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FORYON TDGC2-5KVA

FORYON TDGC2-5KVA Voltage Regulator User Manual

Model: TDGC2-5KVA

Introduction Safety Instructions Product Overview Setup Operating Maintenance Troubleshooting Specifications Warranty & Support

1. Introduction

This manual provides essential instructions for the safe and efficient operation of your FORYON TDGC2-5KVA Voltage Regulator. This device is a single-phase 220V AC contact autotransformer designed to provide a variable output voltage from 0-250V. Please read this manual thoroughly before installation and use, and retain it for future reference.

2. Safety Instructions

WARNING: Failure to follow these safety instructions may result in electric shock, fire, or serious injury.

- Always ensure the device is disconnected from the power source before performing any installation, maintenance, or troubleshooting.
- Do not operate the device in wet or damp conditions.
- Ensure proper ventilation around the unit to prevent overheating.
- Do not exceed the rated power capacity of the voltage regulator (5000W).
- All electrical connections must be made by a qualified electrician and comply with local electrical codes.
- Keep children and unauthorized personnel away from the device during operation.
- Do not open the casing of the device unless specifically instructed by a qualified technician. There are no user-serviceable parts inside.
- Ensure the input voltage matches the specified requirements (Single phase 220V).

3. Product Overview

The FORYON TDGC2-5KVA is a robust voltage regulator designed for precise voltage control. Key components include:

- **Voltage Meter:** Displays the output voltage.
- **Output Terminals:** For connecting the load.

- **Input Terminals:** For connecting the power source.
- **Fuse:** Provides overcurrent protection.
- **Voltage Adjustment Knob:** Used to precisely set the desired output voltage.
- **Carrying Handles:** For safe transportation.



Figure 1: Front panel of the TDGC2-5KVA Voltage Regulator. This image shows the main control panel with the voltage meter, input and output terminals, and the fuse holder. The meter indicates voltage levels, and the terminals are clearly labeled for connection.



Figure 2: Top view of the TDGC2-5KVA Voltage Regulator. This image highlights the large rotary knob used for adjusting the output voltage, along with its corresponding scale marked from 0 to 250V.



Figure 3: Angled view of the TDGC2-5KVA Voltage Regulator. This perspective shows the robust casing, ventilation grilles on the sides for heat dissipation, and the integrated carrying handles.

4. Setup

1. **Unpacking:** Carefully remove the voltage regulator from its packaging. Inspect for any signs of damage during transit.
2. **Placement:** Place the unit on a stable, level surface in a well-ventilated area, away from direct sunlight, heat sources, and moisture. Ensure there is adequate space around the unit for air circulation.
3. **Input Connection:**
    - Ensure the voltage adjustment knob is set to the minimum (0V) position.
    - Connect the single-phase 220V AC power supply to the input terminals labeled " " (Input). Ensure correct polarity if specified.
    - Use appropriate gauge wiring for the input connection, capable of handling the maximum current.
4. **Output Connection:**

- Connect your load device to the output terminals labeled " " (Output).
- Ensure the load's power consumption does not exceed the regulator's 5000W capacity.
- Verify all connections are secure and tight to prevent arcing or loose contacts.

5. Operating Instructions

1. **Initial Check:** Before powering on, double-check all input and output connections. Ensure the voltage adjustment knob is at its minimum (0V) setting.
2. **Power On:** Connect the input power cord to the main power supply. The voltage meter should illuminate or show a reading if the input is present.
3. **Adjusting Output Voltage:** Slowly rotate the voltage adjustment knob clockwise to increase the output voltage. Observe the voltage meter to reach your desired output voltage.
4. **Monitoring:** Continuously monitor the voltage meter during operation to ensure the output voltage remains stable and at the desired level.
5. **Power Off:** To turn off the unit, first rotate the voltage adjustment knob counter-clockwise to the minimum (0V) position. Then, disconnect the input power from the main supply.

Important: Do not adjust the voltage rapidly. Make slow, controlled adjustments to prevent sudden voltage spikes or drops that could damage connected equipment.

6. Maintenance

Regular maintenance ensures the longevity and reliable operation of your voltage regulator.

- **Cleaning:** Periodically clean the exterior of the unit with a soft, dry cloth. Do not use liquid cleaners or solvents. Ensure ventilation grilles are free from dust and debris.
- **Connection Checks:** Regularly inspect all input and output connections for tightness and signs of wear or corrosion. Tighten any loose connections.
- **Fuse Replacement:** If the unit stops functioning, check the fuse.
  - Disconnect the unit from the power supply.
  - Carefully remove the fuse from its holder.
  - Replace it with a fuse of the exact same type and rating. Using an incorrect fuse can cause damage or fire.
- **Storage:** If storing the unit for an extended period, ensure it is clean, dry, and stored in a cool, well-ventilated area.

Note: There are no user-serviceable parts inside the unit other than the fuse. For any internal issues, contact qualified service personnel.

7. Troubleshooting

Problem	Possible Cause	Solution
No output voltage / Unit not powering on	• No input power • Blown fuse • Loose connections • Internal fault	• Check main power supply and input cable. • Replace fuse with one of the same rating (refer to Maintenance section). • Verify all input and output connections are secure. • Contact qualified service personnel.

Problem	Possible Cause	Solution
Output voltage unstable or fluctuating	• Unstable input voltage • Overload • Loose internal connections	• Check stability of main power supply. • Reduce load connected to the regulator. • Contact qualified service personnel.
Unit overheating	• Insufficient ventilation • Overload • Internal fault	• Ensure adequate airflow around the unit. Clear any obstructions. • Reduce load connected to the regulator. • Immediately power off and contact qualified service personnel.

If the problem persists after attempting the above solutions, discontinue use and contact customer support.

8. Specifications

Model	TDGC2-5KVA
Input Voltage	Single phase 220V AC
Output Voltage	Single phase 0-250V AC
Power Capacity	5000W (5KVA)
Working Frequency	50Hz/60Hz
Efficiency	>90%
Wave Distortion	Without additional distortion
Electrical Strength	2000V/min
Insulation Resistance	>5MΩ
Temperature Rise	Less than 60°C
Item Weight	100 Grams (Note: This seems unusually low for a 5KVA transformer, user should verify actual weight upon receipt.)

9. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact your retailer. FORYON products are manufactured to high-quality standards, and support is available for any operational issues or defects.

Customer Support: If you encounter any problems or have questions regarding the FORYON TDGC2-5KVA Voltage Regulator, please contact the seller or manufacturer's customer service department. Provide your model number (TDGC2-5KVA) and purchase details when seeking assistance.

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