

## USER & SAFETY GUIDE

### SHELLY Plus 1

This document contains important technical and safety information about the device, its safety use and installation. **CAUTION!** Before beginning the installation, please read this guide and any other documents accompanying the device carefully and completely. Failure to follow the installation procedures could lead to malfunction, danger to your health and life, violation of the law or refusal of legal and/or commercial guarantee (if any). Allterco Robotics EOOD is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure of following the user and safety instructions in this guide.

### Introduction to Shelly

Shelly® is a line of innovative microprocessor-managed devices, which allow remote control of electric appliances through a mobile phone, tablet, PC, or home automation system. Shelly® devices can work standalone in a local Wi-Fi network or they can also be operated through cloud home automation services. Shelly® devices can be accessed, controlled and monitored remotely from any place the User has Internet connectivity, as long as the devices are connected to a Wi-Fi router and the Internet. Shelly® devices have integrated web servers, through which the user may adjust, control and monitor them. The cloud function could be used, if it is activated through the web server of the device or the settings in the Shelly Cloud mobile application. The user can register and access Shelly Cloud using either Android or iOS mobile application, or with any internet browser at <https://my.shelly.cloud/> Shelly® Devices have two Wi-Fi modes - Access Point (AP) and Client mode (CM). To operate in Client Mode, a Wi-Fi router must be located within the range of the device. Devices can communicate directly with other Wi-Fi devices through

HTTP protocol. An API is provided by Allterco Robotics EOOD.

For more information, please visit: <https://shelly-api-docs.shelly.cloud/#shelly-family-overview> or contact us at: [developers@shelly.cloud](mailto:developers@shelly.cloud) **Control your home with your voice**

Shelly® devices are compatible with Amazon Alexa and Google Home supported functionalities. Please see our step-by-step guide on: <https://shelly.cloud/support/compatibility/>

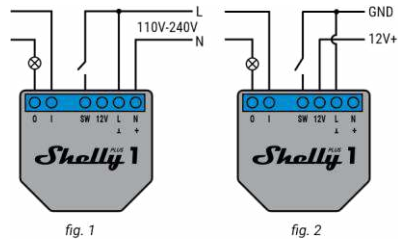


fig. 1

fig. 2

fig. 3

Legend

- N: Neutral terminal / wire
- L: Live (110-240 V) terminal / wire
- O: Relay output terminal
- I: Relay input terminal
- SW: Switch terminal
- +: DC positive terminal (24-48 V)
- -: DC ground terminal
- 12 V: DC positive terminal (12 V stabilized)
- GND: DC ground wire
- DC+: DC positive

(24-48 V) wire

- 12V+: DC positive (12 V) wire

Connecting to the power grid with power supply 110-240V AC (fig. 1) or 24-48V DC (fig.3), or 12V DC (fig. 2) power supply.

### Installation instructions

The Wi-Fi Relay Switch Shelly® PLUS 1 (the Device) can control 1 electrical circuit up to 3.5 kW/240 V AC. It can be retrofitted into a standard in-wall console, behind power sockets and light switches or other places with limited space. **CAUTION!** Danger of electrocution. The mounting/installation of the Device should be done by a qualified person (electrician).

**CAUTION!** Do not connect the Device to appliances exceeding the given max 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 may be connected to and may control electric circuits and appliances only if they comply with the respective standards and safety norms. Short circuit in the power grid or any appliance connected to the Device may damage the Device.

**RECOMMENDATION** Connect the Device using solid single-core cables with increased insulation heat resistance not less than PVC T105°C.

Before starting, wire check that the breakers are turned off and there is no voltage on their terminals. This can be done with a phase meter or multimeter. When you are sure that there is no voltage, you can start wiring the Device. Connect the load circuit to the "I" and "O" terminals of the device.

**CAUTION!** The voltage on the "I" and "O" terminals of the Device should not exceed 30 V in DC mode. If you are using AC power supply (fig.1), connect the Neutral wire to the "N" and the Live wire to the "L" terminals of the Device. Connect the switch to the "SW" terminal of the Device and the Live wire.

If you are using 24-48 V DC power supply

(fig. 3) connect the DC+ wire to the "+" and the GND wire to the "-" terminals of the Device. Connect the switch to the "SW" terminal and the GND wire. If you are using stabilized 12V DC power supply (fig. 2), connect the 12V+ wire to the "12V" terminal, instead to the "-" terminal. **RECOMMENDATION** For inductive loads, which cause voltage spikes during switching, such as electrical motors, fans, vacuum cleaners, refrigerators and similar ones, RC snubber (0.1µF / 100Ω / 1/2W / 600V AC) should be wired in parallel with the load. RC snubbers can purchased at <https://shop.shelly.cloud/rc-snubber-wifi-smart-home-automation>.

### Initial inclusion

You can choose to use Shelly® with the Shelly Cloud mobile application and Shelly Cloud service. Instructions on how to connect your device to the Cloud and control it through the Shelly App can be found in the "App guide". You can also familiarize yourself with the instructions

for Management and Control through the embedded Web interface at 192.168.33.1 in the WiFi network, created by the Device.

**CAUTION!** Do not allow children to play with the button/ switch connected to the Device. Keep the Devices for remote control of Shelly (mobile phones, tablets, PCs) away from children.

### Specification

- Dry contact: Yes
- AC power supply: 110-240 V
- DC Power supply: 12 V stabilized
- DC Power supply: 24-48V
- Max load: 16A/240VAC, 10A/30VDC
- Dimensions (HxWxD): 42x38x17 mm
- Scripting (mjs): YES
- MQTT: YES
- Temperature Protection: YES
- URL Actions: 20
- Scheduling: 50 • Wi-Fi: YES
- Bluetooth: v4.2
- Basic/EDR: YES
- Bluetooth modulation: GFSK, π/4-DQPSK, 8-DPSK
- Controlled elements: 1 electrical circuits (max 30 V in DC mode).
- Controlling elements: 1 relay.
- Working temperature: -20°C up to 40°C
- Electrical consumption: < 1.2 W
- CPU: ESP32
- Flash: 4MB
- Operational range: (depending on terrain and building structure): up to 50 m outdoors, up to 30 m indoors
- Radio signal power: 1mW
- Radio protocol: WiFi 802.11 b/g/n
- RF output Wi-Fi: 13.45 dBm
- RF output Bluetooth: 4.78 dBm
- Frequency Wi-Fi : 2412-2472 MHz; (Max. 2495 MHz)
- Frequency Bluetooth TX/RX: 2402-2480 MHz (Max. 2483.5MHz)

### Declaration of conformity

Hereby, Allterco Robotics EOOD declares that the radio equipment type Shelly Plus 1 is in compliance 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.cloud/knowledge-base/devices/shelly-plus-1/>

**Manufacturer:** Allterco Robotics EOOD  
**Address:** Bulgaria, Sofia, 1407, 103 Cherni vrah Blvd. **Tel.:** +359 2 988 7435  
**E-mail:** [support@shelly.cloud](mailto:support@shelly.cloud)

**Web:** <http://www.shelly.cloud> Changes in the contact data are published by the Manufacturer at the official website of the Device <https://www.shelly.cloud> All rights to trademarks Shelly® and other intellectual rights associated with this Device belong to Allterco Robotics EOOD.

