

Tork ZB124

TORK ZB124 Electronic Photocontrol User Manual

Model: ZB124

1. PRODUCT OVERVIEW

The TORK ZB124 Electronic Photocontrol is designed for precise control of lighting fixtures based on ambient light levels. It features advanced Zero-Cross Switching Technology, which minimizes high inrush currents, extending the life of connected LED luminaires. This photocontrol is suitable for a wide range of applications including roadway, area, parking, flood, and security lighting.

Key features include:

- **Long-Life Design:** Enhanced ZERO-CROSS Switching Technology for compatibility with LED luminaires.
- **Broad Compatibility:** Works with LED, CFL, Induction, High Pressure Sodium, and HID lighting fixtures requiring dusk-to-dawn control.
- **Robust Surge Protection:** Enhanced 445 Joule MOV surge device protects against voltage spikes.
- **Corrosion Resistance:** High-quality conformal coating prevents corrosion in harsh environments.
- **Extended Leads:** 12-inch, 16 AWG wires for easier installation.



Figure 1: Front angled view of the TORK ZB124 Electronic Photocontrol.

This image shows the compact black housing of the photocontrol with the light sensor protruding from the front face. The sensor is threaded, indicating it can be mounted through an enclosure.

2. INSTALLATION AND SETUP

Before beginning installation, ensure that power to the circuit is turned off at the breaker to prevent electrical shock. This device is intended for use by qualified personnel only.

2.1. Components Included

- 1 x TORK ZB124 Electronic Photocontrol
- Installation Sheet

2.2. Wiring Instructions

The ZB124 photocontrol comes with 12-inch, 16 AWG wire leads for connection. Follow the standard wiring color code:

- **Black Wire:** Connect to the Line (L) or Hot input.
- **White Wire:** Connect to the Neutral (N) input.
- **Red Wire:** Connect to the Load (L') output, which goes to the lighting fixture.

Ensure all connections are secure and properly insulated. The photocontrol is designed for 105-305V AC operation.



Figure 2: The TORK ZB124 photocontrol showing the black, white, and red wire leads for electrical connection.

This image provides a clear view of the photocontrol unit with its three color-coded wire leads extending from the back, ready for electrical connection.

2.3. Mounting

Mount the photocontrol in a location where its sensor is exposed to natural ambient light and not obstructed by artificial light sources (e.g., the fixture it controls, streetlights, or car headlights) or shadows. The threaded sensor allows for mounting through a knockout in a junction box or fixture housing.

3. OPERATION

The TORK ZB124 Electronic Photocontrol operates automatically, providing dusk-to-dawn control for connected lighting fixtures. It senses the ambient light level and switches the connected load ON when light levels fall below a certain threshold (dusk) and OFF when light levels rise above another threshold (dawn).

- **Turn-On Level:** 1.3-1.7 foot-candles (fc).
- **On/Off Ratio:** Approximately 1.5:1, ensuring stable operation and preventing rapid cycling.

Once installed and powered, the unit will begin its automatic operation. There are no user-adjustable settings on the device itself.

4. SPECIFICATIONS

Specification	Value
Model Number	ZB124
Operating Voltage	105-305V AC
Current Rating	8A LED Rated

Specification	Value
Tungsten Wattage	1000W
Ballast VA	1800VA
Surge Protection	445 Joule MOV
Operation Mode	Automatic (Dusk-to-Dawn)
On Level	1.3-1.7 fc
On/Off Ratio	1.5:1
Wire Leads	12" 16 AWG
Dimensions (L x W x H)	2.06 x 1.3 x 2.25 inches
Item Weight	3.31 ounces
Manufacturer	NSI Industries
UPC	786261789129

5. MAINTENANCE

The TORK ZB124 photocontrol is designed for long-lasting, maintenance-free operation. However, periodic checks can help ensure optimal performance:

- **Sensor Cleanliness:** Ensure the photocontrol's sensor lens is free from dirt, dust, or obstructions that could interfere with light sensing. Clean gently with a soft, damp cloth if necessary.
- **Environmental Factors:** Verify that no new light sources (e.g., newly installed streetlights, security lights) or obstructions (e.g., growing foliage) are affecting the sensor's exposure to natural light.
- **Connections:** Periodically inspect wiring connections for any signs of corrosion or loosening, especially in outdoor or harsh environments. The unit's conformal coating helps prevent internal corrosion.

No internal user-serviceable parts are present. Do not attempt to open the unit.

6. TROUBLESHOOTING

If the TORK ZB124 photocontrol is not functioning as expected, consider the following common issues and solutions:

- **Lights remain ON during the day:**
 - Check if the sensor is obstructed by dirt, debris, or an object casting a shadow.
 - Ensure no artificial light source (e.g., the controlled fixture itself, another nearby light) is shining directly onto the sensor.
 - Verify the wiring connections are correct and secure.

- **Lights remain OFF at night:**

- Confirm that power is supplied to the photocontrol circuit. Check circuit breakers.
- Inspect wiring connections for looseness or damage.
- Ensure the connected lighting fixture is operational.
- Verify the sensor is not exposed to excessive ambient light from streetlights or other sources at night.

- **Lights cycle ON/OFF rapidly:**

- This is often caused by the controlled light fixture reflecting light back onto the sensor. Reposition the photocontrol or shield the sensor from the fixture's light.
- Intermittent power supply issues.

If troubleshooting steps do not resolve the issue, contact a qualified electrician or NSI Industries customer support.

7. WARRANTY AND SUPPORT

The TORK ZB124 Electronic Photocontrol is backed by a **10-Year Warranty** from NSI Industries. This warranty covers defects in materials and workmanship under normal use and service.

For warranty claims, technical support, or further inquiries, please contact NSI Industries directly. Refer to the contact information provided on the product packaging or the official NSI Industries website.

You can also visit the official Tork store on Amazon for more product information and support resources: [Tork Store on Amazon](#).

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question