

Newgoal AK3-AT1-GL-M-X

Newgoal 2-Channel WiFi Smart Relay Switch Module User Manual

1. INTRODUCTION

This Newgoal 2-Channel WiFi Smart Relay Switch Module is a wireless switch designed to integrate with your smart home system. It supports remote control of electrical appliances or power circuits via the TUYA/Smart Life application and is compatible with voice assistants such as Amazon Alexa and Google Assistant. The module offers multiple operating modes to suit various automation needs.

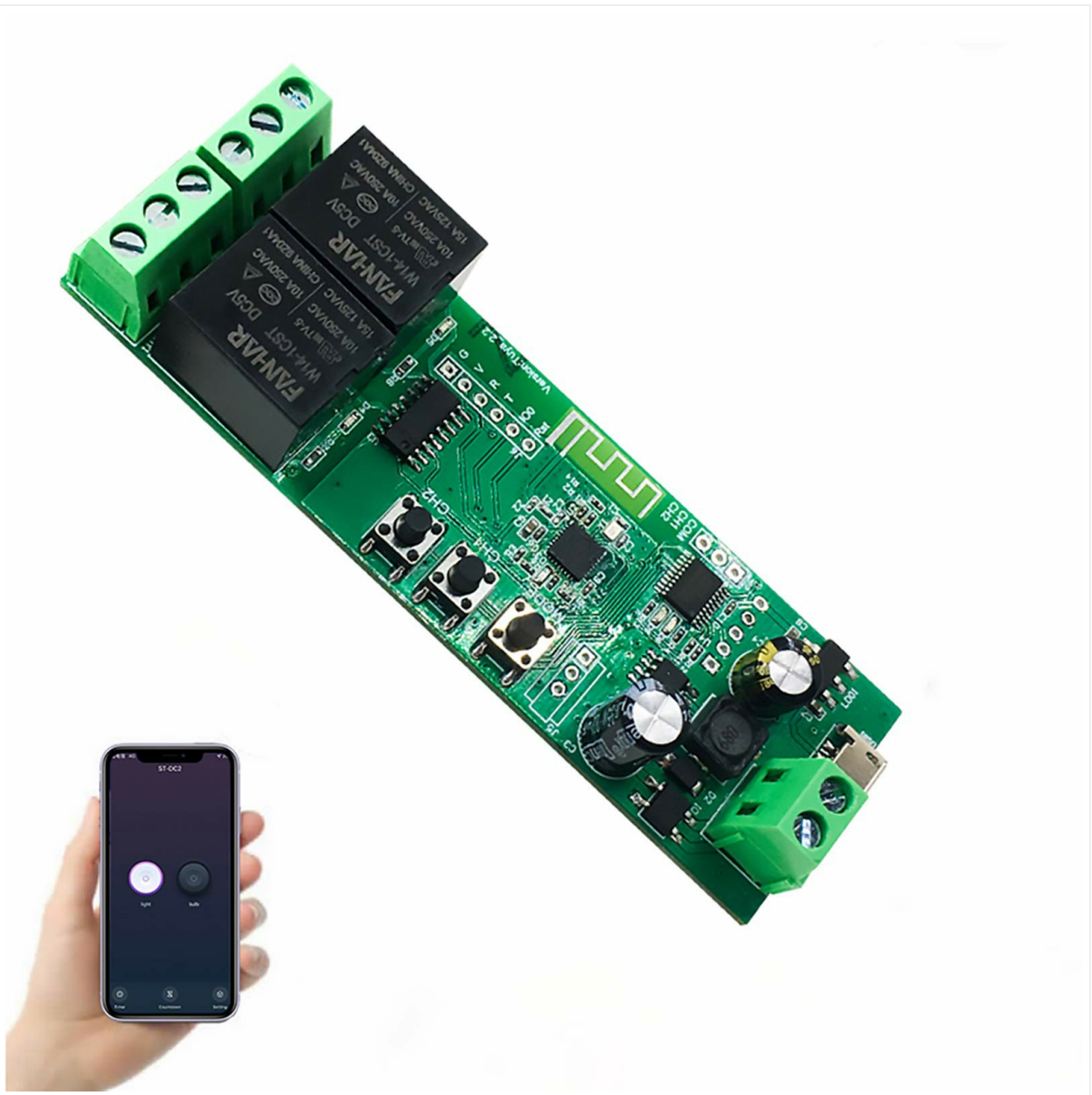


Image 1.1: Newgoal 2-Channel WiFi Smart Relay Switch Module with smartphone app and voice assistant devices.

2. KEY FEATURES

- **Remote Control:** Control connected devices from anywhere using the TUYA/Smart Life application.
- **Voice Control:** Compatible with Amazon Alexa and Google Assistant for hands-free operation.
- **Multiple Working Modes:** Supports Momentary (Jog), Self-Locking, and Interlock modes.
- **Adjustable Momentary Time:** Momentary mode duration is adjustable up to 60 seconds and saved locally.
- **DIY Project Compatibility:** Ideal for smart lights, fans, garage doors, humidifiers, and thermostats.
- **2.4GHz WiFi Connectivity:** Connects to existing 2.4GHz Wi-Fi networks. *Note: 5G WiFi and Mesh WiFi systems are not supported.*
- **Scheduling and Automation:** Set timers, schedules, and create routines via the app.

3. PRODUCT OVERVIEW AND COMPONENTS

Familiarize yourself with the various components and connection points of the relay module.

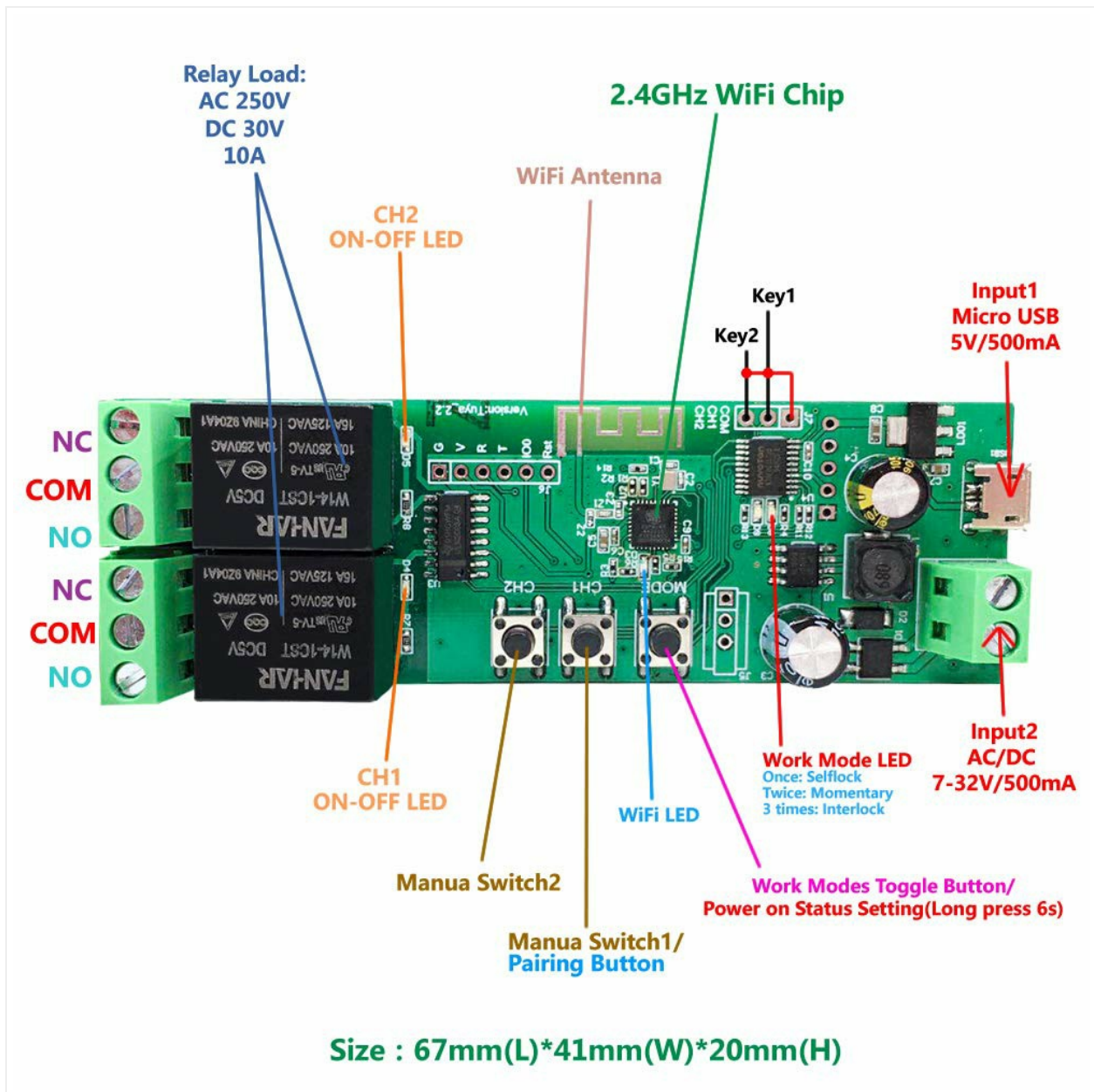


Image 3.1: Detailed view of the Newgoal 2-Channel WiFi Smart Relay Switch Module with labeled components.

- **2.4GHz WiFi Chip:** The core component for wireless communication.
- **WiFi Antenna:** For wireless signal reception.
- **CH1 ON-OFF LED / CH2 ON-OFF LED:** Indicators for relay channel status.
- **Manual Switch 1 / Pairing Button:** Used for manual control and initiating pairing mode.
- **Manual Switch 2:** Used for manual control of the second channel.
- **Work Mode LED:** Indicates the current operating mode.
- **Work Modes Toggle Button / Power on Status Setting:** Long press for 6 seconds to change work mode or set power-on status.
- **Input 1 (Micro USB 5V/500mA):** Power input option for the module.
- **Input 2 (AC/DC 7-32V/500mA):** Alternative power input option for the module.
- **Relay Load Terminals (NC, COM, NO):** Connection points for the electrical load. NC (Normally Closed), COM (Common), NO (Normally Open).

4. SETUP

4.1. Wiring Instructions

The relay acts as a switch without direct output; the power input (AC/DC) is solely for powering the PCBA (Printed Circuit Board Assembly). Ensure all wiring is done by a qualified professional and with power disconnected to prevent electric shock.

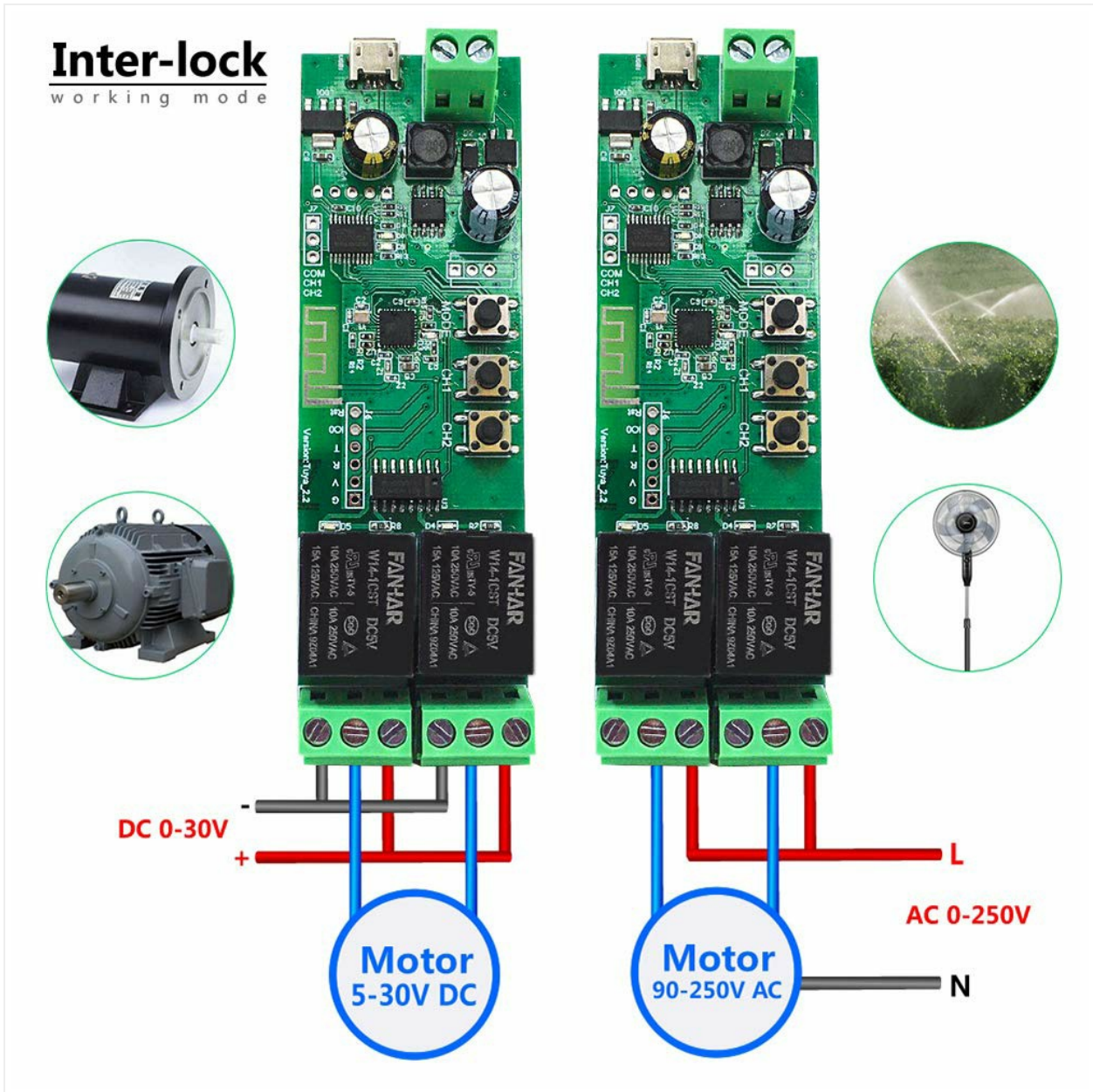


Image 4.1: Example wiring for Interlock mode, showing connections for DC and AC motors.

Self-locking

working mode



Image 4.2: Example wiring for Self-locking mode, demonstrating connections for light bulbs.

4.2. App Installation and Wi-Fi Configuration

1. **Download the App:** Search for "TUYA" or "Smart Life" in your mobile device's app store (available on Android and iOS) and install it.
2. **Create an Account:** Open the app and follow the on-screen instructions to create a new user account or log in if you already have one.
3. **Connect to 2.4GHz WiFi:** Ensure your smartphone is connected to a 2.4GHz Wi-Fi network. The module does not support 5G WiFi or Mesh WiFi systems.
4. **Enter Pairing Mode:** Power on the relay module. Press and hold the "Manual Switch 1 / Pairing Button" (or the Work Modes Toggle Button) for approximately 6 seconds until the WiFi LED indicator starts blinking rapidly, indicating it's in pairing mode.
5. **Add Device in App:** In the TUYA/Smart Life app, tap the "+" icon to add a new device. Select the appropriate device type (e.g., "Switch" or "Relay").
6. **Follow In-App Instructions:** The app will guide you through the remaining steps to connect the module to your Wi-Fi network. This typically involves confirming the blinking indicator and entering your Wi-Fi password.
7. **Rename Device:** Once connected, you can rename the device for easier identification in the app and for

voice control.

5. OPERATING MODES

The module supports different operating modes, which can be selected by pressing the Work Modes Toggle Button. The Work Mode LED will indicate the current mode.

5.1. Momentary Mode (Jog Mode)

In Momentary mode, if you press the button (either in the app or manually on the board), the switch will turn ON and then automatically turn OFF after a set duration. This duration is adjustable up to 60 seconds.

- **Wiring Option 1:** Open for 1 second, then automatically close.
- **Wiring Option 2:** Close for 1 second, then automatically open.

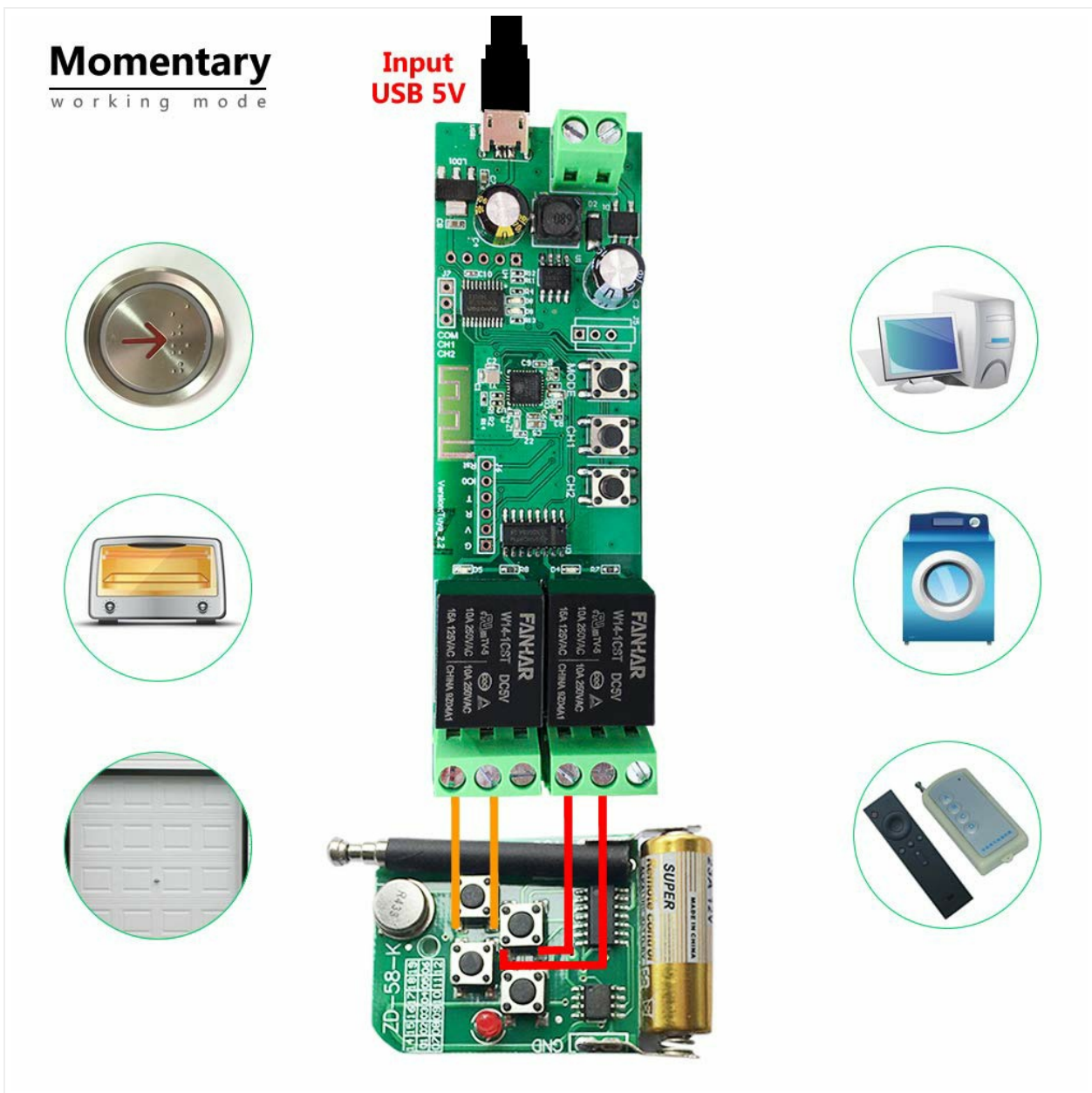


Image 5.1: Momentary mode application examples, such as controlling an elevator button, a toaster, or a garage door opener.

5.2. Self-Locking Mode

In Self-Locking mode, a single press of the button (in the app or manually) will toggle the relay's state. Press

once to turn the connected device ON, and press again to turn it OFF. This mode allows for immediate remote ON/OFF control.

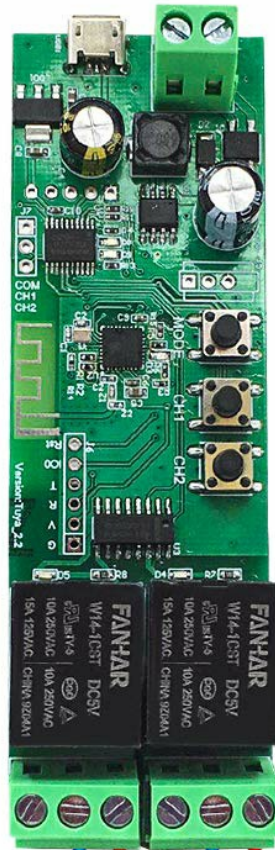
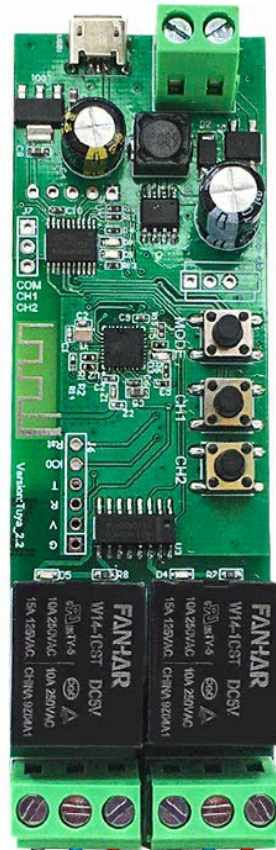


Image 5.2: Self-locking mode application examples, such as controlling a water dispenser, water heater, or electric kettle.

5.3. Interlock Mode

Interlock mode (supported for 2 and 4 channels) is designed for applications where only one channel should be active at a time. This mode is typically used for controlling AC/DC motors, ensuring that when one motor direction is activated, the other is automatically deactivated.

Inter-lock working mode



DC 0-30V
-
+

Motor
5-30V DC

AC 0-250V

Motor
90-250V AC

L
N

Image 5.3: Interlock mode application examples, such as controlling motors or irrigation systems.

5.4. Adjustable Momentary Time

The duration for the Momentary mode can be precisely set within the TUYA/Smart Life app. This setting can be adjusted up to 60 seconds and is stored locally on the device.

Momentary Time Adjustable

Up to 60 Seconds and saved locally

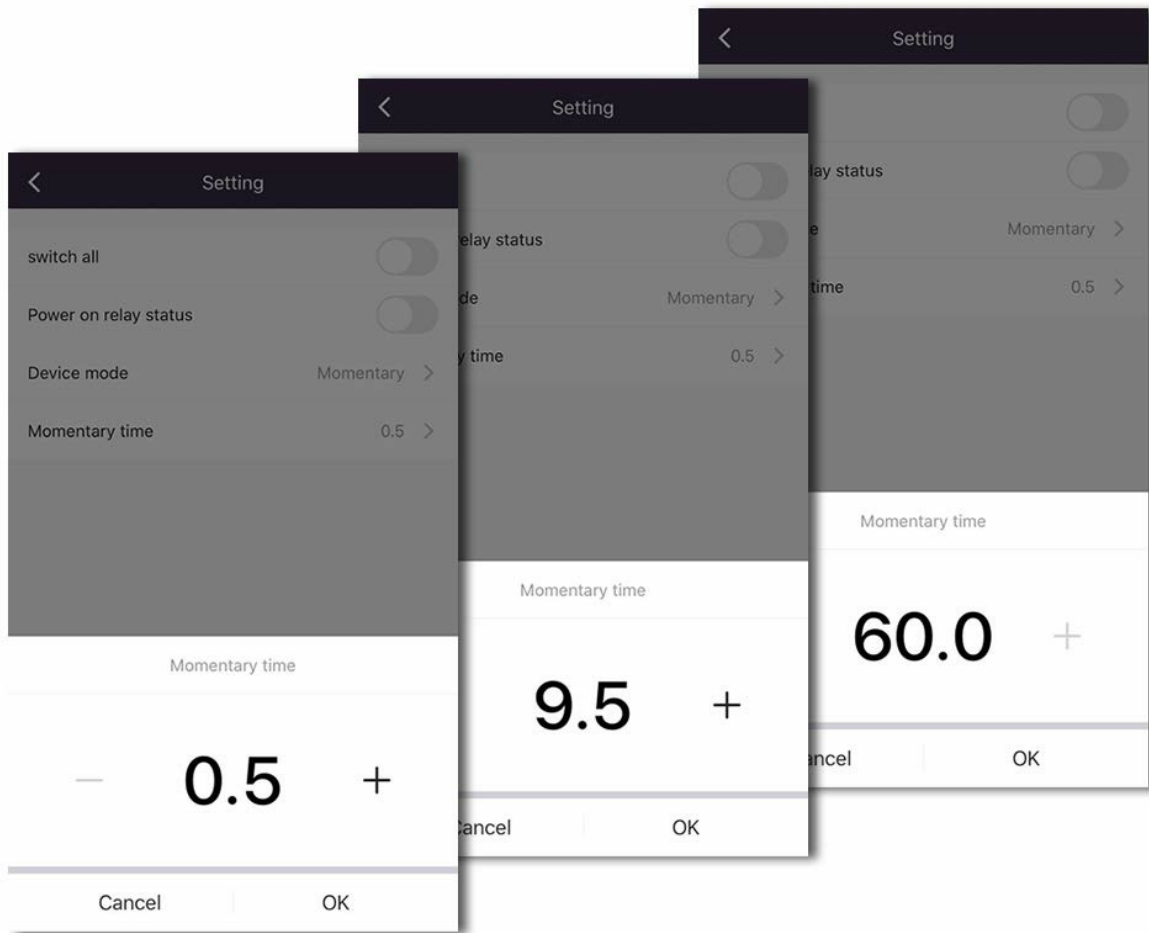


Image 5.4: App interface for adjusting momentary time, showing options from 0.5 seconds up to 60.0 seconds.

6. APP CONTROL (TUYA / SMART LIFE)

The TUYA / Smart Life mobile application provides comprehensive control and management features for your smart relay module:



Interact of Everything

-  Remote Control Each Gang Individually
-  Real-time Monitor Status On APP
-  Set 8 Time Schedules
-  Self-locking mode
-  Interlock mode
-  Inching mode
-  Share Control

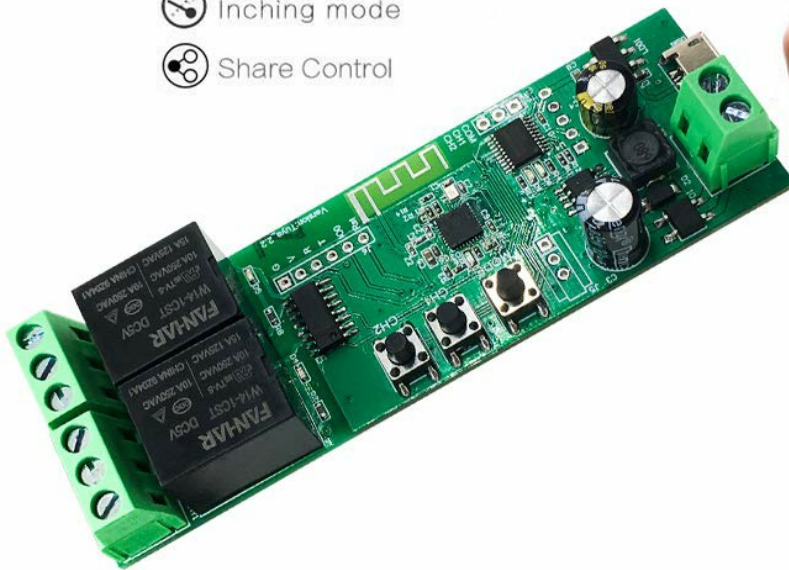


Image 6.1: Smartphone screen showing the TUYA/Smart Life app interface for controlling the relay module.

- **Remote ON/OFF:** Turn devices on or off from anywhere.
- **Time Scheduling:** Set up schedules and timers for automated operation.
- **Device Sharing:** Share control of the module with family members.
- **Group Management:** Group multiple devices for simultaneous control.
- **Real-time Status Monitoring:** View the current status of your connected devices.
- **Inching Mode:** Another term for Momentary mode.

7. VOICE CONTROL (ALEXA / GOOGLE ASSISTANT)

The Newgoal Smart Relay Module is compatible with Amazon Alexa and Google Assistant, allowing you to control connected devices using simple voice commands. Ensure your device is linked within the respective voice assistant app.

- **Supported Commands:** You can ask Alexa or Google Assistant to turn devices ON or OFF.
- **Language Support:** Currently, only US/UK English and German voice commands are supported.
- **Routines:** You can define routines in the Alexa or Google Home app to automate actions with your smart

relay module.

8. DIY PROJECTS

This smart relay module is versatile and can be integrated into various DIY smart home projects. Examples include:

- Automating lights and fans.
- Controlling garage doors.
- Integrating with humidifiers or thermostats.
- Creating custom automation scenarios with other smart devices.

9. SPECIFICATIONS

Feature	Specification
Model Number	AK3-AT1-GL-M-X
Manufacturer Part Number	NG80002.ty
Brand	Newgoal
Operating Mode	Manual (and App/Voice)
Power Input	Micro USB 5V/500mA or AC/DC 7-32V/500mA
Relay Load	AC 250V 10A, DC 30V 10A
Contact Type	Normally Closed
Wireless Connectivity	2.4GHz WiFi (IEEE 802.11 b/g/n)
Dimensions	67mm (L) x 41mm (W) x 20mm (H)
Package Dimensions	14.1 x 5.7 x 2.6 cm
Item Weight	510 grams

10. TROUBLESHOOTING

- **Device not connecting to Wi-Fi:**
 - Ensure your Wi-Fi network is 2.4GHz. 5G WiFi and Mesh WiFi systems are not supported.
 - Check Wi-Fi signal strength at the installation location; a Wi-Fi extender might be needed in weak signal areas.
 - Verify that the Wi-Fi password entered in the app is correct.
 - Make sure the device is in pairing mode (WiFi LED blinking rapidly).
- **Voice control not working:**
 - Verify that the device is correctly linked and enabled in your Amazon Alexa or Google Home app.

- Ensure you are using supported English (US/UK) or German voice commands.
- Check your internet connection.
- **Relay not responding to commands:**
 - Check all wiring connections for power input and the connected load.
 - Ensure the correct operating mode (Momentary, Self-Locking, Interlock) is selected for your application.
 - Confirm the module is powered on and the WiFi LED is solid (connected).

11. WARRANTY AND SUPPORT

For warranty information, technical assistance, or any product-related inquiries, please contact your retailer or the manufacturer, Newgoal. Keep your purchase receipt as proof of purchase.