

## AITRIP AS-10-110

# AITRIP AC 110V 10A Automatic Photocell Street Light Switch User Manual

Model: AS-10-110

## 1. INTRODUCTION

---

This manual provides detailed instructions for the installation, operation, and maintenance of your AITRIP AC 110V 10A Automatic Photocell Street Light Switch. This device is designed to automatically control lighting fixtures based on ambient light levels, turning lights on at dusk and off at dawn, thereby enhancing energy efficiency and convenience.

## 2. SAFETY INFORMATION

---

### **WARNING: Risk of Electric Shock.**

- Always disconnect power at the circuit breaker or fuse box before installing or servicing this device.
- Installation should be performed by a qualified electrician or in accordance with local electrical codes.
- Ensure all wire connections are secure and properly insulated.
- Do not exceed the specified electrical ratings (110V AC, 10A).
- This device is intended for outdoor use but should be mounted in a manner that protects it from direct water ingress, especially from above.

## 3. PRODUCT OVERVIEW

---

### 3.1 Features

- Automatic dusk-to-dawn operation.
- Energy-saving design.
- Compact and durable construction.
- Suitable for various outdoor lighting applications.

### 3.2 Components

The AITRIP Photocell Street Light Switch consists of a light-sensitive sensor, internal switching circuitry, and wire leads for connection. It includes a mounting bracket for secure installation.

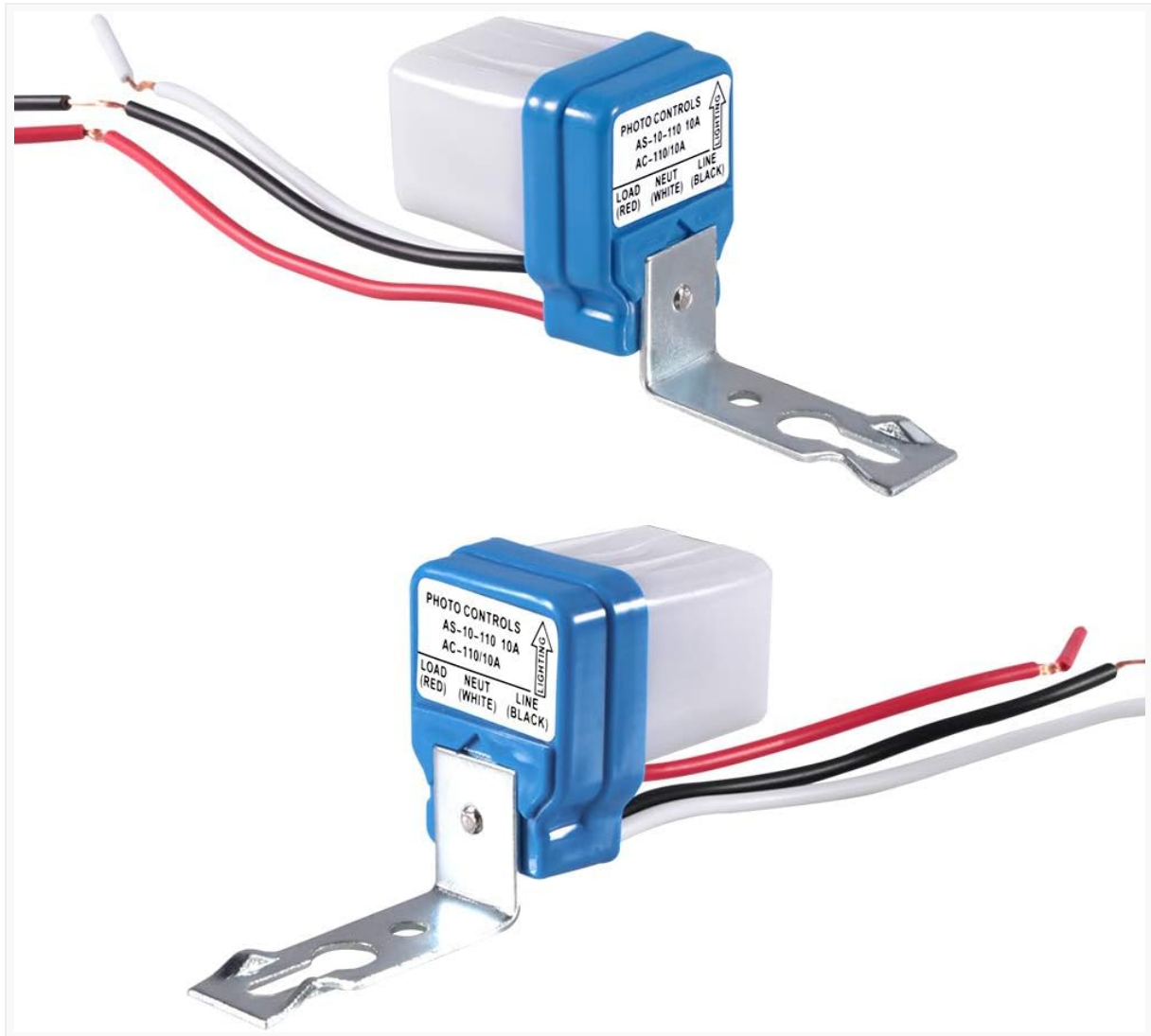


Figure 1: AITRIP Photocell Street Light Switches. Each unit features a white sensor housing, a blue base, a metal mounting bracket, and three wire leads (black, white, red).

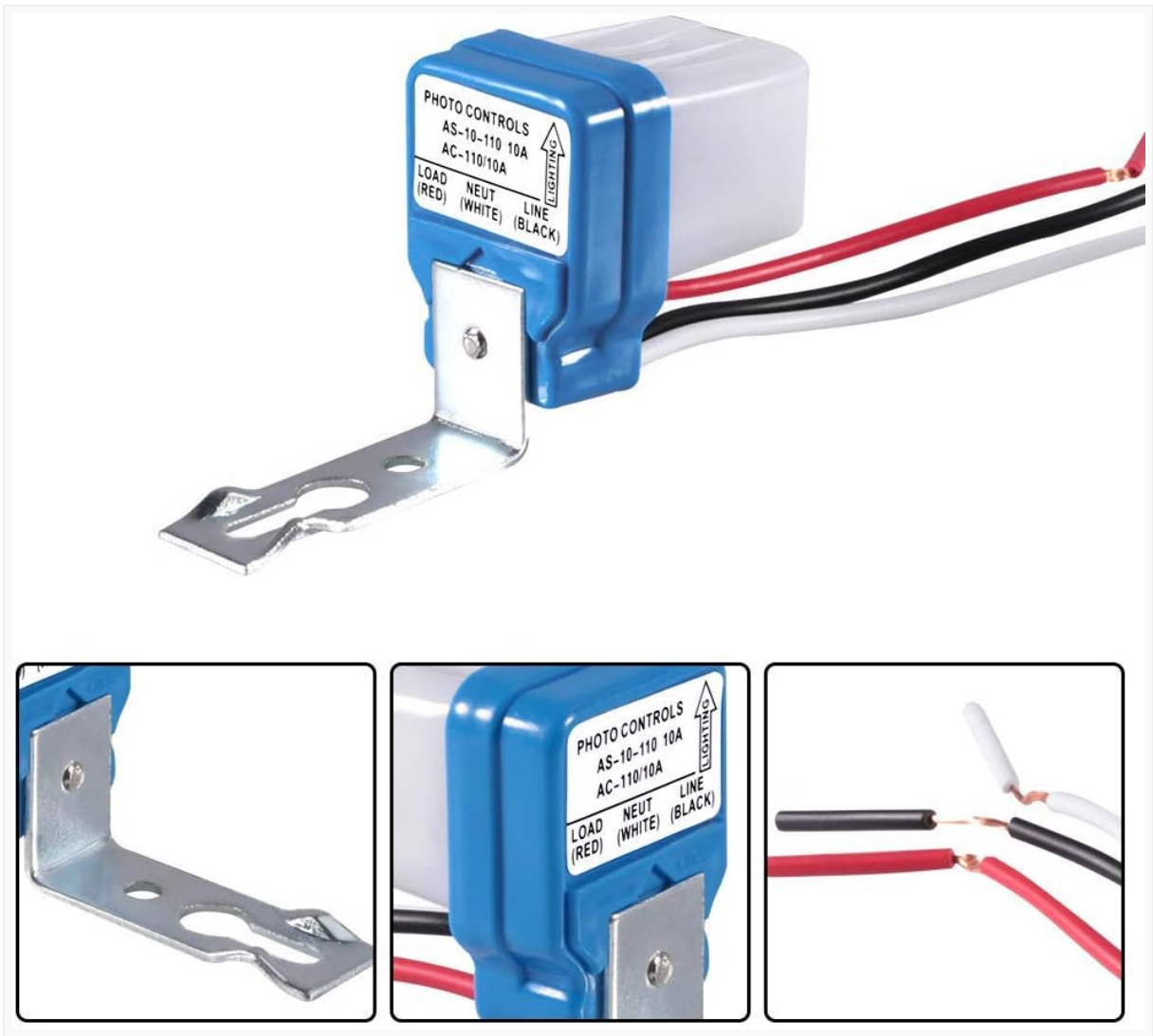


Figure 2: Detailed view of the photocell switch, highlighting the product label with model number AS-10-110 10A, AC-110/10A, and wire color codes (LOAD RED, NEUT WHITE, LINE BLACK).

## 4. SPECIFICATIONS

---

Parameter	Value
Model	AS-10-110
Operating Voltage	AC 110V
Current Rating	10 Amps
Operation Mode	Automatic (Dusk to Dawn)
Wattage	1100 watts (Max)
Contact Type	Normally Open
Connector Type	Wire Leads (Screw Terminal Compatible)
Circuit Type	1-way
Contact Material	Brass
International Protection Rating	IP54
Dimensions (Approx.)	40mm x 32mm x 30mm (main body)

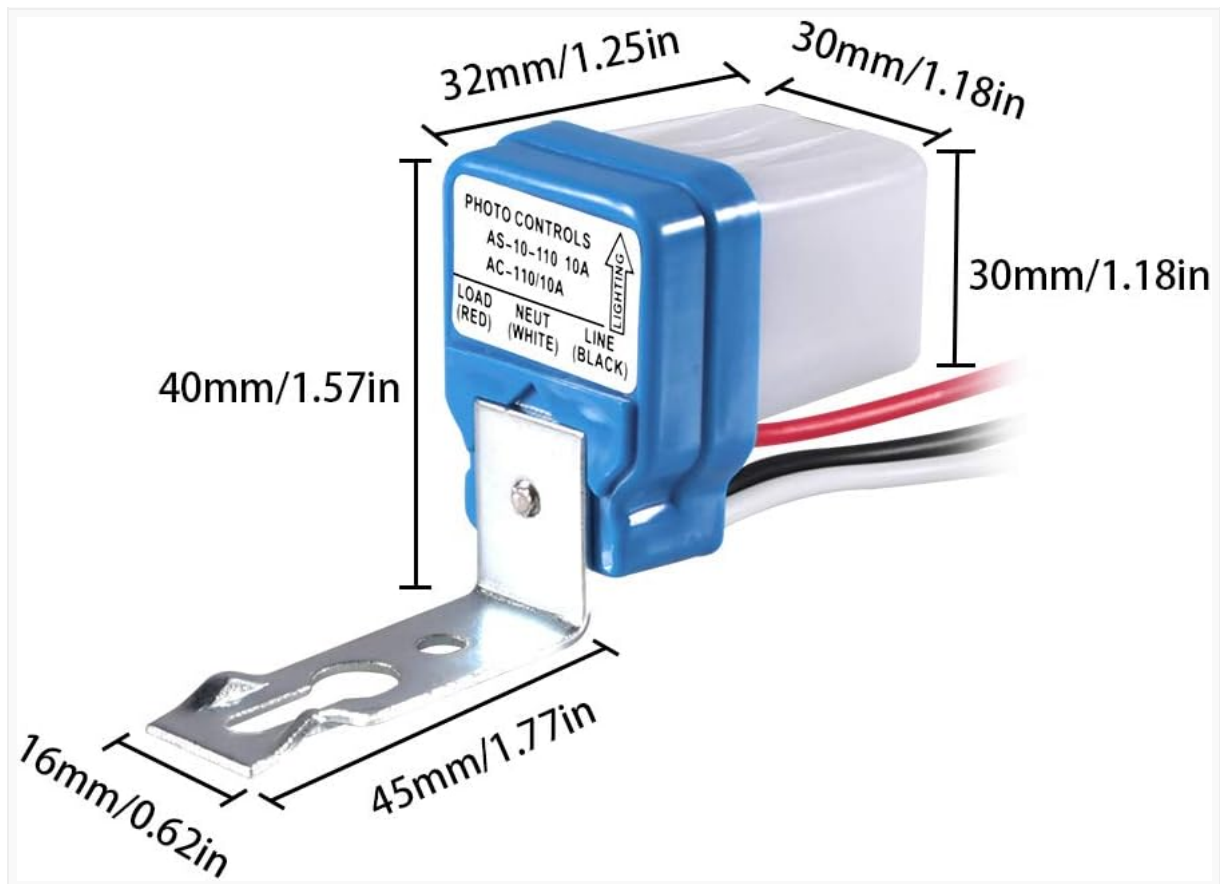


Figure 3: Approximate dimensions of the photocell switch, including the mounting bracket.

## 5. SETUP AND INSTALLATION

Before beginning installation, ensure all power to the circuit is OFF at the main breaker or fuse box.

### 5.1 Wiring Instructions

The photocell switch has three color-coded wire leads:

- **Black Wire:** Connect to the **LINE (Live)** input from the power source (AC 110V).
- **White Wire:** Connect to the **NEUTRAL** wire from the power source and also to the **NEUTRAL** wire of the lighting fixture.
- **Red Wire:** Connect to the **LOAD (Live)** input of the lighting fixture.

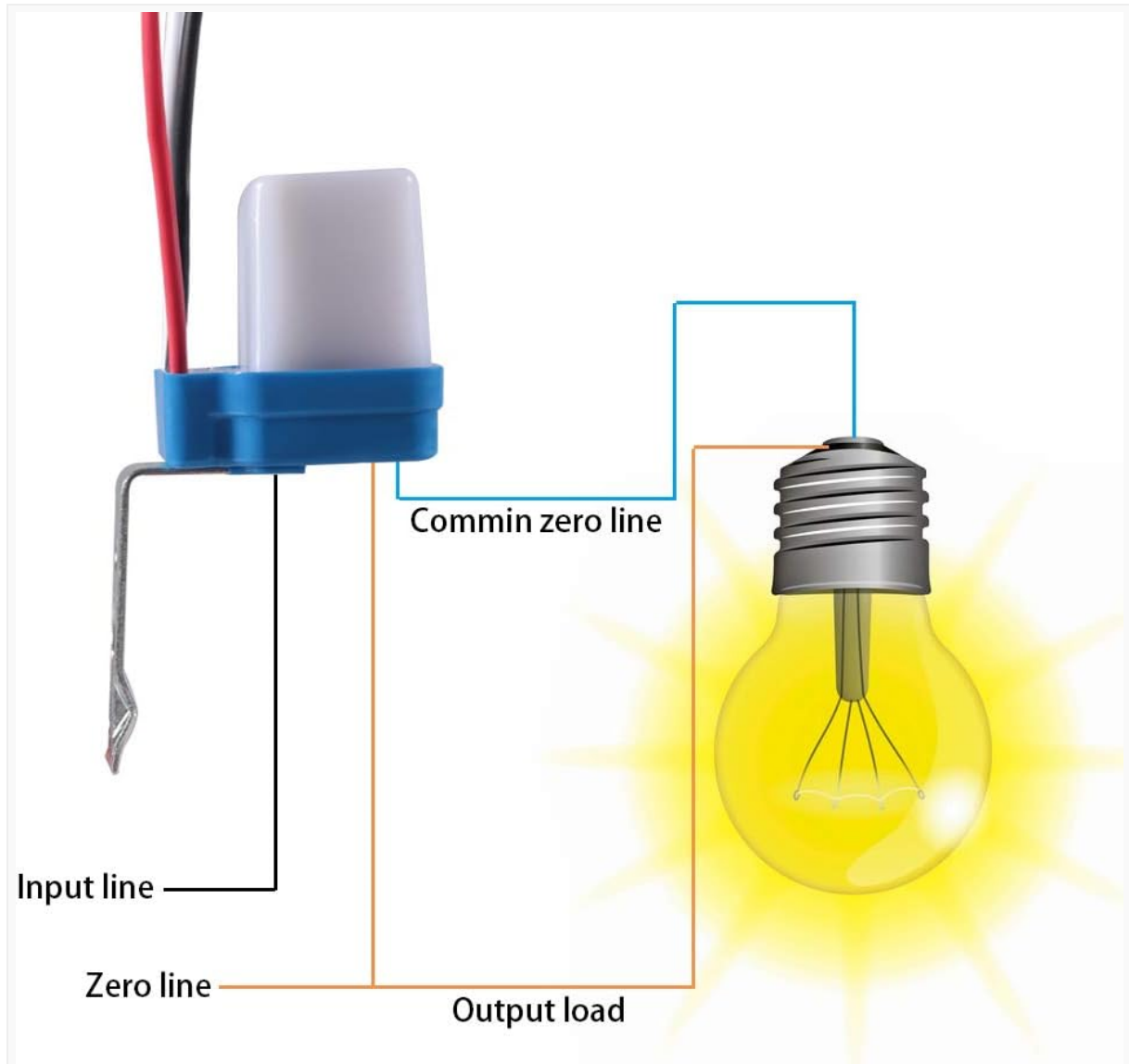


Figure 4: Basic wiring diagram. Connect the black wire to the incoming live (input line), the white wire to the neutral (common zero line) and the neutral of the load, and the red wire to the live of the load (output load).

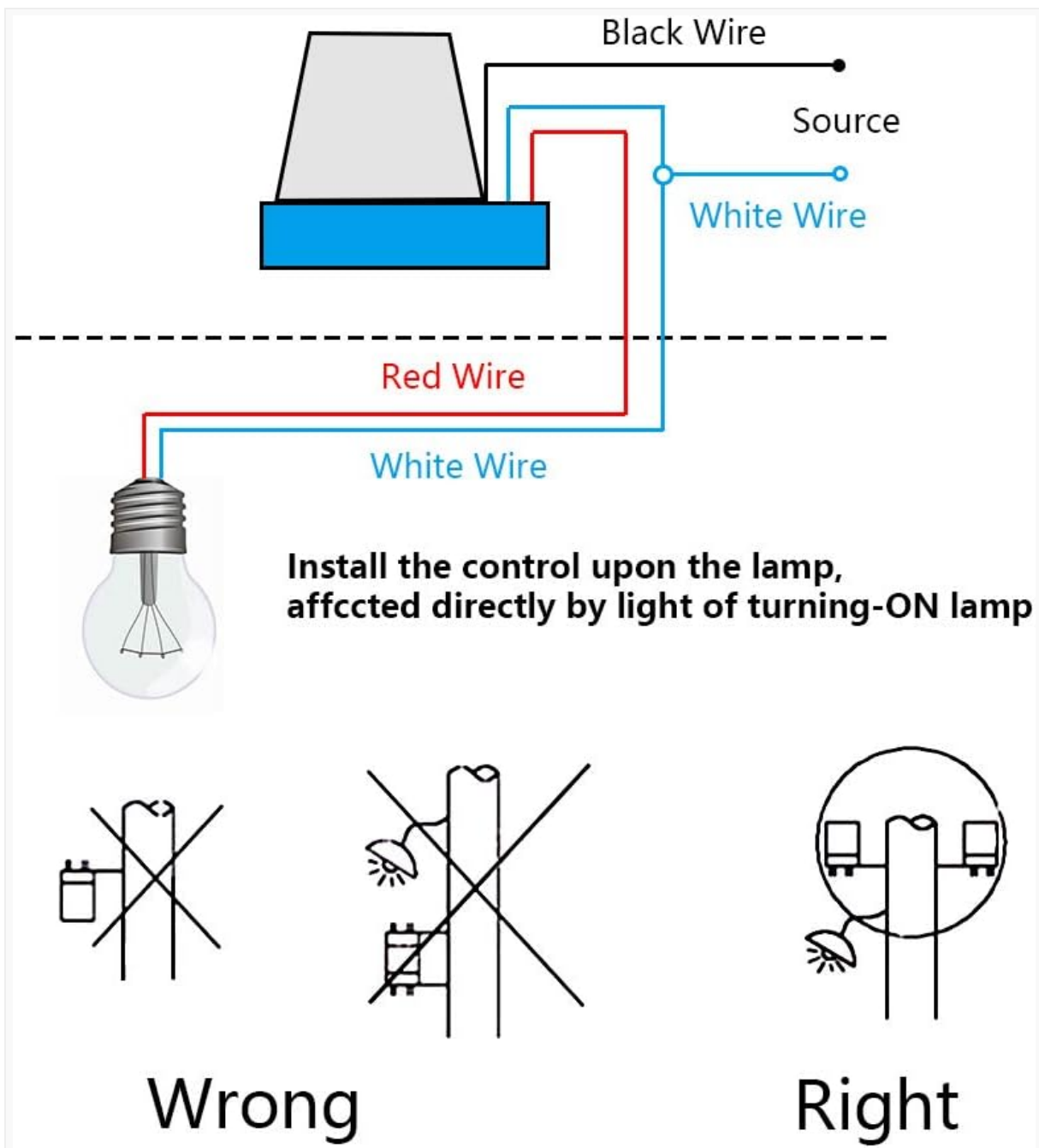


Figure 5: Comprehensive wiring diagram and mounting guidance. The black wire connects to the live source, the white wire connects to the neutral source and the neutral of the lamp, and the red wire connects to the live of the lamp. Ensure the control is installed so it is not directly affected by the light of the turning-ON lamp itself. The diagram also shows correct mounting (sensor facing upwards/outwards) and incorrect mounting (sensor facing downwards or obstructed).

## 5.2 Mounting Location

Proper mounting is crucial for optimal performance:

- Mount the photocell in a location where it receives natural ambient light throughout the day.
- Avoid mounting it where it will be directly exposed to artificial light sources (e.g., the light it controls, car headlights, streetlights) at night, as this can cause erratic operation (cycling on/off).
- Ensure the sensor is not obstructed by eaves, trees, or other objects that could cast shadows on it during the day or block light at dusk/dawn.
- Mount the unit with the sensor facing upwards or outwards to allow for proper light detection and to prevent water accumulation if possible. Some users recommend mounting sensor down to prevent water ingress, but this can affect light detection. Consider sealing the unit with waterproof silicone if mounting in a position prone to water collection.

## 6. OPERATING INSTRUCTIONS

---

Once properly installed and power is restored, the AITRIP Photocell Street Light Switch operates automatically:

- **Dusk:** As ambient light levels decrease at dusk, the photocell sensor will detect the change and activate the connected lighting fixture.
- **Dawn:** As ambient light levels increase at dawn, the photocell sensor will detect the change and deactivate the connected lighting fixture.
- There may be a slight delay (a few seconds to a minute) in switching to prevent false triggers from transient light changes (e.g., car headlights).



Figure 6: Examples of the photocell switch in use, controlling outdoor lighting fixtures.

## 7. MAINTENANCE

---

The AITRIP Photocell Street Light Switch requires minimal maintenance:

- **Cleaning:** Periodically inspect the sensor window for dirt, dust, or debris. Gently clean with a soft, damp cloth if necessary. Do not use abrasive cleaners.
- **Inspection:** Annually check wire connections for tightness and signs of corrosion. Ensure the

mounting bracket is secure.

- **Obstructions:** Ensure no new obstructions (e.g., growing foliage) are blocking the sensor's view of ambient light.

## 8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Lights stay on during the day.	<ul style="list-style-type: none"><li>◦ Sensor is obstructed or in a shaded area.</li><li>◦ Sensor is faulty.</li></ul>	<ul style="list-style-type: none"><li>◦ Relocate the photocell to an area with direct ambient light.</li><li>◦ Clear any obstructions.</li><li>◦ Replace the unit if faulty.</li></ul>
Lights do not turn on at night.	<ul style="list-style-type: none"><li>◦ No power to the unit.</li><li>◦ Loose wiring connections.</li><li>◦ Sensor is exposed to artificial light at night.</li><li>◦ Sensor is faulty.</li><li>◦ Connected light bulb is faulty.</li></ul>	<ul style="list-style-type: none"><li>◦ Check circuit breaker.</li><li>◦ Verify all wiring connections are secure (Black, White, Red).</li><li>◦ Relocate the photocell away from artificial light sources.</li><li>◦ Replace the unit if faulty.</li><li>◦ Test or replace the light bulb.</li></ul>
Lights cycle on/off rapidly.	<ul style="list-style-type: none"><li>◦ Sensor is detecting light from the connected fixture or other nearby artificial light.</li></ul>	<ul style="list-style-type: none"><li>◦ Adjust the mounting position to prevent the sensor from being illuminated by the controlled light or other artificial lights.</li><li>◦ Consider adding a shield to block direct light from the fixture to the sensor.</li></ul>
Water ingress inside the unit.	<ul style="list-style-type: none"><li>◦ Improper mounting allowing water to collect.</li><li>◦ Seal integrity compromised.</li></ul>	<ul style="list-style-type: none"><li>◦ Ensure the unit is mounted to shed water effectively.</li><li>◦ Apply waterproof silicone sealant around seams if necessary, especially if mounting sensor-down.</li><li>◦ Replace the unit if damaged by water.</li></ul>

## 9. WARRANTY AND SUPPORT

AITRIP products are designed for reliability and performance. For specific warranty information, please refer to the product packaging or contact your retailer. If you encounter any issues or require technical assistance, please contact AITRIP customer support through your purchase platform or the official AITRIP website.

Please have your model number (AS-10-110) and purchase date available when contacting support.