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SONOFF ZBMINI-L

SONOFF ZBMINI-L ZigBee Mini Smart Switch User Manual

Model: ZBMINI-L | Brand: SONOFF

1. INTRODUCTION

The SONOFF ZBMINI-L is a compact ZigBee 3.0 smart switch designed for intelligent control of lighting and other electrical loads. Its key feature is the ability to operate without a neutral wire, making it compatible with a wider range of existing electrical installations. This manual provides detailed instructions for installation, operation, and maintenance to ensure safe and efficient use of your device.

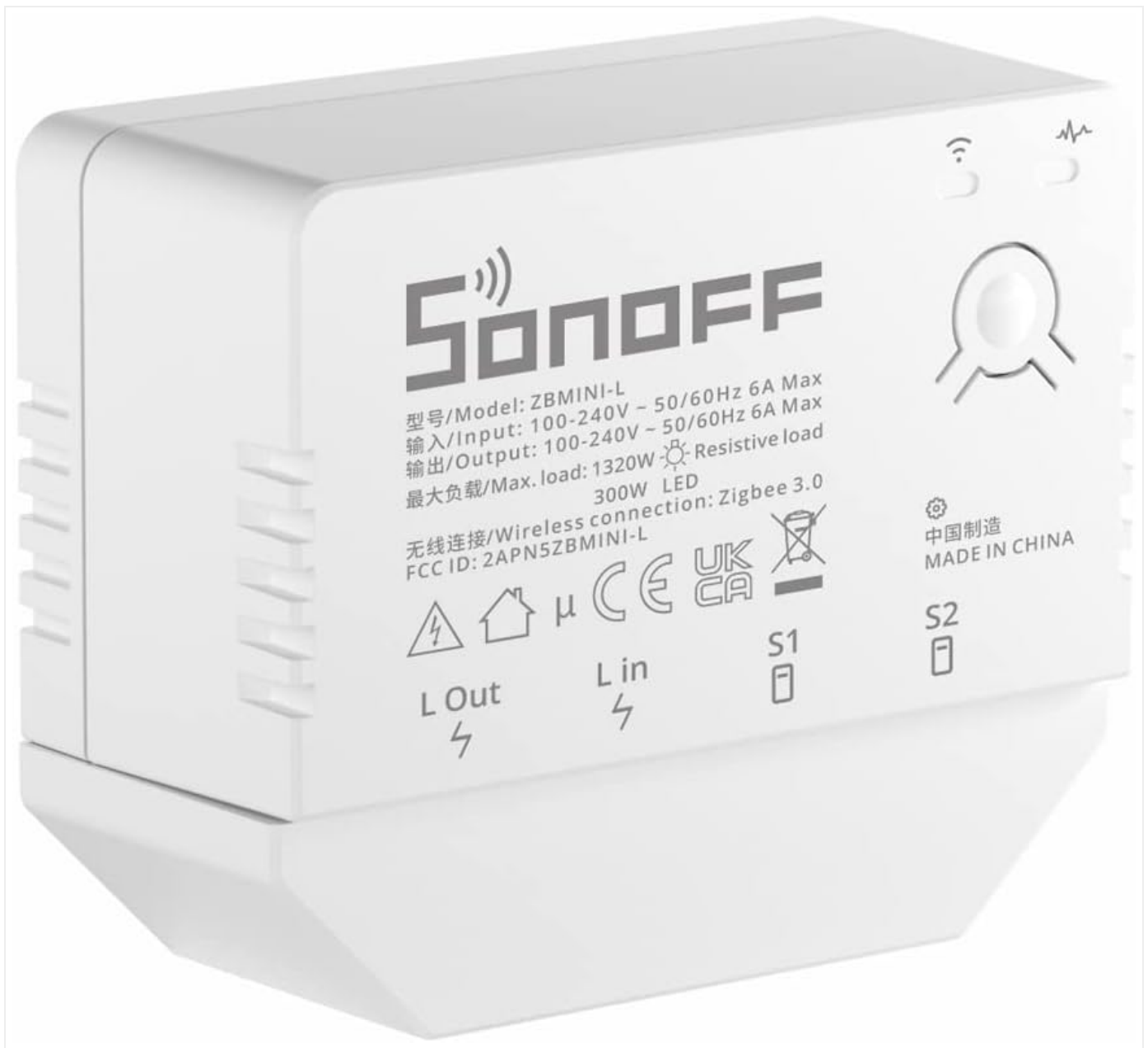


Figure 1.1: The SONOFF ZBMINI-L ZigBee Mini Smart Switch, a compact device for smart home integration.

2. KEY FEATURES

- **No Neutral Wire Required:** Designed for installations where a neutral wire is not available, simplifying setup.
- **ZigBee 3.0 Protocol:** Ensures broad compatibility with standard ZigBee hubs and ecosystems.
- **External Switch Connection:** Supports connection to traditional rocker light switches and push-button wall switches for manual control.
- **Two-way Control:** Enables smart control in existing two-way or multi-way lighting circuits.
- **Compact Design:** Small form factor allows for easy installation within standard junction boxes.
- **Safety Certifications:** CE, FCC, and TÜV certified for safety and reliability.

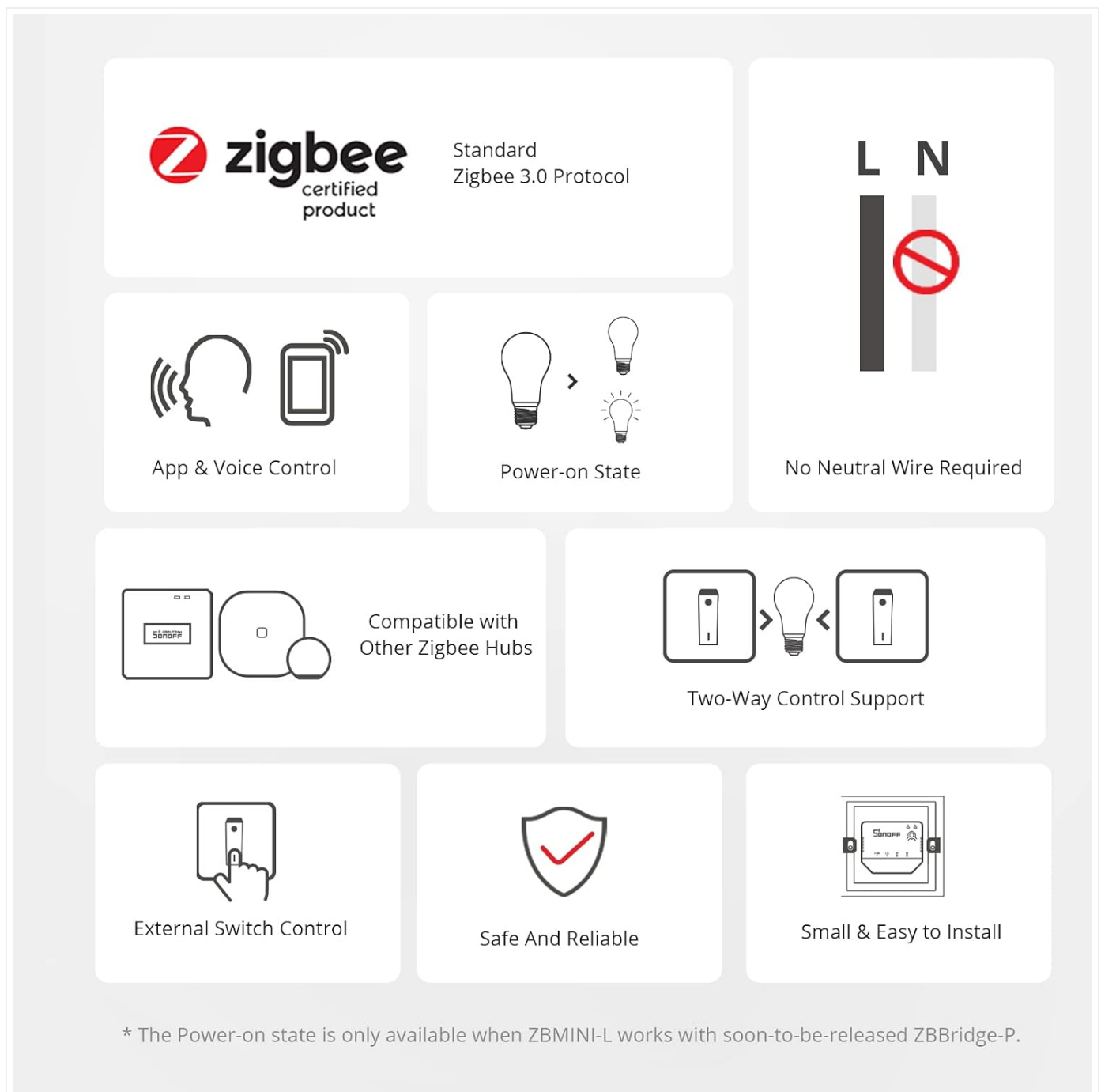


Figure 2.1: Overview of the SONOFF ZBMINI-L's main features, including no neutral wire requirement and ZigBee 3.0 compatibility.

3. SPECIFICATIONS

Parameter	Value
Model	ZBMINI-L
Input Voltage	100-240V AC 50/60Hz
Max Load	6A (Resistive), 300W (LED)
Wireless Protocol	ZigBee 3.0
Dimensions (L x W x H)	2.13 x 1.77 x 0.94 inches (54 x 45 x 24 mm)
Operating Temperature	-10°C to 40°C

Material	PC V0
Certifications	CE, FCC, TÜV

4. SETUP AND INSTALLATION

Before beginning installation, ensure the main power supply is turned off at the circuit breaker to prevent electrical shock. This device requires a ZigBee hub (sold separately) for smart functionality.

4.1 Wiring Diagram (No Neutral Wire)

The ZBMINI-L is designed for installations without a neutral wire. Connect the live wire (L) to the 'Lin' terminal and the load wire (to the light fixture) to the 'Lout' terminal. For external switch control, connect the switch wires to S1 and S2 terminals.

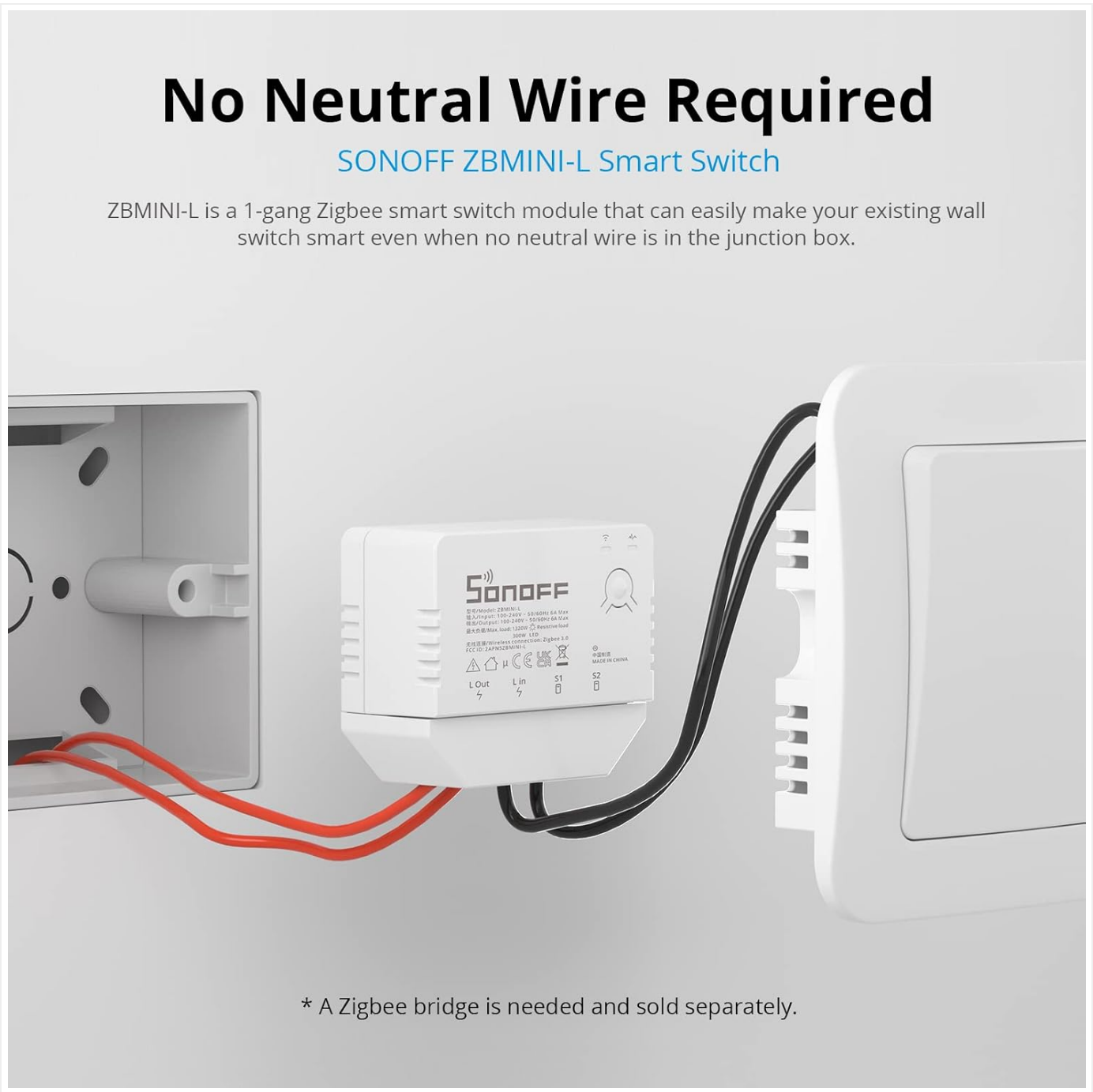


Figure 4.1: Wiring diagram illustrating the connection of the ZBMINI-L in a no-neutral wire setup, showing connections for live input (Lin) and load output (Lout).

For installations with a neutral wire, other SONOFF models like ZBMINI may be more suitable. The ZBMINI-L is specifically designed to work effectively in environments where only live and load wires are present at the switch location.

No Neutral Wire Required

ZBMINI-L fits all the situations of the eletrical wiring for the home.

Have a neutral wire in the junction box?

1 Yes!



ZBMINI-L or ZBMINI

2 No.



ZBMINI-L

3 Not sure?



ZBMINI-L

Figure 4.2: Visual guide to determine if ZBMINI-L is suitable for your wiring, specifically highlighting no-neutral wire scenarios.

4.2 Physical Installation

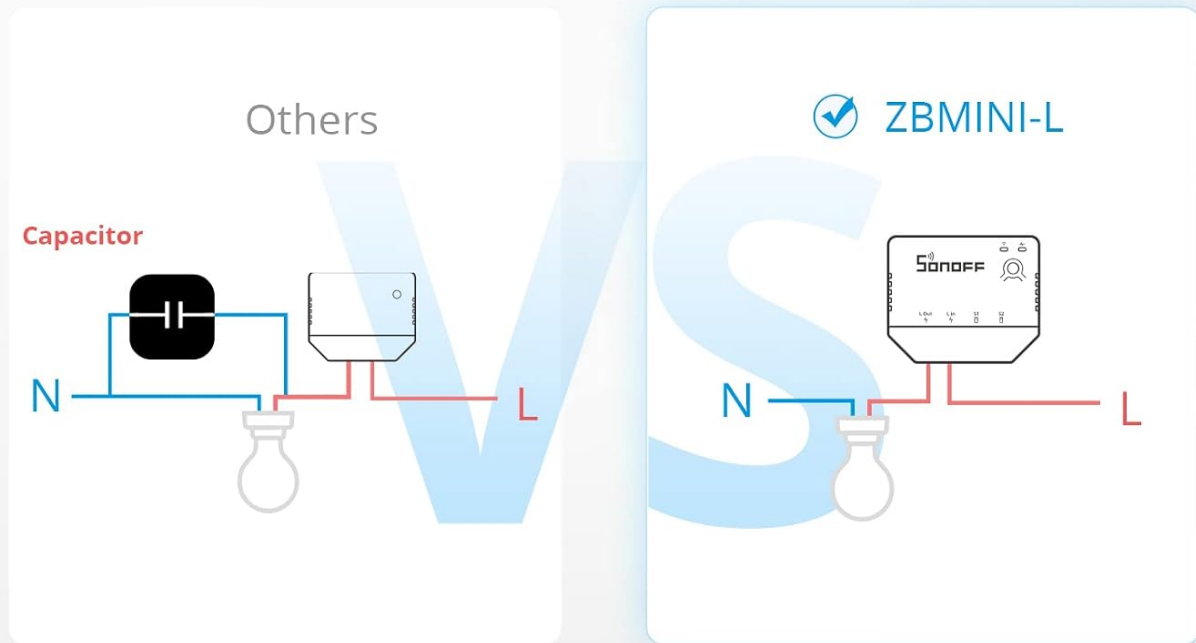
The compact size of the ZBMINI-L allows it to be installed directly into a standard wall switch box behind your existing switch. Ensure there is sufficient space for the device and wiring. The device comes with a protection cover for the terminals.

No Need to Install Extra Anti-flicker Module

The advanced electricity extraction technique ensures a strong load capacity.

After extensive testing,

ZBMINI-L allows for the connected light normally to work even as low as 3W without flickering and restart despite no anti-flicker module being installed to it.



* ZBMINI-L is compatible with most brand light fixtures.

Figure 4.3: Illustration of the ZBMINI-L installed behind a traditional wall switch, retaining original switch control.

The ZBMINI-L supports various switch types, including rocker light switches and push-button wall switches. This flexibility allows for integration with your preferred existing switch aesthetics.

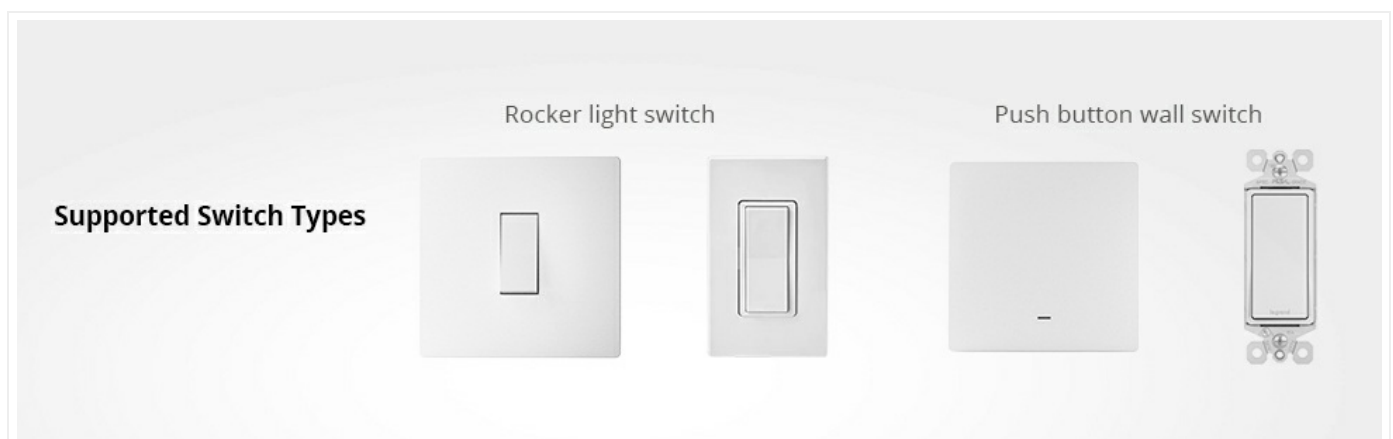


Figure 4.4: Examples of rocker and push-button wall switches compatible with the ZBMINI-L.

4.3 Pairing with a ZigBee Hub

After successful wiring and power restoration, the ZBMINI-L is ready for pairing. Put your ZigBee hub into pairing mode. The ZBMINI-L will automatically enter pairing mode when first powered on. If not, refer to the troubleshooting section for manual pairing instructions.

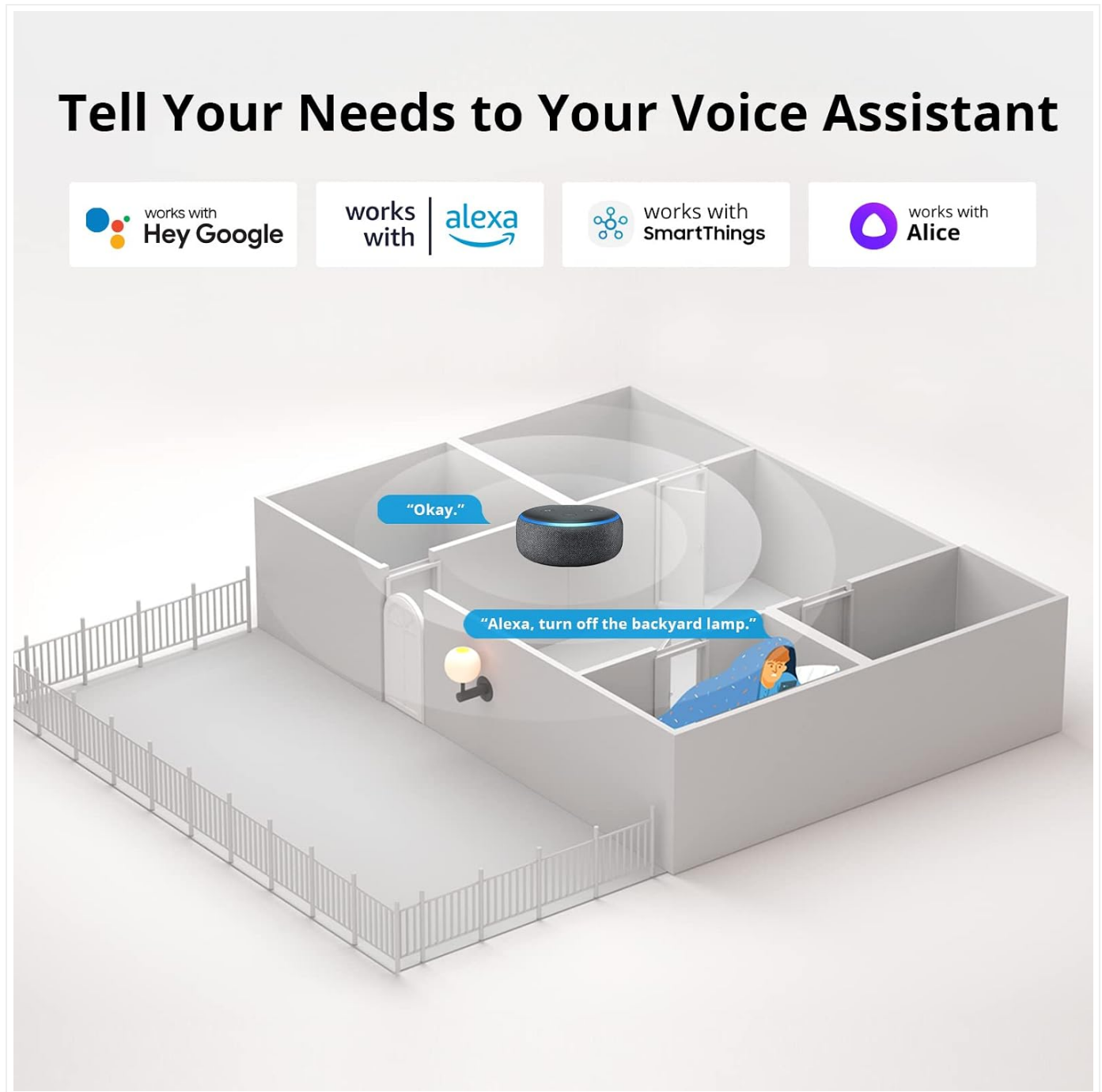


Figure 4.5: The ZigBee Certified Product logo, indicating compliance with ZigBee 3.0 protocol for broad compatibility.

The ZBMINI-L is compatible with various ZigBee hubs, including SONOFF ZBBridge, SONOFF Zigbee 3.0 USB Dongle Plus, Amazon Alexa Echo Speaker (with built-in Zigbee Hub), and Samsung SmartThings Hub. Note that practical compatibility may vary with specific hub protocols and function limitations, such as Philips Hue and IKEA gateways.

Make Existing 2-way or 3-way Control Smart —Only One ZBMINI-L

By installing ZBMINI-L in one of your existing two- or multi-way control junction boxes to make the connected light smart.



Figure 4.6: Examples of ZigBee hubs compatible with the ZBMINI-L, including SONOFF ZBBridge and Amazon Echo devices.

5. OPERATING INSTRUCTIONS

5.1 Manual Control

Once installed behind a traditional wall switch, the ZBMINI-L allows you to continue using your existing switch for manual on/off control of the connected light or appliance. This ensures functionality even without smart home connectivity.

5.2 Smart Control via App

After pairing with your ZigBee hub, you can control the ZBMINI-L through the associated smart home app (e.g., SmartThings app, SONOFF app). This enables remote control, scheduling, and automation features.



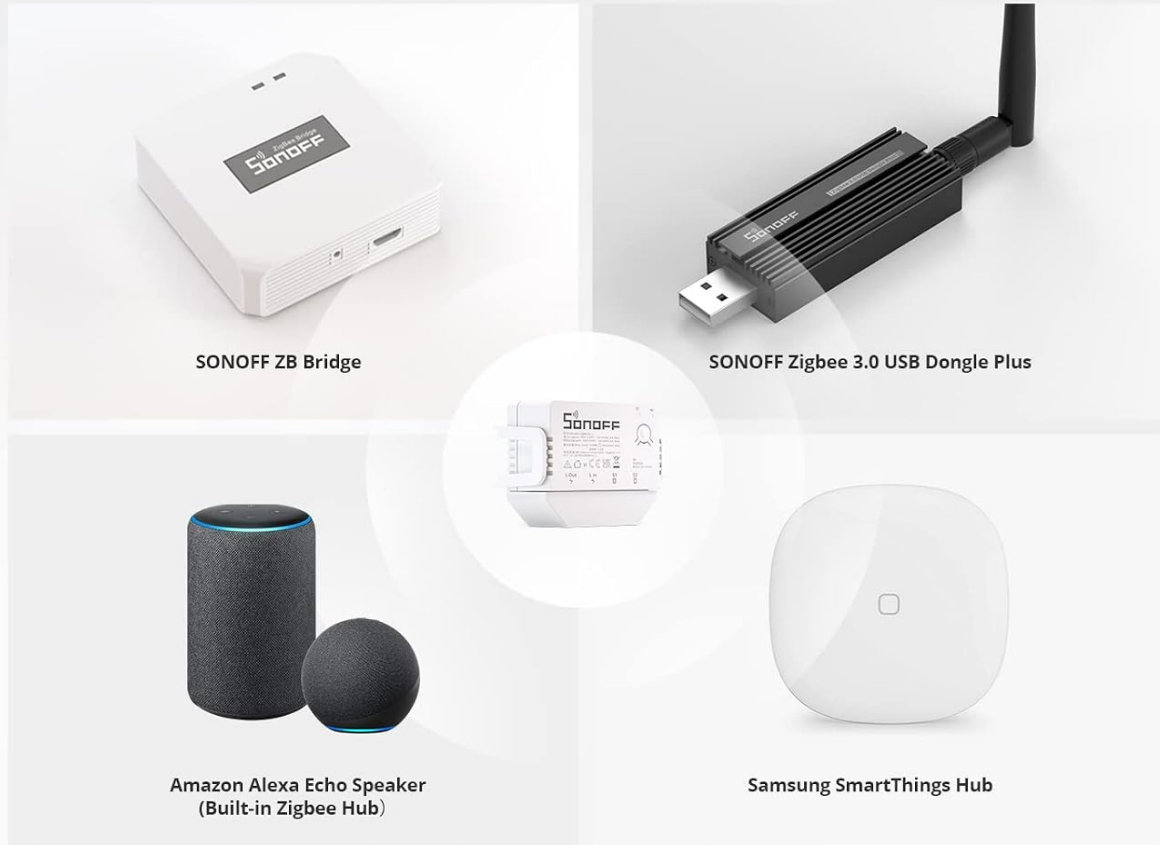
Figure 5.1: Example of a smartphone application interface used to control the smart switch, showing on/off functionality.

5.3 Voice Control

The ZBMINI-L supports voice control through popular smart assistants like Amazon Alexa, Google Home, and SmartThings, when connected to a compatible ZigBee hub. Simply use voice commands to turn lights on or off.

Works with More Zigbee Hubs

ZBMINI-L is an end-device developed according to the standard Zigbee 3.0 protocol. It supports being added to any Zigbee hub developed according to the standard protocol theoretically.



* The practical compatibility situation is subject to the specific hub. Philips Hue and IKEA gateways are not supported due to their protocol and function limitations.

Figure 5.2: Diagram illustrating voice control integration with smart assistants like Alexa and Google Home for controlling lights connected to ZBMINI-L.

Easy to Install Retain Original Switch Control



Figure 5.3: Logos indicating compatibility with Hey Google, Alexa, SmartThings, and Alice voice assistants.

5.4 Two-Way Control

For multi-location control of a single light, install the ZBMINI-L in one of the existing junction boxes. This allows both the traditional switches and smart control to operate the light seamlessly.

Easy to Install Retain Original Switch Control

Connecting directly to your existing wall switches to make your lights smart!
In addition to APP & Voice smart control, the original switch control can be retained.



Supported Switch Types

Rocker light switch



Push button wall switch

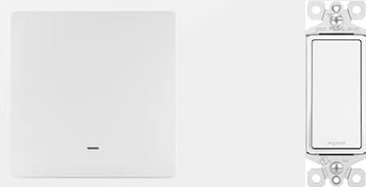


Figure 5.4: Examples of two-way or multi-way lighting control setups made smart with a single ZBMINI-L device.

6. MAINTENANCE

- **Cleaning:** Disconnect power before cleaning. Use a dry, soft cloth to wipe the device. Do not use liquid cleaners or sprays.
- **Firmware Updates:** Periodically check for firmware updates through your ZigBee hub's application. Updates can improve performance and add new features.
- **Environmental Conditions:** Ensure the device is operated within its specified temperature and humidity ranges to prevent damage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device not pairing.	Not in pairing mode; hub too far; interference.	<p>Ensure the device is powered on and the hub is in pairing mode.</p> <p>Move the device closer to the hub.</p> <p>Perform a factory reset on the ZBMINI-L (refer to manual for specific steps, usually involves holding a button).</p>
Light flickers or does not turn off completely.	Low wattage load (e.g., LED lights); residual current.	The ZBMINI-L is designed to work with loads as low as 3W without an anti-flicker module. If flickering occurs with very low wattage LEDs, ensure the total load meets the minimum requirement. No external anti-flicker module is typically needed.
Device unresponsive.	Power loss; ZigBee network issue; device malfunction.	<p>Check power supply to the switch.</p> <p>Restart your ZigBee hub.</p> <p>Re-pair the device if necessary.</p>
Physical fit issues in junction box.	Limited space in existing wall box.	Ensure adequate space before installation. The ZBMINI-L is compact but requires sufficient room for wiring and the device itself.



Figure 7.1: The ZBMINI-L's internal design eliminates the need for an external anti-flicker module, ensuring stable operation even with low-wattage LED lights.

8. OFFICIAL PRODUCT VIDEOS

8.1 SONOFF ZBMINI-L ZigBee Smart Switch Overview

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Video 8.1: This video provides a comprehensive overview of the SONOFF ZBMINI-L ZigBee Smart Switch, highlighting its features and benefits, including its no-neutral wire requirement and compact design. It demonstrates the physical appearance and key aspects of the device.

8.2 Multi-Ways to Install ZBMINI-L (Preview)

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Video 8.2: This short preview video demonstrates various installation methods for the ZBMINI-L, including how to attach it to a DIN rail and its compact size for fitting into switch boxes. It provides a quick visual guide to its versatile mounting options.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SONOFF website or contact their customer service. Keep your purchase receipt for warranty claims.
Manufacturer: SONOFF (Shenzhen Sonoff Technologies Co., Ltd.)
Website: sonoff.tech
Service Email: support@itead.cc

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