Manuals+ — User Manuals Simplified.

Shelly Smart 0-10V Dimming Controller Plus 0-10V Dimmer

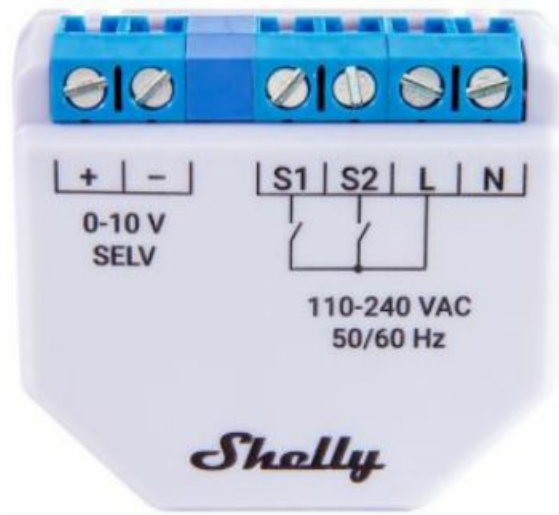# Shelly Smart 0-10V Dimming Controller Plus 0-10V Dimmer User Guide

Contents

Shelly Smart 0-10V Dimming Controller Plus 0-10V Dimmer

Product Information

Specifications

- Model: Shelly Plus 0-10V Dimmer
- Input Voltage: 110-240 VAC
- Max Current: 2 A
- Dimming Type: 0-10V

Product Usage Instructions

Installation

To ensure proper installation and usage of the Smart 0-10V dimming controller, please follow the instructions below:

1. Make sure the Device is not damaged before installation. If any signs of damage are present, do not use the Device.
2. Secure the Device using a cable protection switch according to EN60898-1 with tripping characteristic B.
3. Do not install the Device in areas where it can get wet to prevent damage.

Wiring

Refer to the schematic diagram (Fig. 1 or Abb.1) for proper wiring:

- Connect the V+ and VDim+ terminals to the positive voltage supply.
- Connect the Dim- terminal to the negative voltage supply.
- Connect the L and N terminals to the 110-240 VAC power supply.
- Connect the S1 and S2 terminals according to your specific configuration.

Usage

To use the Shelly Plus 0-10V Dimmer, follow these steps:

1. Ensure that the power supply is connected and turned on.
2. Adjust the dimming level by providing a 0-10V control signal to the Dim- terminal.

Frequently Asked Questions (FAQ)

Q: Can I repair the Device myself if it gets damaged?
A: No, it is not recommended to attempt repairing the Device yourself. Please seek professional assistance.

Q: What is the maximum current supported by the Shelly Plus 0-10V Dimmer?
A: The maximum current supported is 2 A.

USER AND SAFETY GUIDE
Smart 0-10V dimming controller
Shelly Plus 0-10V Dimmer

Read before use
This document contains important technical and safety information about the device, its safe use and installation.

CAUTION! Before beginning the installation, please read carefully and entirely this guide and any other documents accompanying the device. Failure to follow the installation procedures could lead to malfunction, danger to your health and life, violation of law or refusal of legal and/or commercial guarantee (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 of following the user and safety instructions in this guide.

Product Introduction

Shelly® is a line of innovative microprocessor-managed devices, which allow remote control of electric circuits 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 Cloud is a service that can be accessed using either an Android or iOS mobile application or with any internet browser at **https://control.shelly.cloud/**.
Shelly® devices can be accessed, controlled, and monitored remotely from any place where the user has internet connectivity, as long as the devices are connected to a Wi-Fi router and the Internet.

Shelly® devices have an Embedded Web Interface accessible at **http://192.168.33.1** when connected directly to the device access point, or at the device IP address on the local Wi-Fi network. The embedded Web Interface can be used to monitor and control the device, as well as adjust its settings.

Shelly® devices can communicate directly with other Wi-Fi devices through HTTP protocol. An API is provided by Shelly Europe Ltd. For more information, please visit: **https://shelly-api-docs.shelly.cloud/#shelly-family-overview**.
Shelly® devices are delivered with factory-installed firmware. If firmware updates are necessary to keep the devices in conformity, including security updates, Shelly Europe Ltd. will provide the updates free of charge through the device Embedded Web Interface or the Shelly mobile application, where the information about the current firmware version is available. The choice to install or not the device firmware updates is the user's sole responsibility. Shelly Europe Ltd. shall not be liable for any lack of conformity of the device caused by failure of the user to install the provided updates in a timely manner.
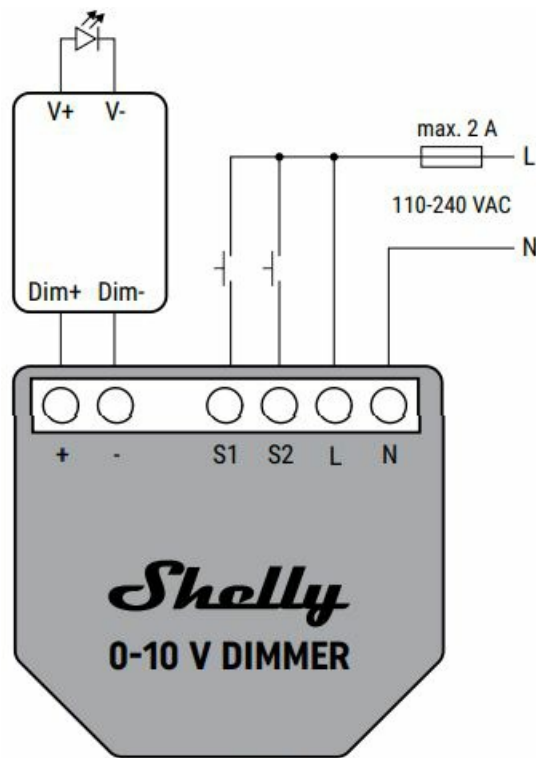
Schematic

Fig. 1

Legend

Device terminals:

- +: 0-10V positive output
- -: 0-10V negative output
- S1: Switch 1 input terminal
- S2: Switch 2 input terminal
- L: Live terminal
- N: Neutral terminal

Wires:

- N: Neutral wire
- L: Live (110 – 240 VAC) wire

Installation Instructions

Shelly Plus 0-10V Dimmer (the Device) is a smart 0-10V dimming controller.

ATTENTION! The Device is not intended to directly control LED lights.
It can be retrofitted into standard electrical wall boxes, behind power sockets and light switches or other places with limited space.

CAUTION!

- Danger of electrocution. Mounting/installation of the Device to the power grid has to be performed with caution, by a qualified electrician.

- Danger of electrocution. Every change in the connections has to be done after ensuring there is no voltage present at the Device terminals.
- Do not open the device. It does not contain any parts that can be maintained by the user. For safety and licensing reasons, unauthorized change and/or modification of the device is not permitted.
- Use the Device only with a power grid and appliances that comply with all applicable regulations. A short circuitin the power grid or any appliance connected to the Device may damage it.
- Do not connect the Device to appliances exceeding the given max load!
- Connect the Device only in the way shown in these instructions. Any other method could cause damage and/or injury.
- Do not use the Device if it shows signs of damage!
  Do not attempt to service or repair the Device yourself!
- Do not install the Device where it can get wet.
- The Device has to be secured by a cable protection switch in accordance with EN60898-1 (tripping characteristic B or C, max. 2 A rated current, min. 6 kA interrupting rating, energy limiting class 3).

RECOMMENDATION: Connect the Device using solid single-core wires or stranded wires with ferrules.

- Before starting the mounting/installation of the Device, check that the breakers are turned off and there is no voltage on their terminals. This can be done with a mains voltage tester or multimeter.
- When you are sure that there is no voltage, you can proceed to connecting the wires.
- Connect the Device positive output to the LED driver 0-10V positive input and the Device negative output to the LED driver 0-10V negative input as shown in Fig. 1.
- Connect the Live wire to the Device L terminal, and the Neutral wire to the N terminal.
- The Live wire must be protected by a circuit breaker with a rated current of less than 2 A.
- Connect switches or buttons to the Device S1 and S2 terminals and the Live wire.
- The Device can work in single or dual button modes or in a single switch mode.
- In single input mode, S2 is always detached.

ATTENTION! Do not use buttons or switches with built-in LED or glow-lamp!
Connect the LED driver to its power supply and the LED lights in accordance with the installation instructions provided by the LED driver manufacturer.

Initial Inclusion

If you choose to use the Device with the Shelly Smart Control mobile application and cloud service, instructions on how to connect the Device to the Cloud and control it through the Shelly Smart Control app can be found in the mobile application 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 and protocols.

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

Specifications

- Dimensions (HxWxD): 37x42x16 mm / 1.46×1.65×0.63 in

- Weight: 18 g / 0.62 oz
- Ambient temperature: -20 °C to 40 °C / -5 °F to 105 °F
- Humidity 30 % to 70 % RH
- Max. altitude 2000 m / 6562 ft
- Screw terminals max torque: 0.4 Nm / 3.54 lbin
- Conductor cross section: 0.5 to 1.5 mm² / 20 to 16 AW
- Conductor stripped length: 5 to 6 mm / 0.20 to 0.24 in
- Power supply: 110 – 240 VAC, 50/60Hz
- Electrical consumption: < 1.2 W
- External protection: max. 2 A, tripping characteristic B or C,6 kA interrupting rating, energy limiting class 3
- Max. control voltage: 10 V
- Max. control current: 35 mA
- PWM frequency: 500 Hz
- Internal temperature sensor: Yes
- RF band: 2400 – 2495 MHz
- Max. RF power: < 20 dBm
- Wi-Fi protocol: 802.11 b/g/n
- Wi-Fi operational range (depending on local conditions):
    - up to 50 m / 160 ft outdoors
    - up to 30 m / 100 ft indoors"
- Bluetooth protocol: 4.2
- Bluetooth operational range (depending on local conditions):
    - up to 30 m / 100 ft outdoors
    - up to 10 m / 33 ft indoors
- CPU: ESP32
- Flash: 4 MB
- Schedules: 20
- Webhooks (URL actions): 20 with 5 URLs per hook
- Scripting: Yes
- MQTT: Yes
- UDP: Yes

Declaration of conformity
Hereby, Shelly Europe Ltd. (former Allterco Robotics EOOD) declares that the radio equipment type Shelly Plus 0-10V Dimmer 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.link/plus_0-10v_DoC**
Manufacturer: Shelly Europe Ltd.
Address: 103 Cherni vrah Blvd., 1407 Sofia, Bulgaria
Tel.: +359 2 988 7435
E-mail: **support@shelly.cloud**
Official website: **https://www.shelly.com**
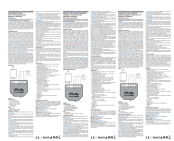Changes in the contact information data are published by the Manufacturer on the official website.
All rights to the trademark Shelly® and other intellectual rights associated with this Device belong to Shelly Europe Ltd.

Documents / Resources

Shelly Smart 0-10V Dimming Controller Plus 0-10V Dimmer [pdf] User Guide
Smart 0-10V Dimming Controller Plus 0-10V Dimmer, Smart 0-10V, Dimming Controller Plus 0-10V Dimmer, Controller Plus 0-10V Dimmer, Plus 0-10V Dimmer

References

- **Shelly Control**
- **Welcome to Shelly Technical Documentation | Shelly Technical Documentation**
- **Shelly Plus 0-10V Dimmer**
- **Shelly - Shelly**
- **Easy Smart Home Automation**
- **User Manual**