Bkiyougo MG02

Bkiyougo 433MHz Wireless Relay Switch with Remote Control

MODEL: MG02

User Instruction Manual

1. Introduction

This manual provides detailed instructions for the installation, setup, and operation of your Bkiyougo 433MHz Wireless Relay Switch (Model MG02). This device is designed for remote control applications, offering stable and reliable performance with high reception sensitivity. It utilizes a 433MHz RF signal, allowing control over distances up to 50 meters in open areas, even through walls, floors, and doors.

The relay switch features a 10A relay, capable of handling high-power electrical appliances, ensuring long-term stability. It supports four operating modes: Momentary, Toggle, Latched, and Delay, providing flexibility for various applications. The EV1527 learning code technology enhances security, preventing unauthorized control by other transmitters.

2. Product Overview

The Bkiyougo MG02 Wireless Relay Switch system includes a receiver module and a remote control transmitter. Below are the key components and their descriptions.
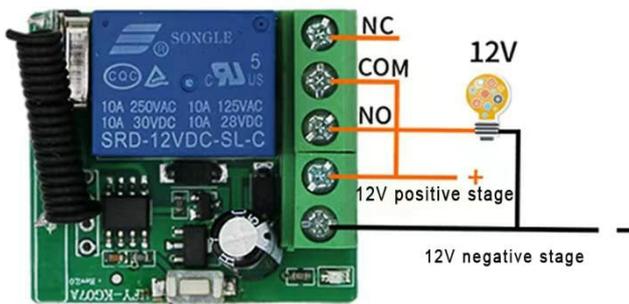
Image 2.1: Bkiyougo 433MHz Wireless Relay Switch MG02 and Remote Control.
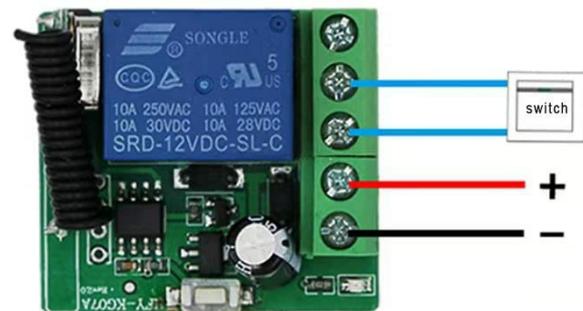
2.1 Receiver Module Components

Application wiring diagram

Control 12V load wiring diagram

Wiring diagram of exit switch

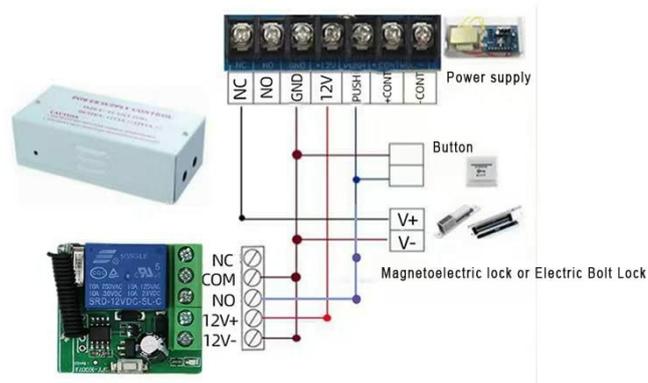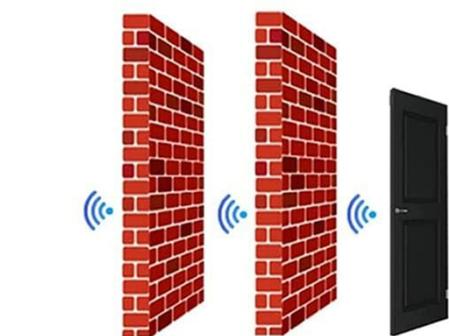### Access Control Wiring Diagram

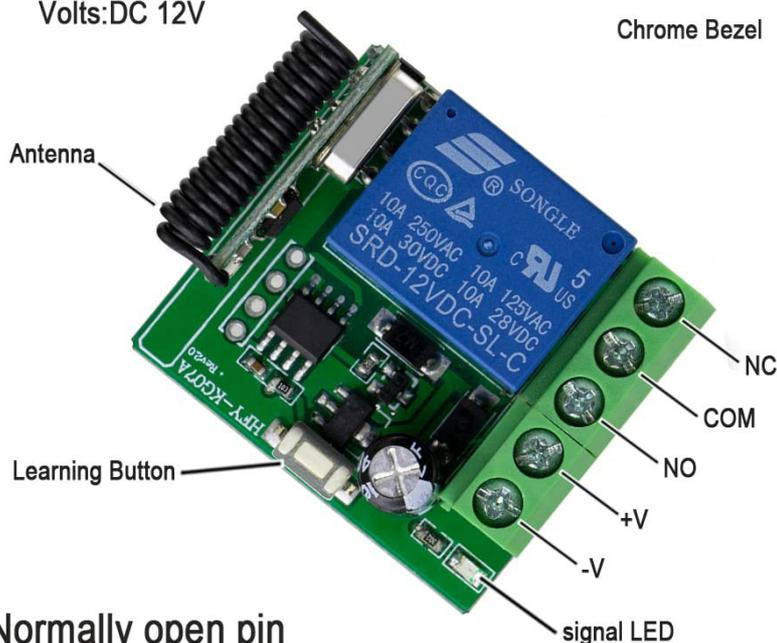

Image 2.2: Receiver Module Component Description.

- **10A Relay:** The main switching component, capable of handling up to 10 Amps.
- **Normally Closed End (NC):** Terminal that is closed when the relay is de-energized and opens when energized.
- **Common Terminal (COM):** The common connection point for the relay switch.
- **Normally Open End (NO):** Terminal that is open when the relay is de-energized and closes when energized.
- **Positive Pole (+V):** Power input for the receiver module.
- **Negative Pole (-V):** Ground input for the receiver module.
- **Operating Indicator Light (LED):** Illuminates to indicate power and operational status.
- **Learn Key (Button):** Used for pairing the remote control and selecting operating modes.
- **High-frequency Electrolytic Capacitor:** Component for stable power filtering.
- **Antenna:** For receiving RF signals from the remote control.

2.2 Remote Control Transmitter

PRODUCT DETAIL

Relay Receiver Board Work
Volts:DC 12V

Silicone Button

Indicator Light

Chrome Bezel

Metal Keychain

Antenna

Learning Button

NC

COM

NO

+V

-V

signal LED

NO:Normally open pin
COM:Common pin
NC:Normally closed pin

Image 2.3: Remote Control Transmitter Details.

- **Silicone Buttons (A, B):** Used to send control signals.
- **Indicator Light:** Illuminates when a button is pressed.
- **Chrome Bezel:** Decorative and protective casing.
- **Metal Keychain:** For portability and attachment.

3. Specifications

Feature	Specification
Brand	Bkiyougo
Model	MG02
Operating Voltage	DC 12V

Input/Output Voltage Range	1V-250V
Current Rating	10 Amps
Maximum Switching Current	10 Amps
Maximum Switching Voltage	12 Volts (DC)
Minimum Switching Voltage	12 Volts (DC)
RF Frequency	433MHz
Encoding Type	EV1527 Learning Code
Reception Sensitivity	> 97dBm
Control Distance	Up to 50 meters (open area)
Operating Modes	Momentary, Toggle, Latched, Delay
Mounting Type	PCB Mount
Included Components	433Mhz RF Wireless Relay Remote Control (Receiver and Transmitter)

4. Setup and Pairing

This section guides you through pairing the remote control with the receiver module and setting the desired operating mode.

4.1 Clearing Existing Codes

1. Press and hold the 'Learn Key' button on the receiver module for approximately 8 seconds.
2. The indicator light will flash rapidly, then turn off, indicating that all previously learned codes have been cleared.

4.2 Pairing the Remote Control (Learning Code)

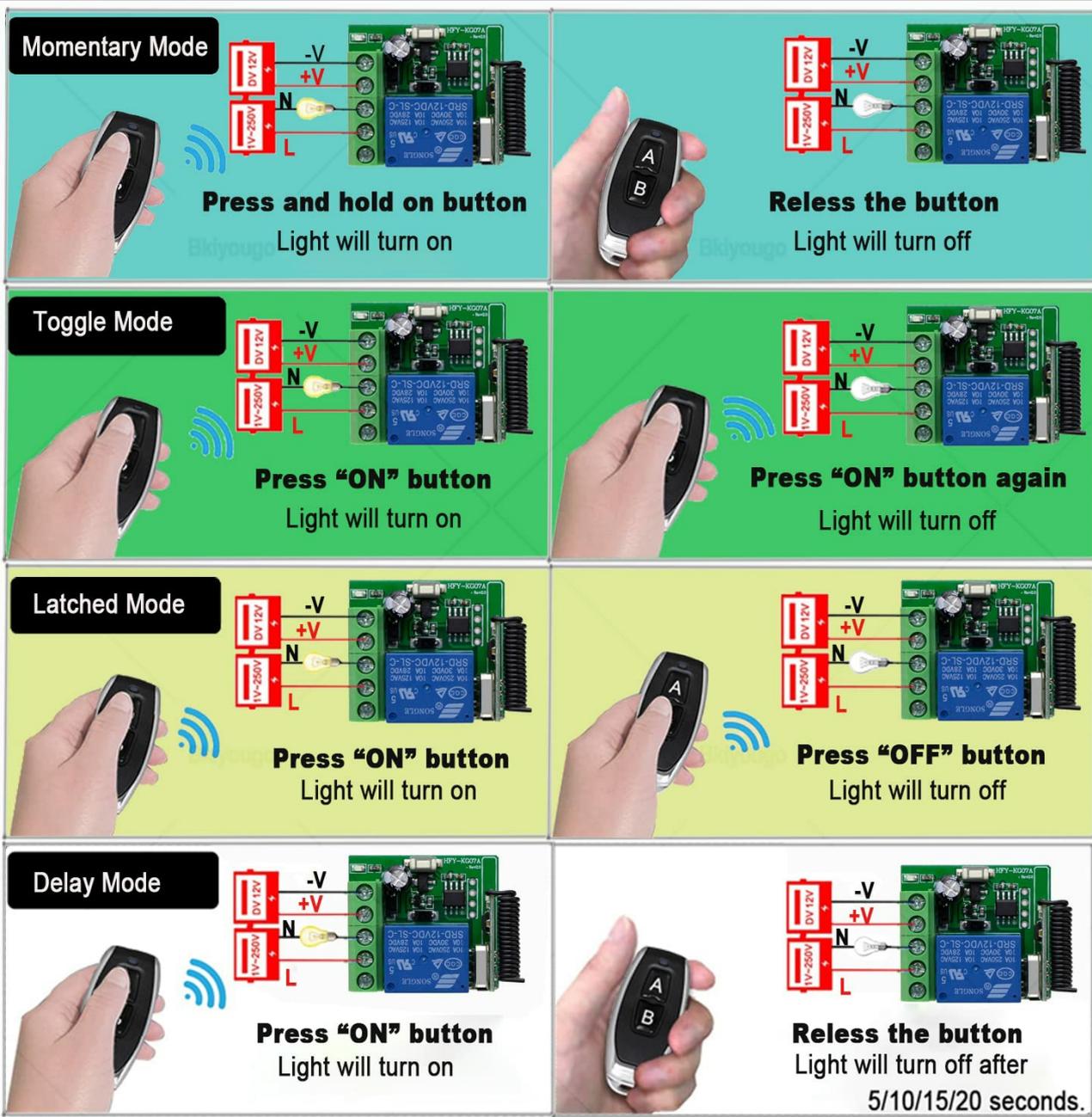After clearing, you can pair the remote control in one of the four operating modes:

Image 4.1: Operating Modes for Pairing.

- **Momentary Mode:** Press the 'Learn Key' button once. The indicator light will flash once. Then, press the desired button on your remote control (e.g., 'A'). The indicator light will flash rapidly and then turn off, confirming successful pairing in Momentary mode. In this mode, the relay activates only while the remote button is held down.

- **Toggle Mode:** Press the 'Learn Key' button twice. The indicator light will flash twice. Then, press the desired button on your remote control. The indicator light will flash rapidly and then turn off. In this mode, one press of the remote button activates the relay, and another press deactivates it.

- **Latched Mode:** Press the 'Learn Key' button three times. The indicator light will flash three times. Then, press button 'A' on your remote control, followed by button 'B'. The indicator light will flash rapidly and then turn off. In this mode, button 'A' activates the relay, and button 'B' deactivates it.

- **Delay Mode (5s/10s/15s/20s):** Press the 'Learn Key' button four, five, six, or seven times respectively for 5, 10, 15, or 20-second delay. The indicator light will flash accordingly. Then, press the desired button on your remote control. The indicator light will flash rapidly and then turn off. In this mode, the relay activates when the button is pressed and automatically deactivates after the set delay time.

4.3 Video Tutorial: Programming the Remote Control

Video 4.1: This video demonstrates the process of programming the 433MHz 12V RF Wireless Relay Remote Control, including clearing codes and setting different operating modes. It shows the interaction between the remote and the receiver's indicator light during the pairing process.
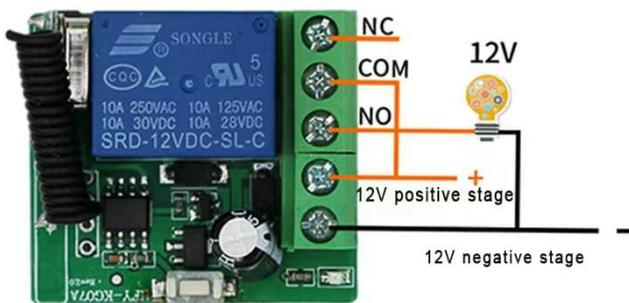
5. Wiring Diagrams

Proper wiring is crucial for the safe and correct operation of the relay switch. Always ensure power is disconnected before making any wiring connections.
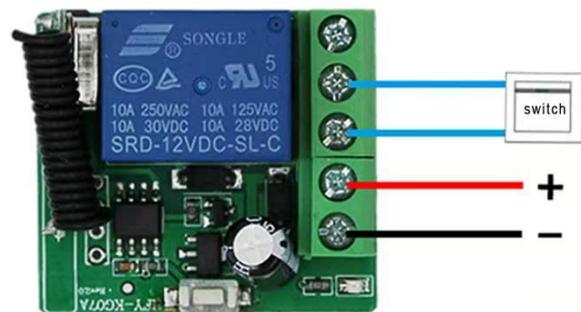
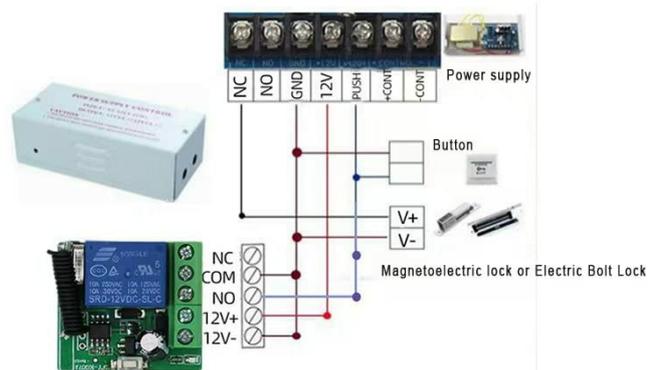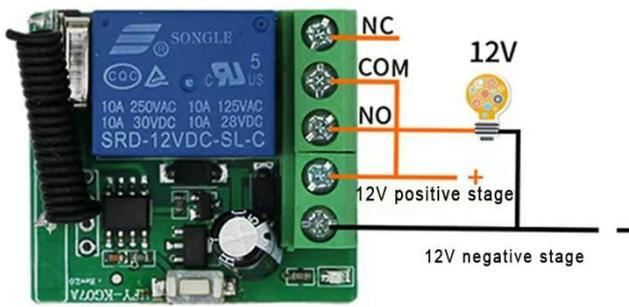## 5.1 Control 12V Load Wiring Diagram

Image 5.1: Wiring for a 12V Load. Connect the 12V positive stage to the COM terminal, and the 12V negative stage to the -V terminal. The load (e.g., a light bulb) connects between the NO terminal and the 12V positive stage.
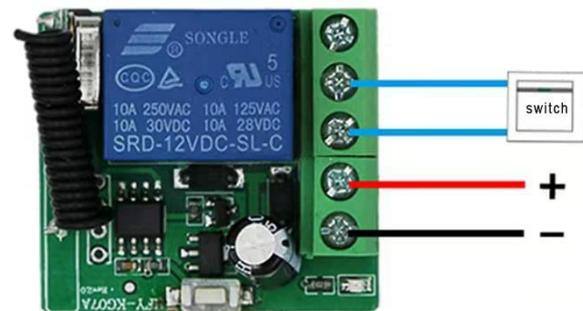
5.2 Wiring Diagram of Exit Switch

Application wiring diagram

Control 12V load wiring diagram

NC
COM
NO
10A 250VAC 10A 125VAC
10A 30VDC 10A 28VDC
SRD-12VDC-SL-C

12V

12V positive stage
12V negative stage

Wiring diagram of exit switch

10A 250VAC 10A 125VAC
10A 30VDC 10A 28VDC
SRD-12VDC-SL-C

switch

+
−

Access Control Wiring Diagram

NC | NO | GND | 12V | PUSH | +CONT | -CONT

Power supply

Button

V+
V−

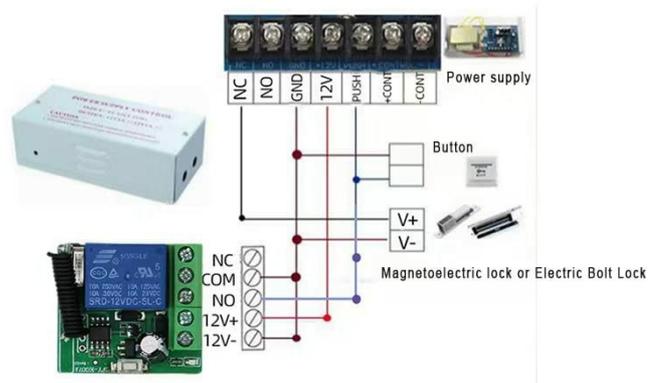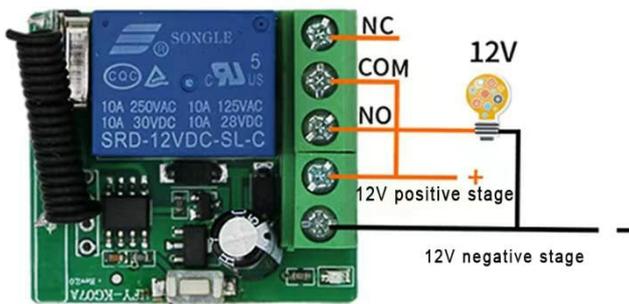Magnetoelectric lock or Electric Bolt Lock

NC
COM
NO
12V+
12V−

Image 5.2: Wiring for an Exit Switch. This diagram shows how to integrate an external switch with the relay module. The switch connects to the relay's input, controlling the output.
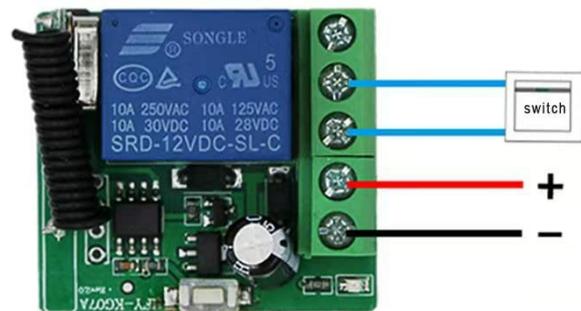
5.3 Access Control Wiring Diagram

Application wiring diagram

Control 12V load wiring diagram

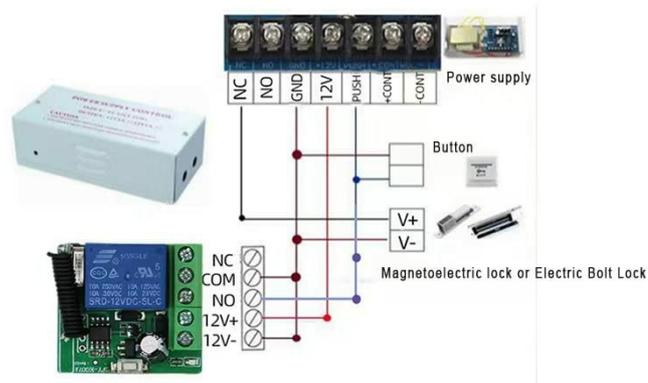### Wiring diagram of exit switch

Access Control Wiring Diagram

Image 5.3: Wiring for Access Control. This diagram illustrates connecting the relay module to an access control system, such as a magnetic lock or electric bolt lock, allowing remote operation.

6. Operating Modes Explained

The Bkiyougo MG02 supports four distinct operating modes, each suitable for different applications:

- **Momentary Mode:** The relay remains active only as long as the remote control button is pressed. Releasing the button deactivates the relay. Ideal for applications requiring temporary contact, like a garage door opener or an electric strike plate.
- **Toggle Mode:** Pressing the remote control button once activates the relay, and it stays active. Pressing the same button again deactivates the relay. This acts like a standard ON/OFF switch, suitable for lights or fans.
- **Latched Mode:** This mode typically uses two buttons on the remote. Pressing one button (e.g., 'A') activates the relay, and it stays active. Pressing another button (e.g., 'B') deactivates the relay. This is useful for distinct ON and OFF controls.
- **Delay Mode:** Pressing the remote control button activates the relay, and it remains active for a pre-set duration (5, 10, 15, or 20 seconds) before automatically deactivating. This is useful for timed operations, such

as a temporary light or a door release with automatic re-locking.

7. Troubleshooting

If you encounter issues with your Bkiyougo Wireless Relay Switch, refer to the following common troubleshooting steps:

- **Device Not Responding:**

  - Ensure the receiver module is correctly powered (DC 12V). Check power connections.
  - Verify the remote control battery is not depleted.
  - Confirm the remote control is properly paired with the receiver. Try re-pairing the remote as per Section 4.2.
  - Check for obstructions or excessive distance between the remote and receiver. The maximum range is 50 meters in open areas.

- **Incorrect Operating Mode:**

  - If the relay behaves unexpectedly (e.g., stays on in Momentary mode), it might be programmed to a different mode. Clear all codes (Section 4.1) and re-pair the remote in the desired mode (Section 4.2).

- **Intermittent Operation:**

  - Strong RF interference from other devices can affect performance. Try relocating the receiver or reducing interference sources.
  - Ensure the antenna on the receiver module is not obstructed or damaged.

- **Relay Not Switching Load:**

  - Verify that the load's voltage and current requirements do not exceed the relay's specifications (10A, 1V-250V).
  - Check all wiring connections to the NO, NC, and COM terminals for secure contact. Refer to Section 5 for correct wiring.

8. Safety Information

Please read and follow these safety guidelines to prevent injury or damage to the device:

- **Electrical Safety:** Always disconnect power to the circuit before installing, wiring, or performing maintenance on the relay module. Improper wiring can cause electric shock, fire, or damage to the device.
- **Voltage Compatibility:** Ensure the power supply voltage (DC 12V) and the load voltage are within the specified ranges of the relay module.
- **Current Limits:** Do not exceed the maximum current rating of 10 Amps for the relay. Overloading can lead to overheating and failure.
- **Installation Environment:** Install the device in a dry environment, away from moisture, extreme temperatures, and corrosive substances.
- **Professional Installation:** If you are unsure about any wiring procedures, consult a qualified electrician.
- **Children and Pets:** Keep the device and remote control out of reach of children and pets to prevent accidental operation or damage.

9. Warranty and Support

Bkiyougo products are designed for reliability and performance. For specific warranty details, please refer to the product packaging or contact your retailer. If you require technical assistance or have questions regarding the operation of your device, please contact Bkiyougo customer support through the vendor's official channels or the platform where the product was purchased.