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TITAN PRO TTMJ88

TITAN PRO TTMJ88 Round Start Capacitor User Manual

Model: TTMJ88

1. Introduction

This manual provides essential information for the safe and effective use of the TITAN PRO TTMJ88 Round Start Capacitor. This component is designed for use in various electrical motor applications, providing the necessary starting torque. Please read this manual thoroughly before installation and operation.

2. Safety Information

WARNING: Electrical components can cause serious injury or death. Installation and maintenance should only be performed by qualified personnel.

- Always disconnect power to the equipment before installing, servicing, or removing the capacitor.
- Ensure the capacitor is fully discharged before handling.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection.
- Verify that the replacement capacitor's specifications (MFD and Voltage) match or exceed the original component's requirements.
- Do not attempt to repair a damaged capacitor. Replace it with a new, compatible unit.
- Dispose of old capacitors according to local regulations.

3. Product Overview

The TITAN PRO TTMJ88 is a round start capacitor designed to provide a temporary boost of current to an electric motor during its startup phase. This temporary current helps the motor overcome initial inertia and reach operating speed efficiently.



Figure 3.1: Front view of the TITAN PRO TTMJ88 Round Start Capacitor, showing the brand name, model number (TTMJ88), capacitance range (88-108 MFD), voltage rating (220-250VAC 50/60Hz), and temperature rating (Rated to 65°C).



Figure 3.2: Top view of the TITAN PRO TTMJ88 capacitor, illustrating the multiple spade terminals for electrical connections.



Figure 3.3: The TITAN PRO TTMJ88 capacitor displayed alongside its retail packaging box. The box features the "TITAN PRO START" logo and indicates "Professional Grade".

4. Setup and Installation

Installation of a start capacitor requires knowledge of electrical systems and safety procedures. It is strongly recommended that installation be performed by a certified electrician or qualified technician.

4.1 Pre-Installation Checks

1. **Verify Compatibility:** Ensure the TTMJ88 capacitor's microfarad (MFD) and voltage (V) ratings match the requirements of the motor or system it is intended for.
2. **Inspect Capacitor:** Before installation, visually inspect the new capacitor for any signs of damage, such as dents, leaks, or swollen casing. Do not install a damaged capacitor.
3. **Power Disconnection:** Absolutely ensure that all power to the motor and associated circuitry is disconnected and locked out before proceeding.

4.2 Installation Steps

1. **Discharge Old Capacitor:** If replacing an existing capacitor, ensure the old capacitor is fully discharged using a properly insulated tool before removal.
2. **Note Wiring:** Carefully note the wiring connections of the old capacitor before disconnecting. Take photos if necessary.
3. **Remove Old Capacitor:** Disconnect the wires and remove the old capacitor from its mounting bracket.
4. **Mount New Capacitor:** Securely mount the TITAN PRO TTMJ88 capacitor in the designated location.
5. **Connect Wiring:** Connect the electrical wires to the terminals of the new capacitor, ensuring all connections are tight and secure according to the motor's wiring diagram.
6. **Verify Connections:** Double-check all wiring connections for correctness and security.
7. **Restore Power:** Once installation is complete and verified, restore power to the system.

5. Operating Instructions

The TITAN PRO TTMJ88 start capacitor operates automatically as part of the motor's electrical circuit. It is designed to provide a temporary surge of current to the motor's start winding, enabling the motor to initiate rotation and reach its operational speed.

- Upon motor startup, the capacitor briefly engages to provide the necessary phase shift and torque.
- Once the motor reaches a certain speed (typically 75% of its rated speed), a centrifugal switch or electronic relay disconnects the start capacitor from the circuit.
- The capacitor is not intended for continuous operation. Prolonged engagement can lead to overheating and failure.

6. Maintenance

Start capacitors generally require minimal maintenance. However, periodic inspection can help identify potential issues before they lead to motor failure.

- **Visual Inspection:** Periodically inspect the capacitor for any physical damage, such as bulging, leaks, discoloration, or corrosion on the terminals.
- **Cleanliness:** Ensure the capacitor and its connections are free from dust, dirt, and moisture, which can affect performance and lead to premature failure.
- **Temperature:** Ensure the operating environment does not exceed the capacitor's rated temperature (65°C). Excessive heat can shorten its lifespan.
- **Replacement:** If any signs of damage or malfunction are observed, the capacitor should be replaced immediately by a qualified technician.

7. Troubleshooting

If a motor is experiencing starting issues, the start capacitor is a common component to investigate. Always ensure power is disconnected before any inspection or testing.

Common Symptoms of a Faulty Start Capacitor:

- **Motor Hums but Does Not Start:** This is a primary indicator that the motor is not receiving the necessary starting torque, often due to a failed start capacitor.
- **Slow or Delayed Start:** The motor struggles to get up to speed, taking longer than usual.
- **Overheating Motor:** If the motor attempts to start repeatedly without success, it can overheat.
- **Visible Damage:** A bulging, leaking, or burnt capacitor is clearly faulty and needs replacement.

Troubleshooting Steps:

1. **Power Off:** Disconnect all power to the motor.
2. **Visual Inspection:** Check the capacitor for any physical signs of failure.
3. **Test Capacitor:** A qualified technician can test the capacitor's capacitance using a multimeter with a capacitance function. Compare the reading to the rated MFD value.
4. **Professional Diagnosis:** If the capacitor appears faulty or if testing is inconclusive, consult a qualified technician for diagnosis and replacement.

8. Specifications

Brand	TITAN PRO
Model Number	TTMJ88
Capacitance	88-108 MFD (Microfarads)
Voltage Rating	250 V (Volts)

Frequency	50/60 Hz
Temperature Rating	Rated to 65°C
Product Dimensions	1.9 x 1.9 x 3.5 inches
UPC	840899130989

9. Warranty and Support

For warranty information, technical support, or service inquiries regarding your TITAN PRO TTMJ88 Round Start Capacitor, please contact the retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.

Manufacturer: DIVERSITECH CORPORATION

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