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› Dayton 31EH06 Control Transformer Instruction Manual

DAYTON 31EH06

Dayton 31EH06 Control Transformer Instruction Manual

Model: 31EH06 (Item Model Number: G8497815)

1. INTRODUCTION

This manual provides essential instructions for the safe installation, operation, and maintenance of the Dayton 31EH06 Control Transformer. Please read this manual thoroughly before installation or use to ensure proper function and to prevent potential hazards.

The Dayton 31EH06 is a single-phase, encapsulated control transformer designed for industrial applications, offering reliable voltage conversion with a 500 VA rating. It features primary and secondary fuse protection and foot-mount installation.



This image displays the Dayton 31EH06 Control Transformer, a black, encapsulated unit with primary and secondary terminals clearly visible on the top surface. The unit features foot-mount brackets for secure installation.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and servicing should only be performed by qualified personnel. Disconnect all power before working on the transformer or connected equipment.

- Always follow local and national electrical codes.
- Ensure proper grounding of the transformer.
- Do not operate the transformer in wet or explosive environments.
- Verify input and output voltages match system requirements before energizing.
- The transformer can become hot during operation. Avoid direct contact.

3. SETUP AND INSTALLATION

3.1 Mounting

The Dayton 31EH06 transformer is designed for foot-mount installation. Secure the transformer to a stable, vibration-free surface using appropriate fasteners through the mounting holes on the base brackets. Ensure adequate ventilation around the unit to prevent overheating.

3.2 Wiring Connections

Refer to the wiring diagram on the transformer label and the following instructions for correct connections. Use appropriately sized conductors for the current ratings.

- **Primary (Input) Connections:** The transformer accepts 240V AC or 480V AC input. Connect the incoming power supply to the designated primary terminals (H1, H2, H3, H4) according to the desired voltage configuration. Ensure proper phasing.
- **Secondary (Output) Connections:** The transformer provides 120V AC output. Connect the load to the designated secondary terminals (X1, X2).
- **Grounding:** Connect the transformer's ground terminal to a reliable earth ground.
- **Protective Devices:** The unit includes primary and secondary fuse protection. Ensure fuses are correctly rated and installed.

Note: Incorrect wiring can damage the transformer and connected equipment, and poses a safety risk. Consult a qualified electrician if unsure.

4. OPERATING INSTRUCTIONS

Once properly installed and wired, the Dayton 31EH06 Control Transformer operates automatically to convert the input voltage to the specified output voltage. No user interaction is required for its basic function.

- Ensure the input voltage supplied to the primary side matches the transformer's configured input voltage (240V AC or 480V AC).
- Monitor the load connected to the secondary side to ensure it does not exceed the transformer's 500 VA rating. Overloading can lead to overheating and damage.
- The transformer is designed for continuous operation within its specified temperature rise (80°C).

5. MAINTENANCE

The Dayton 31EH06 Control Transformer is designed for minimal maintenance. However, periodic inspection is recommended to ensure optimal performance and longevity.

- **Visual Inspection:** Regularly check for any signs of physical damage, loose connections, discoloration from overheating, or accumulation of dust and debris.
- **Cleaning:** If dust or debris accumulates, disconnect power and carefully clean the exterior of the transformer using a dry, soft cloth or compressed air. Do not use liquids.
- **Connection Check:** Periodically verify that all electrical connections are tight and secure. Loose connections can cause arcing and overheating.
- **Fuse Check:** If the transformer is not providing output, check the primary and secondary fuses for continuity. Replace blown fuses with those of the correct rating.

Important: Always disconnect power before performing any maintenance or inspection.

6. TROUBLESHOOTING

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

- **No Output Voltage:**
 - Verify input power is present at the primary terminals.
 - Check primary and secondary fuses for continuity. Replace if blown.
 - Ensure all wiring connections are secure and correct according to the diagram.
- **Incorrect Output Voltage:**
 - Confirm the input voltage matches the transformer's configured primary voltage.
 - Ensure the load is not exceeding the transformer's VA rating.
- **Overheating:**
 - Check for proper ventilation around the transformer.
 - Verify the load does not exceed the 500 VA rating.
 - Inspect for loose connections.

If problems persist after performing these checks, contact a qualified technician or Dayton customer support.

7. SPECIFICATIONS

Feature	Specification
Brand	DAYTON
Model Number	31EH06 (Item Model Number: G8497815)
Input Voltage	240V AC, 480V AC
Output Voltage	120V AC
VA Rating	500 VA
Protective Device	Primary and Secondary Fuse
Enclosure Style	Encapsulated
Mounting	Foot Mount

Feature	Specification
Phase	1
Frequency	50 Hz, 60 Hz
Temperature Rise	80 Degrees C
Product Dimensions	8 x 5 x 6 inches
Item Weight	17 Pounds
Certifications	FCC, UL

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Dayton product documentation or visit the Dayton website. Keep your purchase receipt for warranty claims.

For further assistance, contact Dayton customer service through their official channels.