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Diversitech T2404

Diversitech T2404 Control Transformer User Manual

Model: T2404 | Brand: Diversitech

1. INTRODUCTION

The Diversitech T2404 is a 40VA control transformer designed to provide reliable power for low-voltage control circuits. It features multiple primary voltage taps (120V, 208V, 240V AC) and a single 24V AC secondary output, making it suitable for various applications, commonly found in HVAC systems. This manual outlines the proper procedures for installation, operation, and maintenance to ensure safe and efficient performance of the unit.



Image of the Diversitech T2404 control transformer, showing its compact design and terminal connections.

2. SAFETY INFORMATION

Read and understand all instructions before installing or operating this transformer. Failure to follow these instructions may result in electric shock, fire, or property damage.

- **Disconnect Power:** Always disconnect power at the main service panel before installing, servicing, or removing the transformer.
- **Qualified Personnel:** Installation and servicing should only be performed by qualified, licensed electricians or HVAC technicians.
- **Local Codes:** All wiring must comply with national and local electrical codes.
- **Proper Grounding:** Ensure the transformer is properly grounded according to local electrical codes.
- **Voltage Verification:** Verify input and output voltages with a multimeter before connecting any loads.
- **Overload Protection:** Do not exceed the transformer's 40VA rating. Overloading can cause overheating and damage.

3. TECHNICAL SPECIFICATIONS

Specification	Value
Model	T2404
VA Rating	40VA
Primary Voltage	120V AC / 208V AC / 240V AC
Secondary Voltage	24V AC
Frequency	50/60 Hz
Manufacturer	Diversitech
ASIN	B01N44GFF7

4. INSTALLATION INSTRUCTIONS

Follow these steps for proper installation. Always ensure power is disconnected before beginning any work.

1. **Power Disconnection:** Turn off the main power supply to the circuit where the transformer will be installed. Verify with a voltage tester that power is off.
2. **Mounting:** Mount the transformer securely in a suitable enclosure or location, ensuring adequate ventilation and protection from moisture and physical damage.
3. **Primary Wiring:** Connect the appropriate primary voltage wires (120V, 208V, or 240V AC) to the designated primary terminals on the transformer. Refer to the transformer's labeling for specific terminal identification. Ensure connections are tight and secure.
4. **Secondary Wiring:** Connect the low-voltage control circuit wires to the 24V AC secondary terminals.
5. **Grounding:** Connect the transformer's ground terminal to a proper earth ground according to local electrical codes.
6. **Verification:** Double-check all wiring connections for correctness and tightness. Ensure no bare wires are exposed.

7. **Restore Power:** Once all connections are verified and secure, restore power to the circuit.

Note: If you are unsure about any part of the installation process, consult a qualified electrician or HVAC technician.

5. OPERATION

The Diversitech T2404 transformer operates by converting a higher primary voltage (120V, 208V, or 240V AC) to a lower, constant 24V AC secondary voltage. Once properly installed and powered, it will continuously supply 24V AC to the connected low-voltage control circuit, provided the total load does not exceed its 40VA rating. The transformer is designed for continuous duty within its specified parameters.

6. MAINTENANCE

The T2404 transformer is designed for reliable, long-term operation with minimal maintenance. However, periodic checks can help ensure optimal performance and longevity.

- **Visual Inspection:** Periodically inspect the transformer for any signs of physical damage, corrosion, or loose connections.
- **Cleanliness:** Keep the transformer free from dust, dirt, and debris, which can impede heat dissipation.
- **Ventilation:** Ensure that the installation area maintains adequate ventilation to prevent overheating.
- **Connection Check:** Occasionally check terminal connections to ensure they remain tight and secure.

7. TROUBLESHOOTING

If the transformer is not functioning as expected, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No 24V AC output	<ul style="list-style-type: none">• No primary input power• Incorrect primary voltage connection• Loose wiring connections• Internal transformer failure	<ul style="list-style-type: none">• Check circuit breaker/fuse for primary power• Verify primary wiring matches supply voltage• Tighten all terminal connections• Replace transformer if internal failure is confirmed
Low 24V AC output	<ul style="list-style-type: none">• Transformer overloaded• Loose wiring connections• Faulty connected device	<ul style="list-style-type: none">• Reduce load to below 40VA• Tighten all terminal connections• Test connected devices for faults

Problem	Possible Cause	Solution
Transformer overheating	<ul style="list-style-type: none">• Transformer overloaded• Insufficient ventilation• Short circuit in secondary circuit	<ul style="list-style-type: none">• Reduce load to below 40VA• Ensure proper airflow around transformer• Check secondary circuit for shorts

If troubleshooting steps do not resolve the issue, contact a qualified technician.

8. WARRANTY AND SUPPORT

For specific warranty information regarding the Diversitech T2404 transformer, please refer to the official Diversitech website or contact their customer support directly. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase.

For technical assistance, product inquiries, or to locate authorized service providers, please visit the [Diversitech Store on Amazon](#) or the manufacturer's official website.