

## Universal 24097

# Universal 24097 T5 Fluorescent Ballast User Manual

Model: B228PUNV115-D001C (24097)

## 1. INTRODUCTION

This manual provides instructions for the installation, operation, and maintenance of the Universal 24097 T5 Fluorescent Ballast, model B228PUNV115-D001C. This ballast is designed to operate two F28T5 fluorescent lamps with a programmed rapid start method, compatible with 120/277 volt electrical systems. Please read this manual thoroughly before installation and use to ensure safe and efficient operation.

## 2. SAFETY INFORMATION

**WARNING: Risk of electric shock. Disconnect power before installation or servicing.**

- Installation should be performed by a qualified electrician in accordance with national and local electrical codes.
- Ensure the input voltage matches the ballast's rated voltage (120/277V).
- Do not operate the ballast with damaged wiring or if the casing is compromised.
- This device is not intended for use with dimmers unless specifically rated for dimming applications.
- Keep away from water and damp environments.

## 3. SETUP AND INSTALLATION

The Universal 24097 ballast is designed for easy integration into fluorescent lighting fixtures. Follow these steps for proper installation:

1. **Disconnect Power:** Before beginning any work, ensure the main power supply to the fixture is turned off at the circuit breaker. Verify with a voltage tester.
2. **Remove Old Ballast (if applicable):** Carefully disconnect and remove the existing ballast from the fixture. Note the wiring configuration.
3. **Mount New Ballast:** Securely mount the Universal 24097 ballast inside the fixture using appropriate screws or mounting hardware. Ensure it is firmly in place to prevent vibration.

#### 4. Wiring Connections:

Refer to the wiring diagram provided on the ballast label for correct connections. Typically, this involves:

- Connecting the **black** wire to the 120V or 277V (line) input.
- Connecting the **white** wire to the neutral input.
- Connecting the **red** and **blue** wires to the lamp sockets as indicated for the two F28T5 lamps.
- Ensure all connections are secure and insulated with wire nuts.



*Figure 1: Universal 24097 Fluorescent Ballast. This image shows the ballast unit, typically with a wiring diagram label visible on its surface, indicating connection points for power input and lamp outputs.*

5. **Install Lamps:** Insert the two F28T5 fluorescent lamps into their respective sockets.
6. **Restore Power:** Once all connections are secure and lamps are installed, restore power at the circuit breaker.

## 4. OPERATING INSTRUCTIONS

The Universal 24097 ballast operates automatically once power is supplied. It utilizes a programmed rapid start method, which provides a brief preheat to the lamp cathodes before ignition, extending lamp life and ensuring flicker-free starting.

- Upon power-up, the ballast will initiate the lamps.
- If lamps do not light, ensure they are properly seated and power is supplied.
- This ballast is designed for continuous operation within its specified temperature range.

## 5. MAINTENANCE

The Universal 24097 ballast is designed for long-term, maintenance-free operation. However, periodic checks of the lighting fixture are recommended.

- **Cleaning:** Ensure the ballast and fixture remain free of dust and debris to prevent overheating. Disconnect power before cleaning.
- **Lamp Replacement:** When replacing lamps, always disconnect power first. Replace both lamps simultaneously for optimal performance and ballast life. Use only F28T5 lamps.
- **Wiring Inspection:** Periodically inspect wiring for any signs of wear, fraying, or loose connections. Address any issues immediately after disconnecting power.

## 6. TROUBLESHOOTING

If you encounter issues with your Universal 24097 ballast, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Lamps do not light.	No power to fixture. Loose wiring connections. Defective lamps. Defective ballast.	Check circuit breaker and wall switch. Verify all wiring connections are secure (power off). Replace lamps with new F28T5 lamps. If lamps are new and wiring is correct, replace ballast.
Lamps flicker or hum.	Incorrect lamp type. Loose lamp connections. Aging lamps. Ballast nearing end of life.	Ensure F28T5 lamps are used. Reseat lamps firmly in sockets. Replace lamps. Consider replacing ballast.
Ballast is hot to the touch.	Normal operating temperature. Poor ventilation. Overloaded circuit.	Some heat is normal. Ensure fixture has adequate airflow. Consult an electrician if overheating persists or is excessive.

## 7. SPECIFICATIONS

- **Model:** B228PUNV115-D001C (24097)
- **Brand:** Universal
- **Lamp Type:** F28T5 Fluorescent
- **Number of Lamps:** 2
- **Input Voltage:** 120/277V AC
- **Starting Method:** Programmed Rapid Start
- **Manufacturer Part Number:** 24097
- **ASIN:** B0070FFQG6

- **Date First Available:** January 22, 2012

## 8. WARRANTY AND SUPPORT

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For warranty information and technical support, please refer to the official Universal Lighting Technologies website or contact their customer service department. Keep your purchase receipt for warranty claims.

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