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## TRACO POWER TSP 600-148

# TRACO POWER TSP 600-148 DIN Rail Power Supply

## USER MANUAL

### 1. Introduction

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This manual provides essential information for the safe and efficient installation, operation, and maintenance of the TRACO POWER TSP 600-148 DIN Rail Power Supply. Please read this manual thoroughly before installation and keep it for future reference. The TSP 600-148 is a 600W, 48VDC, 12.5A enclosed power supply designed for DIN rail mounting, featuring an adjustable output voltage and a wide input voltage range of 85-132VAC or 187-264VAC.

### 2. Safety Instructions

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**WARNING: Risk of electric shock and energy hazard. Improper installation or operation may cause serious injury or death.**

- Installation and maintenance must be performed by qualified personnel only.
- Ensure the main power is disconnected before any installation, wiring, or maintenance work.
- Do not open the unit. There are no user-serviceable parts inside.
- Protect the unit from moisture, dust, and direct sunlight.
- Ensure proper ventilation to prevent overheating.
- Connect the protective earth (PE) terminal to the safety ground.

### 3. Setup and Installation

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The TSP 600-148 is designed for mounting on a standard DIN rail (TS35/7.5 or TS35/15).

#### 3.1 Mounting

1. Ensure adequate clearance around the unit for proper airflow (typically 10-15 cm above/below and 5 cm on sides).
2. Hook the top edge of the power supply onto the DIN rail.
3. Push the bottom edge firmly until it snaps into place.
4. Verify that the unit is securely fastened to the DIN rail.

#### 3.2 Wiring Connections

Refer to the terminal block markings on the unit for correct connections. Use appropriate wire gauges for the current ratings.

- **Input (AC):** Connect the AC input lines (L, N) and Protective Earth (PE) to the designated input terminals. The unit supports 85-132VAC or 187-264VAC. Ensure the correct input voltage range is selected if a switch is present (refer to unit labeling).
- **Output (DC):** Connect the DC load to the output terminals (+V, -V). Observe correct polarity.
- **Grounding:** Ensure the PE terminal is properly connected to a reliable safety ground.



Figure 1: Front view of the TRACO POWER TSP 600-148 DIN Rail Power Supply, showing input and output terminals, and adjustment potentiometer.

## 4. Operating Instructions

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### 4.1 Initial Power-Up

1. Double-check all wiring connections for correctness and security.
2. Apply AC input power to the unit.
3. Observe the status indicator (e.g., LED) on the unit. A green LED typically indicates normal operation.

### 4.2 Output Voltage Adjustment

The TSP 600-148 features an adjustable output voltage. A potentiometer is typically located on the front panel for this purpose.

- Using a suitable screwdriver, carefully turn the potentiometer clockwise to increase the output voltage or counter-clockwise to decrease it.
- Monitor the output voltage with a multimeter to ensure it is set to the required level for your application.
- Do not exceed the specified output voltage range to prevent damage to the power supply or connected equipment.

### 4.3 Load Considerations

Ensure that the total current drawn by the connected load does not exceed the power supply's maximum output current (12.5A for 48VDC). Overloading the power supply can lead to reduced lifespan or failure.

## 5. Maintenance

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The TRACO POWER TSP 600-148 is designed for reliable operation and requires minimal maintenance.

- **Cleaning:** Periodically inspect the unit for dust accumulation, especially around ventilation openings. Disconnect power and use a soft, dry brush or compressed air to clean. Do not use liquid cleaners.
- **Inspection:** Regularly check wiring connections for tightness and signs of damage. Ensure the ambient temperature remains within the specified operating range.
- No internal maintenance is required or recommended.

## 6. Troubleshooting

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If the power supply is not functioning as expected, perform the following checks:

Problem	Possible Cause	Solution
No output voltage / No LED indicator	No input power Incorrect wiring Internal fault	Check AC input supply and circuit breaker. Verify input and output wiring connections. If problem persists, contact TRACO POWER support.
Output voltage too low or unstable	Overload condition Incorrect voltage adjustment Input voltage outside range	Reduce load current. Adjust output voltage potentiometer. Verify input voltage is within 85-132VAC or 187-264VAC.
Unit is hot	Insufficient ventilation Overload condition	Ensure proper clearance around the unit. Reduce load current.

## 7. Specifications

Parameter	Value
Model	TSP 600-148
Power Output	600W
Output Voltage	48VDC (Adjustable)
Output Current	12.5A
Input Voltage Range	85-132VAC / 187-264VAC
Mounting	DIN Rail
Enclosure Type	Enclosed
Manufacturer	TRACO POWER
ASIN	B08DPRLTWL
UPC	091128535208

## 8. Warranty and Support

TRACO POWER products are manufactured to high-quality standards. For warranty information and technical support, please refer to the official TRACO POWER website or contact your local distributor. Keep your purchase receipt for warranty claims.