

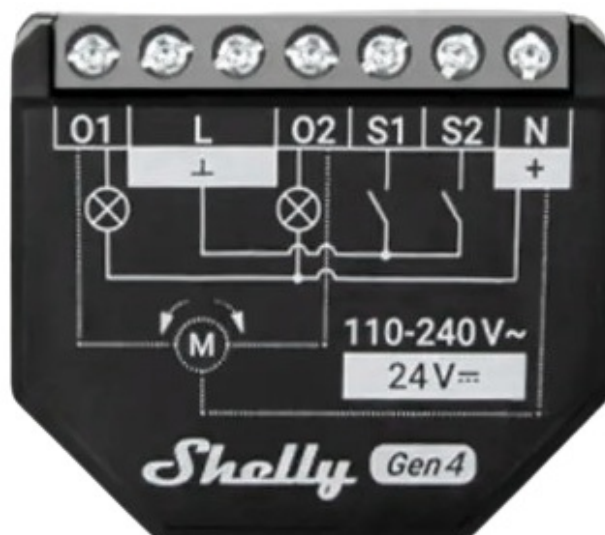


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Shelly

Shelly 2PM Gen4 2 Channel Smart Switch with Power Measurement



Product Specifications

- **Input Voltage:** 110 – 240 V~
- **Output:** O1 L, O2 S1 S2 N +
- **Country Compatibility:** Worldwide
- **Power Consumption:** Varies based on usage

Wiring diagram

Fig. 1. Dual-channel switch, 110-240 V~ power supply

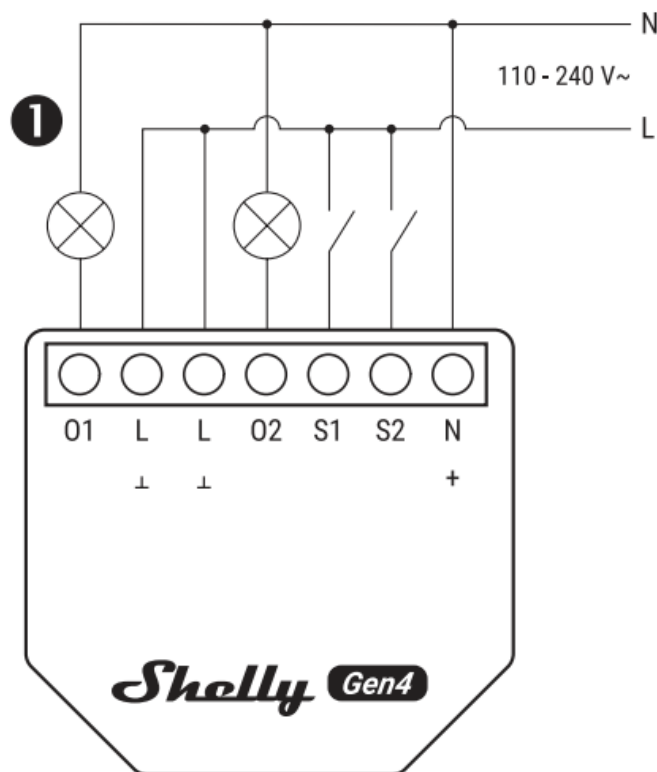


Fig. 2. Dual-channel switch, 24-30 V- power supply

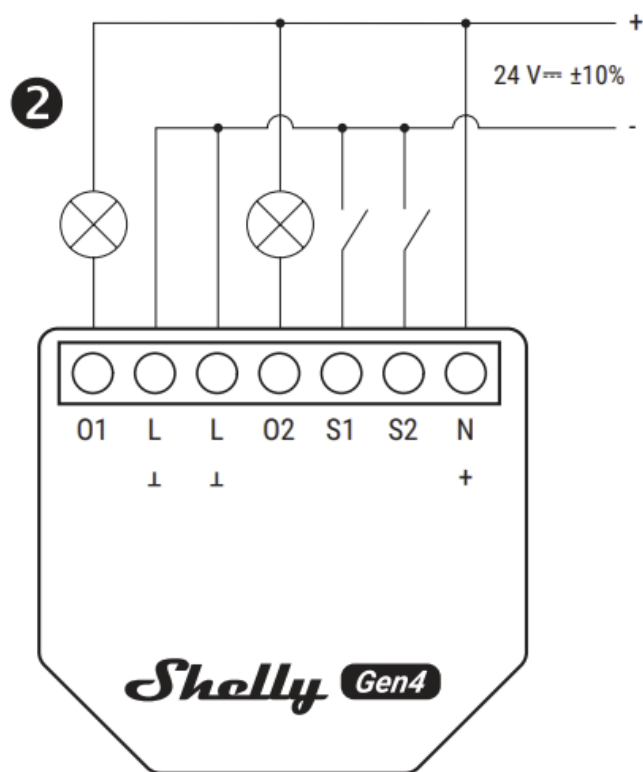
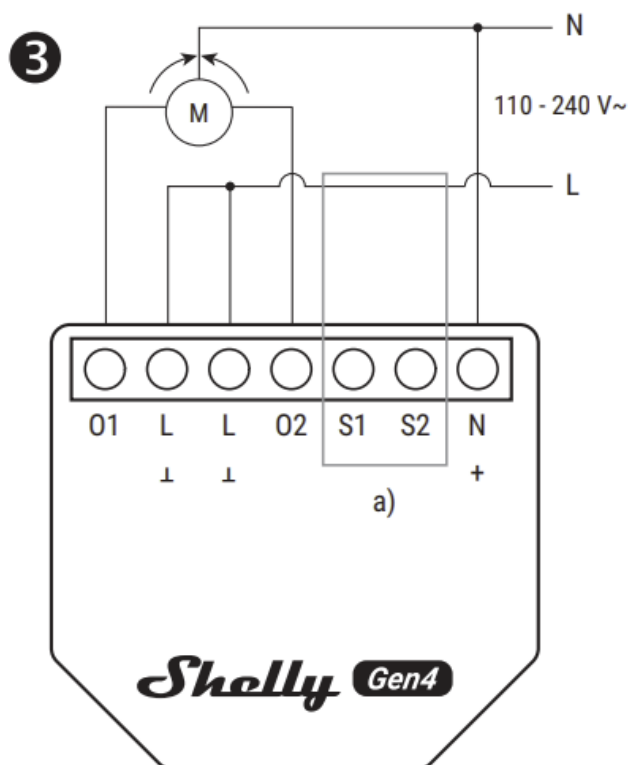
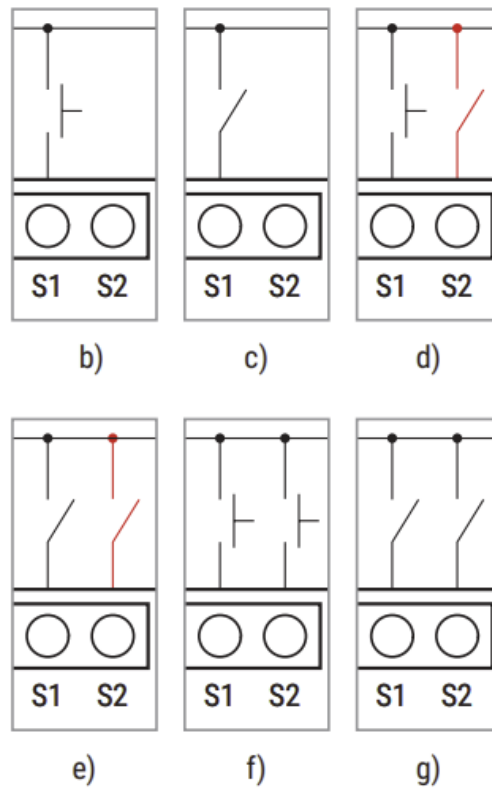


Fig. 3. Cover control profile





Legend

Device terminals

- 01, 02: Load circuit output terminals
- L: Live terminal (110-240 V~)
- S1, S2: Switch input terminals
- N: Neutral terminal
- +: 24V= positive terminal
- L: 24V= negative terminal

Wires

- L: Live wire (110-240 V~)
- N: Neutral wire
- +: 24 V==positive wire
- -: 24 V== ground wire

User and safety guide Shelly 2PM Gen4

2-channel Smart switch with Power measurement

Referred to in this document as “the Device”

Safety information

For safe and proper use, read this guide, and any other documents accompanying this product. Keep them for future reference. Failure to follow the installation procedures can lead to malfunction, danger to health and life, violation of law, and/or refusal of legal and commercial guarantees (if any). Shelly Europe Ltd. is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure to follow the user and safety instructions in this guide.

- A This sign indicates safety information.
- This sign indicates an important note.
- **WARNING!** Risk of electric shock. Installation of the Device to the power grid must be performed carefully by a qualified electrician.
- **WARNING!** Before making any changes to the connections, ensure there is no voltage present at the Device terminals.
- **CAUTION!** Connect the Device only to a power grid and appliances that comply with all applicable regulations. A short circuit in the power grid or any appliance connected to the Device can cause fire, property damage, and electric shock.
- **CAUTION!** The Device may be connected to and control only electric circuits and appliances that comply with the applicable standards and safety norms.
- **CAUTION!** Do not connect the Device to appliances that exceed the specified maximum electric load.
- **CAUTION!** Connect the Device only in the way shown in these instructions. Any other method could cause damage and/or injury.
- **WARNING!** Before installing the Device, turn the circuit breakers off. Use a suitable test device to make sure there is no voltage on the wires you want to connect. When you are sure that there is no voltage, proceed to the installation.
- **CAUTION!** The Device and the appliances connected to it, must be secured by a cable protection switch in accordance with EN60898-1 (tripping characteristic B or C, max. 16 A rated current, min. 6 kA interrupting rating, energy limiting class 3).
- **CAUTION!** Do not use the Device if it shows any sign of damage or defect.
- **CAUTION!** Do not attempt to repair the Device yourself.
- **CAUTION!** The Device is intended only for indoor use.

- **CAUTION!** Keep the Device away from dirt and moisture.
- **CAUTION!** Do not allow children to play with the buttons/switches connected to the Device. Keep the devices (mobile phones, tablets, PCs) for remote control of Shelly away from children.

Product description

Shelly 2PM Gen4 (the Device) is a Matter-compatible small form factor 2-channel smart switch with power measurement and cover control. Equipped with a multi-protocol wireless MCU, it supports Zigbee and Bluetooth connectivity for a secure connection. The Device can control 2 electrical circuits, including a bi-directional AC motor, motorized blinds, Venetian blinds, and roller shutters. Each circuit can be loaded up to 10 A (16 A total for both circuits) and its power consumption can be measured individually (AC only). The Device can be retrofitted into standard electrical wall boxes, behind power sockets and light switches, or in places with limited space. The Device has an embedded web interface to monitor, control, and adjust its settings. The web interface is accessible at <http://192.168.33.1> when connected directly to the Device access point or at its IP address when accessed from the same network. The Device can access and interact with other smart devices or automation systems if they are in the same network infrastructure. Shelly Europe Ltd. provides APIs for the devices, their integration, and cloud control. For more information, visit <https://shelly-api-docs.shelly.cloud>. ® The Device comes with factory-installed firmware. To keep it updated and secure, Shelly Europe Ltd. provides the latest firmware updates free of charge. Access the updates through either the embedded web interface or the Shelly Smart Control mobile application. Installation of firmware updates is the user's responsibility. Shelly Europe Ltd. shall not be liable for any lack of conformity of the Device caused by the failure of the user to install the available updates in a timely manner.

Installation instructions

- To connect the Device, we recommend using solid sin- single-core wires or stranded wires with ferrules. The wires should have insulation with increased heat resistance, not less than PVC T105°C (221°F)
- Do not use buttons or switches with built-in LED or neon glow lamps. When

connecting wires to the Device terminals, consider the specified conductor cross-section and stripped length. Do not connect multiple wires into a single terminal.

- For security reasons, after you successfully connect the Device to the local Wi-Fi network, we recommend that you disable or password-protect the Device AP (Access Point).

In Dual input mode, the Device supports Slat control that allows for precise adjustment of slats in Venetian blinds.

This function has the following settings

- Open time – the duration in seconds for the slats to transition from fully open to fully closed position.
- Close time – the duration in seconds for the slats to transition from fully closed to fully opened position:
 - Default: 1.5 seconds
 - Accepted range: 0.5-10 seconds
- Step – controls the incremental movement of the slats in percent between the two endpoints:
 - Fully closed position (0%)
 - Fully opened position (100%)

Button input configuration

- Pressing a button when the cover is static: Moves the slats in the corresponding direction by the predefined step.
- Pressing the button for the same direction while the cover is moving: Stops the cover.
- Pressing the button for the opposite direction while the cover is moving: Reverses the cover movement until the endpoint is reached.
- Pressing and holding the button moves the slats and the cover in the corresponding direction until the endpoint is reached.

Switch input configuration

- Turning the switch on: Moves the slats and the cover in the corresponding direction

until the endpoint is reached.

- Turning the switch off: Stops the cover movement.
- Both switches turned on: The Device respects the last engaged switch. Turning off the last engaged switch stops the cover movement, even if the other switch is still on. To move the cover in the opposite direction, turn the other switch off and on again. In Detached mode, the Device can only be controlled through its web interface and its app. Buttons or switches connected to the Device will not control the motor rotation.

To use the Device in Detached mode, connect it as shown in Fig. 2a):

1. Connect the two L terminals to the Live wire and the N terminal to to the Neutral wire.
2. Connect the common motor terminal/wire to the Neutral wire
3. Connect motor direction terminals/wires to the 01 and 02 terminals.

Obstacle detection

Shelly 2PM Gen4 can detect obstacles. If an obstacle is present, the cover movement stops. If configured in the Device settings, the movement changes its direction until the endpoint is reached. Obstacle detection can be enabled or disabled for one or both directions.

- The Device outputs can be reconfigured to match the required rotation direction.
- Interaction with the button, the switch, or a control in the Web Interface or in the App (has to command the cover in the opposite direction to the direction before the safety switch engagement).

Adding Zigbee Device

- To switch the Device from Matter firmware (default) to Zigbee, press 5 times the Reset button. The Device stays in pairing mode for 2 minutes, and you can find it in your home automation platform through the Zigbee Hub. If you cannot find the Device, press the Reset button 3 times.
- To remove the Device, go to its page and delete it from your home automation platform. On Zigbee mode, the AP of the Device is not available by default. To enable it, the you should hold the Reset button for 5 seconds.

Setting up the Device via Matter

Before you start, make sure you have:

- 2.4 GHz Wi-Fi network
 - A Matter-compatible hub connected to the Internet
 - A mobile device with Bluetooth enabled and a Matter-compatible app installed
1. Enable the access point of the Device by pressing and holding the Reset/control button for 5 seconds.
 2. Scan the Matter QR code inside the box.
 3. Follow the instructions that appear on your screen to complete the process.
 - Keep the QR code for future reference. If you reset the device, you will need that code again.

Specifications

Physical

- **Size (HxWxD):** 37x42x16 mm / 1.46×1.65×0.63 in
- **Weight:** 30 g / 1.06 oz
- **Screw terminals max torque:** 0.4 Nm / 3.5 lbin
- **Conductor cross section:** 0.2 to 2.5 mm² / 24 to 14 AWG (solid, stranded, and bootlace ferrules)
- **Conductor stripped length:** 6 to 7 mm / 0.24 to 0.28 in
- **Mounting:** Wall console / In-wall box
- **Shell material:** Plastic
- **Shell color:** Black

Environmental

- Ambient working temperature:-20°C to 40°C / -5°F to 105°F
- Humidity: 30% to 70% RH
- Max. altitude:2000 m / 6562 ft

Electrical

- Power supply:
 - 110-240V~
 - 24 V= +10%
- Power consumption: < 1.4 W

Output circuits ratings

- Max. switching voltage:
 - 240 V~
 - 30 V==
- Max. switching current:
 - 10 A (per channel)
 - 16 A (total) Sensors, meters
- Internal-temperature sensor: Yes
- Voltmeter (AC): Yes
- Ammeter (AC): Yes

Safety functions

- **Overheating protection:** Yes (AC)
- **Overvoltage protection:** Yes (AC)
- **Overcurrent protection:** Yes (AC)
- **Overpower protection:** Yes
- **Obstacle detection:** Yes (cover mode)
- **Safety switch:** Yes (cover mode)

Radio

Wi-Fi

- Protocol: 802.11 b/g/n
- RF band: 2412 – 2472 MHz
- Max. RF power: < 20 dBm
- Range: Up to 50 m / 164 ft outdoors, up to 30 m / 98 ft indoors (depending on local conditions)

Zigbee

- Protocol: 802.15.4
- RF bands: 2400 to 2483.5 MHZ
- Max. RF power: < 20 dBm
- Range: Up to 100 m / 328 ft indoors and 300 meters/984 ft outdoors (Depends on local conditions)

Microcontroller unit

- **CPU:** ESP-Shelly-C68F
- **Flash:** 8 MB

Firmware capabilities

- **Schedules:** 20
- **Webhooks (URL actions):** 20 with 5 URLs per hook
- **Wi-Fi range extender:** Yes
- **BLE Gateway:** Yes
- **Scripting:** Yes
- **MQTT:** Yes
- **Encryption:** Yes

Shelly Cloud inclusion

The Device can be monitored, controlled, and set up through our Shelly Cloud home automation service. You can use the service through either our Android, iOS, or Harmony OS mobile application or through any internet browser at

<https://control.shelly.cloud/>.

If you choose to use the Device with the application and Shelly Cloud service, you can find instructions on how to connect the Device to the Cloud and control it from the Shelly app in the application guide: <https://shelly.link/app-guide>.

Troubleshooting

In case you encounter problems with the installation or operation of the Device, check its

knowledge base page: https://shelly.link/2PM_Gen4

Declaration of Conformity

Hereby, Shelly Europe Ltd. declares that the radio equipment type for Shelly 2 PM Gen4 is in compliance with Directive 2014/53/EU, 2014/35/EU, 2014/30/EU, and 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: https://shelly.link/2PM_Gen4_DoC

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Changes in contact information are published by the Manufacturer on the official website. All rights to the trademark Shelly® and other intellectual rights associated with this Device belong to Shelly Europe Ltd.

Frequently Asked Questions

What should I do if the product does not power on?

Check the power source and ensure it is within the input voltage range specified for the product.


Can I connect multiple devices simultaneously?

Yes, you can connect multiple devices as long as the total power consumption does not exceed the product's limits.

How do I switch between operation modes?

Refer to the user manual for instructions on changing operation modes based on the designated letters (a-g).

Documents / Resources

	<p>Shelly 2PM Gen4 2 Channel Smart Switch with Power Measurement [pdf]</p> <p>User Guide</p> <p>2PM Gen4 2 Channel Smart Switch with Power Measurement, 2PM Gen4 , 2 Channel Smart Switch with Power Measurement, Smart Switch with Power Measurement, Switch with Power Measurement, Power Measurement, Measurement, Switch</p>
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References

- [User Manual](#)

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2 Channel Smart Switch with Power Measurement, 2PM Gen4, 2PM Gen4 2 Channel Smart Switch with Power Measurement, measurement, Power Measurement, Shelly, Smart Switch with Power Measurement, switch, Switch with Power Measurement

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