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› GEYA Mini ATS Automatic/Manual Transfer Switch 3P-63A-110VAC User Manual

GEYA 3P-63A-110VAC

GEYA Mini ATS Automatic/Manual Transfer Switch User Manual

Model: 3P-63A-110VAC

Brand: GEYA

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the GEYA Mini ATS Automatic/Manual Transfer Switch, Model 3P-63A-110VAC. This device is designed to automatically or manually switch between two power sources, such as grid power, a generator, or a photovoltaic system, ensuring continuous power supply to your load.



Figure 1: GEYA Mini ATS Automatic/Manual Transfer Switch (Model 3P-63A-110VAC)

2. SAFETY INFORMATION

Please read and understand all safety warnings and instructions before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, or serious injury.

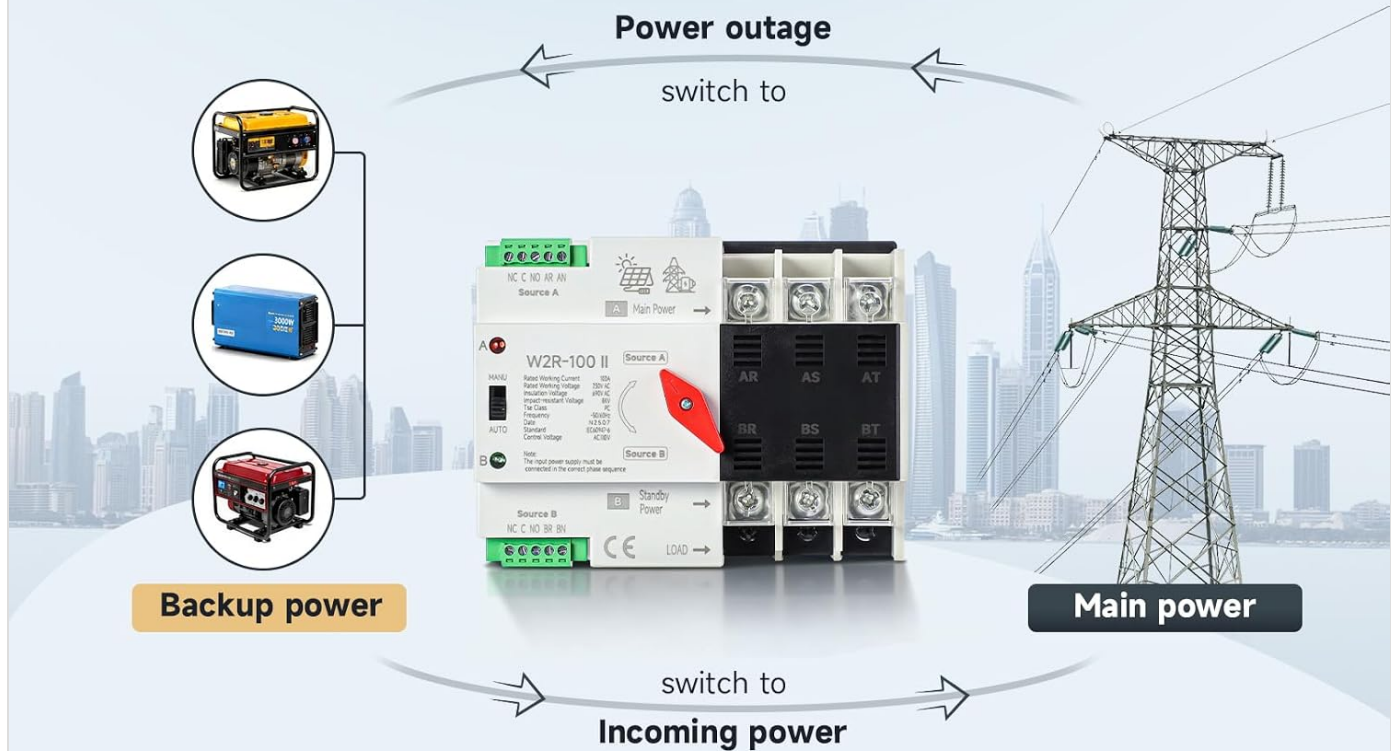
- Installation and maintenance should only be performed by qualified personnel.
- Always disconnect all power sources before working on the switch or connected circuits.
- Ensure proper grounding to prevent electric shock.
- Verify voltage and current ratings of the switch match your application requirements.
- Do not operate the switch in wet or damp conditions.
- The voltage of the common and backup power supply must be 85-110% of the rated voltage.
- The current cannot be less than 5A, otherwise the coil may overheat or combust.
- The backup power of the product must be a stable city power, otherwise the product will not switch automatically.

3. PRODUCT FEATURES

- **Dual Power Source Compatibility:** Designed for automatic or manual conversion between two power supplies (e.g., mains, generator, photovoltaic).
- **Over-Voltage and Under-Voltage Protection (110V/50Hz):**
 - Undervoltage value: 85V, Recovery value: 95V ($\pm 5V$)
 - Overvoltage value: 145V, Recovery value: 130V ($\pm 5V$)
- **Over-Voltage and Under-Voltage Protection (220V/50Hz):**
 - Undervoltage value: 175V, Recovery value: 195V ($\pm 5V$)
 - Overvoltage value: 260V, Recovery value: 240V ($\pm 5V$)
- **Automatic Switching:** When the normal power supply is abnormal, the device automatically switches to the backup power supply. It switches back to normal power when restored.
- **Indicator Lights:** Equipped with indicator lights for both power sources (A and B) to show operational status.
- **Fast Switching:** Power switch completed within 100 milliseconds, minimizing power interruptions.
- **Intelligent Control:** Features self-restoring, over-voltage, and under-voltage protection.
- **Durable Construction:** Utilizes silver contacts and copper terminals for reliability and longevity.
- **DIN Rail Mounting:** Compatible with universal DIN rail mounting for easy installation.

WHAT IS THE FUNCTION OF THE AUTOMATIC TRANSFER SWITCH

When the normal power supply is abnormal, the backup power supply will immediately start working to ensure the continuity, reliability, and safety of power supply.



NOTE:



- If use an inverter, it's rated power must greater than 3000W pure sine wave inverter.
- Both power supply A and power supply B can be connected to the mains/generator/photovoltaic.

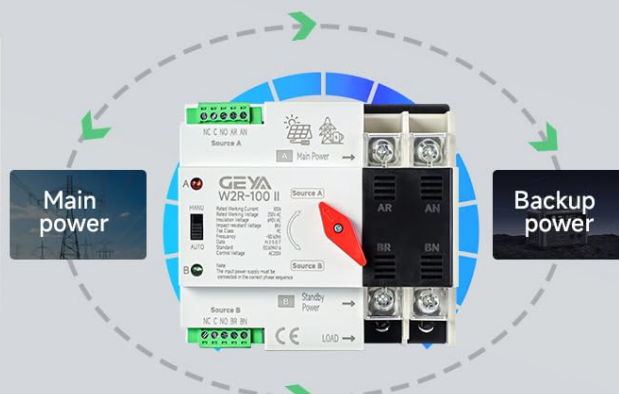
Figure 2: Explanation of Automatic Transfer Switch Function

What is the function of the automatic transfer switch?

⌚ Millisecond switching

FAST SWITCHING

The power switch is completed within 100 milliseconds, which is better than the 2-3 second switching speed of traditional mechanical ATS, reducing the risk of device restart.



INTELLIGENT CONTROL

The product has the function of self-restoring, over-voltage and under-voltage protection, and can be switched by itself when the power is unstable.

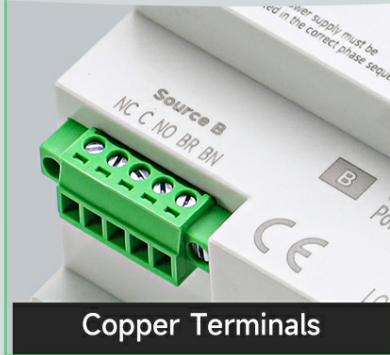
Figure 3: Fast Switching and Intelligent Control Capabilities

Details presentation



Silver Contacts

Dynamic and static contacts using silver contacts, greatly improving the use of the product



Copper Terminals

Not easy to rust, strong electrical conductivity, durable to use



Guide Rail Installation

Fixed snap, easy to install, strong insulation, safe and flame retardant, can be used with

Figure 4: Internal Components and Installation Method

4. HOW TO CHOOSE YOUR MODEL

Refer to the table below to select the appropriate ATS model based on your live line voltage and connection requirements.

How to choose Model



One Live line Voltage	Suitable for US voltage system	Must connect with Neutral line	Product you should choose
 One Live line Voltage 110V	-	1 Live line + 1 Neutral live	ATS-2P-63A-110V
	110/230V	2 Live line + 1 Neutral live	ATS-3P-63A-110V
		3 Live line + 1 Neutral live	ATS-4P-63A-110V
 One Live line Voltage 230V	-	1 Live line + 1 Neutral live	ATS-2P-63A-220V
	220/400V	2 Live line + 1 Neutral live	ATS-3P-63A-220V
		3 Live line + 1 Neutral live	ATS-4P-63A-220V

NOTE

The voltage of the common and backup power supply must be 85%-110% of the rated voltage, and the current cannot be less than 5A, otherwise the coil will heat up or even spontaneously combust. The backup power of the product must be a stable city power, otherwise the product will not switch automatically

Figure 5: Model Selection Guide

Model Selection Table

Live Line Voltage	Suitable for US Voltage System	Must Connect with Neutral Line	Recommended Product
One Live Line Voltage 110V	110/230V	1 Live line + 1 Neutral line	ATS-2P-63A-110V
		2 Live line + 1 Neutral line	ATS-3P-63A-110V
		3 Live line + 1 Neutral line	ATS-4P-63A-110V
One Live Line Voltage 230V	220/400V	1 Live line + 1 Neutral line	ATS-2P-63A-220V
		2 Live line + 1 Neutral line	ATS-3P-63A-220V
		3 Live line + 1 Neutral line	ATS-4P-63A-220V

Note: The voltage of the common and backup power supply must be 85-110% of the rated voltage, and the current cannot be less than 5A, otherwise the coil will heat up or even spontaneously combust. The backup power of the product must be a stable city power, otherwise the

product will not switch automatically.

5. PRODUCT DIMENSIONS

The GEYA Mini ATS is designed for compact installation with universal DIN rail mounting. Refer to the diagram below for detailed dimensions.



Figure 6: Product Dimensions (in mm)

Overall Length: 125 mm

Overall Width: 78.5 mm

Overall Height: 103 mm

DIN Rail Mounting Height: 35 mm

Safety Distance S1: $\geq 30\text{mm}$

Safety Distance S2: $\geq 203\text{mm}$

PRODUCT DIMENSIONS(MM)

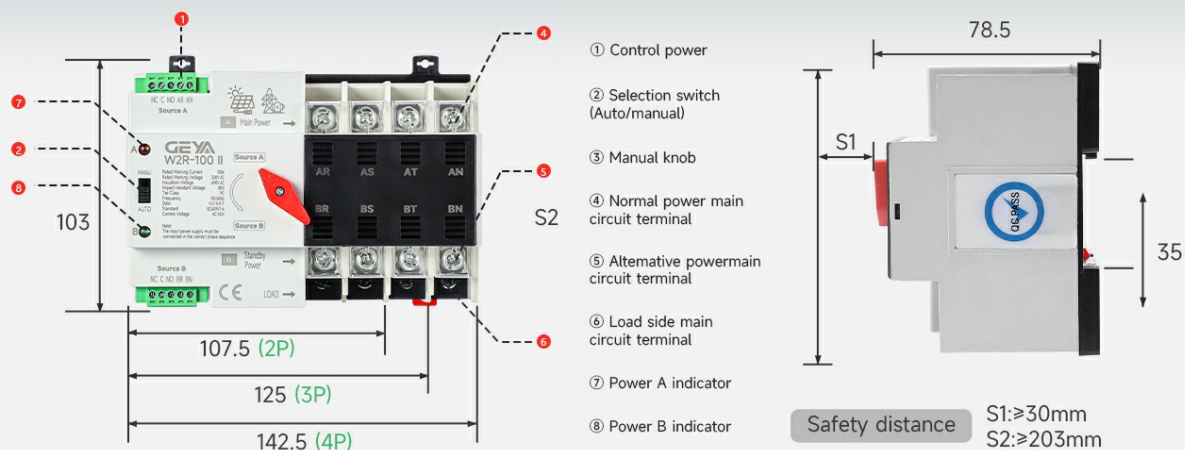


Figure 7: Detailed Dimensions and Safety Clearances

6. TECHNICAL SPECIFICATIONS

Below are the technical specifications for the GEYA Mini ATS Automatic/Manual Transfer Switch.

TECHNICAL PARAMETER



Rated current Ie A		63A	100A
Insulation voltage Ui		AC 690V	
Input voltage Ue		AC110V/AC 220V	
Grade		Grade PC:able to make and withstand not to break short-circuit current	
Use category		AC-33iB	
Pole		2P/3P/4P	
Weight (kg)		0.81	
Life		Electrial:2000 times; Mechanical:5000 times	
Rated conditional short		50kA	
SCPD (fuse)		RT16-00-63A	RT16-00-100A
Rated impulse withstand		8kV	
Control circuit	input voltage: AC110V	Rated control voltage Us:AC110V, 50Hz Correct working condition85%Us~110%Us	
	input voltage: AC 230V	Rated control voltage Us:AC230V, 50Hz Correct working condition85%Us~110%Us	
Current frequency		50/60Hz	
Contact transfer time		<50ms	
Operating transfer time		<50ms	
Return transfer time		<50ms	
Off-time		-55°C~+40°C	
Temperature range		average temperature not more than 35°C in 24 hours	

Figure 8: Technical Parameter Table

Technical Specifications (Model 3P-63A-110VAC)

Parameter	Specification (63A)	Specification (100A)
Rated current Ie A	63A	100A
Insulation voltage Ui	AC 690V	
Input voltage Ue	AC 110V / AC 220V	
Grade	PC grade: able to make and withstand not to break short-circuit current	
Use category	AC-33iB	
Pole	2P / 3P / 4P	
Weight (kg)	0.81	-
Life	Electrical: 2000 times; Mechanical: 5000 times	

WIRING INSTRUCTIONS

Analysis of Each Part Name

3P
Poles

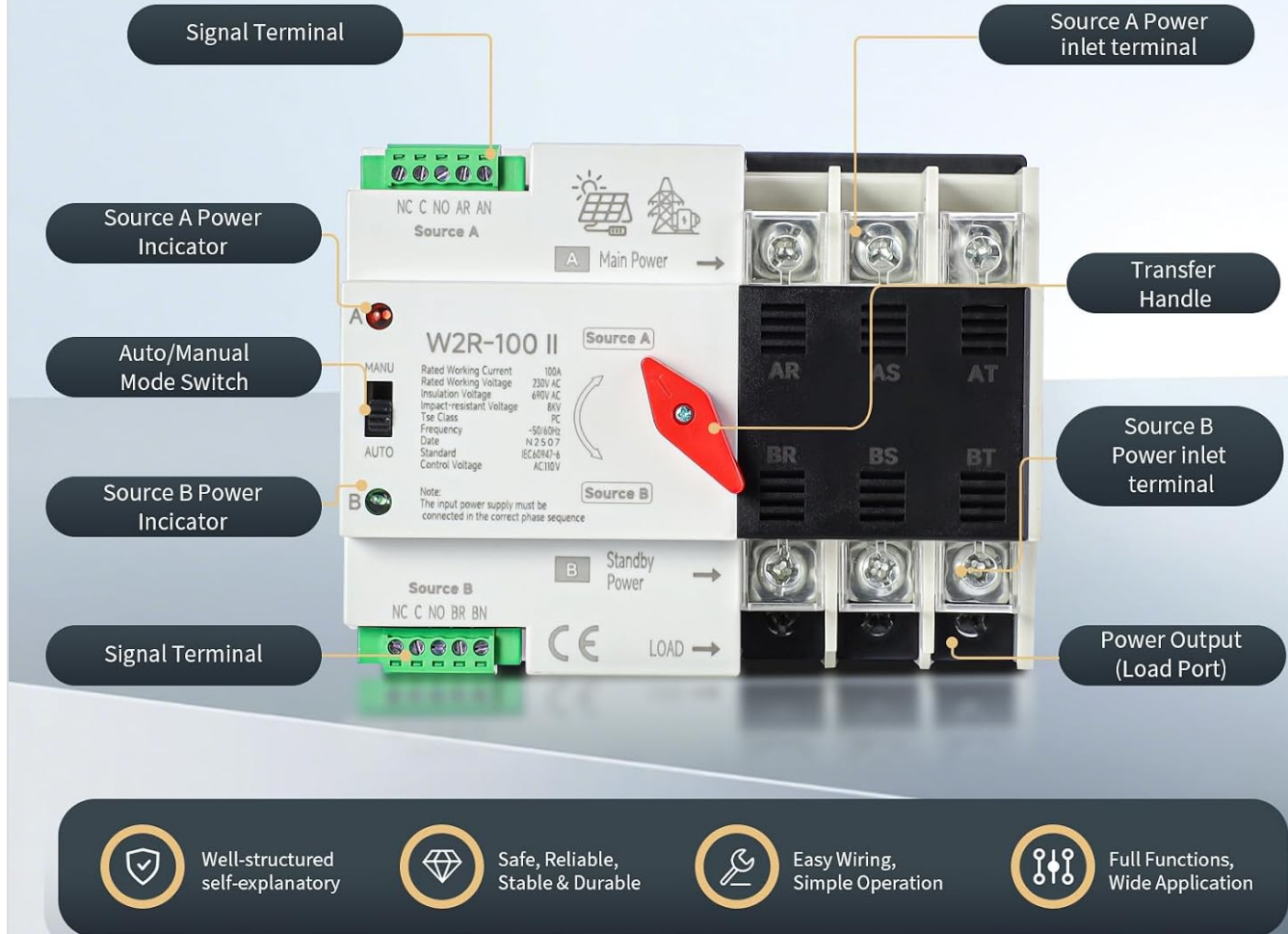


Figure 10: Analysis of Each Part Name (3P Poles)

1. **Signal Terminal:** For control signals.
2. **Source A Power Inlet Terminal:** Connection point for Main Power (Source A).
3. **Source A Power Indicator:** Indicates status of Source A.
4. **Auto/Manual Mode Switch:** Selector for operation mode.
5. **Source B Power Indicator:** Indicates status of Source B.
6. **Transfer Handle:** Manual override for switching power sources.
7. **Source B Power Inlet Terminal:** Connection point for Standby Power (Source B).
8. **Power Output (Load Port):** Connection point for the electrical load.

7.2 Wiring Diagram

Follow the wiring diagrams carefully to ensure correct and safe installation. The device supports connection to mains, generator, or photovoltaic systems.

The combination of photovoltaic and generator



Photovoltaic power station



Generator

Figure 11: Example of Photovoltaic and Generator Combination Wiring

Wiring Diagram

Automatic/Manual
Transfer Switch

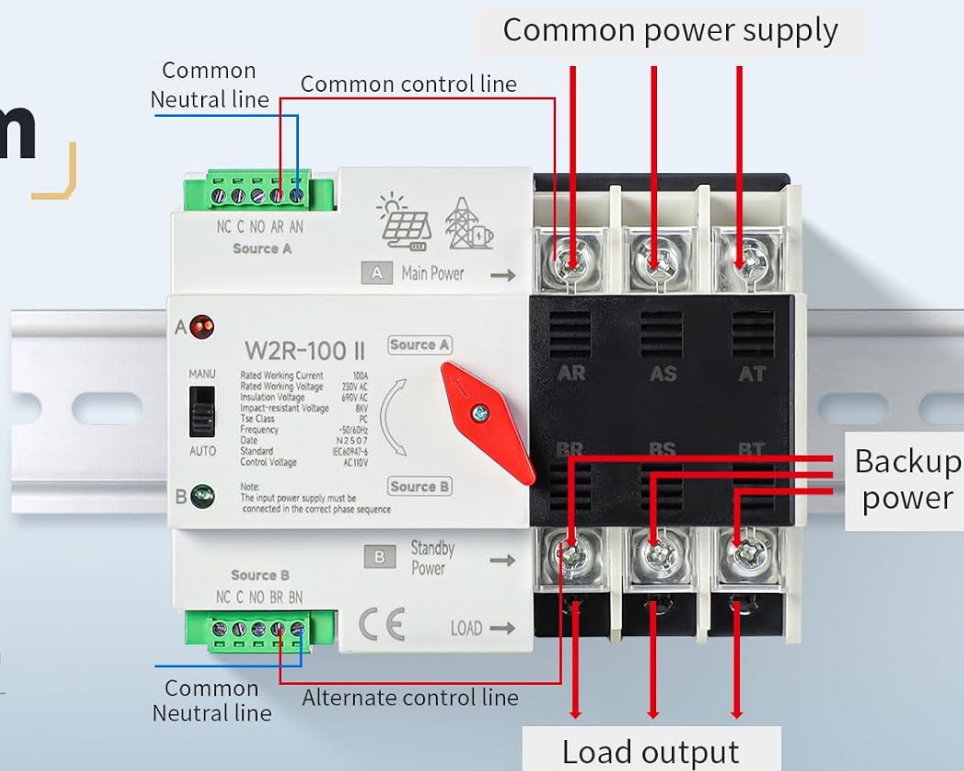
3P
Poles



Clear connection



Safe and reliable



Widely applied



Figure 12: General Wiring Diagram (3P Poles)

PRODUCT WIRING DIAGRAM

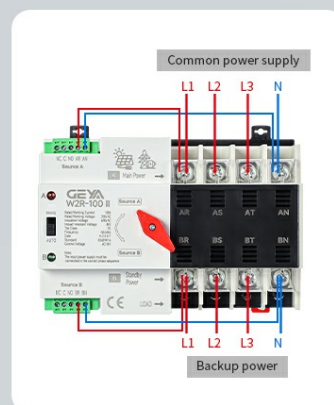
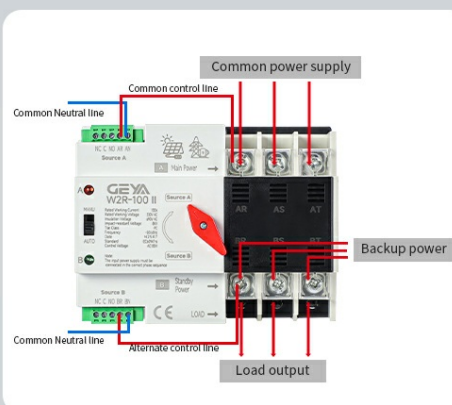
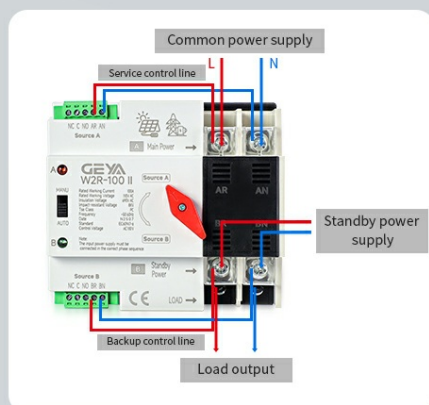


Figure 13: Various Product Wiring Diagram Examples

Wiring Steps:

1. Mount the ATS on a DIN rail in a suitable enclosure.
2. Connect the Main Power (Source A) to the "Source A Power Inlet Terminal" (AR, AS, AT, AN).
3. Connect the Standby Power (Source B) to the "Source B Power Inlet Terminal" (BR, BS, BT, BN).
4. Connect the load to the "Power Output (Load Port)".
5. Ensure all connections are secure and tightened to prevent loose contacts and overheating.
6. Connect the control lines (Common Neutral line, Common control line, Alternate control line) as per the diagram for automatic operation.

Video: Wiring Example and Operation Demonstration

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Video 1: This video demonstrates the wiring process and basic operation of the GEYA ATS (W2R) unit. It shows how to connect power sources and loads, and how the switch responds to power changes.

8. OPERATING INSTRUCTIONS

The GEYA Mini ATS can operate in both automatic and manual modes.

8.1 Automatic Mode

- Set the "Auto/Manual Mode Switch" to **AUTO**.
- When normal power supply A is working properly, the A (red light) indicator will be on.
- If normal power supply A becomes abnormal (e.g., power outage, under/over voltage), the A (green light) indicator will go off, and the switch will automatically transfer the load to backup power supply B.
- When normal power supply A recovers, the switch will automatically transfer the load back to power supply A.

8.2 Manual Mode

- Set the "Auto/Manual Mode Switch" to **MANUAL**.
- To select power supply A, manually operate the red transfer handle towards power supply A. The red light for A will turn on.
- To select power supply B, manually operate the red transfer handle towards power supply B. The red light for B will turn on.
- In manual mode, the switch will not automatically transfer power.

Video: Automatic/Manual Transfer Switch Operation

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Video 2: This video illustrates the functionality of the GEYA Automatic/Manual Transfer Switch (W2R), demonstrating how it switches between power sources.

Video: ATS Usage Demonstration

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Video 3: A brief demonstration of the GEYA ATS (W2R) in action, showing the power transfer process.

9. MAINTENANCE

The GEYA Mini ATS is designed for reliable operation with minimal maintenance. However, periodic checks are recommended to ensure optimal performance and safety.

- **Visual Inspection:** Regularly inspect the switch for any signs of physical damage, loose connections, or discoloration due to overheating.
- **Terminal Tightness:** Periodically check and tighten all terminal screws to ensure good electrical contact.
- **Cleanliness:** Keep the switch free from dust, dirt, and moisture. Use a dry, soft cloth for cleaning.
- **Functionality Test:** Occasionally test the automatic transfer function by temporarily disconnecting the main power source (if safe to do so) to ensure the switch transfers to the backup source as expected.

10. TROUBLESHOOTING

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

- **No Power Transfer:**
 - Check if both power sources (A and B) are active and within the specified voltage range (85-110% of rated voltage).
 - Ensure the "Auto/Manual Mode Switch" is set to AUTO for automatic operation.
 - Verify all wiring connections are secure and correct according to the wiring diagram.
 - Check if the current is below 5A, which can cause the coil to malfunction.
- **Indicator Lights Not Functioning:**
 - Confirm that the corresponding power source is active.
 - Inspect for loose internal connections (requires professional inspection).
- **Overheating:**
 - Ensure the current is not below 5A.
 - Check for loose terminal connections.
 - Verify the load does not exceed the rated current of the switch.

For persistent issues or complex problems, contact qualified electrical personnel or GEYA customer support.

11. WARRANTY AND SUPPORT

GEYA products are manufactured to high-quality standards. For warranty information and technical support, please refer to the official GEYA website or contact your local distributor. Keep your purchase receipt for warranty claims.

For further assistance, visit the [GEYA Store on Amazon](#).

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Manufacturer: ZHEJIANG GEYA ELECTRICAL CO.,LTD

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question