GEYA GEYA-XXX

GEYA Mini ATS Dual Power Automatic Transfer Switch Instruction Manual

Model: GEYA-XXX (2P 25A AC220V)

1. Introduction

The GEYA Mini ATS (Automatic Transfer Switch) is designed to ensure a continuous power supply by automatically switching between a normal power source and a spare (backup) power source. This device is primarily used to detect the status of both power sources. If the normal power supply becomes abnormal, the switch will automatically transfer to the spare power, minimizing interruptions. When the normal power supply is restored, the switch will revert to it. This unit is suitable for household orbit-type installations and is commonly used in PZ30 power distribution boxes for dual power grids operating at 50/60Hz.
The GEYA Mini ATS is characterized by its compact structure, reliable transfer mechanism, ease of installation and maintenance, and long operational lifespan.

2. Safety Information

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified personnel.

- Always disconnect power from both normal and backup sources before installation, inspection, or maintenance.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Verify the voltage and current ratings of the switch match your application requirements.
- Do not operate the switch if it appears damaged.
- The input power supply sequence must be connected correctly to ensure proper operation.

3. Product Overview

The GEYA Mini ATS is a compact device designed for seamless power transfer. It features indicators for power source status and an auto/manual selection switch.

Figure 3.1: Front view of the GEYA Mini ATS. This image shows the main components including the input terminals (I and II), output terminals (LOAD), status indicators, and the auto/manual switch.

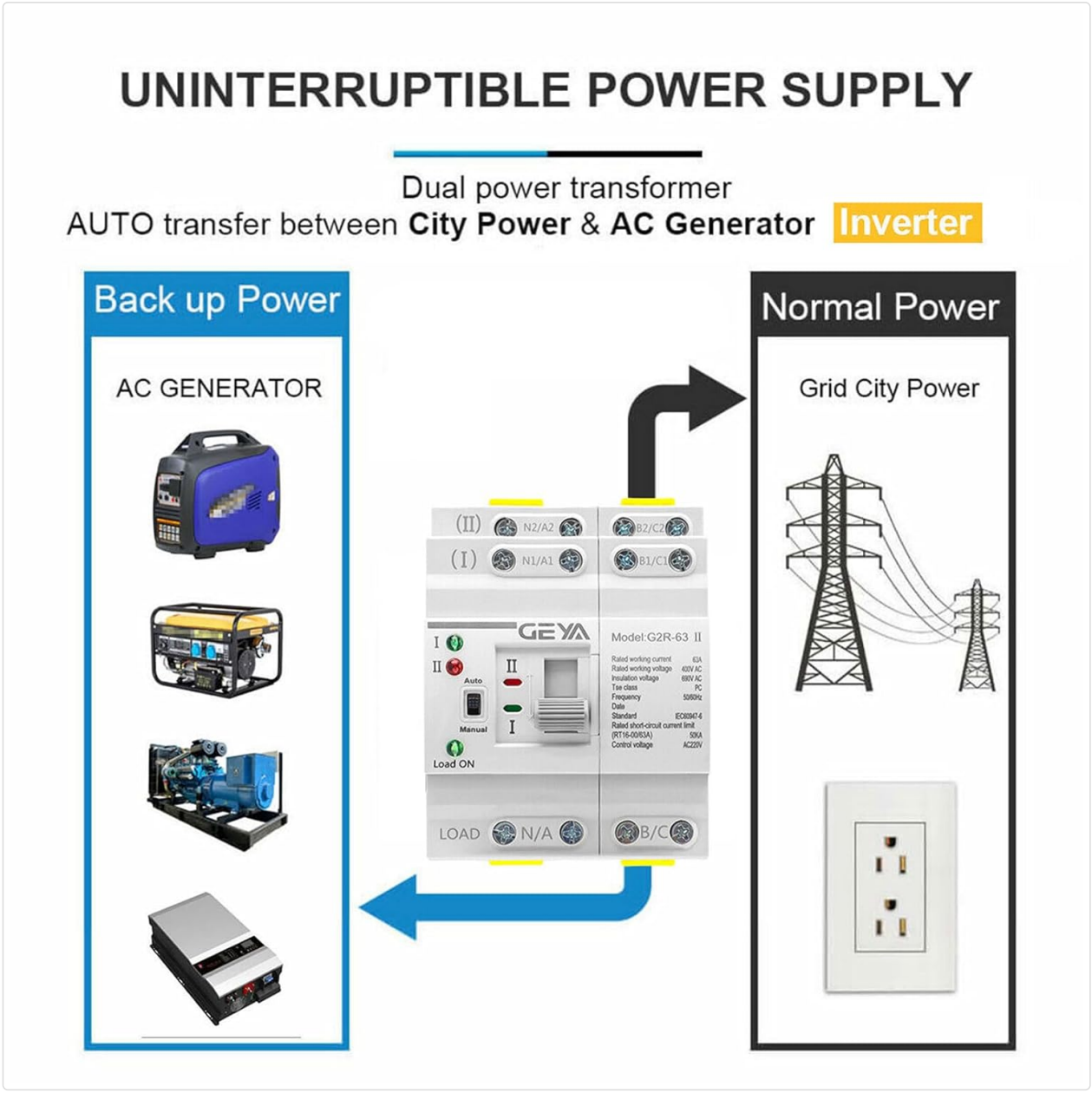


Figure 3.2: Conceptual diagram of the GEYA ATS in an uninterruptible power supply setup. It shows how the switch connects between a normal power source (e.g., grid city power) and a backup power source (e.g., AC generator, inverter) to supply power to the load.

4. Setup and Installation

This device is designed for DIN rail mounting within a PZ30 power distribution box. Follow these steps for proper installation:

1. **Mounting:** Securely attach the ATS to a standard DIN rail.
2. **Wiring:** Connect the normal power source to terminals labeled (I) and the backup power source to terminals labeled (II). Connect the load to the terminals labeled LOAD. Ensure the neutral wire is connected to the 'N' terminal and the live wire to the 'A' terminal for each input and output.
3. **Voltage Selection:** Ensure the correct voltage model is used for your system. For 2P 25A 220V models, this is suitable for 220V/400V systems or single-line 220V applications.
4. **Terminal Connections:** The terminal wiring area accommodates 1 to 25mm² wires. Use an M5 screw for connections and tighten to a torque of 2.5 N.m.

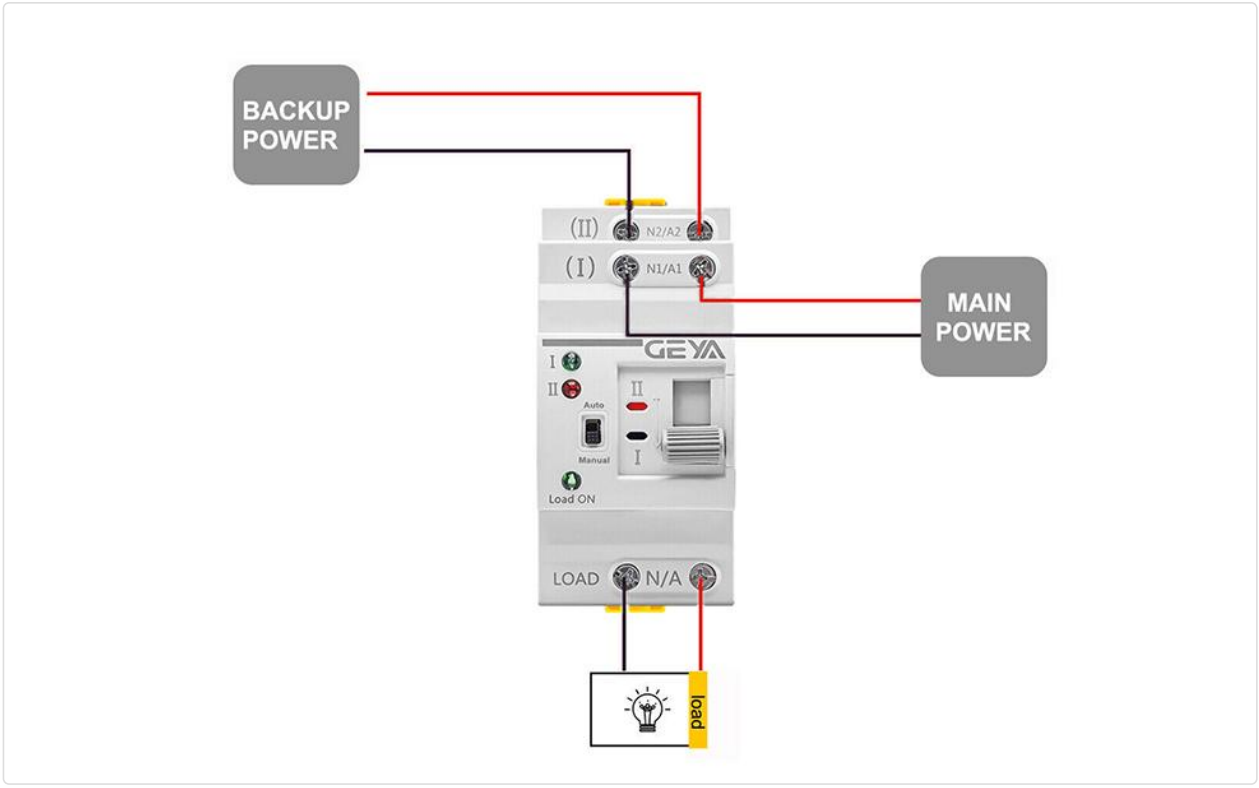


Figure 4.1: Detailed wiring diagram showing connections for backup power, common power supply, load power, and the various terminals and controls on the GEYA Mini ATS.

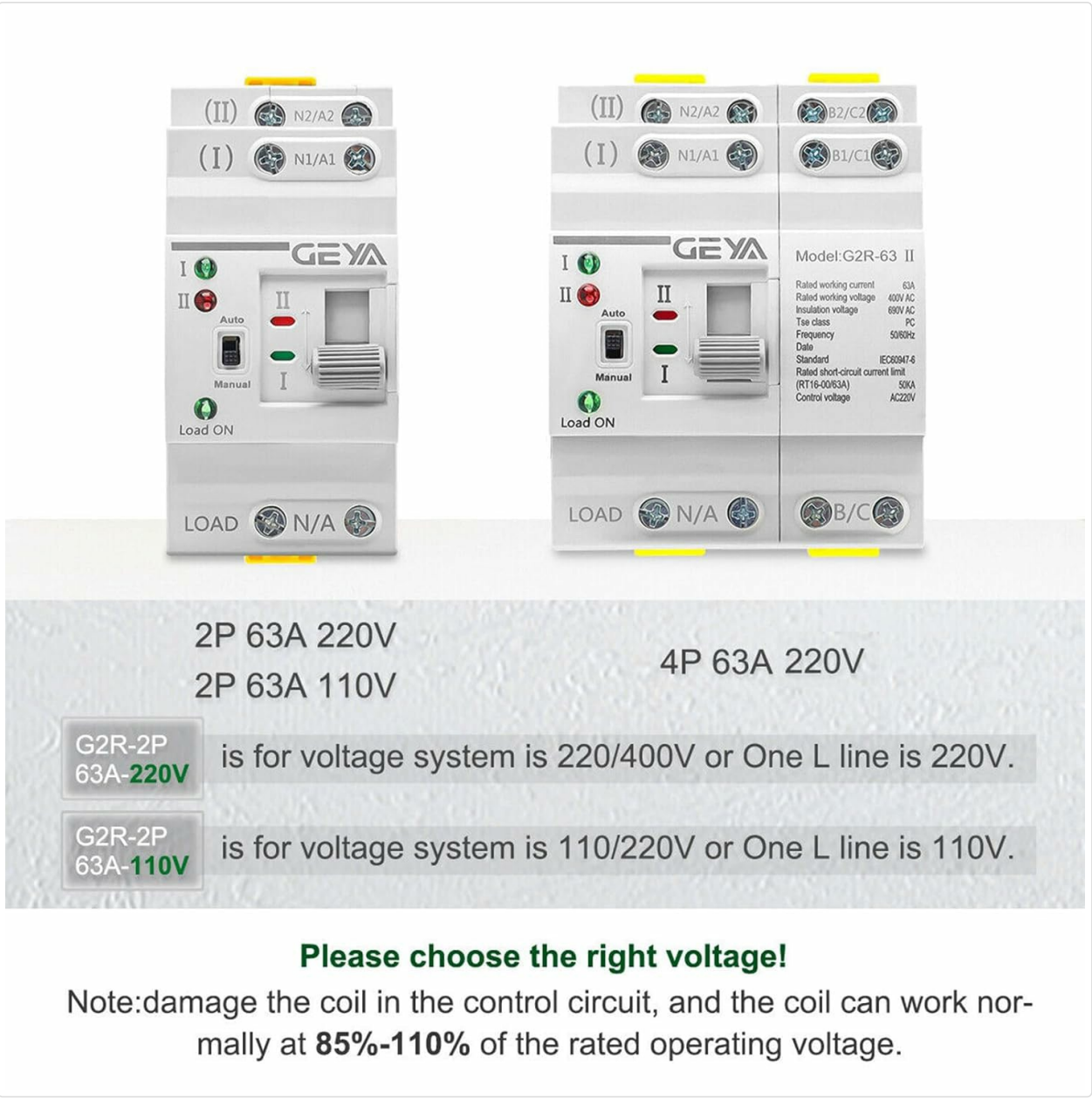


Figure 4.2: Guide for choosing the correct voltage model. It specifies that 2P 220V models are for 220V/400V systems or single-line 220V, and 2P 110V models are for 110V/220V systems or single-line 110V. Incorrect voltage can damage the control circuit.

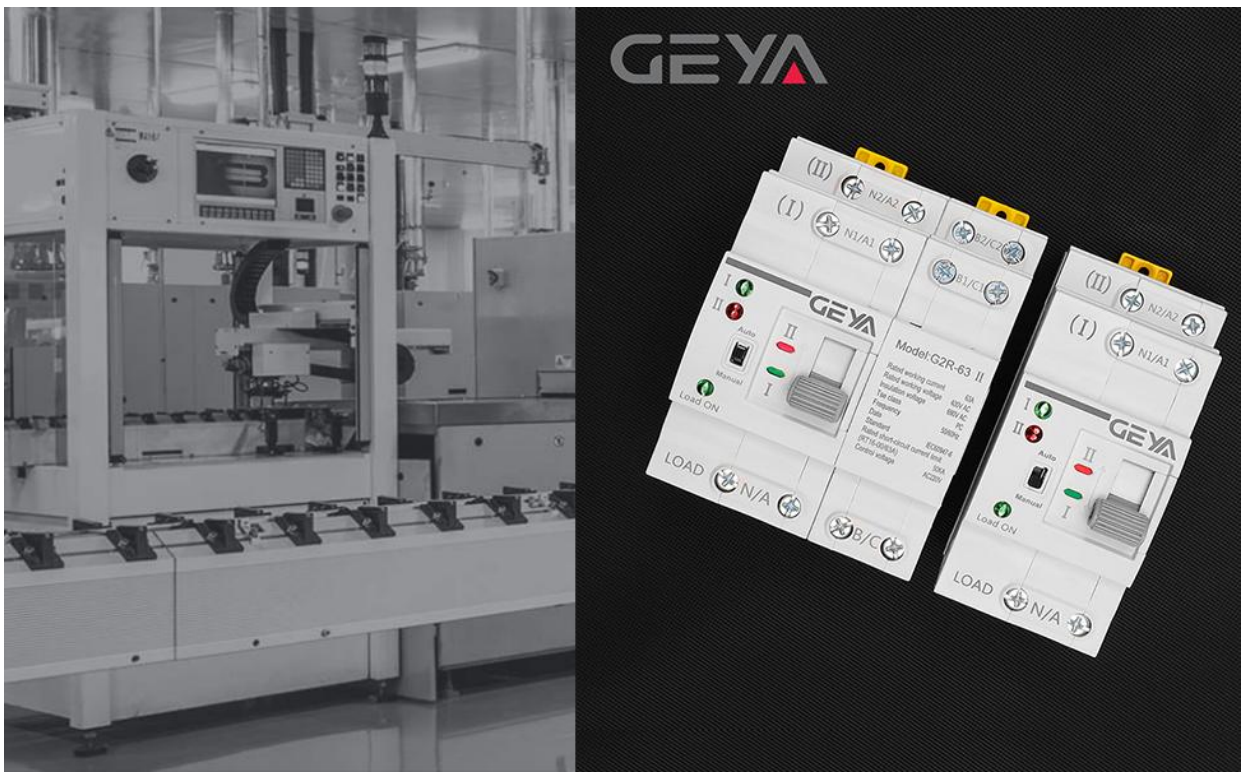


Figure 4.3: Technical drawing showing the dimensions of the GEYA Mini ATS, including width, height, and depth, along with DIN rail mounting specifications. Terminal wiring area and screw torque are also indicated.

5. Operating Instructions

The GEYA Mini ATS offers both automatic and manual operation modes.

- **Automatic Mode:** Set the switch to 'Auto'. In this mode, the device continuously monitors both power sources. If the primary (normal) power fails or drops below acceptable levels, the switch will automatically transfer the load to the secondary (backup) power source. When the primary power is restored, the switch will automatically revert the load back to the primary source.
- **Manual Mode:** Set the switch to 'Manual'. In this mode, you can manually select between power source I and power source II using the operation handle. This mode is useful for testing or specific maintenance scenarios.

Important Note: While the transfer time is fast (typically less than 50ms), it may not be instantaneous enough for highly sensitive electronic equipment like computers to remain powered without a momentary interruption. For such applications, an additional Uninterruptible Power Supply (UPS) may be required for the sensitive load.

6. Maintenance

Regular maintenance ensures the longevity and reliable operation of your GEYA Mini ATS.

- **Visual Inspection:** Periodically inspect the switch for any signs of physical damage, loose connections, or overheating.
- **Terminal Tightness:** Check and re-tighten all terminal screws as necessary to prevent arcing and ensure good electrical contact.
- **Cleaning:** Keep the switch free from dust and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.

- **Functionality Test:** Regularly test the automatic transfer function by simulating a power outage on the primary source (if safe to do so and with appropriate precautions).

7. Troubleshooting

If you encounter issues with your GEYA Mini ATS, consider the following:

- **No Transfer:**
  - Check if both power sources (Normal and Backup) are active and within acceptable voltage ranges.
  - Ensure the switch is set to 'Auto' mode.
  - Verify all wiring connections are secure and correct according to the diagram.
  - Confirm the control voltage is within the rated operating voltage (85%-110% of 220V AC).
- **Partial Power/Intermittent Operation:**
  - Inspect for loose terminal connections.
  - Check for signs of overheating or damaged wiring.
- **Switch Does Not Stay in Position:**
  - If in manual mode, ensure the handle is fully engaged.
  - If in auto mode, this could indicate an issue with the internal mechanism or control circuit.

If problems persist after basic troubleshooting, contact qualified electrical personnel or GEYA customer support.

8. Specifications

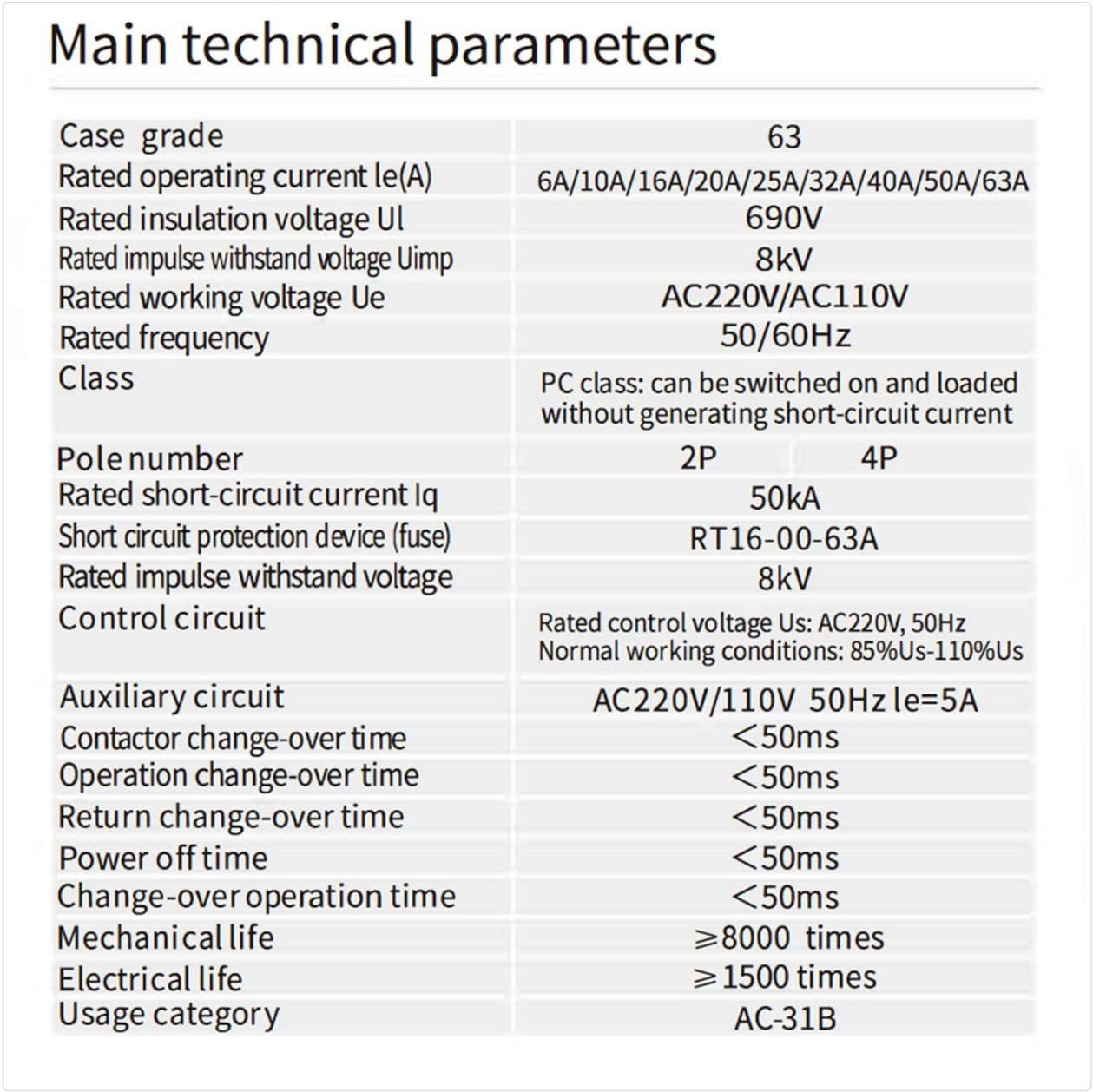


Figure 8.1: Main technical parameters of the GEYA Mini ATS, detailing electrical ratings and performance characteristics.

GEYA Mini ATS (Model GEYA-XXX) Technical Specifications

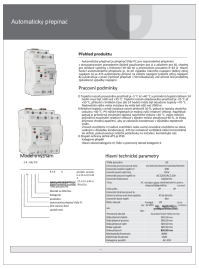
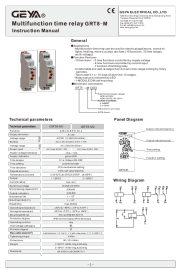
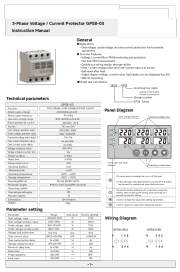
Parameter	Value
Case Grade	63
Rated Operating Current Ie(A)	6A/10A/16A/20A/25A/32A/40A/50A/63A (This model: 25A)
Rated Insulation Voltage Ui	690V
Rated Impulse Withstand Voltage Uimp	8kV
Rated Working Voltage Ue	AC220V/AC110V (This model: AC220V)
Rated Frequency	50/60Hz
Class	PC class
Pole Number	2P
Rated Short-Circuit Current Iq	50kA

Parameter	Value
Short Circuit Protection Device (Fuse)	RT16-00-63A
Rated Control Voltage Us	AC220V, 50Hz
Normal Working Conditions	85%-110% Us
Auxiliary Circuit	AC220V/110V 50Hz Ie=5A
Contactor Change-over Time	<50ms
Operation Change-over Time	<50ms
Return Change-over Time	<50ms
Power Off Time	<50ms
Mechanical Life	≥8000 times
Electrical Life	≥1500 times
Usage Category	AC-31B
Package Dimensions	4.92 x 3.35 x 2.24 inches
Item Weight	13.12 ounces
Material	Copper
Operation Mode	AUTO
Contact Type	Normally Open
Connector Type	Clamp
Terminal	Screw
Circuit Type	2-way
Actuator Type	Rotary

9. Warranty and Support

For warranty information, technical support, or service inquiries, please contact GEYA customer support or refer to the official GEYA website. Keep your purchase receipt for warranty claims.
You can visit the official GEYA store for more information:GEYA Store on Amazon

Related Documents - GEYA-XXX

	[GEYA Automatic Transfer Switch (ATS) G2R-63/00 - Technical Specifications] Detailed technical specifications and installation guide for the GEYA G2R-63/00 Automatic Transfer Switch (ATS), featuring PC class switching for dual power sources, operating conditions, and maintenance procedures.
	[GEYA GRT8-M Multifunction Time Relay - Instruction Manual] Comprehensive instruction manual for the GEYA GRT8-M Multifunction Time Relay, detailing its applications, technical specifications, functions, wiring, and installation.
	[GEYA WiFi Series Intelligent Miniature Circuit Breaker - Operating Instructions] Detailed operating instructions and FAQs for the GEYA WiFi Series Intelligent Miniature Circuit Breaker (ZJSB9 series). Learn about installation, setup, troubleshooting, safety, and application for smart home electrical protection.
	[Simon Double-Pole Switch 16AX 250V~ with Screw Terminal Connection System (Model 75133-39)] Detailed technical specifications, compatibility, installation guidelines, and logistics information for the Simon Double-Pole Switch 16AX 250V~ with screw terminal connection system, model 75133-39. Includes descriptions of various switch mechanism diagrams.
	[Simon 82 Series Unipolar Bell Push Button Switch 10A 127V~ (Model 75150-69) - Technical Specifications] Detailed technical specifications, installation, and logistic information for the Simon 82 series unipolar bell push button switch (10A, 127V~). Includes product features, compatibility, maintenance, normative compliance, and a comprehensive overview of various Simon mechanism wiring diagrams.
	[3-Phase Voltage / Current Protector GPS8-03 Instruction Manual] Instruction manual for the GEYA 3-Phase Voltage / Current Protector GPS8-03, detailing its applications, features, technical parameters, parameter settings, wiring diagrams, and operational functions.