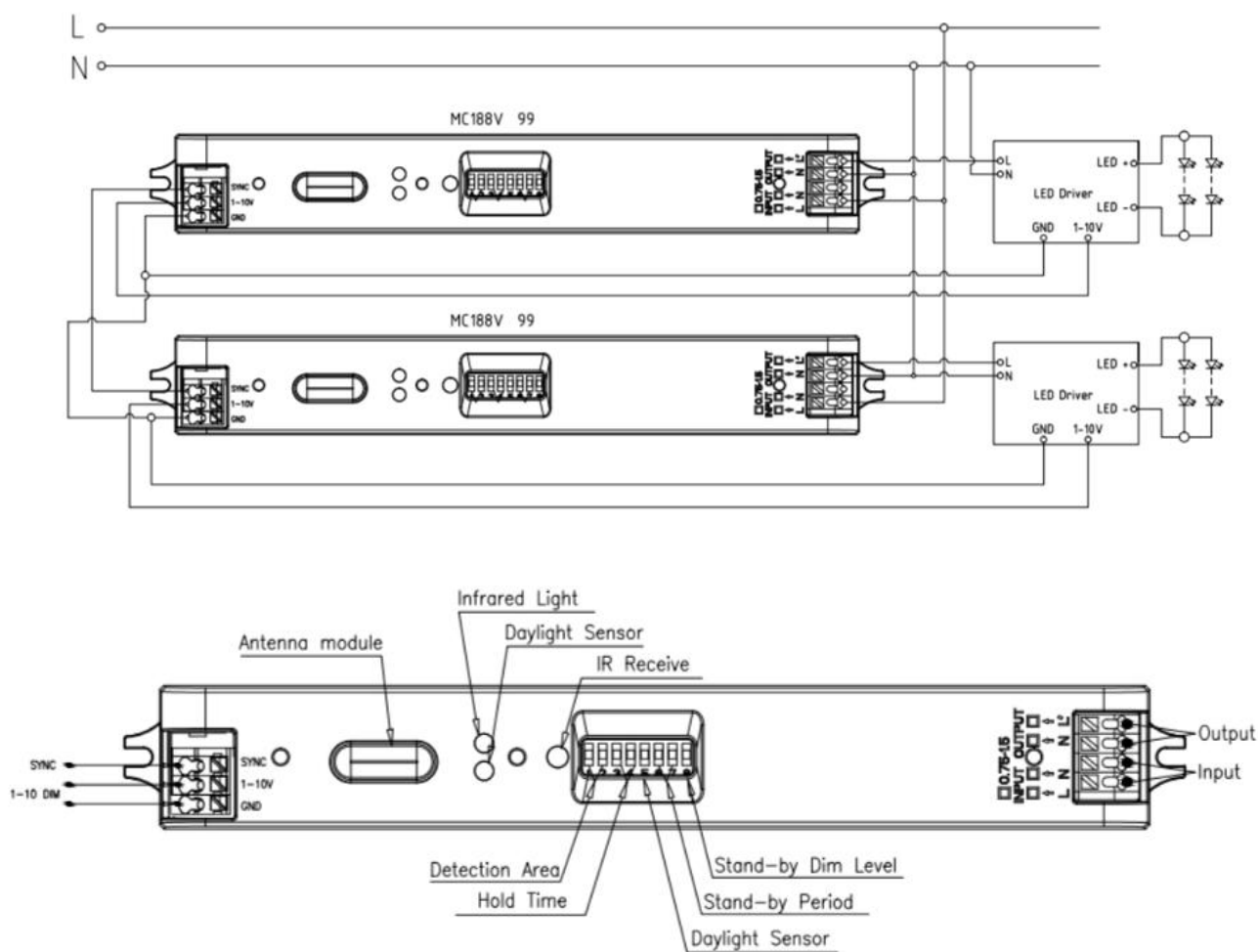
### 【Function】

<input checked="" type="checkbox"/> ON-OFF function	Stand-by Period be set “0s”
<input checked="" type="checkbox"/> 2-step dimming	Stand-by Period be set “+∞”
<input checked="" type="checkbox"/> 3-step dimming	Stand-by Period be set “10s/1min/3min/5min/10min/30min”; “1min/10min” “ (DIP by setting )
<input type="checkbox"/> Daylight harvesting	N/A
<input checked="" type="checkbox"/> Daylight priority	Stand-by Period be set “+∞”

### 【Product Information】



## 【Wiring diagram】

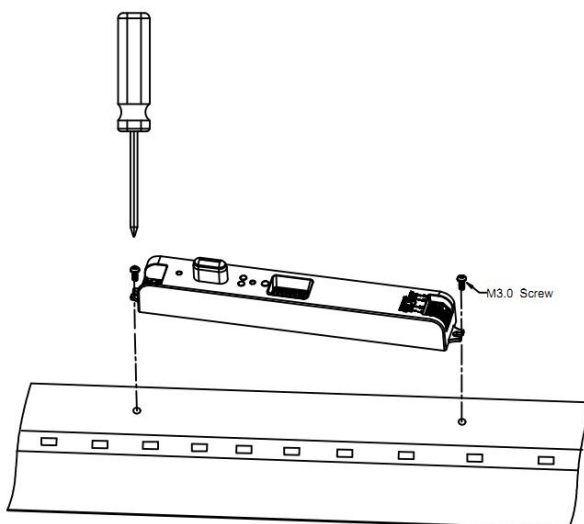
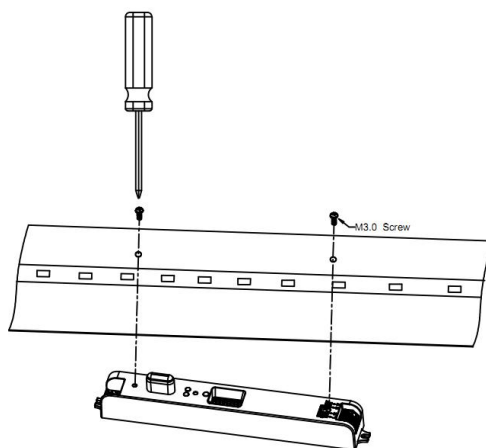


Note: The sensor is designed for connect one load only. Connect more than one loads may damage the sensor.

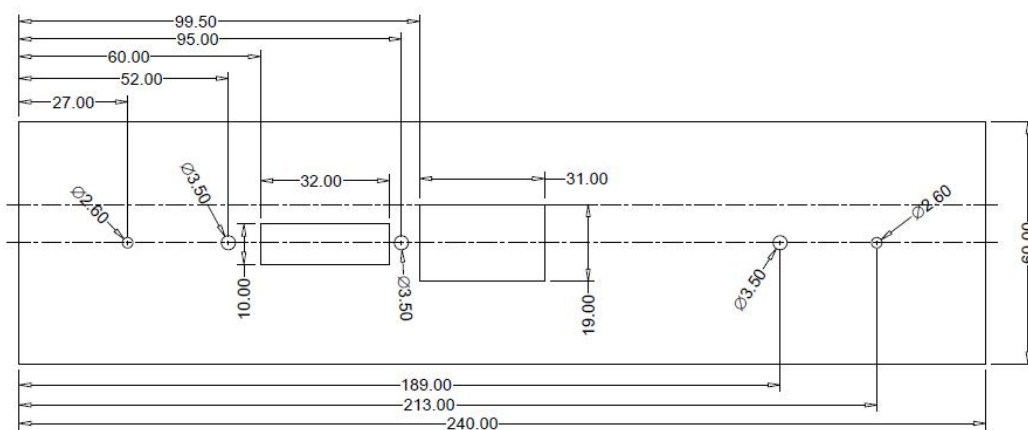
SYNC: When one of the sensors detects movement, the sensor's SYNC port outputs a high level and transmits To other machines in the same group, other machines receive this synchronization signal, which is equivalent to induction triggering into full light, and then set the gear according to each extrinsic code for operation

## 【Installation Instruction】

### ● Screw installation



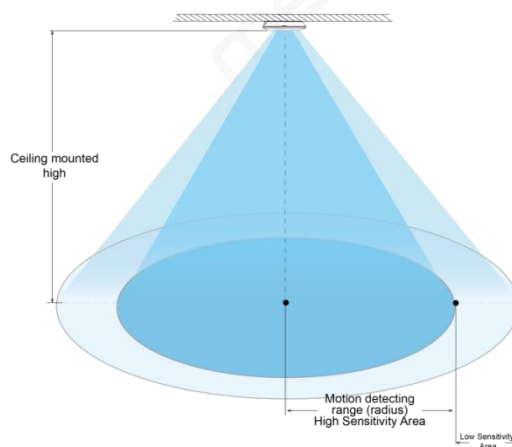
### ● Cut Size



## 【DIP Switch Setting】

Function	Detection Area			Hold Time			Daylight Sensor	
DIP	1	2		3	4		5	
I	ON	ON	100%	ON	ON	5s	ON	30lux
II	ON	–	75%	ON	–	1min	–	disable
III	–	ON	50%	–	ON	5min		
IV	–	–	25%	–	–	10min		
Function	Stand-by period			Stand-by dim Level				
DIP	6	7		8				
I	ON	ON	0s	ON	10%			
II	ON	–	1min	–	30%			
III	–	ON	10min					
IV	–	–	+∞					

## 【Detection Range】



## 【Remote control】



## MH10 Instruction

Remote Control Setting	Button	Remarks
	ON/OFF	Press the "ON/OFF" button, the light enters the constant ON/OFF mode, and the sensing function is disabled. (power off memory function).
	Reset	Press "Reset" button, all parameters are same as setting of DIP switch or factory settings.
	Sensor motion	Press "Sensor motion" button, the light quits from the constant on/ off mode, and the sensor starts to work ( The latest setting stays in validity )
	DIM Test	N/A
	DIM+ DIM-	Short press to transmit a dimming signal, and the brightness of the lamp will be adjusted with +/-2% each time; dimming range:50%-100 %. (Only available for daylight priority function sensor) Note: the maximum brightness can be set with this button;
	DH Mode	Long press " DH Mode" >3s to enter the daylight priority function;
	Q1 Q2 Q3	N/A
	TEST 2S	Press the "RESET" and then Press the "TEST 2S" bottom can enter the test mode any time At the mode the sensor parameters as below:Detection Area is 100%, Hold Time is 2s.Stand-by Dim Level is 10%,Stand-by Period is 0s, daylight sensor disable This function only for testing. Quit the mode by pressing "RESET"or any other function buttons.
	HS LS	N/A
	Daylight Sensor	Set up daylight threshold: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable
	Stand-by period	Set up stand-by time:0S/10S/1min/3min/5min/10min/20min/30min/+∞
	Hold time	Set up hold time:5S/30S/1min/3min/5min/10min/20min/30min
	Stand-by dim level	Set up stand-by dim level:10%/20%/30%/50%
	Detection Area	Set up detection area: 25%/50%/75%/100%
	Remote Distance Toggle	can set the remote distance of remote control and sensor.

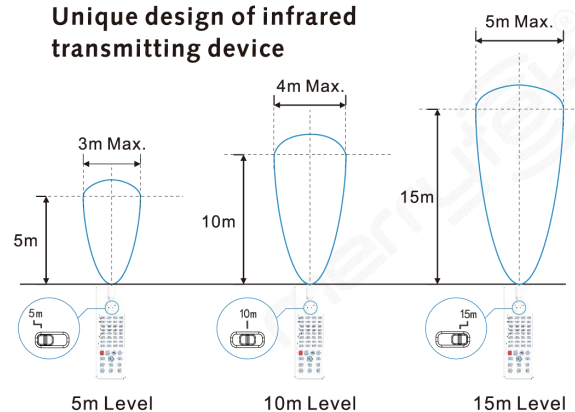
### Remote control and code setting conversion

1. DIP switch setting convert to remote control Press any bottom except "RESET" on the remote control, and the sensor settings convert to the function currently selected by the remote control.  
(No function button settings invalid)

2 remote control convert to DIP switch setting

- Press the "RESET" button on the remote control, and all settings return to the DIP switch settings of the sensor.
- Turn off the power, toggle any DIP switch, connect to the power, and all settings return to the DIP switch settings when supply power again.

### Unique design of infrared transmitting device



## 【Initialization】

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

## 【Default setting】

Sensitivity: 100%, Hold time: 5s, Daylight sensor: Disable, Stand-by Period: 0s, Stand-by DIM Level:10%

## 【Application Notice】

- The sensor should be installed by a professional electrician. Please turn off the power before installing, wiring, changing the setting of the DIP switch.
- 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 typical value that was measured by 165cm/65kg testers in an indoor open environment.
- The detection area of the microwave sensor when installed on the wall will be greatly increased compared to when installed on the ceiling. If adopts wall ceiling, please reduce the sensitivity or contact our company to confirm the usage settings. The daylight thresholds are measured on a sunny day without shadow and in an ambient light diffuse reflection status. Different environment and climate cause different brightness values that daylight sensor measures.
- Sensor parameters may need to be reconfigured in different installation environments, please refer to the following instructions or contact the manufacturer.
- 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.
- The installation height of the sensor product cannot exceed 6 meters, and the optimal height is 3 meters. The distance between the two sensors should be greater than 3m.
- When the sensor is installed in a metal lamp, on a metal reflective surface, or in a small closed environment, the microwave will be reflected multiple times and cause false triggering. Please reduce the sensitivity of the sensor or contact the manufacturer for technical support.
- Please make sure that there are no moving signals such as fans, DC motors, sewer pipes, air outlets, etc. around the sensor, otherwise the sensor may cause false triggering.
- Microwaves cannot penetrate metal. Do not place product in a closed or a half-closed metal lamp. Neither metal nor glass is not allowed to cover above the product.
- For the new installation environment, it is recommended to test 5pcs samples before installation.