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Model: ZGQ5 100/ Isolation Based Power Automated Transfer Switch ATS 100A/4P

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Akozon ZGQ5 100/ Isolation Based Power Automated Transfer Switch (ATS). This device is designed to automatically switch between two power sources, ensuring a continuous and reliable power supply for critical loads. Please read this manual thoroughly before installation and operation.

2. SAFETY INFORMATION

WARNING: HIGH VOLTAGE. RISK OF ELECTRIC SHOCK.

- All installation and maintenance procedures must be performed by qualified electricians in accordance with local and national electrical codes.
- Ensure all power sources are disconnected and locked out before performing any work on the ATS.
- Never operate the ATS with wet hands or in damp conditions.
- Verify correct wiring and connections before applying power. Incorrect wiring can lead to equipment damage, fire, or personal injury.
- Do not bypass or modify any safety features of the ATS.

3. PRODUCT OVERVIEW

The Akozon ZGQ5 100/ ATS is an isolation-based automatic transfer switch designed for robust and reliable power management. It features a double-row composite/transverse pull structure with micro-motor energy storage and micro-electronic control technology, minimizing arc-over during switching.

Key Features:

- Utilizes double row composite /transverse pull structure/micro motor energy storage and micro electronic control technology for nearly zero arc over.
- Offers four operational modes: emergency manual operation, remote electrical control operation, automatic control state emergency disconnect operation, automatic control.
- Mechanical and electrical interlocking for secure use.
- Load isolation execution switch comes with a mechanical interlocking device to provide working of the main and backup power supply without any interference.
- Includes obvious on/off indicators and a padlock function for power and load isolation.

Components:



Figure 3.1: Overall view of the Akozon ZGQ5 100/ Automatic Transfer Switch. This image shows the complete unit, highlighting its compact design and robust construction, with the main power switching components on the left and the control module on the right.



Figure 3.2: Close-up of the control panel. This view details the manual selector switch, key lock, and indicator lights for operational status and power source selection.



Figure 3.3: Detachable manual operation handle. This handle is used for emergency manual switching of the ATS, providing a physical override for the automatic function.

4. SETUP AND INSTALLATION

IMPORTANT: Installation must be performed by a certified electrician.

1. **Mounting:** Securely mount the ATS in a dry, well-ventilated area, away from flammable materials and direct sunlight. Ensure adequate clearance for wiring and maintenance.
2. **Power Disconnection:** Before any wiring, ensure that both the main power source and the backup power source (e.g., generator) are completely disconnected and de-energized. Use appropriate lockout/tagout procedures.

3. Wiring Connections:

- Connect the main power supply (Utility) to the designated input terminals.
- Connect the backup power supply (Generator) to its designated input terminals.
- Connect the load circuits to the output terminals of the ATS.
- Ensure all connections are tight and secure to prevent loose contacts and overheating. Refer to the wiring diagram provided with the product for specific terminal assignments.

4. **Control Wiring:** Connect any necessary control signals for remote operation or generator start/stop, if applicable, according to the wiring diagram.

5. **Final Check:** Double-check all wiring for correctness and security before restoring power.



Figure 4.1: Detailed view of the wiring terminals. This image illustrates the connection points for the main power, backup power, and load, emphasizing the importance of correct and secure wiring.

5. OPERATING INSTRUCTIONS

The ZGQ5 100/ ATS supports multiple operational modes to suit various power management needs.

Operational Modes:

- **Automatic Control:** In this mode, the ATS continuously monitors both power sources. Upon detecting a failure in the primary source, it automatically switches to the backup source. When the primary source is restored, it switches back. This is the default and most common operating mode.
- **Emergency Manual Operation:** In case of an emergency or for maintenance, the ATS can be manually operated using the provided handle. Insert the handle into the designated slot on the control panel (refer to Figure 3.2) and rotate it to switch between power sources. Ensure the automatic control is disengaged before manual operation.
- **Remote Electrical Control Operation:** The ATS can be integrated into a larger control system, allowing for remote switching commands via electrical signals. Consult the wiring diagram for remote control input specifications.
- **Automatic Control State Emergency Disconnect Operation:** This mode allows for an emergency shutdown or disconnection from both power sources while in automatic control, typically triggered by a safety system or manual override.

Indicators and Padlock Function:

The control panel features clear ON/OFF indicators to show the current status of the power sources and the switch position. A padlock function is integrated to secure the switch in a specific position, preventing unauthorized operation or accidental switching during maintenance.

6. MAINTENANCE

WARNING: Disconnect all power before performing any maintenance.

- **Regular Inspection:** Periodically inspect the ATS for any signs of wear, damage, or loose connections. Check for dust accumulation, especially around moving parts and electrical contacts.
- **Cleaning:** Use a dry, soft cloth to clean the exterior of the ATS. For internal cleaning, use compressed air to remove dust from contacts and moving mechanisms. Do not use liquid cleaners.
- **Terminal Tightness:** Annually, or as needed, verify that all electrical terminal connections are tight and free from corrosion.
- **Functional Test:** Periodically test the automatic transfer function by simulating a primary power failure (if safe and feasible) to ensure the ATS operates correctly.

7. TROUBLESHOOTING

If you encounter issues with your ATS, refer to the following basic troubleshooting steps:

- **No Power to Load:**
 - Check if both primary and backup power sources are active.
 - Verify the ATS is in the correct operating mode (e.g., Automatic).
 - Inspect all wiring connections for looseness or damage.
 - Check circuit breakers or fuses upstream of the ATS.
- **ATS Not Switching Automatically:**
 - Ensure the ATS is set to 'Automatic Control' mode.
 - Verify that the control voltage is present and correct.
 - Check for any obstructions or mechanical issues preventing the switch from moving.
- **Unusual Noises or Odors:** Immediately disconnect all power to the ATS and contact a qualified electrician or customer support.

For complex issues or if troubleshooting steps do not resolve the problem, contact Akozon customer support or a qualified

service technician.

8. SPECIFICATIONS

Specification	Value
Brand	Akozon
Material	Plastic
Product Dimensions (L x W x H)	11.41" x 7.87" x 7.08"
Closure Type	Snap
Model Number	Akozonebia97otur
Item Type Name	Basic Switches
ASIN	B0DLH4S15N

9. WARRANTY AND SUPPORT

Specific warranty information for the Akozon ZGQ5 100/ ATS is not provided in this manual. For details regarding warranty coverage, terms, and conditions, please refer to the product packaging, the seller's website, or contact Akozon customer support directly.

For technical assistance, troubleshooting beyond the scope of this manual, or to report a defective product, please contact Akozon customer service through their official channels.

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