DEWIN DEWIN0hcpmy2v3u

DEWIN Mini 3-Wire Electrical Slip Ring Collector Instruction Manual

Model: DEWIN0hcpmy2v3u

1. Introduction

This manual provides essential information for the safe and effective use of your DEWIN Mini 3-Wire Electrical Slip Ring Collector. Please read this manual thoroughly before installation and operation, and retain it for future reference. This slip ring is designed for multi-channel signal transmission in various applications, including wind turbines and power generators.



Image 1.1: Overview of the DEWIN Mini 3-Wire Electrical Slip Ring Collector. This image displays the compact black cylindrical body of the slip ring with three color-coded wires (red, yellow, black) extending from both ends, forming a loop.

2. Safety Information

Always observe the following safety precautions to prevent injury or damage to the product:

- Ensure power is disconnected before installation, maintenance, or troubleshooting.
- This device operates at voltages up to 600V. Exercise extreme caution when handling live circuits.
- Only qualified personnel should perform installation and wiring.
- Verify all connections are secure and properly insulated to prevent short circuits.
- Do not exceed the rated current of 15A.
- Avoid exposing the slip ring to environments outside its specified operating temperature and humidity ranges.

3. Product Features

The DEWIN Mini 3-Wire Electrical Slip Ring Collector offers robust performance and reliability:

- **Excellent Performance:** Features high temperature and corrosion resistance, anti-aging properties, and an anti-

vibration and anti-dust design. It supports multi-channel signal transmission with anti-jamming capabilities.

- **Wide Environmental Adaptability:** Designed with low temperature resistance, allowing it to function effectively across a broad operating temperature range.
- **Durable Construction:** Manufactured from high-quality engineering plastics, ensuring a solid, wear-resistant, and pressure-resistant structure.
- **Broad Application Scope:** Suitable for various equipment, including wind power systems, industrial controllers, robotics, construction machinery, medical devices, and military radar systems.



Image 3.1: The slip ring is shown with text highlighting its stable and reliable operation, particularly in environments with larger temperature differences.



Image 3.2: A close-up view emphasizing the slip ring's high temperature and corrosion resistance, and anti-aging properties.

4. Setup and Installation

Follow these steps for proper installation:

1. **Mounting:** Securely mount the slip ring to a stable surface using appropriate fasteners through its flange. Ensure the mounting surface is flat to prevent stress on the unit.
2. **Wiring:** Connect the three color-coded wires according to your system's electrical diagram. The wires are typically used for power and signal transmission. Ensure proper polarity and secure connections.
3. **Cable Management:** Route the lead wires to prevent strain, abrasion, or interference with moving parts. The lead length is 330mm.
4. **Environmental Check:** Confirm that the installation environment is within the specified operating temperature and humidity ranges.



Image 4.1: Technical diagram illustrating the dimensions and structure of the slip ring, including rotor and stator sides, and wire connections. This diagram is crucial for precise installation.



Image 4.2: Close-up view of the tinned wire ends (black, red, yellow) ready for connection, ensuring good electrical contact.

5. Operating Instructions

Once installed, the slip ring operates automatically as part of your system. Observe the following:

- **Operating Speed:** The slip ring is designed for a working speed of up to 150 RPM. Exceeding this speed may affect performance and lifespan.
- **Voltage and Current:** Ensure the connected system operates within the specified voltage range of 0-600V and does not draw more than the rated current of 15A per pathway.
- **Environmental Conditions:** Maintain operating temperatures between -30°C and 80°C, and humidity between 0-85% RH.
- **Electrical Noise:** The slip ring is designed for low electrical noise, typically ≤20MΩ. Significant increases in noise may indicate an issue.

6. Maintenance

The DEWIN slip ring is designed for minimal maintenance. However, periodic checks are recommended:

- **Visual Inspection:** Regularly inspect the slip ring for any signs of physical damage, wear, or loose connections.
- **Cleanliness:** Keep the slip ring free from excessive dust, dirt, or moisture. The protection class is IP51, indicating protection against dust ingress and dripping water.
- **Connection Integrity:** Periodically check the wiring connections to ensure they remain secure and free from corrosion.
- **Environmental Monitoring:** Ensure the operating environment continues to meet the specified conditions.

7. Troubleshooting

If you encounter issues, consider the following common troubleshooting steps:

- **No Signal/Power Transmission:**
  - Check all wiring connections for looseness or damage.
  - Verify the power source and load are functioning correctly.
  - Ensure the voltage and current are within the slip ring's specifications.
- **Excessive Electrical Noise:**
  - Inspect for any loose or corroded contacts.
  - Ensure proper grounding of the system.
  - Check for external sources of electromagnetic interference.
- **Unusual Mechanical Noise or Resistance:**
  - Verify the slip ring is mounted correctly and not under mechanical stress.
  - Ensure the operating speed does not exceed 150 RPM.
  - Check for any foreign objects obstructing rotation.

If problems persist after attempting these steps, contact customer support.

8. Specifications

Parameter	Value
Material	Engineering plastics
Voltage	0-600V
Insulation Resistance	1000MΩ at 500VDC
Rated Current	15A
Insulation Strength	500VAC at 50Hz, 60s
Electrical Noise	≤20MΩ
Pathway	3 Wires

Parameter	Value
Working Speed	150RPM
Operating Temperature	-30℃ ~ 80℃
Operating Humidity	0-85% RH
Contact Materials	Precious metal
Lead Length	330mm
Torsion	≤8 g.m
Protection Class	IP51
Product Dimensions	3.15 x 2.76 x 2.36 inches (approximate)
Item Weight	2.82 ounces (approximate)

9. Warranty and Support

For warranty information or technical support, please refer to the documentation provided at the time of purchase or contact DEWIN customer service. Ensure you have your product model number (DEWIN0hcpmy2v3u) and purchase details available when seeking support.

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