

Knowledge Base / Devices / Shelly Plus devices

Shelly Plus Wall Dimmer



Device identification

- Device name: **Shelly Plus Wall Dimmer**
- Device model: **SNDM-0013US**
- Device SSID: **ShellyPlusWDUS-XXXXXX**



Short description

Shelly Plus Wall Dimmer (The Device) can switch on/off and vary the brightness of compatible dimmable lights. It can be easily wired in the place of a standard US light switch. Enhanced with all the gen2 firmware flexibility, it provides professional integrators with additional options for end customer solutions. It can work standalone in a local Wi-Fi network, or it can also be operated through cloud home automation services.

Shelly Plus Wall Dimmer can be accessed, set up and monitored remotely from any place where the User has internet connectivity, as long as the device is connected to a Wi-Fi router and the Internet.

The Device has an embedded Web Interface which can be used to monitor and control the device, as well as adjust its settings.

Features

- Night mode
- Weekly schedules
- Auto on/off timers

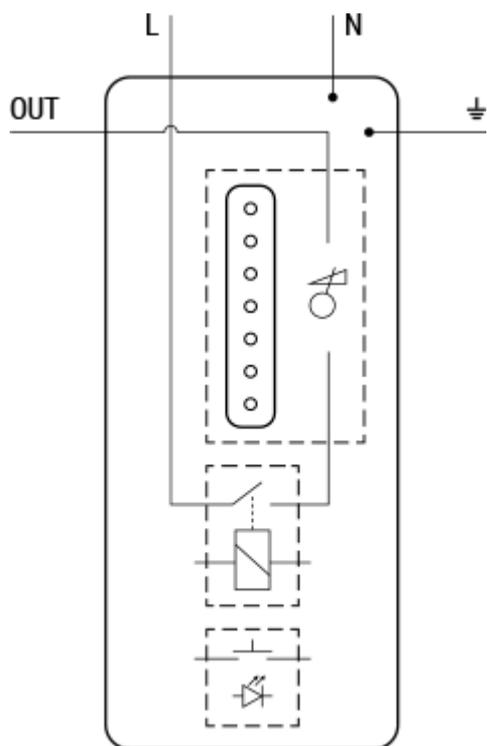
Main applications

- Residential
- MDU (Multi Dwelling Units - apartments, condominiums, hotels, etc.)
- Light commercial (small office buildings, small retail/restaurant/gas station, etc.)
- Government/municipal
- University/college

Integrations

- Google
- Amazon
- Samsung SmartThings

Simplified internal schematics



Device electrical interfaces

Inputs

- 2 line wires: 1 black **L** and 1 white **N**
- 1 green \perp (Ground) wire

Output

- 1 red **OUT** wire

Connectivity

- Wi-Fi
- Bluetooth

Supported load types

- Incandescent lights
- Dimmable only LED lights
- Dimmable only CFL

User interface

Inputs

- One power button with LED indication:
 - Press to turn on/off the lights.
 - Press and hold for 5 sec to activate Device AP.
 - Press and hold for 10 sec to factory reset the Device.
- One slider with brightness LED indication:
 - Slide up to increase the lights brightness.
 - Slide down to decrease the light brightness.

Outputs

- Power button LED indication:
 - Blue Wi-Fi LED*:
 - AP (Access Point) enabled and Wi-Fi disabled:
Blue light flashing¹.
 - Wi-Fi enabled, but not connected:
Blue light flashing slowly².
 - Wi-Fi connected and Cloud disabled or Cloud connected:
Steady blue light.

- Wi-Fi connected and Cloud enabled, but not connected:
Blue light flashing very slowly³.
- Power button pressed and held for 5 sec:
Blue light flashing quickly⁴.
- Power button pressed and held for 10 sec:
Blue light flashing very quickly⁵.
- OTA:
Blue light flashing quickly⁴.

- White Power LED** (while the lights are turned on):
 - AP (Access Point) enabled and Wi-Fi disabled:
White light flashing¹.
 - Wi-Fi enabled, but not connected:
White light flashing slowly².
 - Wi-Fi connected and Cloud disabled or Cloud connected:
Steady white light.
 - Wi-Fi connected and Cloud enabled, but not connected:
White light flashing very slowly³.
 - Power button pressed and held for 5 sec:
White light flashing quickly⁴.
 - Power button pressed and held for 10 sec:
White light flashing very quickly⁵.
 - OTA:
White light flashing quickly⁴.

- Brightness LED indication:
 - A single white dot is lit, when the lights are turned off. Each position from the bottom up represents 14% increase of the brightness (84-100% for the top dot).
 - A vertical bar of white dots is lit, when the lights are turned on. Each lit dot represents 14% increase of the brightness (84-100% for the top dot).

* Blue Wi-Fi LED can be enabled (default) or disabled by the user.

** White Power LED can be set by the user to: match the Device output (default), invert the Device output, to be always ON, or to be always OFF .

- ¹ 1 second ON / 1 second OFF
- ² 1 second ON / 3 seconds OFF
- ³ 1 second ON / 5 seconds OFF
- ⁴ 1/5 second ON / 1/2 second OFF
- ⁵ 1/5 second ON / 1/5 second OFF

Specifications



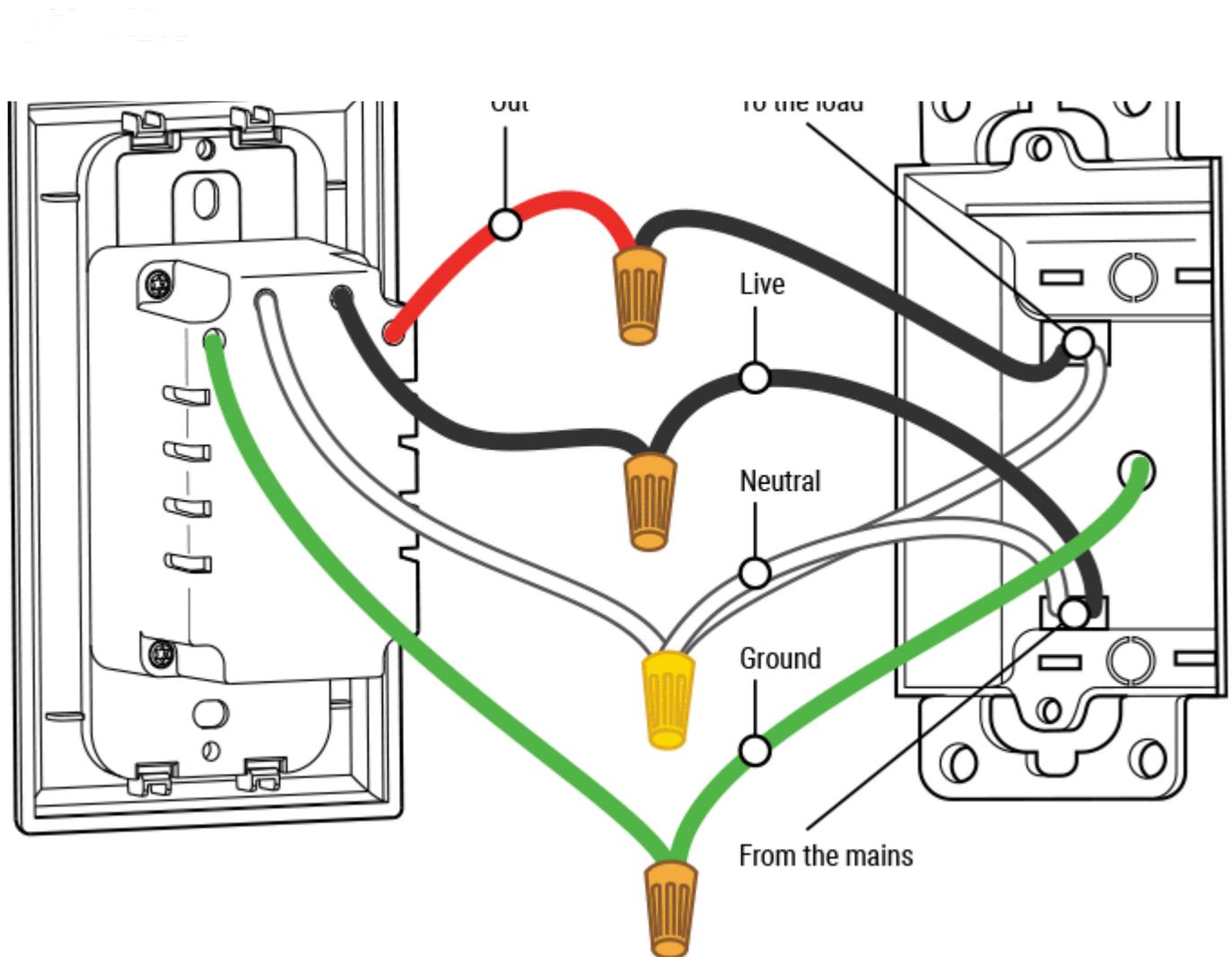
Type	Value
Physical	
Size without face plate and wires (HxWxD):	104x44x39 ±0.5 mm / 4.09 x 1.73 x 1.50 ±0.02 in
Size with face plate and without wires (HxWxD):	120x70x39 ±0.5 mm / 4.72 x 2.76 x 1.50 ±0.02 in
Weight without face plate:	105 g / 3.70 oz
Weight with face plate:	121 g / 4.28 oz
Shell material:	ABS
Color:	White
Environmental	
Ambient temperature:	-20 °C to 40 °C / -5 °F to 105 °F
Humidity	30 % to 70 % RH
Electrical	
Power supply voltage AC:	100 - 120 V, 50/60 Hz
Power supply voltage DC:	N/A

Power consumption:	< 3 W
Output circuits ratings	
Max load power at 120 VAC:	<ul style="list-style-type: none"> • 400 W (incandescent) • 150 W (dimmable only LED and CFL)
Radio	
RF band:	2400 - 2495 MHz
Max. RF power:	<20 dBm
Wi-Fi protocol:	802.11 b/g/n
Wi-Fi Range:	Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors (Depends on local conditions)
Bluetooth Protocol:	4.2
Bluetooth Range:	Up to 10 m / 33 ft indoors and 30 m / 100 ft outdoors (Depends on local conditions)
MCU	
CPU:	ESP32
Flash:	4 MB
Firmware capabilities	
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	Yes
MQTT:	Yes

CoAP:

No

Wiring diagram



Troubleshooting

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Components and APIs

- [This device](#)
- [All Shelly devices and services](#)

Printed user guide

- [Shelly Plus Wall Dimmer multilingual printed user and safety guide.pdf](#)

Installation guides



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