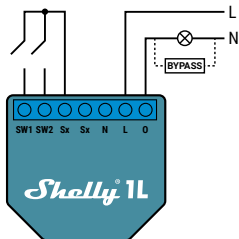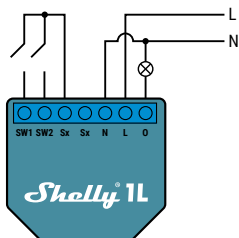# Shelly® 1L

UNIVERSAL WIFI SENSOR INPUT USER GUIDE

Wiring without neutral

Wiring with neutral

LEGEND*
N - Neutral Input
L - Line input (110-240V)
O - Output
SW1 - Switch 1
SW2 - Switch 2
SX - signal for Switch

***** When using the device without neutral, Shelly 1L requires at least 20W 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! Shelly Bypass is accessory that will be sold separatley!

The WiFi Relay Switch Shelly 1L can control 1 electrical circuit up to 1kW load. It is intended to be mounted into a standard in-wall console, behind power sockets and light switches or other places with limited space. Shelly may work as a standalone Device or as an accessory to another home automation controller.
• Purpose of control: Operating
• Construction of control: Independently mounted
• Type 1.B Action
• Pollution Degree 2
• Impulse Voltage: 4000 V

SPECIFICATION
Power supply: 110-230V ±10% 50/60Hz AC
Max load
• 4,1A/230V
• 4,1A/110V
Max current for short operation
• 1200W/230V
• 600W/110V
Supported load type (with and without neutral):
• Resistive - for example lights, electric heaters, etc.
• Inductive for example LED lights, transformers, fans, motors, etc.
• Capacitive for example motor starting capacitors, generators, synchronous motors, etc.
Supported light types:
• Incandescent lamps
• Fluorescent lamps
• Halogen lamps
• Dimmable LED
• Non Dimmable LED
• Fluorescent tubes
• Neon lamps
Protection: Overheating
Complies with:
• RE Directive 2014/53/EU
• LVD 2014/35/EU
• EMC 2004/108/WE
• RoHS2 2011/65/UE
Working temperature: – 20°C up to 40°C

Radio signal power: 1mW
Radio protocol: WiFi 802.11 b/g/n
Frequency: 2400 – 2500 MHz
Operational range (depending on local construction)
• up to 50 m outdoors
• up to 30 m indoors
Dimensions (HxWxL): 41 x 36 x 17 mm
Electrical consumption: < 1 W

TECHNICAL INFORMATION
• Control through WiFi from a mobile phone, PC, automation system or any other Device supporting HTTP and/or UDP protocol.
• Microprocessor management.
• Controlled elements: 1 electrical circuits/appliances.
• Controlling elements: 1 relays.
• 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 appliances 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! Danger of electrocution. Even when the Device is turned off, it is possible to have voltage across its clamps. Every change in the connection of the clamps has to be done after ensuring all local power is powered off/disconnected.
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 with solid single-core cables with increased heat resistance to insulation not less than PVC T105°C.

Initial Inclusion
Before installing/mounting the Device ensure that the grid is powered off (turned down breakers).
1. Connecting to the power grid without neutral 110-240 fig.1 bypass is optional
2. Connecting to the power grid with neutral 110-240 fig.2
For more information about the Device, please visit:
http://shelly-api-docs.shelly.cloud/#shelly-family-overview
or contact us at: developers@shelly.cloud
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. For more information see:
https://shelly.cloud/compatibility/Alexa
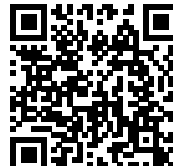https://shelly.cloud/compatibility/Assistant

Application for Shelly devices management
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.
To install the application please scan the QR code below or search for "Shelly cloud" in your app store.

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 Instalation 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 **shelly1L-35FA58** check if you have connected Shelly correctly by the schemes described above. If you do not see an active WiFi network with SSID like **shelly1L-35FA58**, reset the Device. If the Device has been powered on, you have to restart by powering it off and on again. After turning the power on, you have one minute to press 5 consecutive times the button/switch connected to either input (SW1/SW2). You have to hear the Relay trigger itself. After the trigger sound, Shelly should return to AP Mode. If you have physicall access to the device, you can press and hold the Reset button for 10 second, which is placed on the back of the device. Shelly should return to AP Mode. If not, please repeat or contact our customer support at: 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 press the home button of your iPhone/iPad/iPod. Open Settings > WiFi and connect to the WiFi network created by Shelly, e.g. shelly1L-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 application, you can control it, change its settings and automate the way it works.

To switch the Device on and off, use the respective ON/OFF button.

To enter at the details menu of the respective Device, simply click on it's name.

From the details menu you may control the Device, as well as edit its appearance and settings.

Edit device
Allows you to change the Device's name, room and picture.

Device settings
Allows you to change settings. For example, with Restrict login you may enter a username and password to restrict access to the embedded web interface in Shelly. You may automate the Device operations from this menu as well.

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 and day throughout the week. You may add unlimited number of weekly schedules.

Sunrise/Sunset
This function requires an Internet connection. To use Internet, a Shelly Device has to be connected to a local WiFi network with a working Internet connection.
Shelly receives actual information through the Internet about the time of sunrise and sunset in your area. Shelly may turn on or off automatically at sunrise/sunset, or at a specified time before or after sunrise/sunset.

Settings

All the settings are well explained in THE EMBEDDED WEB INTERFACE section of this user guide.

Firmware update
Shows present firmware version. If a newer version is available, you can update your Shelly Device by clicking Update.

Factory reset
Remove Shelly from your account and return it to its factory settings.

Device information
Here you can see the unique ID of Shelly and the IP it got from the 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 let-

ters, for example 35FA58.
• **SSID** – the name of the WiFi network, created by the Device, for example **shelly1L-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! In case the Device has not created its own WiFi network with SSID like **shelly1L-35FA58** check if you have connected Shelly correctly by the schemes described above. If you do not see an active WiFi network with SSID like **shelly1L-35FA58**, reset the Device. If the Device has been powered on, you have to restart by powering it off and on again. After turning the power on, you have one minute to press 5 consecutive times the button/switch connected to either input (SW1/SW2). You have to hear the Relay trigger itself. After the trigger sound, Shelly should return to AP Mode. If you have physicall access to the device, you can press and hold the Reset button for 10 second, which is placed on the back of the device. Shelly should return to AP Mode. If not, please repeat or contact our customer support at: support@shelly.cloud

Step 2
When Shelly has created an own WiFi network (own AP), with name (SSID) such as shelly1L-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 is correctly, you will see information about:
• Settings menu button
• Current state (on/off)
• Present time

Settings – General Settings
In this menu, you can configure the Shelly device's work and connection modes.

WiFi Settings
The WiFi connection settings:
• Access Point **(AP)** Mode - allows the Device to operate as a WiFi access point. The User can change the name (SSID) and the password to access the AP. After you have entered the desired settings, press Connect.
• WiFi Client Mode **(CM)** - allows the Device to connect to an available WiFi network. In order to switch to this mode, the User must enter the name (SSID) and the password to connect to a local WiFi network. After entering the correct details, press Connect.
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 as explained in Step 1.

Login
Access to the Device
Leave unprotected
removing the notification for disabled authorization.
Enable authentication
You can turn authentication on or off
Password and username
This is where you can change your username and password. You must enter a new username and the new password, then press Save to save the changes.
Connect to cloud
you can turn the connection between Shelly and Shelly Cloud on or off.
Factory reset
Return Shelly to its factory settings.
Firmware update
Shows present firmware version. If a newer version is available, you can update your Shelly Device by clicking Update.
Device reboot
Reboots the device.

Relay mode

Relay Screen
In this screen you can control, monitor and change the settings for turning the power on and off. You can also see the current status of the connected appliance to Shelly, Buttons Settings, On and OFF.
To control your Shelly:
1. Press Relay
• To turn on the connected circuit press "Turn ON".
• To turn off the connected circuit press "Turn OFF"
2. Press the **>** icon to go to the previous menu.

Shelly Management Settings
Each Shelly can be configured individually. This lets you personalize each Device in a unique manner, or consistently, as you choose.
Power On Default State
This sets the relays' default state when powered from the power grid.
• **ON** - By default when the Device is powered and the connected circuit/appliance to it will be powered as well.
• **OFF** - By default the Device and any connected circuit/appliance will not be powered, even when it is connected to the grid.
• Restore last state - By default the Device and the connected circuit/appliance will be returned to the last state they occupied (on or off) before the last power off/shutdown.
Auto ON/OFF
Automatic powering/shutdown of the socket and the connected appliance:
• Auto **OFF** after: After turning on, the power supply will be automatically shut down after a predefined time (in seconds). A value of 0 will cancel the automatic shutdown.
• Auto **ON** after: 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 start.
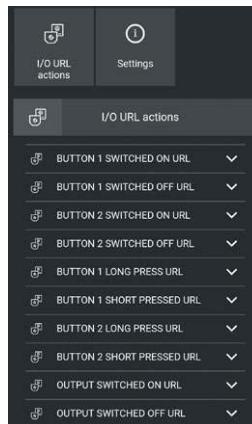**Manual Switch Type**
• One button mode - relay is controlled with button 1 - (momentary)
• Dual button mode - relay is controlled with button 1 for On and 2 for Off (momentary)
• Toggle switch one button - relay is controlled with switch 1
• Toggle Dual switch mode - relay is controlled with button 1 for On and 2 for Off
• Edge switch - relay is controlled with switch 1
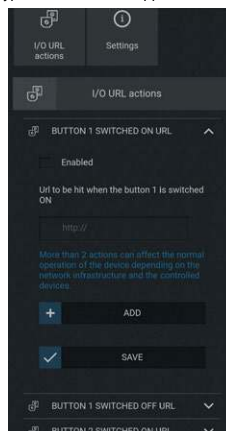• Edge Dual switch mode - relay is controlled with button 1 for On and 2 for Off
• Activation Switch - use it for motion sensor connected to swith 1. Any input turns "ON" and resets Auto OFF timer.
• Detached Switch 1- switch doesn't control dimmer output.
Actions supported from Shelly1L

When the button is switched ON or OFF and When the output is ON or OFF. The difference is that button means physical action (push with hand), the relay can be switched ON/OFF from scene, Schedule, Application Different type of devices can support different actions.

You must activate the required option and enter the URL that is being executed. Detailed description about what commands are possible between Shelly device can be found here https://shelly-api-docs.shelly.cloud/
Sunrise/Sunset hours
This function requires an Internet connection. To use Internet, a Shelly Device has to be connected to a local WiFi network with a working Internet connection.
Shelly receives actual information through the Internet about the time of sunrise and sunset in your area. Shelly may turn on or off automatically at sunrise/sunset, or at a specified time before or after sunrise/sunset.
On/Off 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.
Shelly may turn on/off automatically at a predefined time.

Hereby, Allterco Robotics EOOD declares that the radio equipment type Shelly 1L 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
Web: http://www.shelly.cloud
Updates 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.

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