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1 Gen4 Smart Switch
with Potential Free
Contacts

Shelly 1 Gen4 Smart Switch with Potential Free Contacts User Guide

Contents

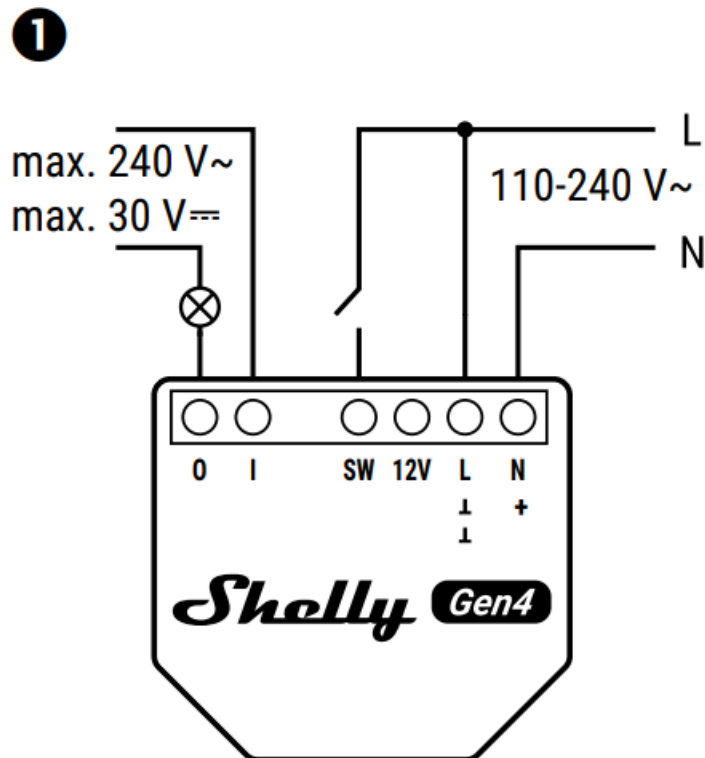**Shelly 1 Gen4 Smart Switch with Potential Free Contacts**

Product Information

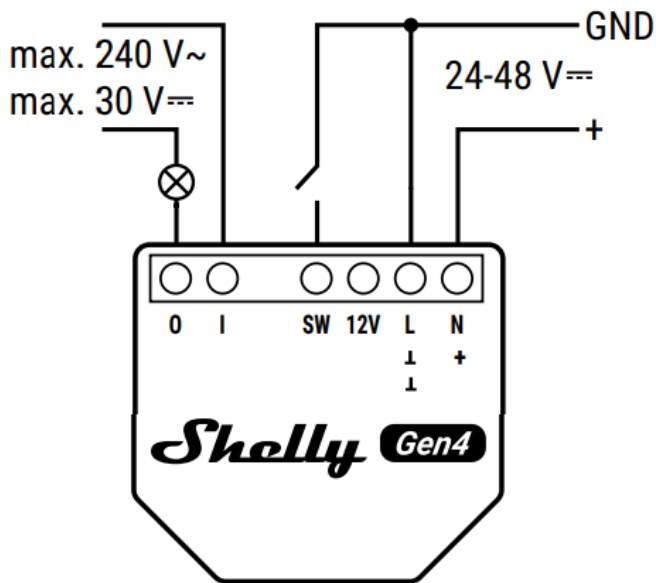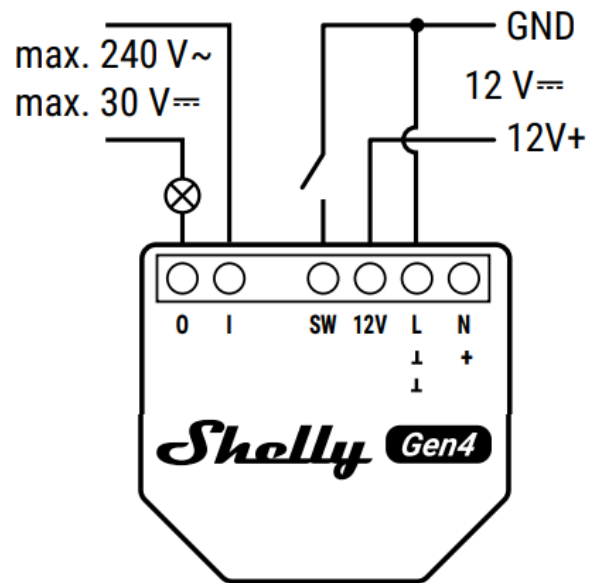The Shelly 1 Gen4 is a smart switch with potential-free contacts. It can be integrated into home automation systems and controlled via APIs provided by Shelly Europe Ltd. The device comes with factory-installed firmware, and users are responsible for keeping it updated for security purposes.

Wiring diagram

- Fig. 1. 110-240 V~ power supply

- Fig. 2. 24-48 V power supply
- Fig. 3. 12 V stabilized power supply

❷

max. 240 V~
max. 30 V⎓

GND
24-48 V⎓
+

O   I   SW 12V L   N
                    ⊥   +
                    ⊥

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❸

max. 240 V~
max. 30 V⎓

GND
12 V⎓
12V+

O   I   SW 12V L   N
                    ⊥   +
                    ⊥

Shelly Gen4

Legend

Device terminals

- O: Load circuit output terminal
- I: Load circuit input terminal
- SW: Switch input terminal (controlling O)
- +12V: 12 V positive terminal
- L: Live terminal (110-240 V~)
- N: Neutral terminal
- +: 24-48 V positive terminal
- ⊥: 12/24-48V ground terminal

Wires

- L: Live wire (110-240 V~)
- N: Neutral wire
- +: 12/24-48V positive wire
- GND: 12/24-48V ground wire plete 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: 26 g / 0.92 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: Blue

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:
  - 110-240 V~
  - 24-48 V
  - 12 V
- Power consumption: < 1.2 W

Output circuits ratings

- Max. Switching voltage:
  - 240 V~
  - 30 V
- Max. Switching current:
  - 16 A (240 V~)
  - 10 A (30 V)
- Sensors, meters
  - Internal temperature sensor: Yes

Radio

Wi-Fi

- Protocol: 802.11 b/g/n
- RF band: 2401-2483 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)

Bluetooth

- Protocol: 4.2

- RF band: 2400 – 2483.5 MHz
- Max. RF power: <4 dBm
- Range: Up to 30 m / 98 ft outdoors, up to 10 m / 33 ft indoors (depending on local conditions)

Zigbee

- Protocol: 802.15.4
- RF band: 2400 to 2483.5 MHz
- Max. RF power: < 20 dBm
- Range: Up to 100 m / 328 ft indoors and 300 meters / 984ft. outdoors, depending 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

Smart switch with potential-free contacts
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.

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 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.
- **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.
- **CAUTION!** The Device and the appliances connected to it, must be secured by a cable protection switch by 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 1 Gen4 is a Matter-compatible smart switch with potential-free contacts. Equipped with a multi-protocol wireless MCU, it supports Zigbee and Bluetooth connectivity for a secure connection. The Device operates on both AC and DC
power. Its small form factor allows retrofitting into standard electrical wall boxes, behind power sockets, light switches, or other 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. The 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 promptly.

Installation instructions

- To connect the Device, we recommend using solid 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).

- To enable the access point and the Bluetooth connection of the Device, press and hold the Reset/control button for 5 seconds.
- To perform a factory reset of the Device, press and hold the Reset/control button for 10 seconds.
- Connect the load circuit to the I and O terminals of the Device.

If you are using a 110-240 V~ power supply (Fig. 1)

1. Connect the Live wire to the L terminal and the Neutral wire to the N terminal.
2. Connect the switch to the SW terminal of the Device and the Live wire.

If you are using a 24-48 V power supply (Fig. 2)
The voltage on the I and O terminals of the Device should not exceed 30 V .

1. Connect the DC+ wire to the + terminal and the GND wire to the   terminal.
2. Connect the switch to the SW terminal and the GND wire. If you are using a stabilized 12V power supply (Fig. 3):
3. Complete the previous two steps.
4. Instead of connecting the 12V+ to the + terminal, connect it to the 12V terminal.

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. In Zigbee mode, the AP of the Device is not available by default. To enable it, 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.d

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 com-

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.
The Shelly mobile application and Shelly Cloud service are not conditions for the Device to function properly. This Device can be used standalone or with various other home automation platforms.

Troubleshooting

In case you encounter problems with the installation or operation of the Device, check its knowledge base page:
https://shelly.link/1_Gen4

Declaration of Conformity
Hereby, Shelly Europe Ltd. declares that the radio equipment type Shelly 1 Gen4 complies with Directive 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The full text of the EU declaration of conformity is available at the following
internet address:

https://shelly.link/1_Gen4_DoC
Manufacturer: Shelly Europe Ltd.
Address: 51 Cherni Vrah Blvd., bldg. 3, fl. 2-3, Sofia 1407,

Bulgaria
Tel.: +359 2 988 7435
E-mail: **support@shelly.cloud**
Official website: **https://www.shelly.com**

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.

For the UP PSTI Act Statement of Compliance, scan the QR code

FAQs

Q: How do I update the firmware of the Shelly 1 Gen4?
A: You can update the firmware through the embedded web interface or the Shelly Smart Control mobile application provided by Shelly Europe Ltd.

Q: Can I connect multiple wires into a single terminal of the Device?
A: No, it is not recommended to connect multiple wiretoto to a single terminal for safety reasons.

Documents / Resources

Shelly 1 Gen4 Smart Switch with Potential Free Contacts [pdf] User Guide
Gen4, 1 Gen4 Smart Switch with Potential Free Contacts, 1 Gen4, Smart Switch with Potential Free Contacts, Switch with Potential Free Contacts, Potential Free Contacts, Contacts, Switch

References

- 🌐 **Shelly Control**
- 🔗 **Shelly Smart Control guide**
- **User Manual**