

Intelligent Street Lighting Management System

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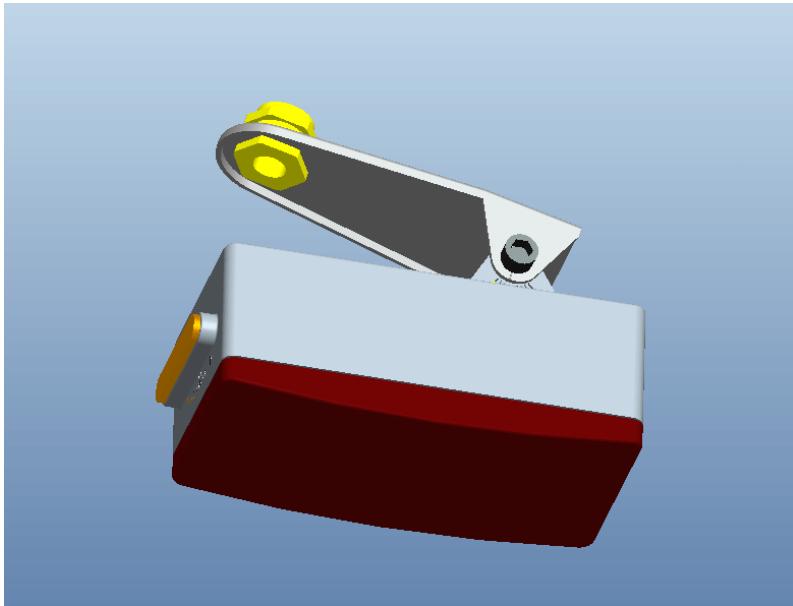
Intelligent Street Lighting Management System



SolarPath USA has obtained a global patent for an intelligent control system which could release intelligent dimming control. When cars pass by the light, it becomes brighter. Conversely, when there are no vehicles passing, it enters into a power-saving state.

For most of the existing systems, dimming control can be achieved at certain intervals, but cannot meet the international standards for road lighting, thus may have considerable defects in security. SolarPath USA offers advanced real-time dimming systems, which meet international standards for road lighting and minimize the security risks. SolarPath USA adopts high communication technology between lamps to realize cluster management, e.g. when a car passes the first lamp, the lamp will signal the nearest lamp. In addition, it can release remote control signals with a built-in cell phone chip to monitor lights at any time. Furthermore, it can be equipped with a camera, environmental monitoring devices, and traffic statistic devices to build a smart city.

Microwave Motion Sensor



Model No.: MSA277

Technical Parameters:

- Operating Voltage: 120-277VAC 50/60Hz
- Protection Rating: IP67
- Lifetime: 50,000 hours

The sensor is mainly used for roadway automatic lighting controls or roadway lighting real-time dimming control for energy saving purposes.

The sensor detects the moving objects and transmits the preset 1-10v dimming control signal to the led electronic driver with 1-10v dimming interface to activate the 1-10v dimmable led driver.

The qualified technician authorized by the end user can set codes by themselves to preset the delay period, brightness dimming, power-on delay period, etc.

The sensor can be equipped with a wireless transceiver as well. The wireless communication grouping frequency band (WCGFB) can be set to make all the motion sensors in WCGFB installed to the led street lights communicate by themselves, as a result the led street lights with MSA277 equipped, which are not in MSA277 detection range are activated and dimmed to a preset percentage of brightness in advance, e.g. 100% brightness (lumen output) for enough driving security and safety.

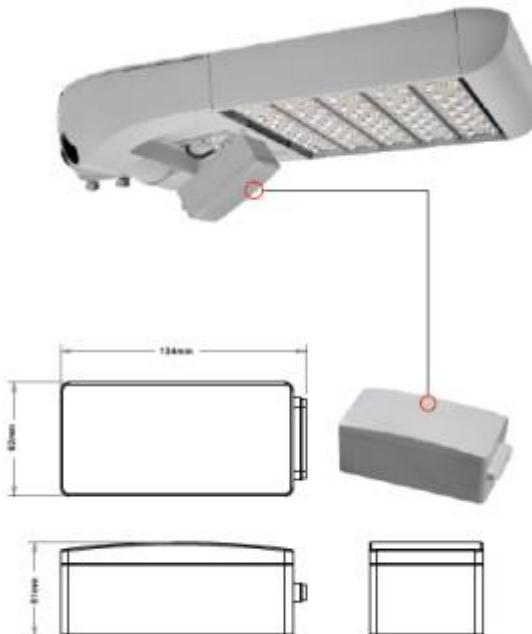
Microwave Motion Sensor



Operating Environment Requirements

- Operating Ambient Temperature : -40°C - 60°C
- Applicable Mounting Height : 6-18m. Maximum mounting height is 30 meters, but the sensing range is decreased. To achieve the same sensing performance, the sensing surface of the moving object is required to be increased, or increase the speed of the moving object, e.g. a running car.
- Detection Range: A rectangular area under a 120°× 60° detection angle.
- Detection Sensitivity: The motion sensor is mainly used for the detection and reaction for the automobiles on the roadway. The detection sensitivity rating is 100% if the speed of the automobile is 20km/h~150km/h, while there is no metal plate or glass cover to block the sensor. If the speed of the automobile is less than 20km/h~150km/h, or there are passing pedestrians only, the sensitivity is supposed to be lowered. To remain the sensitivity, another model # MSB277 is the choice.

Microwave Motion Sensor Installation



Function Code Set

a) Delay Function: Delay period (5s/1min/3min/10min)

| | 1 | 2 | 3 | Delay period |
|-----|---|---|---|--------------|
| I | ↓ | ↓ | ↓ | 5s |
| II | ↑ | ↓ | ↓ | 1min |
| III | ↓ | ↑ | ↓ | 3min |
| IV | ↓ | ↓ | ↑ | 10min |

b) Brightness Adjustment Preset Function

(Constant Voltage Output 5V /3V/ 2V/ 1.5V) :

| | 4 | 5 | Constant Voltage Output | Luminaire Brightness Ratio |
|-----|---|---|-------------------------|----------------------------|
| I | ↓ | ↓ | 5V | 45-50% |
| II | ↑ | ↓ | 3V | 25-30% |
| III | ↓ | ↑ | 2V | 15-20% |
| IV | ↑ | ↑ | 1.5V | 5-10% |

c) Power-on Delay Function

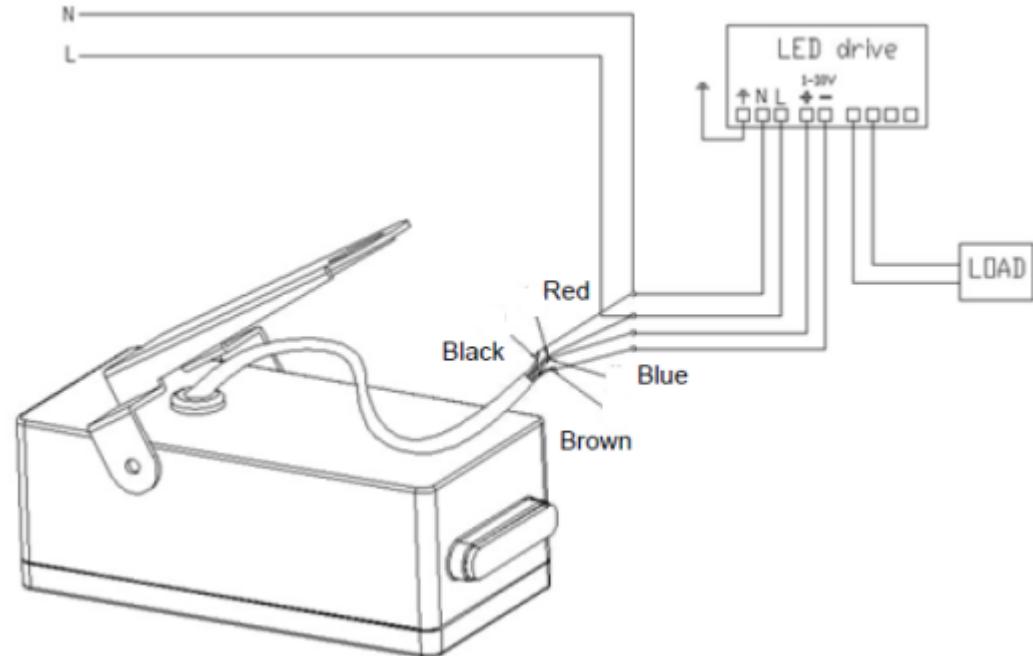
| | 6 | 7 | 8 | Power-on Detection Period |
|-----|---|---|---|---------------------------|
| I | ↓ | ↓ | ↓ | 10s |
| II | ↑ | ↓ | ↓ | 4h |
| III | ↓ | ↑ | ↓ | 6h |
| IV | ↓ | ↓ | ↑ | 8h |

d) Wireless Grouping Configuration

| 9 | 10 | Wireless Communication Frequency Band |
|---|----|---------------------------------------|
| ↓ | ↓ | A |
| ↑ | ↑ | B |

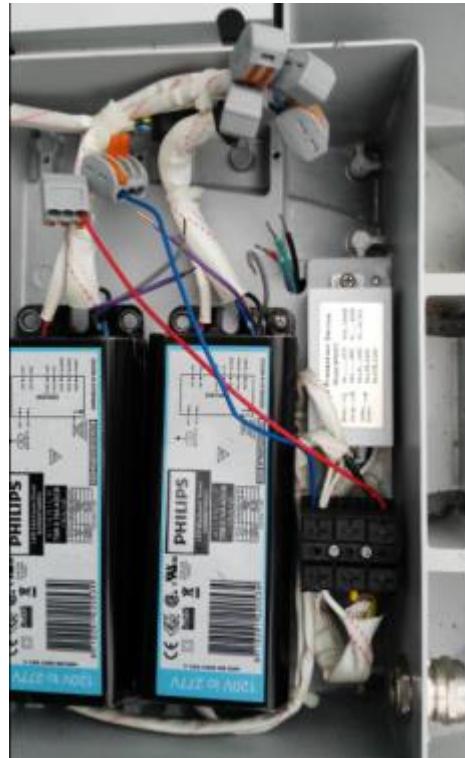
Microwave Motion Sensor Installation

- Wiring



Microwave Motion Sensor Installation

- **Wiring**



Microwave Motion Sensor Installation



Microwave Motion Sensor Installation



ALFA Street light

10 Years
Warranty

ALFA Series

Modular LED Street Light, top-ranked
in global market share.



SolarPath™
sun solutions

UL cUL UL94-4V DLG lighting facts

KC TUV CE CB IP67 IK08 ErP

Nominal Power:

SLA: 30W>>>300W

SLC: 80W>>>320W

SLB: 40W>>>320W

SLD: 20W, 30W, 40W, 60W, 80W, 90W

ALFA Street light



Only one spigot /tenon provides mast-arm side entry mount (MA) or pole top mount (PT).

SolarPath USA, can fix the spigot in our factory for you, and the installer can unscrew the spigot to convert MA to PT.

It is up to the installer to fix the spigot for MA or PT and no extra mounting accessory is required to change the mounting type, i.e. MA or PT.

Please consult us if you have any questions about how to fix the spigot for MA or PT.

ALFA Street light



ALFA Street light Highlights

1.1

The screw bolts do not drop off when the maintenance technician unscrews the bolts using 6mm allen key in the air.

1.2

Press the WAGO branded terminal block using the 6mm Allen key to connect or disconnect wire leads.

1.3

Use fingers only to release or fix the WAGO branded quick connectors to connect or disconnect wire leads.

1.4

One 6mm Allen key to fasten and unscrew all bolts.

1.5

Two axisT-shaped bubble level for ease of leveling and tilting angle setup.

2.

One tenon/spigot provides two mounting options, i.e. pole top mount (see fig. 2.2, ±20° adjustable), and side entry mast-arm mount (see fig. 2.1, ±20° adjustable), which does not require any other mounting accessory.

3.

The led driver(s) is/are screws fixed to the driver compartment bottom seamless, which ensures direct heat conductivity from the driver to the air.

4.

Excellent led driver compartment water resistance performance is easy to have as long as the driver compartment upper lid is fixed to the bottom tightly, the cable gland is fastened tightly.

5.

Patented LED light module/engine with unique aluminium heatsink and top quality LEDs, which maximizes heat conductivity and radiation, ensures its long term lumen maintenance.

6.

Optional Photoelectric Control Unit (PECU) is available upon request.

7.

Motion sensor receptacle. The optional motion sensor enables smart dimming and result in further energy savings.

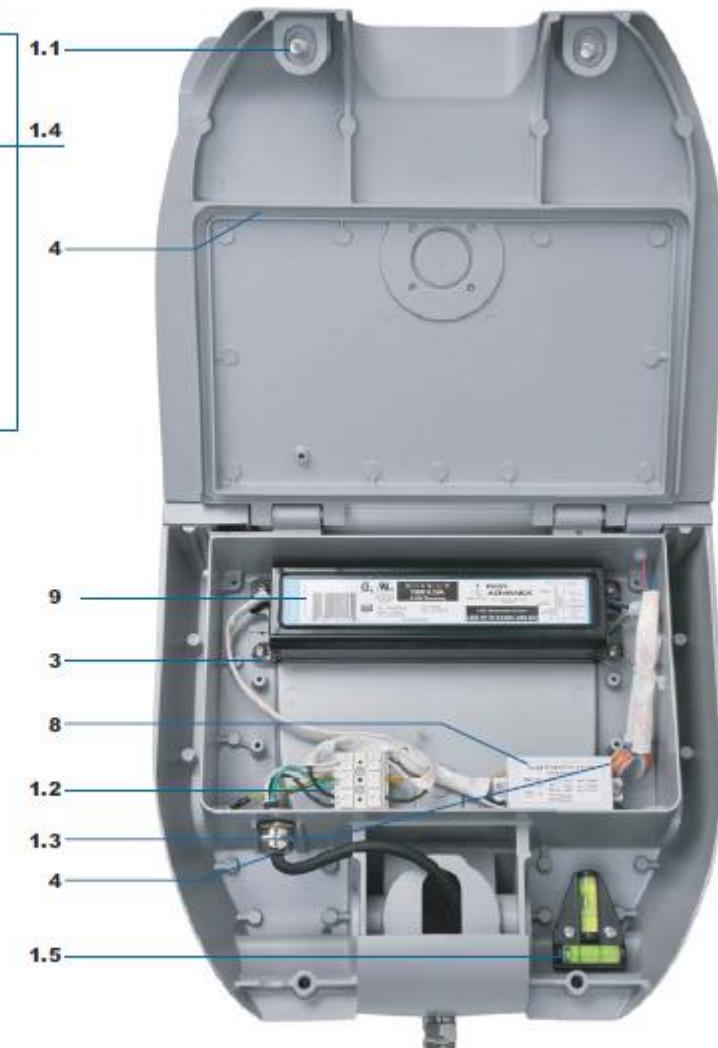
8.

10 KV surge protection device (SPD).

9.

Top reliable and worldwide prestigious LED electronic driver.

HIGHLIGHTS



ALFA Street light



MA



PT

MA = Mast-arm side entry mount.

PT = Pole/post top mount.

Thank You!

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