

## SHELLY DIMMER SMART DIMMING

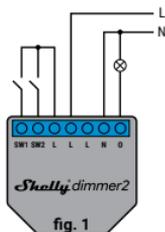


fig. 1

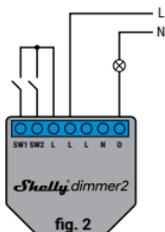


fig. 2

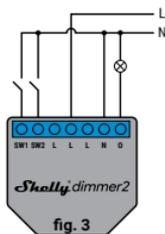


fig. 3

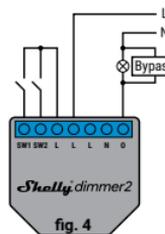


fig. 4

### Legend

- SW1 - Switch input 1 for on/off/dimming
- SW2 - Switch input 2 for on/off/dimming
- O - Output
- L - Line input (110-240V)
- N - Neutral input (Zero)

**CAUTION!** When using the device without neutral, Shelly Dimmer 2 requires at least 10W of power consumption, in order to operate. If the connected light has a smaller power consumption, then Shelly Bypass is required for the operation of the Device.

The Shelly smart WiFi dimmer by Allterco Robotics is intended to be installed directly to your lights in order to control and dim the light. It is intended to be mounted into a standard in-wall console, behind the light switches or other places with limited space. Shelly may work as a standalone device or as an accessory to a home automation controller.

**CAUTION!** Shelly dimmer cannot be connected and operate a fan. Doing so may cause damage to the unit or fan, including causing a fire!

**CAUTION!** For multiple bulbs connected to one Dimmer 2, all bulbs need to be equal in power load and technology!

### Specification

- Power supply - 110-240V  $\pm 10\%$  50/60Hz AC
- Operational current - 0.1 - 1.1A
- Device temperature protection - 105°C
- Complies with EU standards - RE Directive 2014/53/EU, LVD 2014/35/EU, EMC 2004/108/WE, RoHS2 2011/65/UE
- Working temperature - from 0°C to 35°C
- Radio signal power - 1mW
- Radio protocol - WiFi 802.11 b/g/n
- Frequency - 2400 - 2483.5 MHz
- Operational range (depending on local construction) - up to 50 m outdoors, up to 30 m indoors
- Dimensions (HxWxL) - 42 x 36 x 14 mm
- Electrical consumption - < 1,5 W
- Supported light types - Incandescent and halogen light sources 1-220W, Dimmable LED 50-200VA/1W - 200W, Resistive-inductive loads ferromagnetic transformers 50-150VA

### Technical Information

- Control through WiFi from a mobile phone, PC, automation system or any other Device supporting HTTP and/or UDP protocol.
- Microprocessor management.
- Shelly may be controlled by an external button/switch.

**CAUTION!** Danger of electrocution. Mounting the Device to the power grid has to be performed with caution.

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

### Introduction to Shelly

Shelly® is a family of innovative Devices, which allow remote

control of electric appli-ances through mobile phone, PC or home automation system. Shelly® uses WiFi to connect to the devices controlling it. They can be in the same WiFi network or they can use remote access (through the Internet). Shelly® may work standalone, without being managed by a home automation controller, in the local WiFi network, as well as through a cloud service, from everywhere the User has Internet access.

Shelly® has an integrated web server, through which the User may adjust, control and monitor the Device. Shelly® has two WiFi modes - access Point (AP) and Client mode (CM). To operate in Client Mode, a WiFi router must be located within the range of the Device. Shelly® devices can communicate directly with other WiFi devices through HTTP protocol.

An API can be provided by the Manufacturer. Shelly® devices may be available for monitor and control even if the User is outside the range of the local WiFi network, as long as the WiFi router is connected to the Internet. The cloud function could be used, which is activated through the web server of the Device or through the settings in the Shelly Cloud mobile application.

The User can register and access Shelly Cloud, using either Android or iOS mobile applications, or any internet browser and the web site: <https://my.Shelly.cloud/>.

### Installation Instructions

**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!** Before beginning the installation please read the accompanying documentation carefully and completely. Failure to follow recommended procedures could lead to malfunction, danger to your life or violation of the law. Allterco Robotics is not responsible for any loss or damage in case of incorrect installation or operation of this Device.

**CAUTION!** Use the Device only with power grid and appliances which comply with all applicable regulations. Short Circuit in the power grid or any appliance connected to the Device may damage the Device.

**RECOMMENDATION!** The Device may be connected to and may control electric circuits and appliances only if they comply with the respective standards and safety norms.

**RECOMMENDATION!** The Device may be connected to and may control electric circuits and light sockets only if they comply with the respective standards and safety norms.

**CAUTION!** If the Device is not connected to the supported light types, the dimming functionality may not be present. However, you will still be able to turn on and off your lights.

### Declaration of conformity

Hereby, Allterco Robotics EOOD declares that the radio equipment type Shelly Dimmer 2 is in compliance with Directive 2014/53/EU, 2014/35/EU, 2004/108/WE, 2011/65/UE. The full text of the EU declaration of conformity is available at the following internet address:

<https://shelly.cloud/declaration-of-conformity/>

**Manufacturer:** Allterco Robotics EOOD

**Address:** 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 <http://www.shelly.cloud>

The User is obliged to stay informed for any amendments of these warranty terms before exercising his/her rights against the Manufacturer.

All rights to trademarks She® and Shelly®, and other intellectual rights associated with this Device belong to Allterco Robotics EOOD.

## INITIAL INCLUSION

Before installing/mounting the Device ensure that the grid is powered off (turned down breakers).

Connect the Device to the power grid and install it in the console behind the switch/power socket following the scheme that suits the desired purpose.

- Connecting to a standard power grid with neutral – **fig. 1**
- Connecting to a power grid without neutral, with a minimal consumption of 10W – **fig. 2**
- Connecting to a standard power grid with neutral, and switches also connected to neutral – **fig. 3**
- Connecting to a power grid without neutral, with no minimal consumption and using Shelly Bypass – **fig. 4**

You may choose if you want to use Shelly with the Shelly Cloud mobile application and Shelly Cloud service. You can also familiarize yourself with the instructions for Management and Control through the embedded Web interface.

## CONTROL YOUR HOME WITH YOUR VOICE

All Shelly devices are compatible with Amazon Echo and Google Home. Please see our step-by-step guide on:

- <https://shelly.cloud/compatibility/Alexa>
- <https://shelly.cloud/compatibility/Assistant>

## SHELLY APPLICATION



Shelly Cloud gives you opportunity to control and adjust all Shelly® Devices from anywhere in the world. You only need an internet connection and our mobile application, installed on your smartphone or tablet.

## Registration

The first time you load the Shelly Cloud mobile app, you have to create an account which can manage all your Shelly® devices.

## Forgotten Password

In case you forget or lose your password, just enter the e-mail address you have used in your registration. You will then receive instructions to change your password.

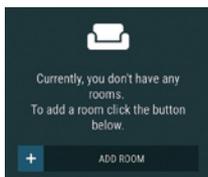
**⚠ WARNING!** Be careful when you type your e-mail address during the registration, as it will be used in case you forget your password.

## First steps

After registering, create your first room (or rooms), where you are going to add and use your Shelly devices.

Shelly Cloud gives you opportunity to create scenes for automatic turning on or off of the Devices at predefined hours or based on other parameters like temperature, humidity, light etc. (with available sensor in Shelly Cloud).

Shelly Cloud allows easy control and monitoring using a mobile phone, tablet or PC.



## Device Inclusion

To add a new Shelly device, install it to the power grid following the Installation Instructions included with the Device.

### Step 1

After the installation of Shelly following the Installation Instructions and the power is turned on, Shelly will create its own WiFi Access Point (AP).

**⚠ WARNING!** In case the Device has not created its own WiFi network with SSID like **shellydimmer2-35FA58** check if you have connected Shelly correctly by the wiring schemes. If you do not see an active WiFi network with SSID like **shellydimmer2-35FA58**, reset the Device. If the Device has been powered on, you have to power it off and on again. After turning the power on, you have 60 seconds to press 5 consecutive times either switch connected 11/12. Or if you have physical access to the Device, press and hold the reset button for 10 seconds. Shelly should return to AP Mode. If not, please repeat or contact our customer support at [support@Shelly.cloud](mailto:support@Shelly.cloud)

### Step 2

Choose "Add Device". In order to add more Devices later, use the app menu at the top right corner of the main screen and click "Add Device". Type the name (SSID) and password for the WiFi network, to which you want to add the Device.



### Step 3

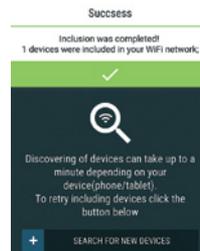
If using iOS: you will see the following screen:



Press the home button of your iPhone/iPad/iPod. Open Settings > WiFi and connect to the WiFi network created by Shelly, e.g. **shellyswitch25-35FA58**. If using Android your phone/tablet will automatically scan and include all new Shelly Devices in the WiFi network that you are connected to.



Upon successful Device Inclusion to the WiFi network you will see the following pop-up:



### Step 4

Approximately 30 seconds after discovery of any new Devices on the local WiFi network, a list will be displayed by default in the "Discovered Devices" room.



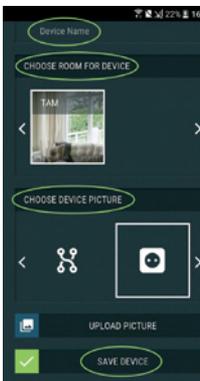
### Step 5

Enter Discovered Devices and choose the Device you want to include in your account.



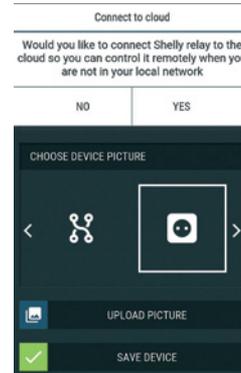
### Step 6

Enter a name for the Device (in the Device Name field). Choose a Room, in which the Device has to be positioned. You can choose an icon or add a picture to make it easier to recognize. Press "Save Device".



### Step 7

To enable connection to the Shelly Cloud service for remote control and monitoring of the Device, press "YES" on the following pop-up.



## Shelly devices settings

After your Shelly device is included in the app, you can control it, change its settings and automate the way it works.

To switch the Device on and off, use the Power button.

To enter at the details menu of the Device, click on its name. From the details menu you may control the Device, as well as edit its appearance and settings.



**Timer** - To manage the power supply automatically, you may use:

- Auto OFF: After turning on, the power supply will automatically shutdown after a predefined time (in seconds). A value of 0 will cancel the automatic shutdown.

- Auto ON: After turning off, the power supply will be automatically turned on after a predefined time (in seconds). A value of 0 will cancel the automatic power-on.

**Weekly Schedule** - This function requires an Internet connection.

To use Internet, your Shelly has to be connected to a local WiFi network with an active internet connection. Shelly may turn on/off automatically at a predefined time, at sunrise/sunset, or at a specified time before or after sunrise/sunset. Multiple schedules are possible.

## Internet/Security

- WiFi Mode - Client: Allows the device to connect to an available WiFi network. After typing the details in the respective fields, press Connect.

- WiFi Client Backup: Add a backup WiFi network, in case your primary one becomes unavailable.

- WiFi Mode - Access Point: Configure Shelly to create a Wi-Fi Access point. After typing the details in the respective fields, press Create Access Point.

- Cloud - Enable or Disable connection to the Cloud service.

**Cloud** - Restrict Login - Restrict the web interface of Shelly with a Username and Password. After typing the details in the fields, press Restrict Shelly.

## Settings

**Power On Default Mode** - This sets the default output state when Shelly is powered.

- ON: Configure Shelly to turn ON, when it has power.
- OFF: Configure Shelly to turn OFF, when it has power.
- Restore Last Mode: Configure Shelly to return to last state it was in, when it has power.

**Firmware Update** - Update the firmware of Shelly, when a new version is released.

## Button Type

- One Button mode: the device is controlled with a single switch.
- Dual button mode: the device is controlled dual switch.
- Toggle switch one button: the device is controlled by a single toggle switch.
- Edge switch: the device is controlled with an edge on/off.

**Button Debounce** - Adjust the sensitivity (time of reaction) of the connected switch. If there are any interferences in the power grid, this will prevent undesired status change (on/off) of the device. The range is 60 - 200 ms.

**Calibration** - Shelly Dimmer needs calibration based on the type of light that you are going to use it with. To make a calibration, press Start Calibration.

**Transition Time** - Set the time (in milliseconds), for which Shelly Dimmer goes from 0% to 100%. The value can be from 0 to 5000 ms.

**Fade rate** - Set the speed of dimming, when the switch is pressed and held. Range: 1x - 5x

**Minimum Brightness** - If the connected light is not working below a certain percentage, you can set the minimum percent at which Shelly Dimmer will turn on. Once set, you can not dim the light below the minimum. Range: 0 - 50%

**Warm up** - Some lights require a certain power impulse, in order to start below 100% brightness. You can set the brightness level and time at which Shelly Dimmer will turn on. Brightness range: 10 - 100%. Time range: 20 - 200 ms

**Night Mode** - With this mode you can set a period of time and level of brightness, in which any turning on will set the brightness to the predefined level.

**Time Zone and Geo-location** - Enable or Disable the automatic detection of Time Zone and Geo-location.

**Factory Reset** - Return Shelly to its factory default settings.

**Device Information** - here you can see the device ID(Unique ID of Shelly) and device IP(the IP of Shelly in your Wi-Fi network)

## THE EMBEDDED WEB INTERFACE

Even without the mobile app, Shelly can be set and controlled through a browser and WiFi connection of a mobile phone, tablet or PC.

## Abbreviations used

- **Shelly-ID** - the unique name of the Device. It consists of 6 or more characters. It may include numbers and letters, for example 35FA58.
- **SSID** - the name of the WiFi network, created by the Device, for example shellydimmer2-35FA58
- **Access Point (AP)** - the mode in which the Device creates its own WiFi connection point with the respective name (SSID).
- **Client Mode (CM)** - the mode in which the Device is connected to another WiFi network.

## Initial inclusion

### Step 1

Install Shelly to the power grid following the schemes described above and place it into the console. After turning the power on Shelly will create its own WiFi network (AP).

**⚠ WARNING!** If you don't see the WiFi please follow the step 1 from the device inclusion section of the guide.

### Step 2

When Shelly has created an own WiFi network (own AP), with name (SSID) such as **shellydimmer2-35FA58**. Connect to it with your phone, tablet or PC.

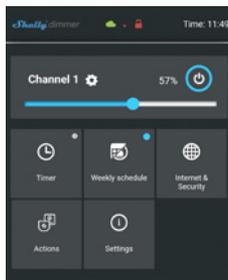
### Step 3

Type 192.168.33.1 into the address field of your browser to

load the web interface of Shelly.

## GENERAL - HOME PAGE

This is the home page of the embedded web interface. If it has been set up correctly, you will see information about Current state (on/off), Current brightness level, Power button Connection to Cloud, Present time, Settings



**Timer** - To manage the power supply automatically, you may use:

- Auto OFF: After turning on, the power supply will automatically shutdown after a predefined time (in seconds). A value of 0 will cancel the automatic shutdown.
- Auto ON: After turning off, the power supply will be automatically turned on after a predefined time (in seconds). A value of 0 will cancel the automatic power-on.

**Weekly Schedule** - This function requires an Internet connection. To use Internet, a Shelly Device has to be connected to a local WiFi network with working internet connection. Shelly may turn on/off automatically at a predefined time, at sunrise/sunset, or at a specified time before or after sunrise/sunset. Multiple schedules are possible.

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  - Cloud - Enable or Disable connection to the Cloud service.
  - Restrict Login - Restrict the web interface of Shelly with a Username and Password. After typing the details in the fields, press Restrict Shelly.
  - SNTP Server - You can set a custom SNTP Server. Type the URL address and press Save.
- ⚠ ATTENTION!** If you have entered incorrect information (wrong settings, usernames, passwords etc.), you will not be able to connect to Shelly and you have to reset the Device.

**⚠ WARNING!** If you don't see the WiFi please follow the step 1 from the device inclusion section of the guide.

**Advanced - Developer Settings** - Here you can change the action execution via CoAP (CoIoT) or Via MQTT

**Firmware Upgrade** - Shows present firmware version. If a newer version is available, officially announced and published by the Manufacturer, you can update your Shelly Device. Click Upload to install it to your Shelly Device.

## Settings

**Power On Default Mode** - This sets the default output state when Shelly is powered.

- ON: Configure Shelly to turn ON, when it has power.
- OFF: Configure Shelly to turn OFF, when it has power.

**Restore Last Mode** - Configure Shelly to return to last state it was in, when it has power.

**SWITCH** - Configure Shelly to operate accordingly to the state of the switch (button).

**Time Zone and Geo-location** - Enable or Disable the automatic detection of Time Zone and Geo-location.

**Firmware Update** - Update the firmware of Shelly, when a new version is released.

## Button Type

- One Button mode: the device is controlled with a single switch.
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**Night Mode** - With this mode you can set a period of time and level of brightness, in which any turning on will set the brightness to the predefined level.

**Factory Reset** - Return Shelly to its factory default settings.

**Device Reboot** - Reboots the device.

**Device Information** - Here you can see the unique ID of Shelly.

**Additional Features** - Shelly allows control via HTTP from any other device, home automation controller, mobile app or server.

For more information about the REST control protocol, please visit: <https://shelly.cloud/developers/> or send a request to: [developers@shelly.cloud](mailto:developers@shelly.cloud)

