Mark Lighting
sales@tlwglobal.com
www.tlwglobal.com
+44 (0) 01302 741941

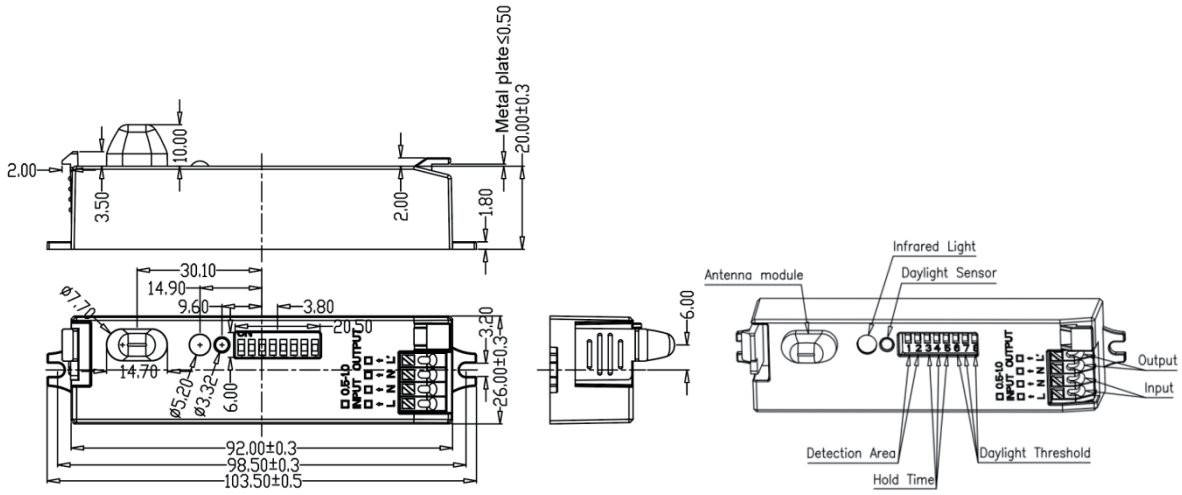
Non Corrosive Batten Microwave Sensor - Installation and Operation Manual

Specifications

Part number: **M5NCMS**

- Patented mini dipole microwave antenna for tri-proof light and ceiling light, suitable to built-in metal LED tray without false trigger.
- Low transmitting power.
- Sensor data can be set by DIP switch & remote control.
- Not affected by temperature, humidity, noise, dust etc.
- Function ON/OFF

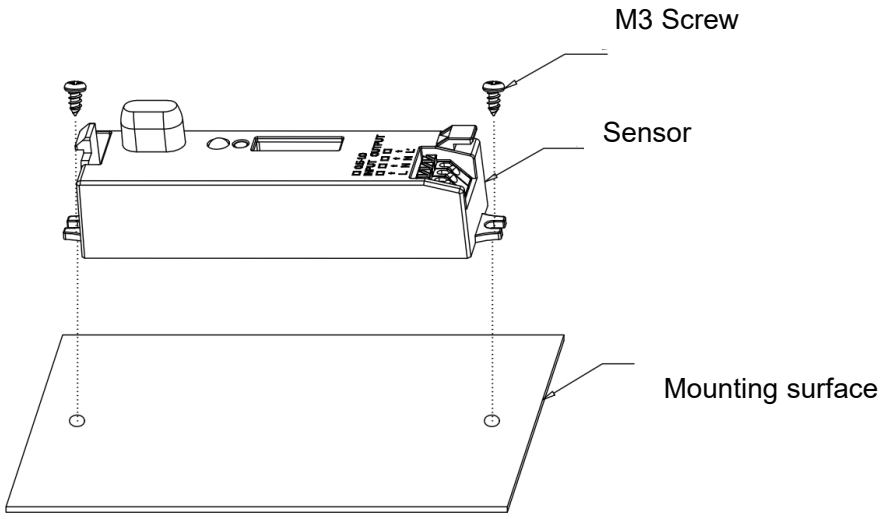
Product Information



Input	
Rated Voltage	220-240VAC 50/60Hz
Stand-by Power	≤0.5W
Surge Test	L--N: 1kV
Output	
Output Control	ON-OFF
Load Capacity	200W(Inductive/LED); 400W(Resistive)
Max. Surge Capacity	20A (50% Ipeak, twidth =500uS, 230Vac full load, cold start);
	40A (50% Ipeak, twidth =200uS, 230Vac, full load, cold start)
Sensor Parameter	
Operating Frequency	5.8 GHz ±75MHz, ISM wave band.
Transmitting power	1mW Max.
Detecting Radius	≥4m @ ceiling mounting, ≥ 8mi @ wall mounting
	Motion speed: 1m/s, 100% sensitivity, 165cm person.
Mounting Height	2.5-6m (ceiling mounting), 2-3m (wall mounting)
Environment	
Operating Temperature	-20~60°C
Storage Temperature	-40°C~80°C, Humidity: ≤85% (Non-condensing)
IP Rating	
IP Rating	IP20
Other	
Wiring	Press-in type terminal block, wiring 0.5-1.5 mm2
Installation	Built-in
Lifetime	5 years warranty

Installation Instruction

- **Screw installation**



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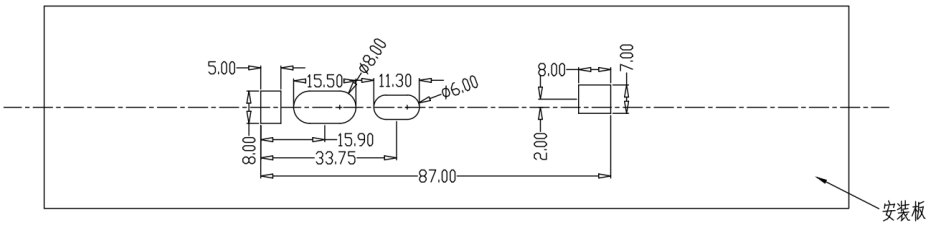
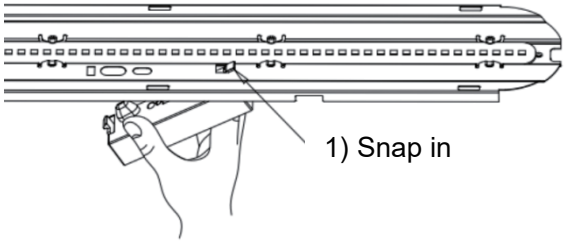
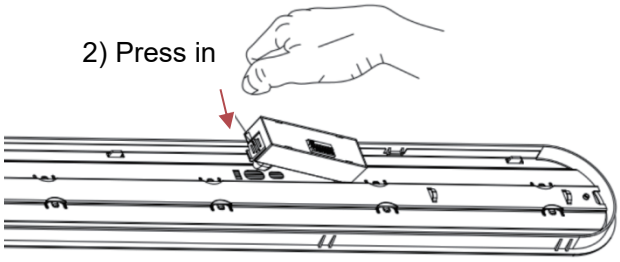
● Snap-in installation

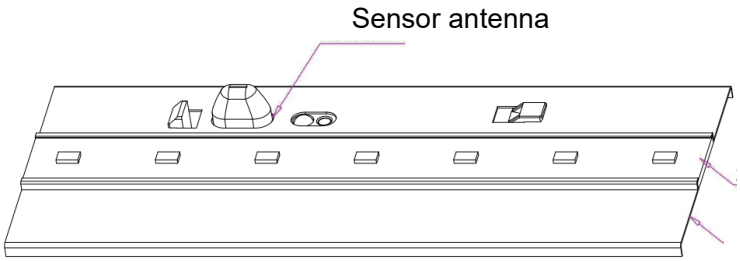
Note: Please check the sensor installation method with Merrytek before design any luminaire.

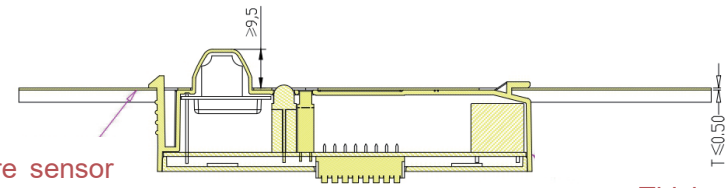
Cut size





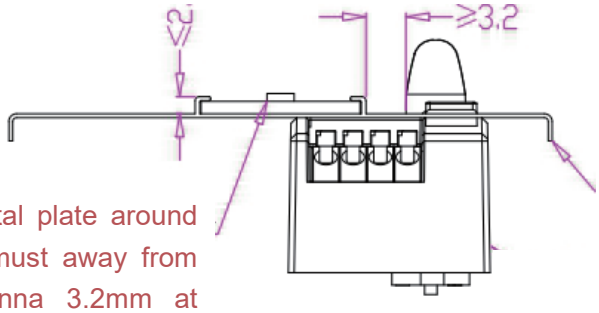






Make sure sensor close to LED tray

Thickness of LED tray is not greater than 0.5mm



LEDs or metal plate around the sensor must away from sensor antenna 3.2mm at least.

Metal plate height around sensor antenna should be 2.0mm Max.

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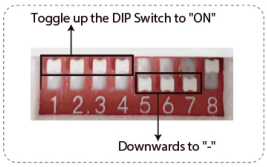
DIP Switch Setting



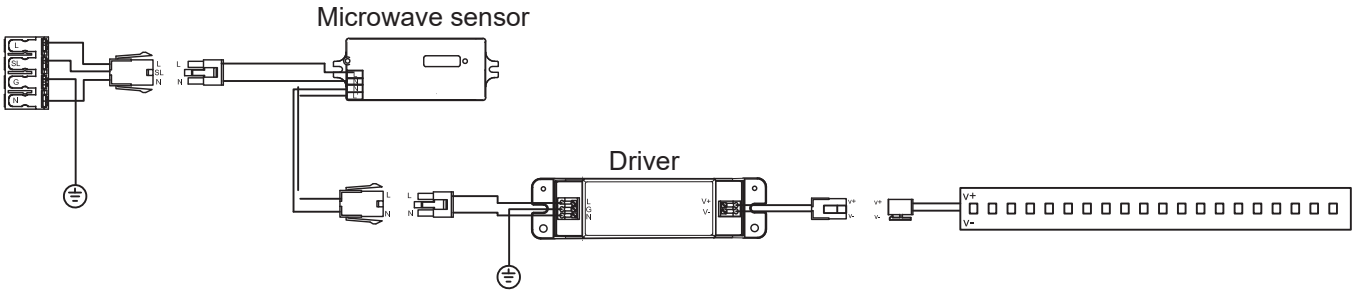
ON

Detection Area			
1	2		Detection Radius
ON	ON	100%	Around 5 meters
—	ON	75%	Around 4 meters
ON	—	50%	Around 2.5 meters
—	—	25%	Around 1.5 meters

Hold Time			
3	4	5	
ON	ON	ON	5S
—	ON	ON	30S
ON	—	ON	90S
—	—	ON	5min
ON	ON	—	20min
—	—	—	30min

Daylight Sensor			
6	7	8	
ON	ON	ON	2 Lux
ON	ON	—	10 Lux
—	ON	—	30Lux
ON	—	—	50 Lux
—	—	—	Disable

Wiring diagram



Initialisation

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.

Default Settings

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.

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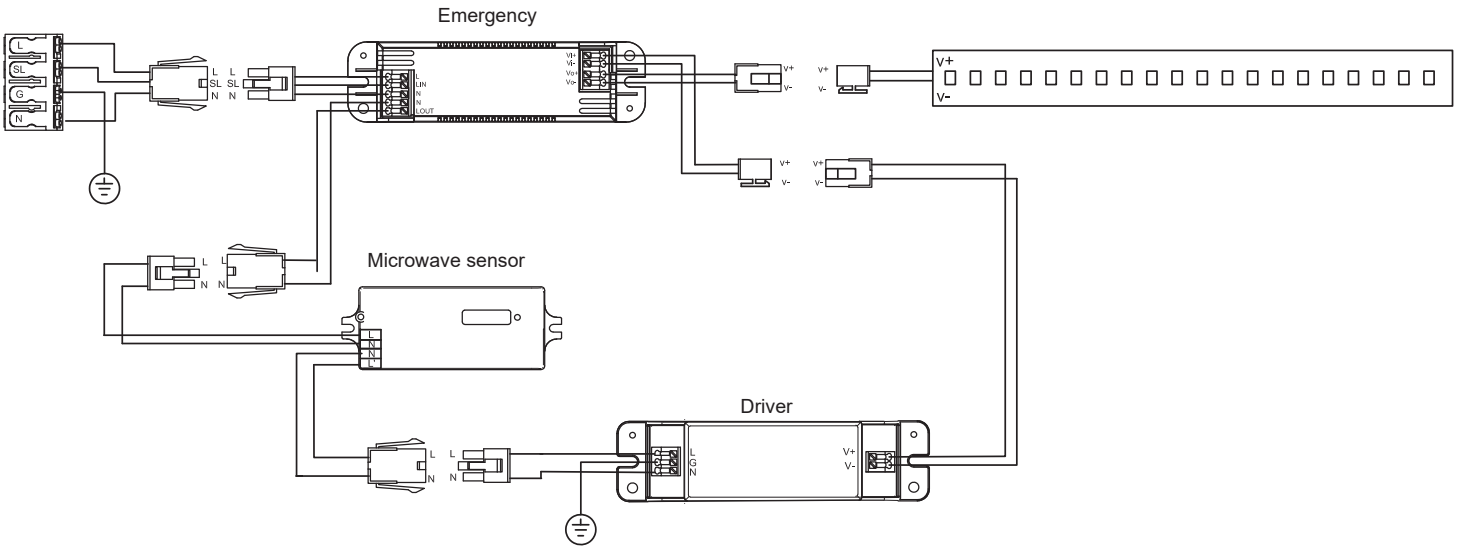
Microwave and Emergency Wiring Diagram



Safety Instructions

● Sensor should be installed by a professional electrician. Please turn off power before installing, wiring, or setting the DIP switches.

● Microwaves cannot penetrate metal. Do not place product in a closed or a half-closed metal lamp. Neither metal or glass is not allowed to cover above the product. If antenna needs to pass through the metal plate, please ensure that the top of sensor is close to the metal plate.

● 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 high testers in an indoor open environment.

● 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.

● The installation spacing between sensors is recommended to be greater than 1.5m, and the installation spacing between sensors and routers is recommended to be greater than 1.5m.

● Sensor should not be covered or hided by metal, PCB, LED tray etc..The spacing between the sensor antenna and surrounding materials should be greater than 5mm. There should be no metal or PCB tracks near the sensor antenna, above or below it. The recommended thickness of cover is 2mm, and keep the spacing between the sensor antenna and cover is greater than 3.2mm.

● 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 cause false trigger.

● The antenna surface of microwave module should be away from input AC, output DC, rectifier bridge, transformer, switch tube and other high-power devices to avoid high frequency signals affecting the normal operation of microwave sensor’s antenna.

● 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.