

Shelly Wave 2PM US LR UL

Shelly Wave 2PM US LR UL Z-Wave Long Range Smart Switch Relay Instruction Manual

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Shelly Wave 2PM US LR UL Z-Wave Long Range Smart Switch Relay. This device is a 2-channel smart relay designed for home automation, offering power metering capabilities and Z-Wave Long Range communication. It is UL certified for safety and quality assurance.

2. Safety Information

Important Safety Precautions:

- Installation should only be performed by a qualified electrician or person with appropriate electrical knowledge.
- Always disconnect power to the circuit at the main breaker before performing any installation or maintenance.
- Ensure the device is installed in compliance with all local and national electrical codes.
- Do not exceed the maximum load specified for the device (14 A per channel, 16 A total).
- The device is designed for AC 120 V power supply.
- Keep the device away from moisture and extreme temperatures.
- This device is for indoor use only.

3. Product Overview

The Shelly Wave 2PM US LR UL is a compact Z-Wave smart relay that allows you to control two independent electrical circuits and monitor their power consumption. Its small size enables installation within standard electrical boxes or behind existing switches.

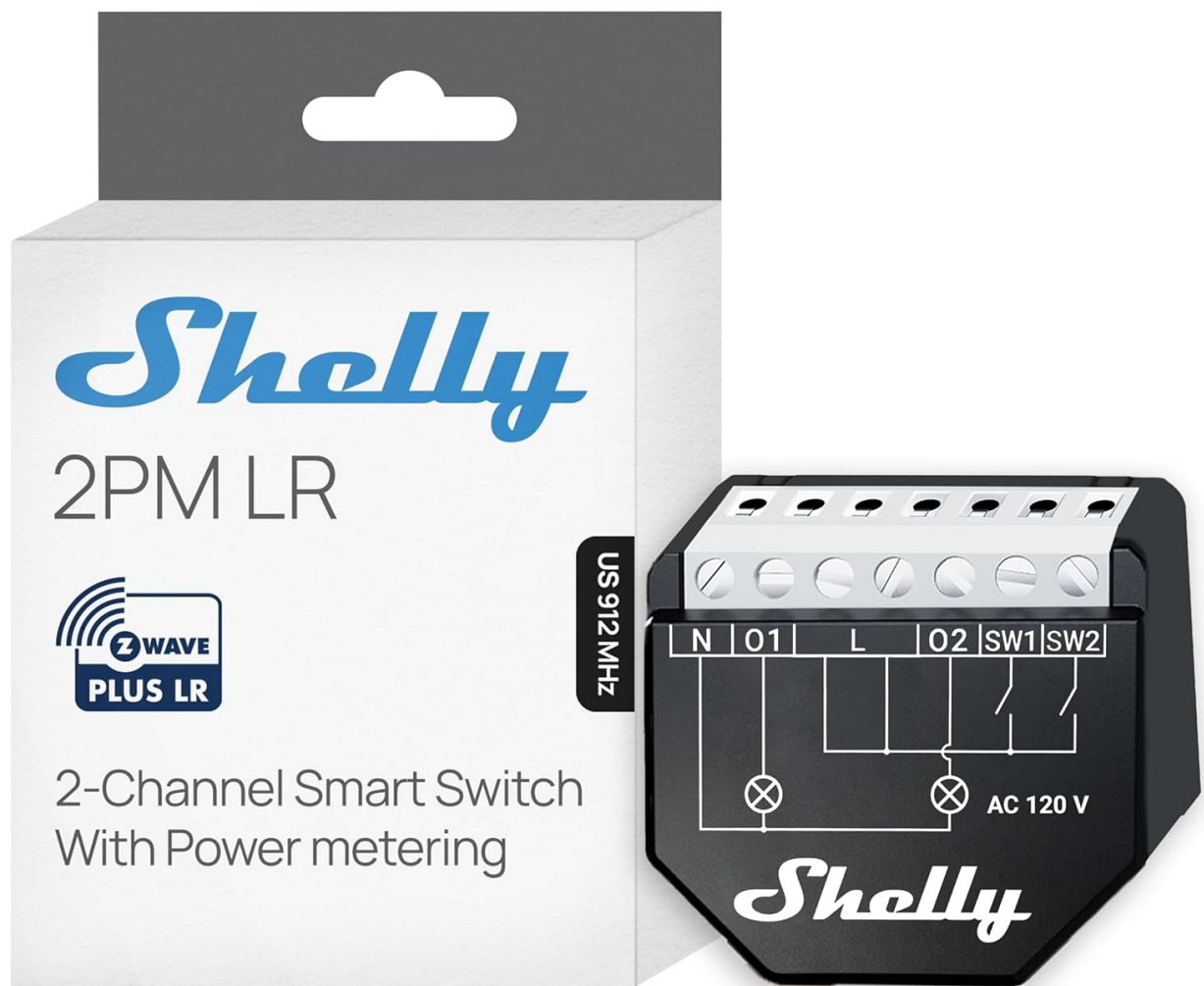


Image 3.1: Shelly Wave 2PM US LR UL Smart Switch Relay and its retail packaging.

3.1 DEVICE DIMENSIONS

Ideal size

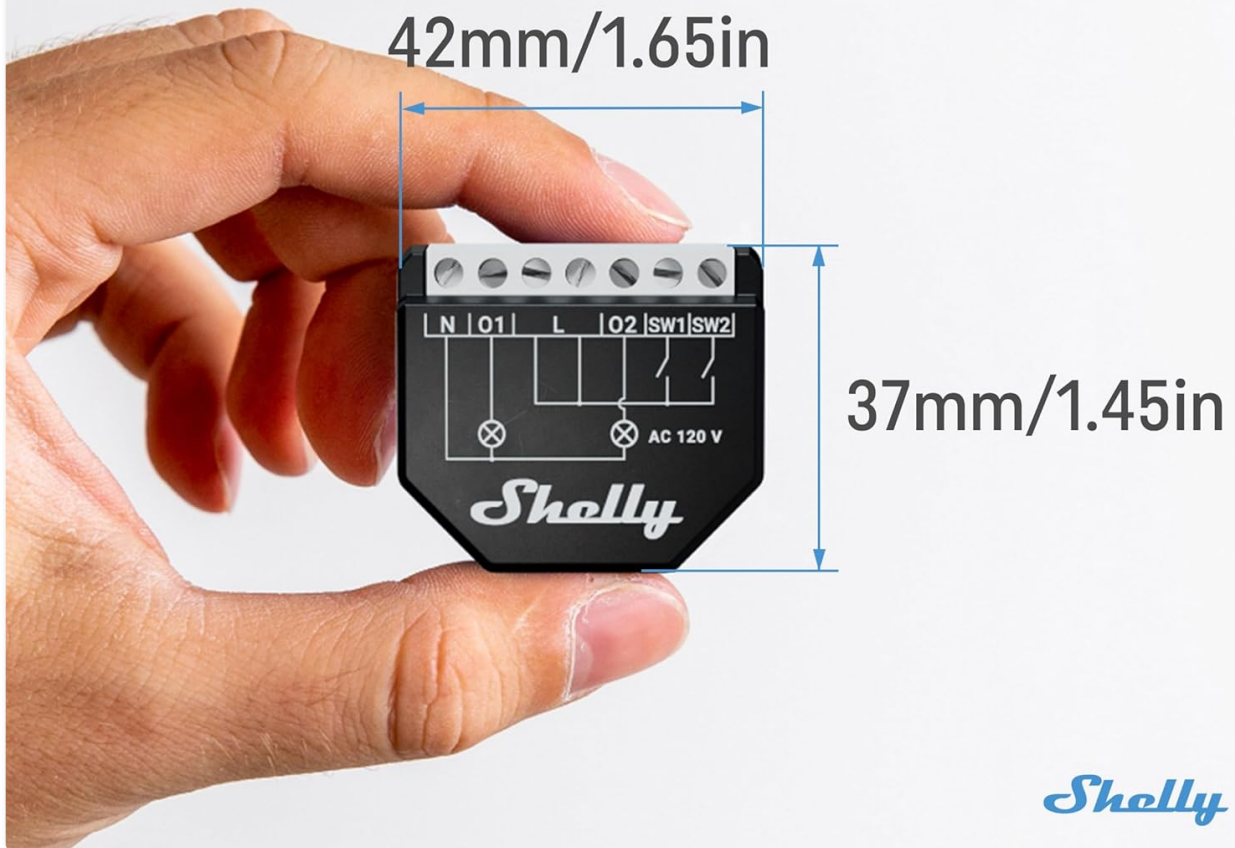


Image 3.2: The Shelly Wave 2PM US LR UL device held in a hand, illustrating its compact dimensions of 42mm (1.65 inches) in width and 37mm (1.45 inches) in height.

The device measures approximately 42mm (1.65 inches) in width and 37mm (1.45 inches) in height, making it suitable for installation in confined spaces.

3.2 TERMINAL DESCRIPTIONS

- **N:** Neutral input.
- **L:** Live input.
- **O1:** Output 1 for controlled appliance/light.
- **O2:** Output 2 for controlled appliance/light.
- **SW1:** Switch input 1 for manual control of O1.
- **SW2:** Switch input 2 for manual control of O2.

4. Setup and Installation

4.1 PRE-INSTALLATION CHECKLIST

- Ensure you have a compatible Z-Wave gateway (hub) for device pairing and control.
- Verify that the electrical circuit is rated for the device's specifications.
- Gather necessary tools: screwdriver, wire strippers, voltage tester.

4.2 WIRING INSTRUCTIONS

WARNING: Disconnect power at the circuit breaker before proceeding.

1. Connect the **Neutral (N)** wire from your electrical supply to the 'N' terminal on the Shelly Wave 2PM.
2. Connect the **Live (L)** wire from your electrical supply to the 'L' terminal on the Shelly Wave 2PM.
3. Connect the load (e.g., light fixture, appliance) for the first channel to the **Output 1 (O1)** terminal. The other side of the load should be connected to Neutral.
4. Connect the load for the second channel to the **Output 2 (O2)** terminal. The other side of the load should be connected to Neutral.
5. If using external switches for manual control, connect the switch wires to **SW1** and **SW2** terminals. These switches should be connected to the Live (L) line.

4.3 PHYSICAL INSTALLATION

Easy to install

- Designed to fit in most standard electrical boxes and behind switches
- Can be installed in less than 10 minutes

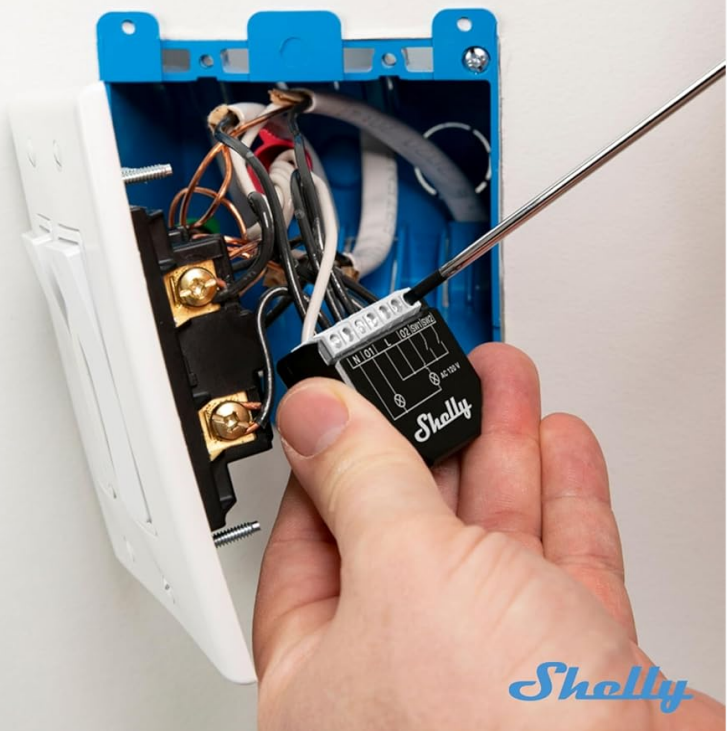


Image 4.1: A hand installing the compact Shelly Wave 2PM US LR UL device into a standard electrical wall box behind a

switch, demonstrating its ease of fit.

The Shelly Wave 2PM is designed to fit into most standard electrical boxes and behind wall switches. After wiring, carefully place the device into the electrical box, ensuring no wires are pinched. Secure the cover plate.

4.4 Z-WAVE NETWORK INCLUSION

Once the device is physically installed and power is restored, you can include it into your Z-Wave network:

1. Put your Z-Wave gateway into inclusion mode (refer to your gateway's manual for specific instructions).
2. Triple-click the button connected to SW1 or SW2, or cycle the power to the device three times within 5 seconds.
3. The device should now be detected and added to your Z-Wave network. Confirm successful inclusion via your gateway's interface.

5. Operating Instructions

5.1 BASIC CONTROL

The Shelly Wave 2PM allows control of connected appliances or lights through multiple methods:

- **Manual Switch:** Use the physical wall switches connected to SW1 and SW2.
- **Z-Wave Gateway/App:** Control the device remotely via your Z-Wave gateway's mobile application or web interface.
- **Automation Systems:** Integrate with various home automation platforms for advanced control and scene creation.
- **Voice Control:** If your Z-Wave gateway supports it, you can use voice assistants (e.g., Alexa, Google Home) to control the device.

Control two lights with one device

- Control two different circuits and monitor their energy usage
- Save additional energy



Image 5.1: Illustration of a bedroom setting where two distinct lights are controlled by a single Shelly Wave 2PM device, highlighting its dual-channel capability.

5.2 POWER METERING

The Shelly Wave 2PM provides real-time power consumption data for each channel independently and combined. This data can be accessed through your Z-Wave gateway's interface, allowing you to monitor energy usage and identify opportunities for savings.

Track **energy usage** and save money

- With Wave 2 PM you can precisely measure power consumption for each channel separately (W) and together (W, kWh)
- Monitor real-time consumption and adjust usage patterns to cut utility costs easily



Image 5.2: A visual representation of the Shelly Wave 2PM monitoring energy consumption within a smart home environment, demonstrating its ability to track usage and potentially reduce utility costs.

5.3 SMART SCHEDULES AND AUTOMATION

Leverage your Z-Wave gateway to create personalized schedules and automation rules for the Shelly Wave 2PM. This allows for automatic control of lights and appliances based on time, sensor input, or other conditions, enhancing convenience and energy efficiency.

Smart schedules

- Create personalized schedules aligned with your daily routine
- Manage your lighting



Image 5.3: A smartphone screen displaying various smart home controls and schedules, indicating how users can manage lighting and other devices with Shelly products.

6. Maintenance

The Shelly Wave 2PM US LR UL is designed for maintenance-free operation. However, consider the following:

- **Cleaning:** If necessary, gently wipe the device with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Firmware Updates:** Periodically check your Z-Wave gateway's interface or Shelly's official support channels for available firmware updates to ensure optimal performance and security.
- **Electrical Inspection:** For safety, it is recommended to have electrical installations periodically inspected by a qualified professional.

7. Troubleshooting

If you encounter issues with your Shelly Wave 2PM, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device not pairing with Z-Wave gateway	Gateway not in inclusion mode, device too far, incorrect pairing procedure.	Ensure gateway is in inclusion mode. Move device closer to gateway. Repeat pairing steps (triple-click switch or power cycle).
Connected appliance/light not responding	Incorrect wiring, power issue, device malfunction.	Verify wiring according to Section 4.2 (disconnect power first). Check power supply to the device. Perform a factory reset if necessary.
Inaccurate power metering	Device not calibrated (unlikely for Shelly), electrical interference.	Ensure stable power supply. If issue persists, contact support.
Device frequently disconnects from network	Weak Z-Wave signal, interference.	Ensure device is within range of the Z-Wave gateway or a Z-Wave repeater. Check for sources of interference.

7.1 FACTORY RESET

To perform a factory reset, press and hold the button connected to SW1 or SW2 for 10 seconds. The device will reset to its factory default settings and be removed from the Z-Wave network.

8. Specifications

Feature	Specification
Model Number	3800238070946
Product Dimensions	0.63 x 1.65 x 1.46 inches (16 x 42 x 37 mm)
Current Rating	13.99 Amps (per channel)
Contact Type	Normally Open
Contact Material	Steel
Connector Type	Screw Terminals
Mounting Type	Wall Mount (behind switch/in electrical box)
Z-Wave Frequency	912MHz (ZWLR) and 908.4MHz (Z-Wave Plus)
Channels	2
Power Metering	Yes
Certifications	UL Certified

9. Warranty and Support

9.1 WARRANTY INFORMATION

Shelly provides a **3-year device warranty** for the Shelly Wave 2PM US LR UL. Please retain your proof of purchase for warranty claims.

9.2 CUSTOMER SUPPORT

For technical assistance, product information, or troubleshooting not covered in this manual, please utilize the following resources:

- **Shelly Customer Service:** Contact Shelly's professional support team.
- **Knowledge Base:** Access detailed product specifications and guidelines online.
- **Technical Support & Community:** Join Facebook Support Groups and Reddit communities for peer and expert assistance.
- **Shelly Academy:** Explore video tutorials and webinars for further guidance.

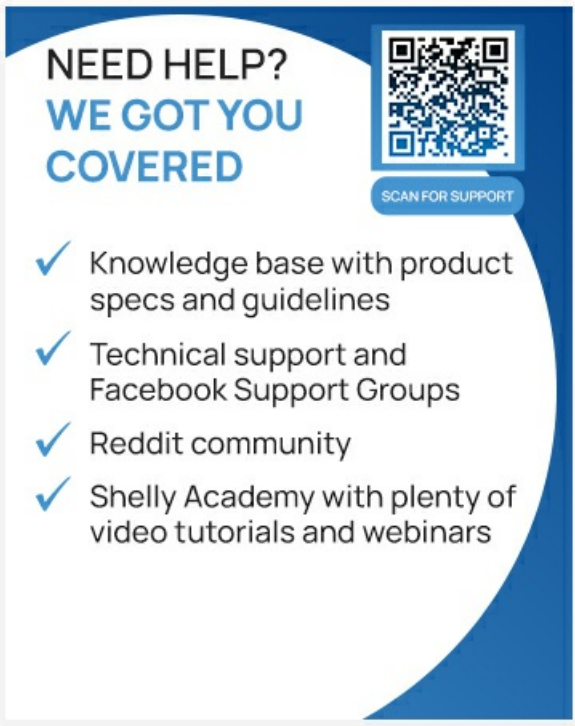








Image 9.1: A graphic detailing Shelly's support options, including a QR code for direct access to their support portal. Resources include a knowledge base, technical support, Facebook groups, Reddit community, and Shelly Academy.

For direct access to support, visit: <https://support.shelly.cloud/en/support/home>

Related Documents - Wave 2PM US LR UL

	<p>Shelly Wave Pro 2PM User and Safety Manual Smart Switch</p> <p>Comprehensive user and safety manual for the Shelly Wave Pro 2PM, a 2-channel DIN-rail mount Z-Wave smart switch with power metering. Learn about installation, operation, specifications, and safety precautions.</p>
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	<p>Shelly Wave Pro 2PM: Ръководство за потребителя и безопасност</p> <p>Това ръководство предоставя важна техническа и безопасна информация за интелигентния превключвател Shelly Wave Pro 2PM, включително инструкции за инсталиране, безопасна употреба и технически спецификации. Устройството е двуканален интелигентен превключвател за монтаж на DIN шина с измерване на мощност, съвместим с Z-Wave® протокола.</p>
	<p>Shelly Katalóg Produktov: Inteligentné Automatizačné Systémy</p> <p>Objavte komplexný katalóg produktov Shelly, ktorý predstavuje inteligentné automatizačné systémy pre váš domov a kanceláriu. Získajte prehľad o inovatívnych zariadeniach Shelly, ich funkciách, technických špecifikáciách a možnostiach integrácie pre modernú chytrú domácnosť.</p>
	<p>Shelly Qubino Wave 2PM: Smart Z-Wave Switch with Power Metering - User Manual</p> <p>Comprehensive user and safety manual for the Shelly Qubino Wave 2PM, a 2-channel Z-Wave smart switch with power metering capabilities. Includes installation, operation, specifications, and compliance information.</p>
	<p>Shelly Wave i4 Z-Wave Контролер с 4 Цифрови Входа - Ръководство</p> <p>Подробно ръководство за потребителя и безопасност за Shelly Wave i4, Z-Wave контролер с 4 цифрови входа. Научете за инсталация, спецификации, употреба и безопасност на това устройство за интелигентен дом.</p>
	<p>Shelly Wave Plug S - Smart Z-Wave Plug with Power Metering and Safety Guide</p> <p>User and safety guide for the Shelly Wave Plug S, a smart Z-Wave plug with power metering. Learn about installation, usage, safety precautions, and technical specifications.</p>