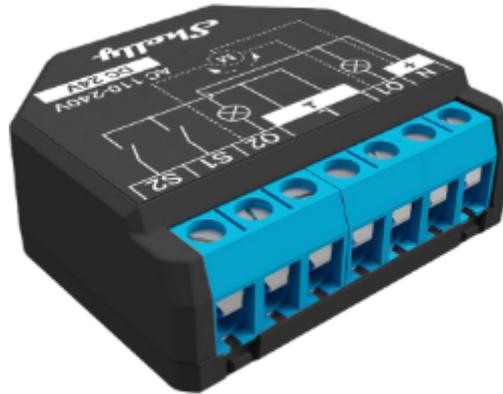


USER GUIDE

SHELLY PLUS 2PM



APP GUIDE

REGISTRATION & INCLUSION IN THE SHELLY APP

Introduction

Download the Shelly Cloud Application by scanning the QR code above, or access the devices through the Embedded web interface, explained further down in the user guide. Shelly devices are compatible with Amazon Echo supported functionalities, as well as other home automation platforms and voice assistants.

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

Registration

The first time you load the Shelly Cloud mobile app, you have to create an account which will allow you to manage all your Shelly devices. You need to use an actual e-mail because it will be used in case of a forgotten password!

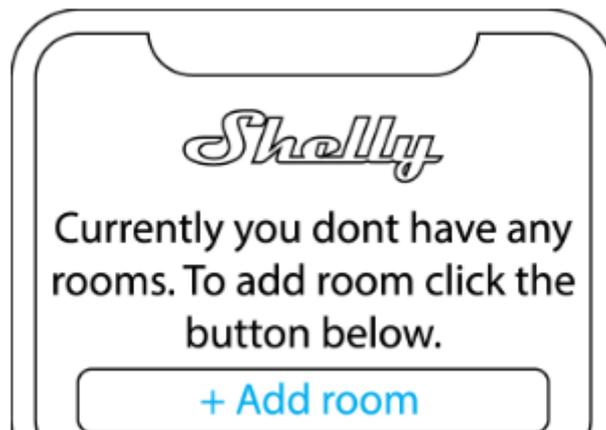
Forgotten Password

In case you forget or lose your password, click the "Forgot Password?" link on the login screen and type the e-mail you used in your registration. You will receive an e-mail with a link to a page where you can reset your password. The link is unique and can be used only once.

⚠ ATTENTION! If you are unable to reset your password, you have to reset your Shelly device(s) (as explained in “Device Inclusion” section, Step 1).

First steps

After registering, create your first room (or rooms), where you are going to add and use your Shelly devices. Shelly Cloud allows you to create scenes for automatic control of devices at predefined hours or based on other parameters like temperature, humidity, light, etc. (with available sensors in Shelly Cloud). Shelly Cloud allows easy control and monitoring using a mobile phone, tablet or PC. Shelly Plus 2PM can be grouped with other devices in the application. It can also be set to trigger actions on other Shelly devices, activate or deactivate any created scene, run synchronized actions, or execute complex trigger scenarios.



Abbreviations:

AP – Access Point. The mode in which the Device creates its own Wi-Fi network.

Device Inclusion (Shelly App):

Step 1

When the installation of Shelly Plus 2PM is done and the power is turned on, Shelly will create its own Wi-Fi Access Point (AP).

Step 2

Make sure the Location and Local Network for the Shelly Cloud app are enabled in your phone settings.

Please keep in mind that the inclusion process is different for iOS and Android devices.

1. iOS inclusion – Select “Add device” from the hamburger menu on the top right of your Shelly Cloud App. Enter your home network name and password, and click the

“NEXT” button. Select “Shelly Plus 2PM ” from the dropdown list. A message will pop up asking for your permission to connect to the AP of your Shelly Plus 2PM (e.g ShellyPlus2PM-f008d1d8bd68). Click the “Join” button.

fig. 1



fig. 2



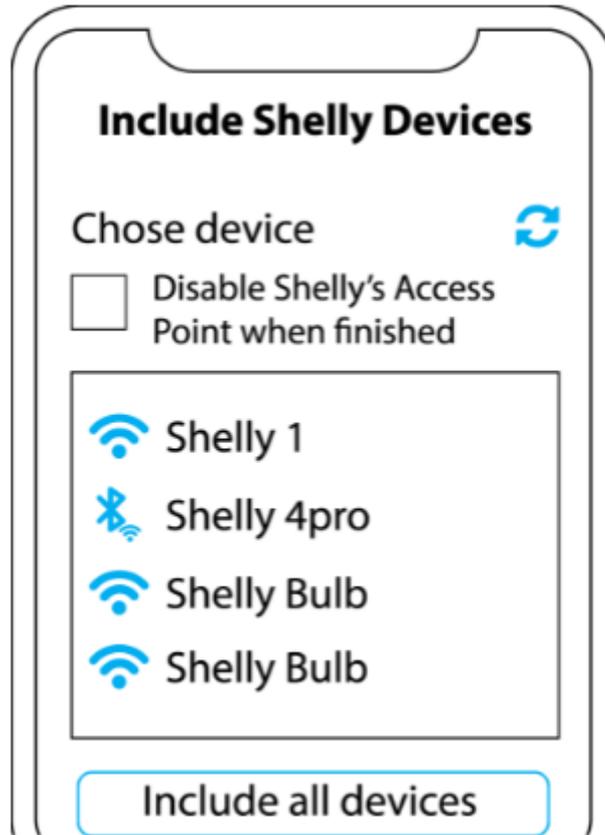
The image shows a mobile app interface for configuring a Shelly device. At the top, the 'Shelly' logo is displayed in a stylized font. Below the logo, the text reads: 'Type in the WiFi Name and Password for your Home WiFi network.' There are two input fields: the first is labeled 'WiFi name' with a Wi-Fi icon, and the second is labeled 'Password' with a lock icon. At the bottom of the form is a blue 'Submit' button.

2. Android inclusion – Select “Add device” from the hamburger menu on the top right of your Shelly Cloud App. Select your home network from the dropdown list and enter its password. Next, you will see listed all of the available devices. Choose your Shelly Plus 2PM device from the list and click “Yes” when asked for inclusion. A message will pop up asking for your permission to connect to your Shelly Plus 2PM’s AP address (e.g. ShellyPlus2PM-f008d1d8bd68). Click the “Yes” button.

fig. 3



fig. 4



Step 3

Once this process is completed, approximately 10 seconds later, a pop up (button) will appear on the top of the page with "Discovered devices" on the home screen of the Shelly Cloud App. click the "Discovered devices" button and find your Shelly device in the list. If you do not see it, try again by clicking the "SCAN" button.



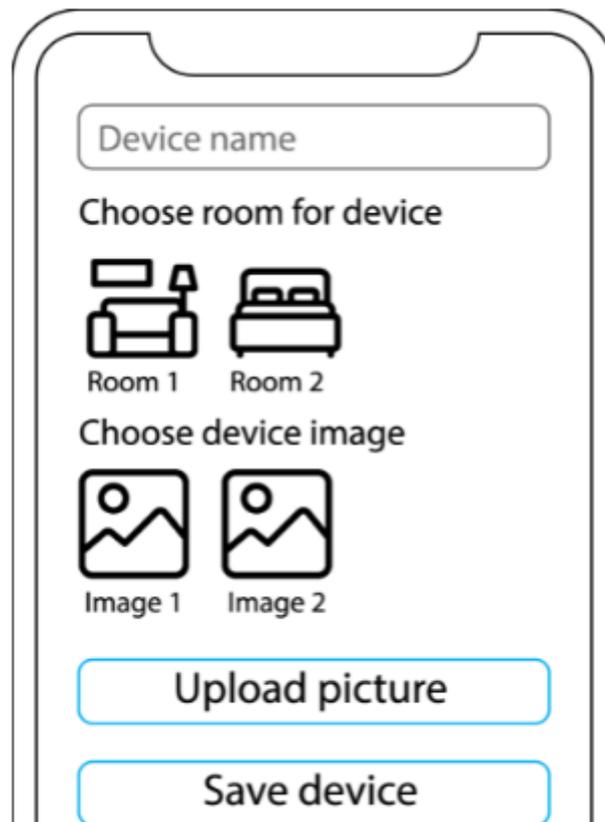
Step 4

You can choose which available device from the list to include. If a newer firmware update is available, the app will first let you update and then add the device. Click the "ADD DEVICE" button to move to the next step of the inclusion process.



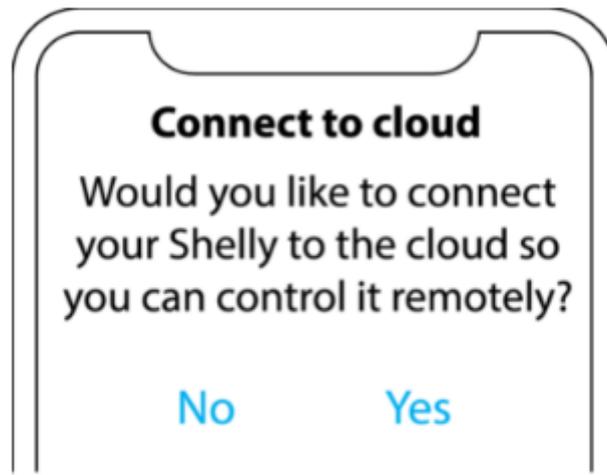
Step 5

Enter a name for the device in the "device name" field. Select a room which the device will be added to. For easy recognition of the device select an image from the list of existing ones or upload your own. Click the "DONE" button.



Step 6

If you'd like to connect your device to the cloud and control it remotely, click "Yes". In case you want to control your devices only locally, click "No".



Managing your device

After your Shelly device is added in the application, you can control it, change its use, settings, and automate the way it works. To switch the device on and off, use the ON/OFF button in the app. For device management, simply click on the device's name. From there you may control the device, as well as edit its appearance and settings.

COVER (ROLLER) MODE

If you'd like to use Shelly Plus 2PM for cover (roller) control, you need to set this in the application. After clicking on the device in its corresponding room, select the "Settings" tab positioned right to the "Status and Control" tab. Then, select "Settings", and click on the "Device Profile" submenu. By selecting "cover", you set your Shelly Plus 2PM to control roller shutters, curtains, awnings, garage doors, gates, etc.

Calibration

Shelly Plus 2PM needs to be calibrated in order to move the cover to a specific position.

Select the "Calibration" submenu and click the "START CALIBRATION" button.

Status and Control tab:

Upon clicking on the device's name, you will see a "position" slider. By using the slider, you can set the desired position of your cover (for example 50%). Save your

favorite and most frequently used positions by clicking “Save” displayed right next to the slider.

Saved Positions

This is where your favorite cover positions are stored, displayed in percentages (%). Selecting one will move the cover to that position immediately.

Consumption

This graph displays the power consumption data of this device in Wh. By using the calendar on top, you can go back and view your consumption history for any given period.

The “Edit Device” button at the bottom of this screen allows you to change the device’s name, room, and image.

Settings tab:

Here you can change the settings of your device.

Schedule

This function requires a working connection to the Internet. You can set Shelly Plus 2PM to automatically open, close or move the cover to a specific position at a predefined time and day throughout the week. Additionally, Shelly Plus 2PM can automatically open, close or move the cover to a specific position at sunrise/sunset, or at a specified time before or after sunrise/sunset. You may add up to 20 weekly schedules with up to 5 actions.

Webhooks

Use events to trigger http endpoints. You can add up to 20 webhooks with up to 5 URLs each..

Internet

- Wi-Fi 1: Allows the device to connect to an available Wi-Fi network. Enter the network details in the respective fields and click the “APPLY” button.
- Wi-Fi 2: Allows the device to connect to another available Wi-Fi network, as a backup if your primary Wi-Fi network becomes unavailable. Enter the network details in the respective fields and click the “APPLY” button.
- Access Point: You can enable the device AP mode and change the password of the Wi-Fi network created by Shelly Plus 2PM. Click the “APPLY” button to enable the device AP mode
- Cloud: Connection to the cloud allows you to control your device remotely and to receive notifications and updates
- Bluetooth: Enable/disable Bluetooth connectivity

- MQTT: Configure the Shelly device to communicate over MQTT.

Favorite positions

You can edit or delete your favorite cover positions here. You can change the position by entering a new value or click the target button to apply the current cover position.

Safety

- Max Power Protection: Configure Shelly device to turn off when power level reaches a set value.
- Max Voltage Protection: Configure Shelly device to turn off when the voltage exceeds the set value.
- Max Current Protection: Configure Shelly device to turn off when the current through a channel exceeds the set value.
- Obstacle detection: If an obstacle is present, the cover movement will be stopped and, if configured so in settings below, reversed until the endpoint is reached. Obstacle detection can be enabled or disabled for only one of the directions or for both.
- Safety Switch: This function works only if the Input Type is set to "Button" and Control Button Mode is set to "Single". Input 1 controls the cover movement, and input 2 acts as a safety switch. From the options below, you can choose how this function works.
 - The checkboxes under Moving directions allow the safety switch to be configured to stop the cover movement while opening, while closing or in both directions.
 - If the "Stop" checkbox under Action is checked, engaging the safety button will stop the cover movement until the safety switch is disengaged or until a command is sent by the physical button or the mobile application, and, if the "Reversed" checkbox under Allowed move is checked, the movement is resumed in the opposite direction until the end position is reached.
 - If the "Reverse" checkbox under Action is checked, engaging the safety button will stop and immediately reverse the movement until the end position is reached. This option requires reverse movement to be allowed.

Application Settings

- PIN lock: Restrict control of the Shelly device through the web interface by setting a PIN code.
- Sync name: Keep the device name in sync with the name given in the app.
- Exclude from Event Log: Do not show events from this device in the app.
- Consumption calculation: Tracks the total energy consumed by the device.

- Exclude from total room consumption: Option to exclude the device from the room's total power consumption.
- Exclude from total account consumption: Option to exclude the device from the account's total power consumption.

Share

Share the control of your device with other users by typing their email.

Settings

- Device Profile: Set the desired use of your Shelly Plus 2PM. The current guide section describes Shelly Plus 2PM settings when the device profile is set to "cover". If you'd like to use Shelly Plus 2PM as a switch (on/off), then please select "switch" and see the "Switch mode" section of this guide. Please note that changes to the device profile will restart the device and clear all existing schedules and webhooks.
- Input type: These settings define the way Shelly Plus 2PM interprets the attached physical button(s) or switch(s). The options are "button" or "switch".
- Control Button Mode: As a cover controller Shelly® Plus 2PM can work in 3 modes: Single, Dual or Detached.
 - Single:
 - If the input is configured as a "button" in the Device settings, each button press cycles open, stop, close, stop...
 - If the input is configured as a "switch", each switch toggle cycles open, stop, close, stop...
 - Dual:
 - If the inputs are configured as buttons:
 - Pressing a button when the cover is static, moves the cover in the corresponding direction until the endpoint is reached.
 - Pressing the button for the same direction while the cover is moving, stops the cover.
 - Pressing the button for the opposite direction, while the cover is moving, reverses the cover movement until the endpoint is reached.
 - If the inputs are configured as switches in dual input mode:
 - Turning a switch on moves the cover in the corresponding direction until an endpoint is reached.
 - Turning the switch off stops the cover movement.
 - If both switches are turned on, Shelly® Plus 2PM will respect the last engaged switch. Turning off the last engaged switch stops the cover movement, even if the

other switch is still on. To move the cover in the opposite direction, the other switch has to be turned off and on again.

- Detached: Shelly Plus 2PM can be controlled through its WebUI and the App only. Even if buttons or switches are connected to the Device, they will not be allowed to control the cover movement in detached mode.
- Reverse Directions: Swap outputs. If the device outputs have been wired wrong, you can swap the outputs using this setting.
- Swap inputs: If the device inputs have been wired wrong, you can swap them using this setting.
- Action On Power On: Set the action that Shelly Plus 2PM will execute after power comes back on.
- Movement Time Limits: Limit the time for moving in a direction in seconds. Values must be from 0 to 300. Setting this to a low value may affect calibration.
- Device Name: Set a name for your device.
- Firmware version: Shows your current firmware version. If a newer version is available, you can update your Shelly device by clicking the Update button.
- Geo Location And Time Zone: Set your time zone and geo-location manually, or enable/disable automatic detection.
- Device Reboot: Reboot your Shelly Plus 2PM.
- Factory Reset: Remove Shelly Plus 2PM from your account and return it to its factory settings. This will delete all set data.
- Device Information: Here you can view the ID, IP and other settings of your device. Upon clicking "Edit device", you can change the room, name or image of the device.

SWITCH MODE – SHELLY APP

If you'd like to use Shelly Plus 2PM for switching, you need to set this in the application. After clicking on the device in its corresponding room, select the "Settings" tab positioned right to the "Status and Control" tab. Then, select "Settings", and click on the "Device Profile" submenu. Then, select "Settings", and click on the "Device Profile" submenu. By selecting "switch", you can set your Shelly Plus 2PM to switch for example lights on/off.

Status and Control tab

When Shelly Plus 2PM is set as a switch, its 2 channels appear as separate devices in the mobile application.

Upon clicking on one of the two the device's channel names, you will be able to view real-time power consumption data for that channel under "Consumption". By using the calendar on top, you can go back and view your consumption history for any given period.

The "Edit Device" button at the bottom of this screen allows you to change the channel's name, room, and image.

Settings Tab

Here, you can change the settings of your device channel.

Timer

Allows you to manage the power supply automatically. You may use:

- Auto ON: After turning off, the relay output will be automatically turned on after a predefined time (in seconds).
- Auto OFF: After turning on, the relay output will be automatically turned off after a predefined time (in seconds).

Schedule

This function requires a working connection to the Internet. Shelly may turn on/off automatically at a predefined time and day throughout the week. Additionally, Shelly may turn on/off automatically at sunrise/sunset, or at a specified time before or after sunrise/sunset. You may add up to 20 weekly schedules with up to 5 actions.

Webhooks

Use events to trigger http endpoints. You can add up to 20 webhooks with up to 5 URLs.

Internet

- Wi-Fi 1: Allows the device to connect to an available Wi-Fi network. Enter the network details in the respective fields and click the "APPLY" button.
- Wi-Fi 2: Allows the device to connect to another available Wi-Fi network, as a backup if your primary Wi-Fi network becomes unavailable. Enter the network details in the respective fields and click the "APPLY" button.
- Access Point: You can enable the device AP mode and change the password of the Wi-Fi network created by Shelly Plus 2PM. Click the "APPLY" button to enable the device AP mode.
- Cloud: Connection to the cloud allows you to control your device remotely and to receive notifications and updates.
- Bluetooth: Enable/disable Bluetooth connectivity.
- MQTT: Configure the Shelly device to communicate over MQTT.

Safety:

- Max Power Protection: Configure Shelly device to turn off when power level reaches a set value.
- Max Voltage Protection: Configure Shelly device to turn off when the voltage exceeds the set value.
- Max Current Protection: Configure Shelly device to turn off when the current through a channel exceeds the set value.

Application Settings:

- PIN lock: Restrict control of the Shelly device through the web interface by setting a PIN code. After typing the details in the respective fields, press "Restrict Shelly".
- Sync name: Keep the device name in sync with the name given in the app.
- Input State Display: View the state of your input (on/off). An option is available to add an input state identifier to the power button.
- Exclude from Event Log: Do not show events from this device in the app.
- Consumption calculation: Tracks the total energy consumed by the device.
 - Exclude from total room consumption: Option to exclude the device from the room's total power consumption.
 - Exclude from total account consumption: Option to exclude the device from the account's total power consumption.

Share

Share the control of your device with other users.

Settings:

- Device Profile: Set the desired use of your Shelly Plus 2PM. The current guide section describes Shelly Plus 2PM settings when the device profile is set to "switch". If you'd like to use Shelly Plus 2PM for cover control (roller shutters, curtains, garage doors, awnings, etc.) then please select "cover" and see the "Cover (roller) mode" section of this guide. Please note that changes to the device profile will restart the device and clear all existing schedules and webhooks.
- Input/Output settings: These settings define the way the attached switch or button controls the output state. The possible input modes are "button" and "switch", and the relay mode can be chosen depending on the preferred usage of the device.
- Invert switch: If enabled, the device will consider the switch is on, while it is actually switched off and vice versa.
- Device Name: Set a name for your device.
- Firmware version: Shows your current firmware version. If a newer version is available, you can update your Shelly device by clicking the UPDATE button.

- Geo Location And Time Zone: Set your time zone and geo-location manually, or enable/disable automatic detection.
- Device Reboot: Reboot your Shelly Plus 2PM.
- Factory Reset: Remove Shelly Plus 2PM from your account and return it to its factory settings. This will delete all set data.
- Device Information: Here you can view the ID, IP and other settings of your device. Upon clicking "Edit device", you can change the room, name or image of the device.

WEB INTERFACE

EMBEDDED WEB INTERFACE

If your Shelly Plus 2PM is in AP (Access Point) mode, connect your PC or mobile device to the Wi-Fi network with the name (SSID) such as ShellyPlus2PM-f008d1d8bd68. Enter <http://192.168.33.1> into the address field of your browser to load the web interface of Shelly Plus 2PM.

If you can't find the Shelly Plus 2PM AP, it may already be connected to your home Wi-Fi network and its AP mode disabled.

Find your Device IP address in the Wi-Fi network. You can use a simple tool to find shelly devices in the local

network: https://shelly.cloud/documents/device_finders/ShellyFinderWindows.zip (Windows) and https://shelly.cloud/documents/device_finders/ShellyFinderOSX.zip (Mac OSX)."

If you can't find the Shelly Plus 2PM AP or its IP address in your home Wi-Fi network, you can enable the AP mode by pressing and holding the device Reset button for 5 seconds.

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 the 2 channels and common functionality menus on the bottom. For individual functionality menus, choose one of the 2 channels.

The device connection status is displayed in the header bar between the logo and the time.

- Gray AP icon indicates the AP mode is disabled. Blue AP icon indicates the AP mode is enabled.
- Gray Wi-Fi icon indicates the Wi-Fi connection is disabled. White Wi-Fi icon indicates the Wi-Fi connection is enabled, but not established. Blue Wi-Fi icon indicates the device is connected to a Wi-Fi network.
- Gray Bluetooth icon indicates the Bluetooth connection is disabled. Blue Bluetooth icon indicates the Bluetooth connection is enabled.
- Gray cloud icon indicates the connection to Shelly Cloud is disabled. White cloud icon indicates the connection to Shelly Cloud is enabled, but not established. Blue cloud icon indicates the device is connected to Shelly Cloud.

- Gray MQTT icon indicates the Mqtt is disabled. Blue MQTT icon indicates that MQTT is enabled. Clicking on an icon takes you to the corresponding settings.

COVER (ROLLER) MODE – WEB UI

If you'd like to use Shelly Plus 2PM for cover (roller) control, you can set this using the Web UI. On the homepage of Shelly Plus 2PM's Web UI, you will see 2 channels and common functionalities menus. Click on "Device" and choose "Device profile". From the options, choose "cover" and save. The interface will now reload and change to cover control.

Please calibrate your device before continuing.

Cover

- Cover name: Set a name for your cover.
- Input type: These settings define the way Shelly Plus 2PM interpretes the attached physical button(s) or switch(es). The options are "momentary" (button) or "toggle" (switch).
- Idle power threshold: Set a threshold below which the motor is considered as stopped (in watts).
- Control button mode: As a cover controller Shelly® Plus 2PM can work in 3 modes: Single, Dual or Detached.
 - Single:
 - If the input is configured as a "button" in the Device settings, each button press cycles open, stop, close, stop...
 - If the input is configured as a "switch", each switch toggle cycles open, stop, close, stop...
 - Dual:
 - If the inputs are configured as buttons:
 - Pressing a button when the cover is static, moves the cover in the corresponding direction until the endpoint is reached.
 - Pressing the button for the same direction while the cover is moving, stops the cover.
 - Pressing the button for the opposite direction, while the cover is moving, reverses the cover movement until the endpoint is reached."
 - If the inputs are configured as switches:
 - Turning a switch on moves the cover in the corresponding direction until an endpoint is reached.
 - Turning the switch off stops the cover movement.

- If both switches are turned on, Shelly® Plus 2PM will respect the last engaged switch. Turning off the last engaged switch stops the cover movement, even if the other switch is still on. To move the cover in the opposite direction, the other switch has to be turned off and on again.
- Detached: Shelly Plus 2PM can be controlled through its WebUI and the App only. Even if buttons or switches are connected to the Device, they will not be allowed to control the cover movement in detached mode.
- Reverse Directions: Swap outputs. If the device outputs have been wired wrong, you can swap the outputs using this setting.
- Swap inputs: If the device inputs have been wired wrong, you can swap them using this setting.
- Calibration:
- Action On Power On: Set the action that Shelly Plus 2PM will execute after power comes back on.
- Movement Time Limits: Limit the time for moving in a direction in seconds. Values must be from 0 to 300. Setting this to a low value may affect calibration.
- Obstacle detection: If an obstacle is present, the cover movement will be stopped and, if configured so in settings below, reversed until the endpoint is reached. Obstacle detection can be enabled or disabled for only one of the directions or for both.
- Safety Switch: This function works only if the Input Type is set to "Button" and Control Button Mode is set to "Single". Input 1 controls the cover movement, and input 2 acts as a safety switch. From the options below, you can choose how this function works.
 - The checkboxes under Moving directions allow the safety switch to be configured to stop the cover movement while opening, while closing or in both directions.
 - If the "Stop" checkbox under Action is checked, engaging the safety button will stop the cover movement until the safety switch is disengaged or until a command is sent by the physical button or the mobile application, and, if the "Reversed" checkbox under Allowed move is checked, the movement is resumed in the opposite direction until the end position is reached.
 - If the "Reverse" checkbox under Action is checked, engaging the safety button will stop and immediately reverse the movement until the end position is reached. This option requires reverse movement to be allowed.

- Overpower protection: Configure Shelly device to turn off when power level reaches a set value.> Overvoltage protection: Configure Shelly device to turn off when the voltage exceeds the set value.> Overcurrent protection: Configure Shelly device to turn off when the current through a channel exceeds the set value.

Schedules

This function requires a working connection to the Internet. You can set Shelly Plus 2PM to automatically open, close or move the cover to a specific position at a predefined time and day throughout the week. Additionally, Shelly Plus 2PM can automatically open, close or move the cover to a specific position at sunrise/sunset, or at a specified time before or after sunrise/sunset. You may add up to 20 weekly schedules with up to 5 actions.

Webhooks

Use events to trigger http endpoints. You can add up to 20 webhooks with up to 5 URLs each..

Device

Here you can see your firmware version and update, reboot, factory reset, and set your location and time zone.

Networks

Configure Wi-Fi, AP, Cloud, Bluetooth, MQTT settings.

Scripts

Shelly Plus 2PM features scripting capabilities. You can use them to customize and enhance device functionality based on a users' specific needs. These scripts can take into consideration device state, communicate with other devices, or pull data from external services like weather forecasts. A script is a program, written in a subset of JavaScript. You can find more at <https://shelly-api-docs.shelly.cloud/gen2/Scripts/ShellyScriptLanguageFeatures/>

SWITCH MODE – WEB UI

On the homepage of Shelly Plus 2PM's Web UI, you will see 2 channels and common functionalities menus.

Device:

Here you can see your firmware version and update, reboot, factory reset, and set your location and time zone.

Networks

Configure Wi-Fi, AP, Cloud, Bluetooth, MQTT settings.

Scripts:

Shelly Plus 2PM features scripting capabilities. You can use them to customize and enhance device functionality based on a users' specific needs. These scripts can take into consideration device state, communicate with other devices, or pull data from external services like weather forecasts. A script is a program, written in a subset of JavaScript. You can find more at <https://shelly-api-docs.shelly.cloud/gen2/Scripts/ShellyScriptLanguageFeatures/>

Upon clicking on one of the 2 channels, you will see individual functionality sub-menus for each.

Channel settings:

- Input/Output settings: These settings define the way the attached switch or button controls the output state.
- The possible input modes are "button" and "switch", and the relay mode can be chosen depending on the preferred usage of the device.
- Invert switch: If enabled, the device will consider the switch is on, while it is actually switched off and vice versa.
- Max Power Protection: Configure Shelly device to turn off when power level reaches a set value.
- Max Voltage Protection: Configure Shelly device to turn off when the voltage exceeds the set value.
- Max Current Protection; Configure Shelly device to turn off when the current through a channel exceeds a set value.
- Channel name: Set your desired name for this channel.
- Consumption type: Choose the corresponding appliance type that Shelly Plus 2PM will be controlling, or type a custom one.
- PIN lock: Restrict control of the Shelly device through the web interface by setting a PIN code. After typing the details in the respective fields, press "Restrict Shelly".

Timers

Allow you to manage the power supply automatically. You may use:

- Auto ON: After turning off, the relay output will be automatically turned on after a predefined time (in seconds).
- Auto OFF: After turning on, the relay output will be automatically turned off after a predefined time (in seconds).

Schedules

This function requires a working connection to the Internet. Shelly may turn on/off automatically at a predefined time and day throughout the week. Additionally, Shelly may turn on/off automatically at sunrise/sunset, or at a specified time before or after sunrise/sunset. You may add up to 20 weekly schedules.

Webhooks

Use events to trigger http endpoints. You can add up to 20 webhooks with up to 5 URLs each.

USER AND SAFETY GUIDE

2 CIRCUIT WI-FI RELAY SWITCH WITH POWER MEASUREMENT AND COVER CONTROL CAPABILITY

Read before use

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.*

Product Introduction

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 Cloud is such a service that can be accessed using either Android or iOS mobile application, or with any internet browser at <https://home.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 embedded Web Interface accessible at <http://192.168.33.1> in the Wi-Fi network, created by the device in Access Point mode, or at the URL address of the device in the Wi-Fi network it is connected to. 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 Allterco Robotics EOOD. 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, Allterco Robotics EOOD will provide the updates free of charge through the device embedded Web Interface or Shelly Mobile Application, where the information about the current firmware version is available. The choice to install or not the Device firmware updates is User's sole responsibility. Allterco Robotics EOOD 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. Shelly® Plus line offers PM products capable of real-time precise power measurement.

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/>.

Schematics

See the schematics at the beginning of the user guide.

Legend

Device terminals:

- **O1**: Load circuit 1 output terminal
- **O2**: Load circuit 2 output terminal
- **S1**: Switch (controlling O1) input terminal
- **S2**: Switch (controlling O2) input terminal
- **L**: Live (110-240 VAC) terminals
- **N**: Neutral terminal
- **+**: 24 VDC positive terminal
- **-**: 24 VDC negative terminal

Cables:

- **N**: Neutral cable
- **L**: Live (110-240 VAC) cable
- **+**: 24 VDC positive cable
- **-**: 24 VDC negative cable

Installation Instructions

Shelly® Plus 2PM (the Device) can control 2 electrical circuits, including a bi-directional AC motor. Each circuit can be loaded up to 10 A (16 A total for both circuits) and its power consumption can be measured individually (AC only). 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. Mounting/installation of the Device to the power grid has to be performed with caution, by a qualified electrician.*

⚠ CAUTION! *Danger of electrocution. Every change in the connections has to be done after ensuring there is no voltage present at the Device terminals.*

⚠ CAUTION! *Use the Device only with a power grid 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.*

⚠ 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! *Do not install the device at a place that is possible to get wet.*

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

Before starting installing/mounting the Device, 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 proceed to connect the cables. If you want to use the Device as a relay switch to control 2 load circuits, connect the Device as shown on **Fig. 1** for AC circuits and on **Fig. 2** for DC circuits.

⚠ CAUTION! Use the same power supply for the two load circuits and the Device.

For AC circuits connect both L terminals to the Live cable and the N terminal to the Neutral cable. Connect the first load circuits to the O1 terminal and the Neutral cable. Connect the second load circuits to the O2 terminal and the Neutral cable. Connect the first switch to the S1 terminal and the Live cable. Connect the second switch to the S2 terminal and the Live cable.

For DC circuits connect both L terminals to the Negative cable and the N terminal to the Positive cable. Connect the first load circuits to the O1 terminal and the Positive cable. Connect the second load circuits to the O2 terminal and the Positive cable. Connect the first switch to the S1 terminal and the Negative cable. Connect the second switch to the S2 terminal and the Negative cable.

⚠ RECOMMENDATION: For inductive appliances that cause voltage spikes during switching on/off, such as electrical motors, fans, vacuum cleaners and similar ones, RC snubber (0.1µF / 100Ω / 1/2W / 600V AC) should be connected parallel to the appliance.

The RC snubber can be purchased at <https://shop.shelly.cloud/rc-snubber-wifi-smart-home-automation> As a cover controller Shelly® Plus 2PM can work in 3 modes: detached, single input or dual input. In detached mode, the Device can be controlled through its WebUI and the App only. Even if buttons or switches are connected to the Device, they will not be allowed to control the motor rotation in detached mode. If you want to use the Device in detached mode connect the device as shown on **Fig. 3**: Connect both L terminals to the Live cable and the N terminal to the Neutral cable. Connect the common motor terminal/cable to the Neutral cable. Connect motor direction terminals/cables to the O1 and O2 terminals.* If you want to use the Device in single input mode connect the device as shown on **Fig. 4** for a button input or **Fig. 5** for a switch input. Connect both L terminals to the Live cable and the N terminal to the Neutral cable. Connect the common motor terminal/cable to the Neutral cable. Connect motor direction terminals/cables to the O1 and O2 terminals*. Connect the button or the switch to the S1 or the S2 terminal and the Live cable. If the input is configured as a button in the Device settings, each button press cycles open, stop, close, stop... If the input is configured as a switch, each switch toggle cycles open, stop, close, stop... In single input mode Shelly® Plus 2PM provides safety switch functionality. To utilize it, connect the device as shown on **Fig. 6** for a button input or **Fig. 7** for a switch input. Connect both L terminals to the Live cable and the N terminal to the Neutral cable. Connect the common motor terminal/cable to the Neutral cable. Connect motor direction terminals/ cables to the O1 and O2 terminals*. Connect the controlling button or switch to the S1 terminal and the Live cable. Connect the safety switch to the S2 terminal and the Live cable. The safety switch can be configured to:

- Stop the movement until the safety switch is disengaged or until a command is sent** and, if allowed in the Device settings, the movement is resumed in the

opposite direction until the end position is reached.

- Stop and immediately reverse the movement until the end position is reached. This option requires reverse movement to be allowed in the Device settings.

The safety switch can also be configured to stop the movement in only one of the directions or in both. If you want to use the Device in dual input mode, connect the device as shown on **Fig. 8** for a button input or **Fig. 9** for a switch input. Connect both L terminals to the Live cable and the N terminal to the Neutral cable. Connect the common motor terminal/cable to the Neutral cable. Connect motor direction terminals/cables to the O1 and O2 terminals*. Connect the first button/switch to the S1 terminal and the Live cable. Connect the second button/switch to the S2 terminal and the Live cable. In case the inputs are configured as buttons:

- Pressing a button when the cover is static, moves the cover in the corresponding direction until the endpoint is reached. - Pressing the button for the same direction while the cover is moving, stops the cover.

- Pressing the button for the opposite direction, while the cover is moving, reverses the cover movement until the endpoint is reached. In case the inputs are configured as switches:

- Turning a switch on moves the cover in the corresponding direction until an endpoint is reached.

- Turning the switch off stops the cover movement. If both switches are turned on, Shelly® Plus 2PM will respect the last engaged switch. Turning off the last engaged switch stops the cover movement, even if the other switch is still on. To move the cover in the opposite direction, the other switch has to be turned off and on again. Shelly® Plus 2PM can detect obstacles. If an obstacle is present, the cover movement will be stopped and, if configured so in the Device settings, reversed until the endpoint is reached. Obstacle detection can be enabled or disabled for only one of the directions or for both.

Troubleshooting

In case you encounter problems with the installation or operation of Shelly® Plus 2PM, please check its knowledge base page: www.shelly.cloud/knowledge-base/devices/shelly-plus-2pm/ *The Device outputs can be reconfigured to match the required rotation direction.

***Interaction with the button, the switch or a control in the WebUI or in the App (has to command the cover in the opposite to the direction before the safety switch engagement)*

Initial Inclusion

If you choose to use the Device with the Shelly Cloud mobile application and Shelly Cloud service, instructions on how to connect the Device to the Cloud and control it through the Shelly App can be found in the "App Guide". Shelly Mobile Application and Shelly Cloud service are not conditions for the Device proper functioning. This Device can be used with various other home automation services and applications.

⚠ 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): 41x36x17 mm
- Power supply: 110 - 240 VAC, 50/60 Hz or 24 VDC \pm 10%
- Power metering: Yes
- Cover mode: Yes
- Electrical consumption: < 1.4 W
- Working temperature: -20°C - 40 °C
- Controlling elements: 2 relays
- Controlled elements: 2 circuits or a bi-directional AC motor
- Max switching voltage: 240 VAC / 30 VDC
- Max current per channel: 10 A
- Total max current: 16 A
- Dry contacts: No
- Temperature Protection: Yes
- Wi-Fi: Yes
- Bluetooth: Yes
- Radio protocol: Wi-Fi 802.11 b/g/n
- Radio signal power: 1 mW
- Frequency Wi-Fi : 2412-2472 MHz; (Max. 2495 MHz)
- RF output Wi-Fi: < 15 dB
- Operational range (depending on terrain and building structure): up to 50 m outdoors, up to 30 m indoors
- Bluetooth: v4.2
- Bluetooth modulation: GFSK, π /4-DQPSK, 8-DPSK
- Frequency Bluetooth: TX/RX: 2402- 2480 MHz (Max. 2483.5MHz)
- RF output Bluetooth: < 5 dB
- Scripting (mjs): Yes
- MQTT: Yes
- CoAP: No
- Webhooks (URL actions): 20 with 5 URLs per hook
- Schedules: 20 with 5 calls per schedule
- Add-on support: Yes
- CPU: ESP32
- Flash: 4 MB

Declaration of conformity

Hereby, Allterco Robotics EOOD declares that the radio equipment type Shelly® Plus 2PM 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

www.shelly.cloud/knowledge-base/devices/shelly-plus-2pm/

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Tel.: +359 2 988 7435

E-mail: support@shelly.cloud

Web: <https://www.shelly.cloud>

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

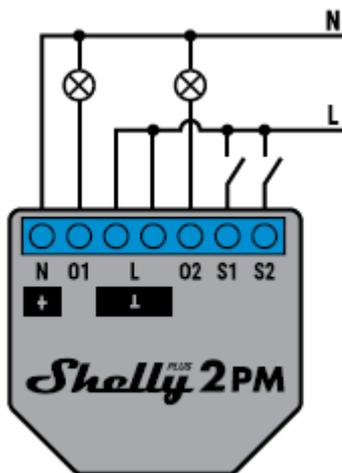


fig.1

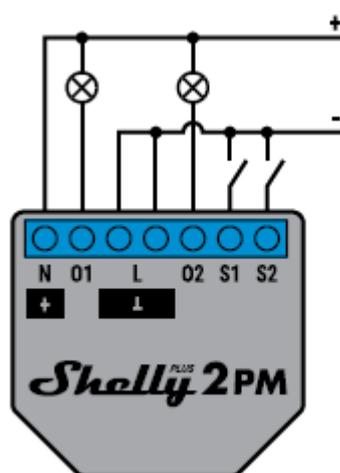


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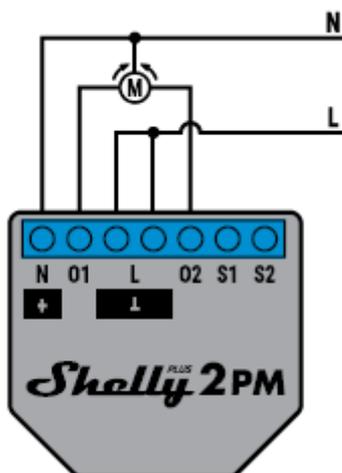


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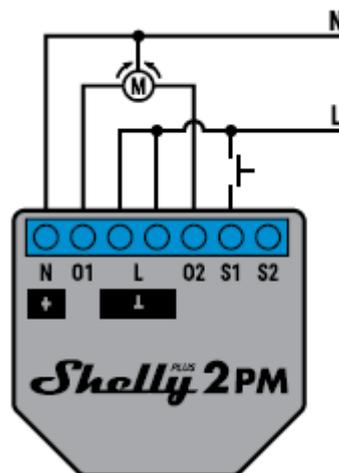


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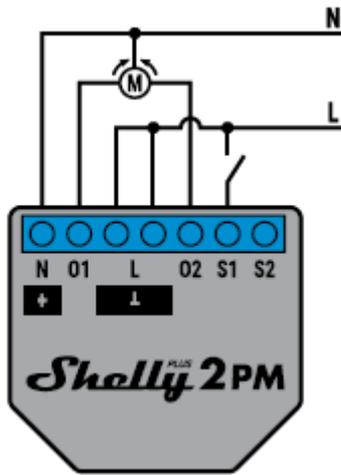


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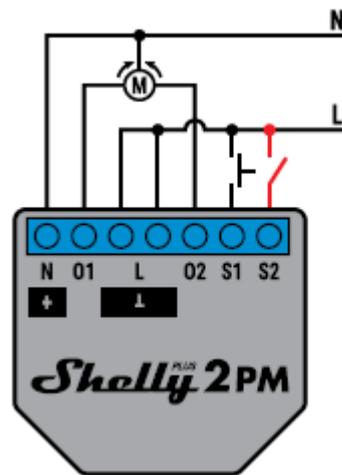


fig.6

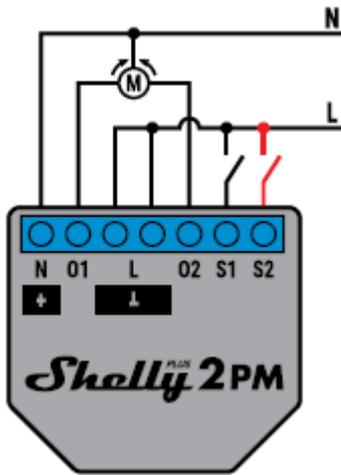


fig.7

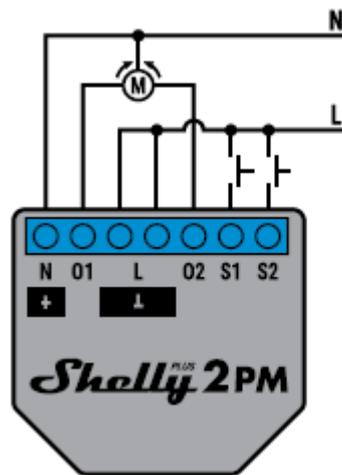


fig.8

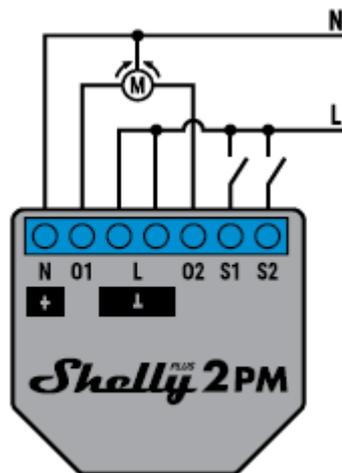


fig.9



