TDK-Lambda DPP15-24

DPP15-24 DIN Rail Power Supply User Manual

Model: DPP15-24 | Brand: TDK-Lambda

1. Introduction

This manual provides essential information for the safe and efficient operation of the TDK-Lambda DPP15-24 DIN Rail Power Supply. The DPP15-24 is a compact, high-efficiency power supply designed for industrial applications, providing a stable 24V DC output with an adjustable voltage range, capable of delivering up to 0.63A (15W) of power. It accepts a wide input voltage range of 85-264VAC or 90-375VDC, making it suitable for various global power systems.

2. Safety Information

Please read all safety instructions carefully before installation and operation. Failure to comply with these instructions may result in electric shock, fire, or damage to the unit.

- **Qualified Personnel:** Installation and maintenance should only be performed by qualified personnel.
- **Power Disconnection:** Always disconnect the AC/DC input power before making any connections or adjustments.
- **Ventilation:** Ensure adequate ventilation around the unit to prevent overheating. Do not block ventilation holes.
- **Environment:** Do not operate the unit in wet or excessively dusty environments. Avoid exposure to direct sunlight or extreme temperatures.
- **Grounding:** Ensure proper grounding of the unit as per local electrical codes.

3. Package Contents

Verify that all items are present in the package:

- 1 x TDK-Lambda DPP15-24 DIN Rail Power Supply
- 1 x User Manual (this document)

4. Setup and Installation

The DPP15-24 is designed for mounting on a standard DIN rail (TS-35/7.5 or TS-35/15).

4.1 Mounting

1. Ensure the DIN rail is securely fastened within the enclosure.
2. Hook the top edge of the power supply onto the DIN rail.
3. Push the bottom edge of the power supply firmly until it clicks into place on the DIN rail.
4. Verify the unit is securely mounted and does not wobble.

4.2 Wiring Connections

Refer to the terminal block labels on the unit for correct wiring. Use appropriate wire gauges for the current requirements.

Image: Front view of the TDK-Lambda DPP15-24 DIN Rail Power Supply, highlighting the input terminals (L, N, Earth) at the bottom and the output terminals (+V, -V) at the top. An adjustment potentiometer for output voltage is also visible.

- **Input (AC/DC):** Connect the AC Line (L), Neutral (N), and Earth (PE) wires to the corresponding input terminals. For DC input, connect the positive DC to 'L' and negative DC to 'N'.
- **Output (DC):** Connect the positive (+) load wire to the '+V' terminal and the negative (-) load wire to the '-V' terminal.

5. Operating Instructions

5.1 Powering On

After all connections are securely made and verified, apply power to the input terminals. The green 'DC OK' LED indicator on the front panel will illuminate, indicating that the output voltage is within the specified range.

5.2 Output Voltage Adjustment

The output voltage can be finely adjusted using the potentiometer located on the front panel. Use a small, insulated screwdriver to turn the potentiometer clockwise to increase the voltage and counter-clockwise to decrease it. Always monitor the output voltage with a multimeter during adjustment to ensure it remains within the safe operating limits of your connected devices.

6. Maintenance

The DPP15-24 power supply is designed for long-term, reliable operation with minimal maintenance. However, periodic checks are recommended.

- **Cleaning:** Ensure the ventilation openings are free from dust and debris. If cleaning is necessary, disconnect power and use a soft, dry cloth. Do not use liquid cleaners.
- **Connections:** Periodically check all wiring connections for tightness. Loose connections can lead to poor performance or safety hazards.
- **Environment:** Verify that the operating environment remains within the specified temperature and humidity ranges.

7. Troubleshooting

If you encounter issues with your DPP15-24 power supply, refer to the following table:

Problem	Possible Cause	Solution
No output voltage / DC OK LED off	No input power; Incorrect wiring; Internal fault; Overload/Short circuit	Check input power source and connections; Verify wiring polarity; Disconnect load to check for short circuit; If problem persists, contact support.
Output voltage unstable or incorrect	Load too high; Poor connections; Adjustment potentiometer setting	Reduce load; Check and tighten all connections; Adjust output voltage potentiometer carefully.
Unit is hot to the touch	Insufficient ventilation; Overload	Ensure adequate airflow around the unit; Reduce load if it exceeds specifications.

If the issue cannot be resolved using the troubleshooting guide, do not attempt to repair the unit yourself. Contact qualified service personnel or TDK-Lambda support.

8. Specifications

Parameter	Value
Model	DPP15-24
Input Voltage Range	85-264VAC (1-Phase) / 90-375VDC
Output Voltage	24VDC (Adjustable)
Output Current	0.63 Amps
Output Power	15 Watts
Efficiency	Typically >80% (refer to datasheet for exact values)
Operating Temperature	Refer to product datasheet
Mounting	DIN Rail (TS-35/7.5 or TS-35/15)

9. Warranty and Support

Specific warranty information for the TDK-Lambda DPP15-24 is typically provided with the product packaging or available on the official TDK-Lambda website. Please refer to these resources for detailed warranty terms and conditions.

For technical support, service, or further inquiries, please contact your local TDK-Lambda distributor or visit the official TDK-Lambda website for contact information.