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> XNWKF AS-20 Automatic Photocell Street Light Switch AC 110V User Manual

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Model: AS-20 | Brand: XNWKF

1. INTRODUCTION

The XNWKF AS-20 Automatic Photocell Street Light Switch is designed to automatically control lighting fixtures based on ambient light levels. This device detects daylight and darkness, turning connected lights off during the day and on at night, providing energy efficiency and convenience. This manual provides essential information for the safe installation, operation, and maintenance of your AS-20 switch.

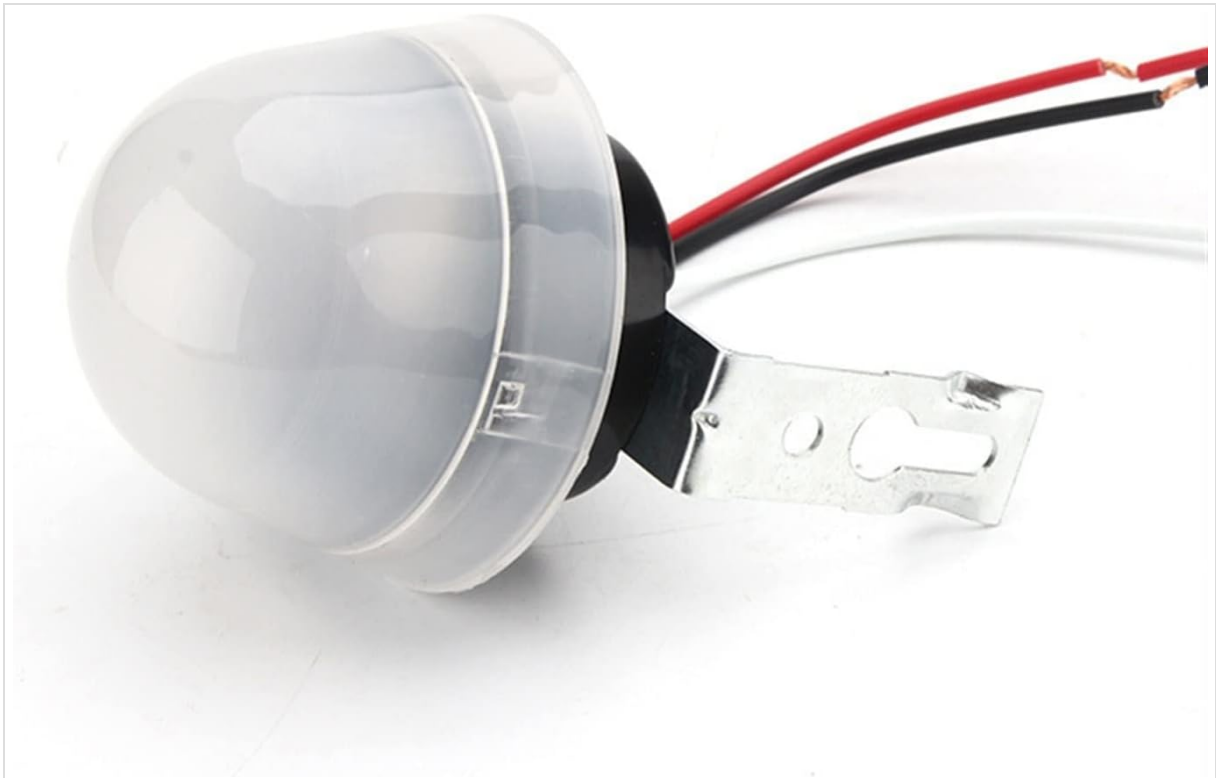


Figure 1: XNWKF AS-20 Automatic Photocell Street Light Switch with wires. This image displays the main unit of the photocell switch, showing its dome-shaped light sensor and the attached electrical wires for connection.

2. PRODUCT FEATURES

- **Automatic Operation:** Turns lights on at dusk and off at dawn.
- **Voltage Compatibility:** Designed for AC 110V systems.
- **High Sensitivity:** Responsive photocell sensor for accurate light detection.
- **Waterproof Design:** Suitable for outdoor use in various weather conditions.
- **Easy Installation:** Compact design with a mounting bracket for straightforward setup.

3. SAFETY INFORMATION

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or property damage.

- **Electrical Hazard:** Installation should only be performed by a qualified electrician or trained personnel.
- **Power Disconnection:** Always disconnect power at the circuit breaker or fuse box before installing, servicing, or removing the switch.
- **Voltage Compatibility:** Ensure the operating voltage of the switch (AC 110V) matches your electrical system.
- **Secure Connections:** All wire connections must be secure and properly insulated to prevent short circuits.
- **Mounting:** Mount the switch securely to prevent it from falling or being damaged.

4. PACKAGE CONTENTS

- 1 x XNWKF AS-20 Automatic Photocell Street Light Switch (AC 110V)

5. INSTALLATION AND SETUP

Proper installation is crucial for the correct functioning and longevity of the photocell switch. Refer to the wiring diagram below for connection details.

1. **Power Off:** Turn off the main power supply to the circuit where the switch will be installed. Verify power is off using a voltage tester.
2. **Mounting Location:** Choose a mounting location that receives natural ambient light and is not obstructed by artificial light sources (e.g., other street lights, windows) that could interfere with its operation. The sensor should face the sky.
3. **Secure Mounting:** Use the integrated mounting bracket to securely attach the switch to a pole, wall, or junction box.
4. **Wiring:** Connect the wires according to the wiring diagram provided in Section 6. Ensure all connections are tight and insulated.
5. **Power On:** Once all connections are secure and verified, restore power to the circuit.
6. **Testing:** Cover the photocell sensor to simulate darkness; the connected light should turn on. Uncover the sensor; the light should turn off after a short delay.

6. WIRING DIAGRAM

The following diagram illustrates the standard wiring connections for the AS-20 photocell switch. Always ensure power is disconnected before making any electrical connections.

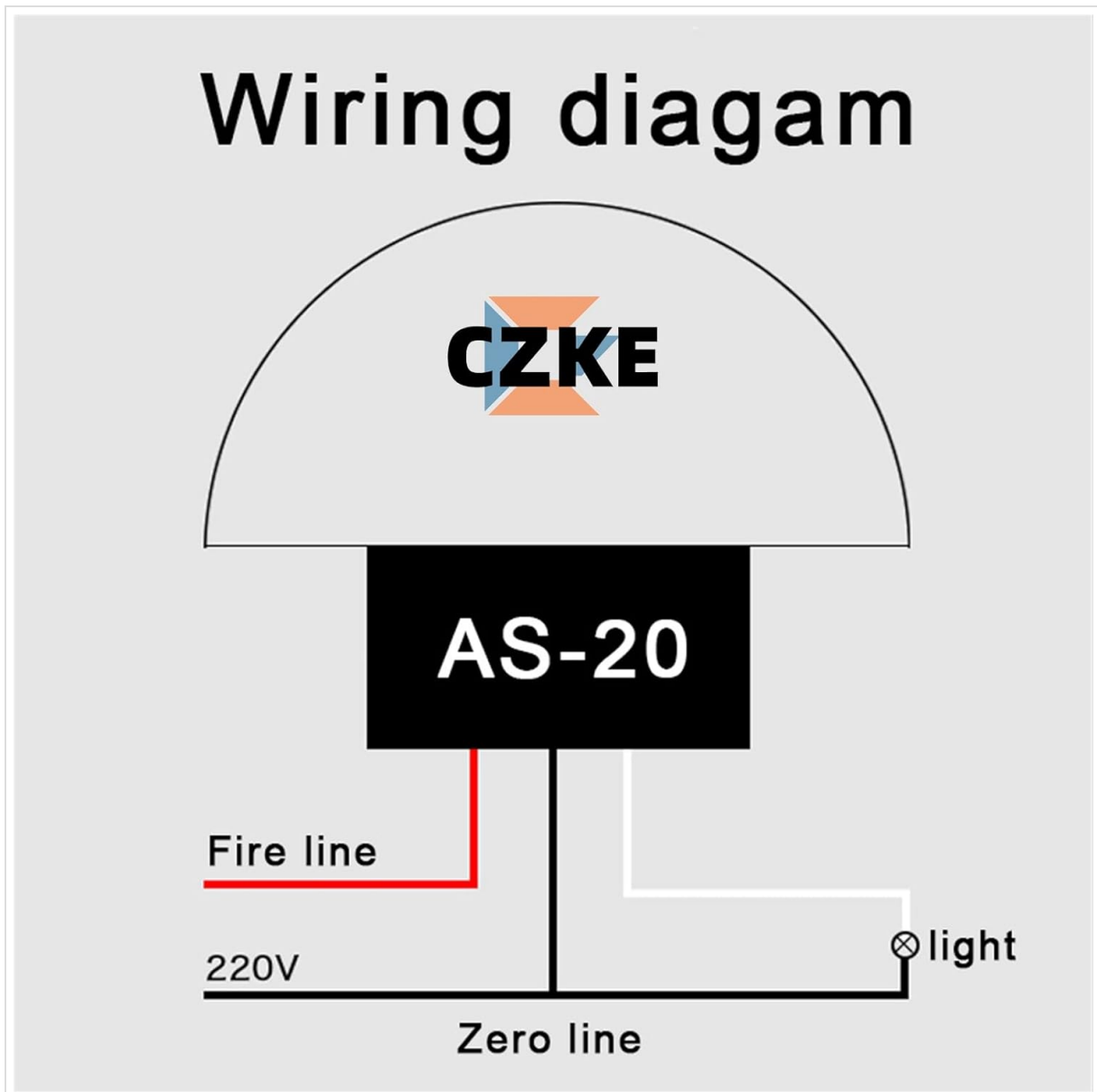


Figure 2: Wiring diagram for the AS-20 photocell switch, illustrating connections for Fire line, Zero line, and Light. The diagram shows a red wire for the 'Fire line' (live), a black wire for the 'Zero line' (neutral), and a white wire connecting to the light fixture.

- **Red Wire:** Connect to the AC 110V Live (Fire) line.
- **Black Wire:** Connect to the AC 110V Neutral (Zero) line.
- **White Wire:** Connect to the Live input of the light fixture. The Neutral input of the light fixture should connect directly to the AC 110V Neutral (Zero) line.

7. OPERATION

Once properly installed and powered, the AS-20 photocell switch operates automatically. It continuously monitors ambient light levels. When the light level drops below a certain threshold (dusk), the switch will activate, turning on the connected lighting fixture. When the light level rises above the threshold (dawn), the switch will deactivate, turning off the lighting fixture. There is typically a short delay (a few seconds to

minutes) to prevent false triggering from transient light changes like car headlights or lightning.

8. MAINTENANCE

The AS-20 photocell switch is designed for minimal maintenance. However, periodic checks can ensure optimal performance:

- **Cleaning:** Periodically clean the photocell sensor dome with a soft, damp cloth to remove dirt, dust, or debris that might obstruct light detection. Do not use abrasive cleaners.
- **Inspection:** Annually inspect the wiring and connections for any signs of wear, corrosion, or damage. Ensure the switch remains securely mounted.
- **Obstructions:** Ensure no new obstructions (e.g., growing foliage, new structures) are blocking the sensor's view of ambient light.

9. TROUBLESHOOTING

If your AS-20 photocell switch is not functioning as expected, consider the following:

- **Light Not Turning On at Dusk:**
 - Check if the power supply to the switch is active.
 - Ensure the photocell sensor is not obstructed by dirt, debris, or external light sources.
 - Verify all wiring connections are correct and secure.
 - Test the connected light fixture independently to ensure it is functional.
- **Light Not Turning Off at Dawn:**
 - Ensure the photocell sensor is receiving sufficient ambient light and is not covered.
 - Check for nearby artificial light sources (e.g., streetlights, porch lights) that might be illuminating the sensor, causing it to remain in 'night' mode.
 - Clean the sensor dome.
- **Light Flickers:**
 - This can be caused by intermittent light sources near the sensor. Relocate the switch or shield it from interfering lights.
 - Check for loose wiring connections.

If problems persist after troubleshooting, consult a qualified electrician.

10. SPECIFICATIONS



Figure 3: Dimensions of the AS-20 photocell switch: 7cm width, 6.5cm height, 11cm total length including bracket. This image provides a visual representation of the physical size of the photocell switch with key measurements.

Parameter	Value
Model	AS-20
Operating Voltage	AC 110V
Rated Current	10A
Operation Mode	Automatic On/Off (Photocell)
Mounting Type	Surface Mount
Connectivity Protocol	X-10 (Standard electrical control)
Item Weight	Approximately 1.1 pounds (0.5 kg)
Dimensions (approx.)	7cm (W) x 6.5cm (H) x 11cm (L, including bracket)

11. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the product packaging or contact your retailer. Keep your purchase receipt as proof of purchase.

