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LEDUPDATES KVF-24300-TDWJN

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Model: KVF-24300-TDWJN

1. INTRODUCTION

This manual provides detailed instructions for the safe installation, operation, and maintenance of your LEDUPDATES 24V 300W Triac Dimmable LED Driver (Model: KVF-24300-TDWJN). This UL Listed constant voltage power supply is designed to convert 110V-277V AC input to a stable 24V DC output, enabling smooth dimming of compatible LED lighting fixtures with standard AC wall dimmers.

Please read this manual thoroughly before installation and retain it for future reference. Proper installation and adherence to safety guidelines are crucial for optimal performance and longevity of the product.

2. SAFETY INFORMATION

WARNING: Risk of Electric Shock. Improper installation can lead to serious injury or death. All electrical work should be performed by a qualified electrician in accordance with national and local electrical codes.

- Disconnect power at the circuit breaker before installation or servicing.
- Ensure the input voltage (110-277V AC) and output voltage (24V DC) are compatible with your electrical system and LED fixtures.
- Do not exceed the maximum output power of 300W. Overloading the driver can cause damage and fire hazards.
- This driver is suitable for dry, damp, and wet locations. Ensure proper sealing and protection for outdoor or wet applications.
- Maintain a minimum 10% load on the driver for optimal dimming performance and to prevent buzzing or humming.
- Ensure proper grounding as per electrical codes.
- Do not open or modify the driver casing. There are no user-serviceable parts inside.

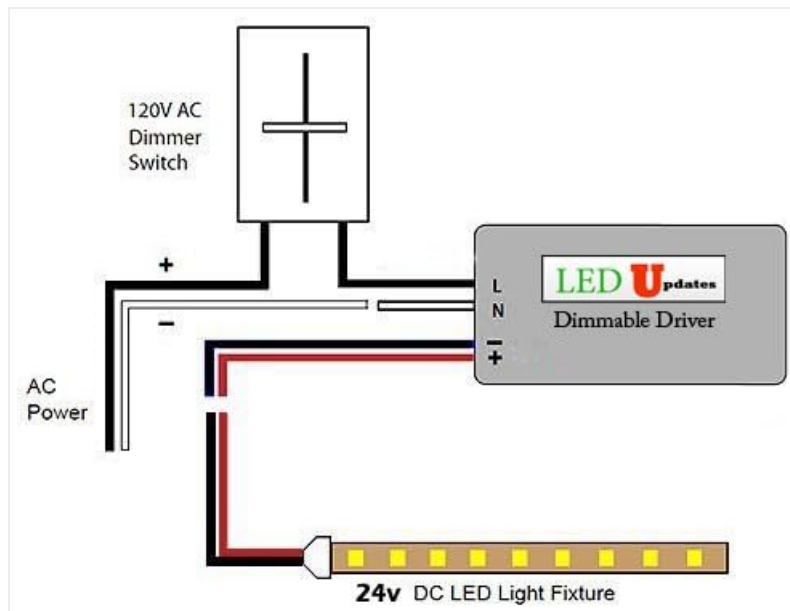


Image: UL Listed certification logo, indicating compliance with safety standards.

3. PRODUCT FEATURES

- **UL Listed:** Certified for high quality and safety standards.
- **Wide Input Voltage:** Supports 110V - 277V AC input.
- **Constant Voltage Output:** Provides stable 24V DC output.
- **Triac Dimmable:** Compatible with Lutron, Leviton, and most AC wall dimmers (Forward and Reverse phase).
- **Smooth Dimming:** Engineered for flicker-free and quiet operation.
- **Minimum Load Requirement:** Requires only 10% minimum load to eliminate buzzing and humming noise.
- **Versatile Application:** Suitable for 24V LED strip lights, LED puck lights, module lights, and other low voltage 24V LED applications.
- **Easy Installation:** Designed for straightforward mounting and hard-wire installation.

4. SPECIFICATIONS



Image: Top view of the LED driver, highlighting the product label with detailed specifications and wiring instructions.

Parameter	Value
Model	KVF-24300-TDWJN
Input Voltage	110-277V AC, 3.4A max, 50/60Hz
Output Voltage	24V DC
Output Power	300W
Output Current	12.5A
Dimming Type	Triac (Forward and Reverse phase, ELV, MLV)
Minimum Load	10%
Certifications	UL Listed, Class P, SELV, Type HL, RoHS, Conforms UL 8750, Conforms CAN/CSA-C22.2 NO.250.13, Conforms FCC
Mounting Type	Wall Mount, Hard Wire Installation
Operating Environment	Suitable for Dry, Damp, and Wet Locations

5. SETUP AND INSTALLATION

Before beginning installation, ensure all power is disconnected at the circuit breaker. This device requires hard-wire installation by a qualified professional.

5.1 Pre-Installation Checklist

- Verify that the total wattage of your 24V LED fixtures does not exceed 300W.
- Confirm that your AC wall dimmer is a Triac (forward or reverse phase) type and compatible with LED drivers.
- Ensure you have appropriate wiring (rated for the current and voltage) and connectors.
- Select a suitable mounting location that allows for adequate ventilation and access for wiring.

5.2 Wiring Diagram



Image: Simplified wiring diagram showing connections from AC power, through a 120V AC dimmer switch, to the LEDUPDATES Dimmable Driver, and then to a 24V DC LED light fixture.

5.3 Wiring Instructions

1. Input Wiring (AC Side):

- Connect the **Black (AC L)** wire from the driver to the Live/Hot wire from your AC power source (or dimmer output).
- Connect the **White (AC N)** wire from the driver to the Neutral wire from your AC power source.
- Connect the **Green (Ground)** wire from the driver to the Earth Ground wire.

2. Output Wiring (DC Side):

- Connect the **Red (LED +)** wire from the driver to the positive (+) input of your 24V DC LED light fixture.
- Connect the **Black (LED -)** wire from the driver to the negative (-) input of your 24V DC LED light fixture.

3. Ensure all connections are secure and insulated. Use appropriate wire nuts or connectors.



Image: Close-up view of the LED driver's wiring compartments, showing properly connected AC input and DC output wires.

5.4 Mounting

- Mount the driver securely using the integrated mounting tabs.
- Ensure the mounting surface is stable and can support the weight of the driver.
- Allow for adequate air circulation around the driver to prevent overheating. Do not enclose in a sealed, unventilated space.

6. OPERATING INSTRUCTIONS

Once the driver is correctly installed and wired, restore power at the circuit breaker.

- The connected LED lights should illuminate.
- Use your compatible AC wall dimmer to adjust the brightness of the LED lights.
- For optimal dimming performance and to avoid potential buzzing or flickering, ensure the total load of your LED fixtures is at least 10% of the driver's maximum capacity (300W * 10% = 30W).
- The driver is designed for smooth dimming across its range.

7. MAINTENANCE

- The LEDUPDATES Dimmable LED Driver is designed for maintenance-free operation.
- Periodically inspect the wiring connections to ensure they remain secure.
- Keep the driver free from dust and debris to ensure proper heat dissipation. Clean with a dry, soft cloth if necessary.
- Do not use liquid cleaners or solvents.
- Ensure the operating environment remains within the specified temperature and humidity ranges.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
LED lights do not turn on.	<ul style="list-style-type: none"> No power to the driver. Incorrect wiring. Faulty LED fixture. Driver failure. 	<ul style="list-style-type: none"> Check circuit breaker and power connections. Verify all input and output wires are correctly connected as per Section 5.3. Test LED fixture with a known working power supply. Contact customer support if all other checks fail.
LED lights flicker or dim erratically.	<ul style="list-style-type: none"> Incompatible dimmer switch. Load is below 10% minimum. Loose wiring connection. 	<ul style="list-style-type: none"> Ensure dimmer is a compatible Triac type. Increase the load by adding more LED fixtures (up to 300W total) or ensure existing load meets 30W minimum. Check all wiring connections for tightness.
Buzzing or humming noise from the driver.	<ul style="list-style-type: none"> Load is below 10% minimum. Incompatible dimmer. 	<ul style="list-style-type: none"> Ensure the total LED load is at least 30W. Verify dimmer compatibility.
Driver is hot to the touch.	<ul style="list-style-type: none"> Overloaded driver. Insufficient ventilation. 	<ul style="list-style-type: none"> Reduce the total wattage of connected LED fixtures to below 300W. Ensure the driver is mounted in a location with adequate airflow.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact LEDUPDATES customer service. Keep your purchase receipt and product model number (KVF-24300-TDWJN) handy when contacting support.

Contact information can typically be found on the product packaging or the official LEDUPDATES website.