



## Shelly 1PM WiFi Relay Switch with Power Metering User Guide

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### *Shelly* 1PM<sup>®</sup> WiFi Relay Switch with power metering USER GUIDE



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### Power supply: 110-240V AC

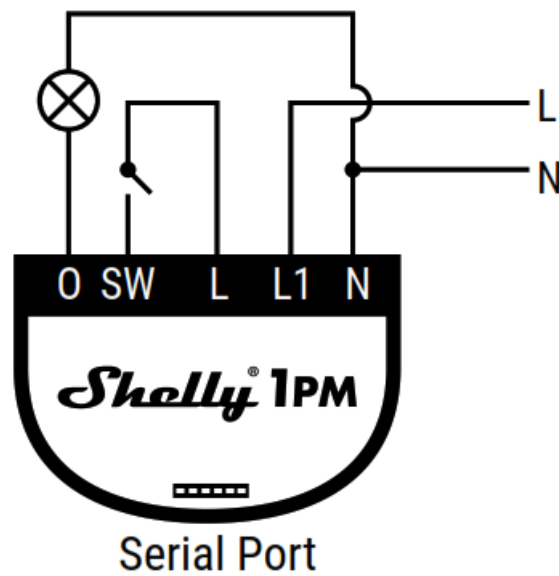


fig. 1

### Power supply: 24-60V DC

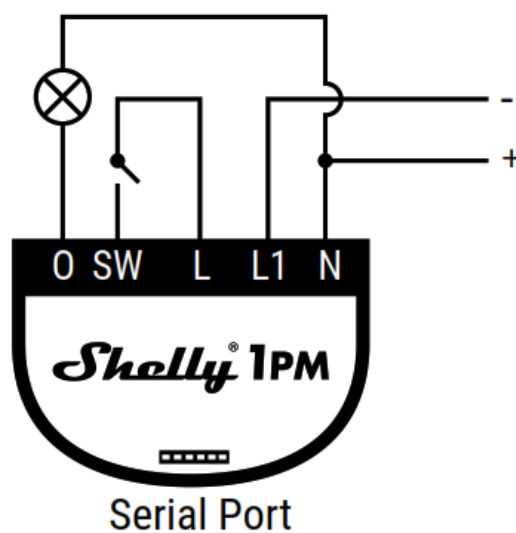


fig. 2

#### LEGEND:

N – Neutral input (Zero)/( + )

**L** – Line input (110-240V)/( – )

**L1** – Line input for relay power SW – Switch (input) controlling O

**O** – Output

The WiFi Relay Switch Shelly ® 1 PM may control 1 electrical circuit up to 3.5 kW. It is intended to be mounted into a standard in-wall console, behind power sockets and light switches, or in 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
- Indication of proper terminal connection

## **Specification**

### **Power supply:**

- 110-240V  $\pm 10\%$  50/60Hz AC
- 24-60V DC

### **Max load:**

16A/240V

### **Complies with EU standards:**

- RE Directive 2014/53/EU
- LVD 2014/35/EU
- EMC 2004/108/WE
- RoHS2 2011/65/UE

### **Working temperature:**

– 40°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 relay.
- Shelly may be controlled by an external button/switch.
- Shelly may monitor the power consumption and save it, free on our Cloud, with a history of up to 1 year.



**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 to 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 phones, PC, or home automation systems. Shelly ® uses WiFi to connect to the devices controlling it. They can be on 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 website: <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 grids and appliances which comply with all applicable regulations. A 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).

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

1. Connecting to the power grid with a power supply of 110-240V AC – fig. 1
2. Connecting to the power grid with a power supply 24-60V DC – fig. 2

For more information about the Bridge, please visit: <http://shelly-api-docs.shelly.cloud/#shelly-family-overview> or contact us at: [developers@shelly.cloud](mailto: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.

Please see our step-by-step guide on:

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

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



#### **MOBILE APPLICATION FOR MANAGEMENT OF SHELLY®**

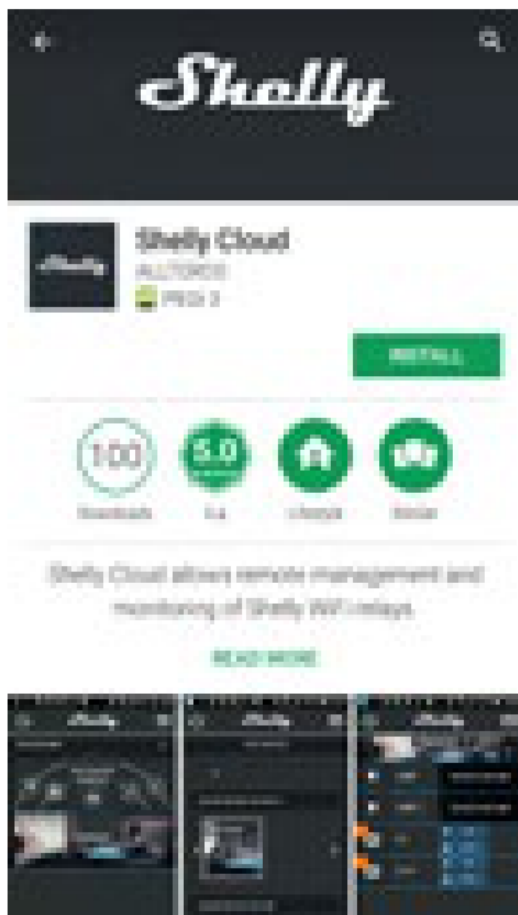


[http://shelly.cloud/app\\_download/?i=android](http://shelly.cloud/app_download/?i=android)

[http://shelly.cloud/app\\_download/?i=ios](http://shelly.cloud/app_download/?i=ios)

Shelly Cloud gives you the 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 visit Google Play (Android – fig. 3) or App Store (iOS – fig. 4) and install the Shelly Cloud app.



**fig. 3**



**fig. 4**

### **Registration**

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

### **Forgotten Password**

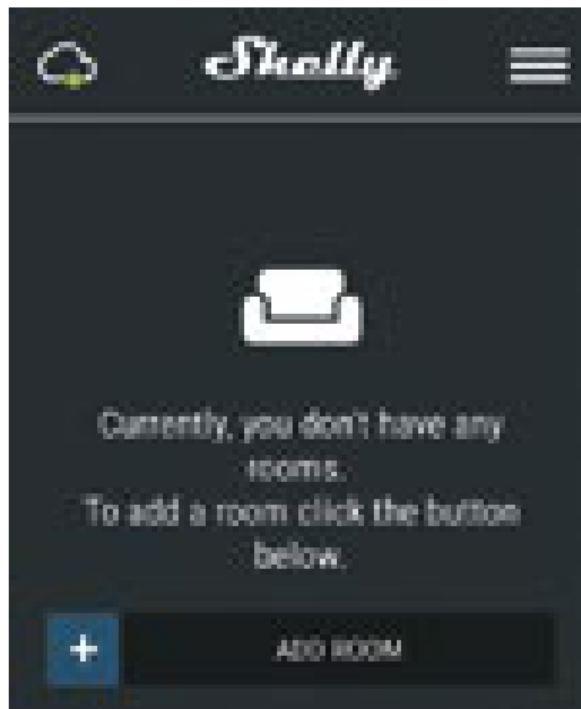
In case you forget or lose our password, just enter the e-mail address you have used in your registration. You will then receive instructions to change your password.



**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 the 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 the 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**

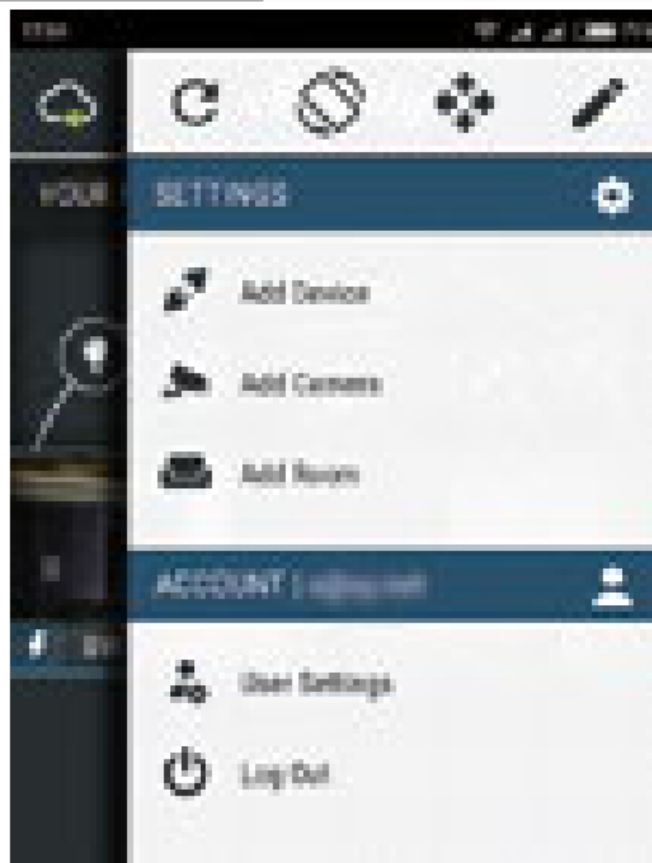
After the installation of Shelly following the Installation Instructions and the power is turned on, Shelly will create its own WiFi Access Point (AP).

**WARNING:** In case the Device has not created its' own AP WiFi network with SSID like shelly- 1 pm-35FA58, please check if the Device is connected accordingly to the Installation Instructions. If you still do not see an active WiFi network with SSID like shelly1pm-35FA58, or you want to add the Device to another Wi-Fi network, 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 SW. You have to hear the Relay trigger itself. After the trigger sound, 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. **shelly1pm-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 the discovery of any new Devices on the local WiFi network, a list will be displayed by default in the “Discovered Devices” room.



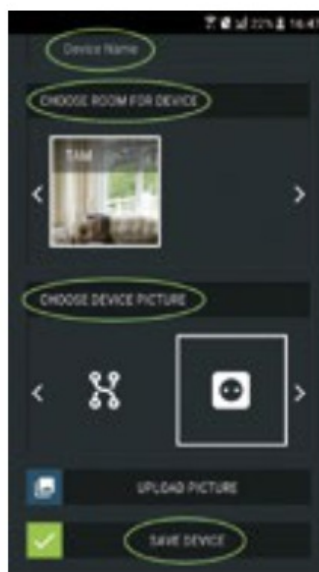
**Step 5:**

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 Device 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 respective Power 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.



### Timer

To manage the power supply automatically, you may use:

**Auto OFF:** After turning on, the power supply will automatically shut down after a predefined time (in seconds). A value of 0 will cancel the timer.

**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 timer.

### Weekly Schedule



This function requires an Internet connection. Shelly may turn on/off automatically at a predefined time.

### Sunrise/Sunset



This function requires an Internet connection. Shelly receives actual information 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.

#### **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 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.

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

#### **Safety**

**Max Power Protection:** Configure Shelly to turn off when defined power consumption is reached. Range: 1-3500W. After typing the desired power consumption, press Save.

#### **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.

##### **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
- Device IP – The IP of Shelly in your Wi-Fi network

##### **Edit Device**

From here you can edit:

- Device Name
- Device Room
- Device Picture

When you are done, press **Save Device**.

## **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, **Shelly1pm-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.

## Installation/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 do not see an active WiFi network with SSID like Shelly1pm-35FA58, reset the Device. If the Device has been powered on, you have to restart it 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 SW. You have to hear the Relay trigger itself. After the trigger sound, Shelly should return to AP Mode. If you have physical access to the device, you can press and hold the Reset button for 10 seconds, 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](mailto:support@Shelly.cloud)

### Step 2

When Shelly has created their own WiFi network (own AP), with a name (SSID) such as Shelly1pm-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. Here you will see information about:

- Current electrical consumption
- Current state (on/off)
- 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 shut down 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. Shelly may turn on/off automatically at a predefined time.

### Sunrise/Sunset



This function requires an Internet connection. Shelly receives actual information 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.

### Safety

**Max Power:** You can limit the maximum power the socket will supply. If the pre-set current draw is exceeded, Shelly will turn the socket off. Allowable power can be set between 1 to 3500W.

### 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 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.

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

**Advanced – Developer Settings:** Here you can change the action execution:

- Via CoAP (CoIoT)
- Via MQTT



**WARNING:** If you do not see an active WiFi network with SSID like Shelly1pm-35FA58, reset the Device. If the Device has been powered on, you have to restart it 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 SW. You have to hear the Relay trigger itself. After the trigger sound, Shelly should return to AP Mode. If you have physical access to the device, you can press and hold the Reset button for 10 seconds, 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](mailto:support@Shelly.cloud)

### 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).

#### Manual Switch Type

- Momentary – When using a button
- Toggle Switch – When using a switch.
- Edge Switch – Shelly will change its state on every push.

### Firmware Update

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

### 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 Reboot:** Reboots the Device.

You can find the latest version of this User Guide in .PDF by scanning the QR code



<https://shelly.cloud/downloads/>

The Declaration of Conformity is available at:

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

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 of any amendments to 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.



## Documents / Resources



[Shelly 1PM WiFi Relay Switch with Power Metering](#) [pdf] User Guide

1PM, WiFi Relay Switch with Power Metering, 1PM WiFi Relay Switch with Power Metering, Relay Switch, WiFi Relay Switch

## References

- [Welcome to Shelly Technical Documentation | Shelly Technical Documentation](#)
- [Shelly - Shelly](#)
- [Shelly Cloud](#)
- [Device Knowledge Base - Shelly Cloud](#)