

FPBIGCHA TOQ7

FPBIGCHA TOQ7 3-Phase Dual Power Automatic Transfer Switch User Manual

Model: TOQ7 | Brand: FPBIGCHA

1. INTRODUCTION

The FPBIGCHA TOQ7 3-Phase Dual Power Automatic Transfer Switch (ATS) is designed to ensure a continuous and uninterrupted power supply to critical loads. This device automatically switches between a primary power source (Source A) and a backup power source (Source B) when the primary source fails or returns. Its compact design, high reliability, and long service life make it suitable for a wide range of applications requiring stable power.

This manual provides essential information for the safe installation, operation, and maintenance of your TOQ7 ATS. Please read it thoroughly before installation and use.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified electrical personnel. Failure to follow these instructions may result in serious injury or death.

- Always disconnect all power sources before installing, servicing, or performing any work on the ATS.
- Ensure proper grounding of the device.
- Verify all connections are secure and correctly wired according to the diagram.
- Do not operate the switch if it appears damaged.
- Adhere to all local and national electrical codes.

3. PRODUCT OVERVIEW

3.1 Key Features

- **Automatic and Manual Operation:** Can be operated automatically for seamless power transfer or manually for controlled switching.
- **Continuous Power Supply:** Ensures immediate transfer to backup power upon primary source failure.
- **Compact Structure:** Space-saving design for various installations.
- **High Reliability:** Engineered for dependable performance and long service life.
- **Easy Installation:** Designed for straightforward installation and disassembly.

3.2 Components

The FPBIGCHA TOQ7 ATS features clearly labeled terminals for Source A (Primary Power) and Source B (Backup Power/Generator), a manual/auto selector switch, and load output terminals. The device also includes indicators for power status.



Figure 1: Front view of the FPBIGCHA TOQ7 Automatic Transfer Switch, showing Source A and Source B inputs, the manual/auto selector switch, and terminal blocks.

4. SPECIFICATIONS

4.1 Technical Data

Parameter	Value
Rated Insulation Voltage	690V
Rated Current	63A / 100A (Model dependent)
Number of Poles	3P
Rated Voltage	L+N 110-120V 50-60Hz (for 110V/120V models)
Rated Working Voltage	110V~ (as per device label)
Impact-Resistant Voltage	8kV
Standard	IEC/EN60947-6-1

Product parameters

Rated insulation voltage

690V

Rated current

63A 100A

Number of poles

3P

Model number

TOQ7-125/3

Rated voltage

L+N 110-120V 50-60Hz

Item

Dual power automatic transfer switch

Figure 2: Detailed product parameters including rated insulation voltage, current, and standard compliance.

4.2 Physical Dimensions

- **Overall Dimensions:** Approximately 125mm (width) x 109mm (height) x 78mm (depth).
- **Item Weight:** 15.9 ounces (approximately 450 grams).

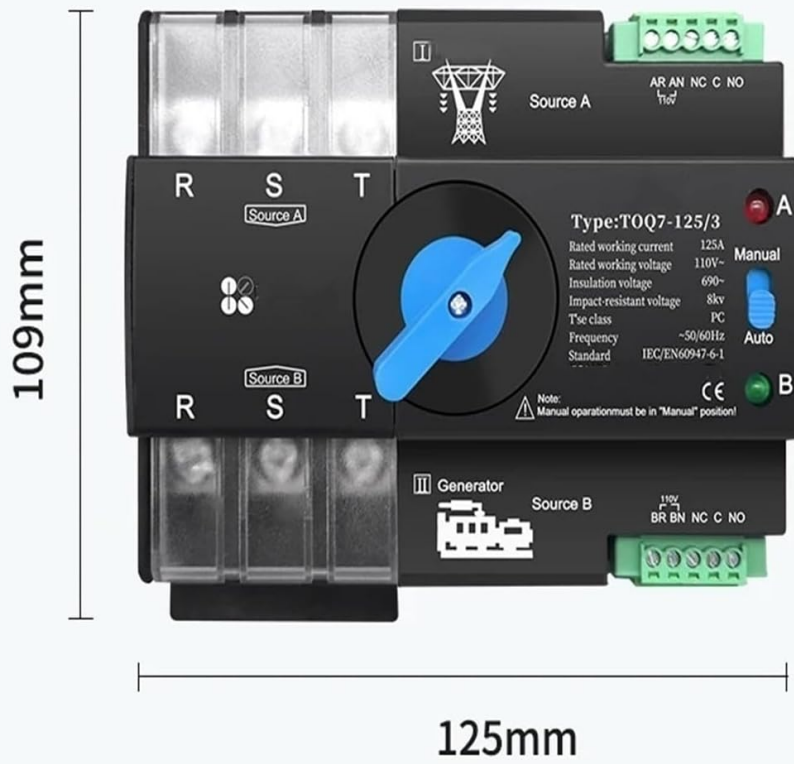


Figure 3: Front view dimensions of the ATS, indicating a width of 125mm and a height of 109mm.



Figure 4: Side view dimensions of the ATS, indicating a depth of 78mm and the location of the load side terminals.

5. SETUP AND INSTALLATION

5.1 Installation Guidelines

The TOQ7 ATS is designed for easy installation due to its compact size. However, given its electrical nature, professional installation by a certified electrician is strongly recommended to ensure safety and compliance with all electrical standards.

- Choose a suitable mounting location that is dry, well-ventilated, and free from excessive vibration or extreme temperatures.
- Ensure adequate clearance around the device for ventilation and future maintenance.
- Mount the ATS securely using appropriate fasteners.

5.2 Wiring Diagram

Refer to the wiring diagram below for correct connection of the primary power source (Source A), backup power source (Source B), and the load. Pay close attention to the common incoming lines, standby incoming lines, common control lines, and zero line inputs.

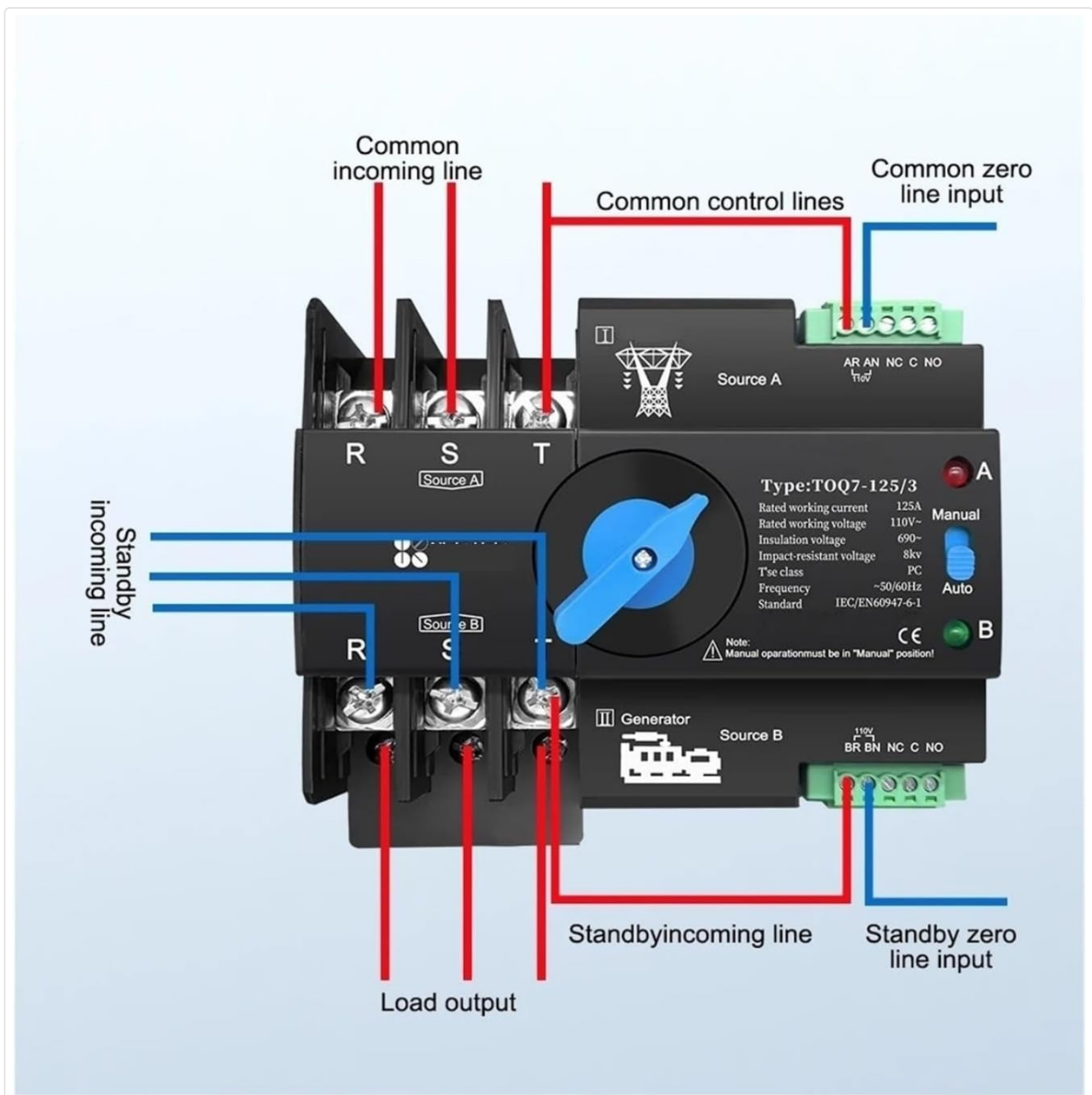


Figure 5: Detailed wiring diagram for the FPBIGCHA TOQ7 ATS, illustrating connections for common incoming lines, standby incoming lines, control lines, zero lines, and load output.

- **Source A:** Connect your primary power supply (e.g., utility grid) to the 'Source A' terminals (R, S, T).
- **Source B:** Connect your backup power supply (e.g., generator) to the 'Source B' terminals (R, S, T).
- **Load Output:** Connect your electrical load to the 'Load output' terminals.
- **Control and Zero Lines:** Ensure correct connection of common control lines, common zero line input, standby incoming line, and standby zero line input as indicated in the diagram.
- Double-check all connections for tightness and correct polarity before applying power.

6. OPERATING INSTRUCTIONS

6.1 Operating Modes

The TOQ7 ATS features a selector switch on the front panel to choose between 'Manual' and 'Auto' operation.

- **Auto Mode:** In this mode, the switch will automatically transfer the load from Source A to Source B if Source A fails, and automatically transfer back to Source A when it is restored. This is the recommended mode for continuous, uninterrupted power.
- **Manual Mode:** In this mode, the power transfer must be initiated manually. This mode is typically used for testing, maintenance, or specific operational requirements.

Important Note: For manual operation, ensure the selector switch is firmly in the 'Manual' position before attempting to switch power sources.

6.2 Automatic Transfer Function

When the ATS is in 'Auto' mode:

1. The device continuously monitors the primary power source (Source A).
2. If Source A's voltage or frequency falls outside acceptable limits, the ATS will initiate a transfer.
3. After a brief delay, the load will be disconnected from Source A and connected to Source B (backup power).
4. When Source A is restored and stable, the ATS will automatically transfer the load back to Source A, ensuring the continuity of power supply.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of your ATS. Always disconnect all power sources before performing any maintenance.

- **Visual Inspection:** Periodically inspect the ATS for any signs of physical damage, loose connections, or overheating.
- **Cleaning:** Keep the device clean and free from dust and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Terminal Check:** Ensure all terminal connections remain tight. Loose connections can lead to overheating and device failure.
- **Functional Test:** Periodically test the automatic transfer function by simulating a primary power failure (if safe to do so and with proper precautions).

8. TROUBLESHOOTING

If the ATS is not functioning as expected, consider the following basic troubleshooting steps. For complex issues, contact a qualified electrician.

- **No Power to Load:**

- Check if both Source A and Source B are active.
- Verify the ATS is in 'Auto' mode if automatic transfer is desired.
- Inspect all wiring connections for looseness or damage.

- **Failure to Transfer:**

- Ensure the backup power source (Source B) is operational and providing stable power.
- Confirm the ATS is in 'Auto' mode.
- Check for any error indicators on the device (if present).

- **Overheating:**

- Ensure proper ventilation around the unit.
- Check for loose connections, which can cause resistance and heat.
- Verify the load does not exceed the rated current of the ATS.

9. WARRANTY AND SUPPORT

For warranty information, please refer to the terms and conditions provided at the time of purchase. Keep your proof of purchase for any warranty claims.

For technical support or further assistance, please contact your vendor or the manufacturer directly. When contacting support, please have your product model (TOQ7) and purchase details readily available.