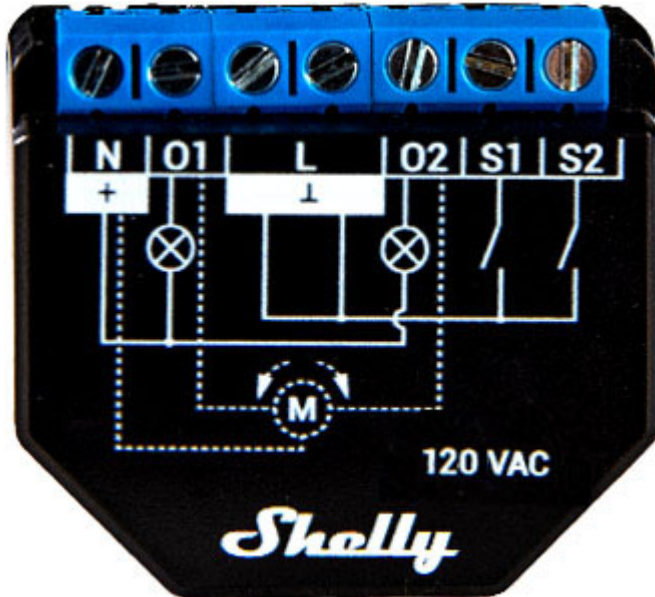


Knowledge Base / Devices / Shelly Plus devices

Shelly Plus 2PM UL



Device identification

- Device name: **Shelly Plus 2PM UL**
- Device model: **SNSW-002P15UL**
- Device SSID: **ShellyPlus2PM-XXXXXX**

Short description

The Shelly Plus 2PM UL is a UL-certified small form factor 2-channel smart switch with power measurement and cover control, which allows remote control of electric appliances through a mobile phone, tablet, PC, or home automation system. It can work standalone in a local Wi-Fi network or it can also be operated through cloud home automation services.

The Shelly Plus 2PM UL can be accessed, controlled 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.



It can be retrofitted into standard electrical wall boxes, behind power sockets and light switches or other places with limited space.

The Shelly Plus 2PM UL has an embedded Web Interface which can be used to monitor and control the device, as well as adjust its settings.

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

Amazon Alexa supported capabilities

- Yes

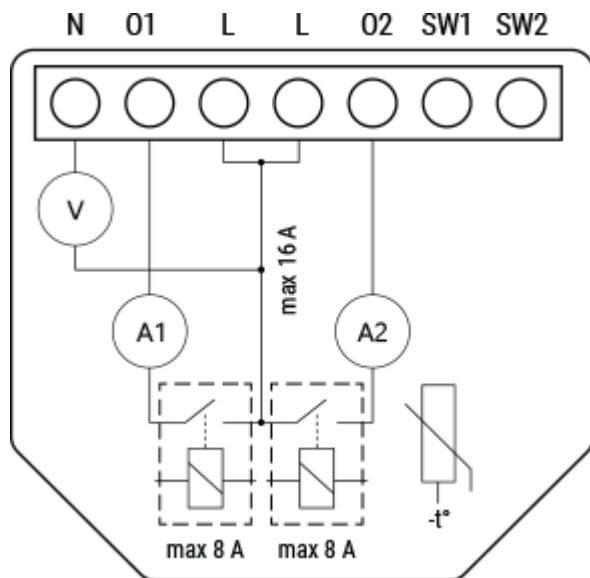
Google Smart Home supported traits

- Yes

Samsung SmartThings supported capabilities

- Yes

Simplified internal schematics



Device electrical interfaces

Inputs

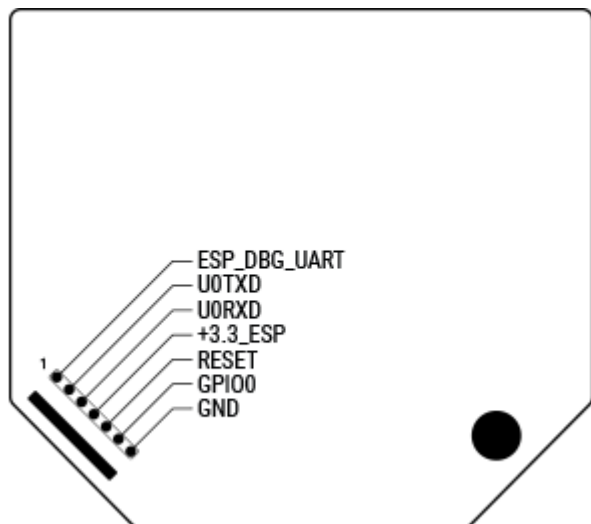
- 2 switch/button inputs on screw terminal: S1 and S2
- 3 power supply inputs on screw terminals: 1 N (+) and 2 L (⊗)

Outputs

- 2 relay outputs with power measurement on screw terminal

Add-on interface

- Shelly proprietary serial interface



⚠ CAUTION! High voltage on the add-on interface when the Device is powered!

Connectivity

- Wi-Fi
- Bluetooth

Safety features

- Overheating protection
- Overvoltage protection
- Overcurrent protection
- Overpower protection
- Obstacle detection (cover mode)
- Safety switch (cover mode)

Supported load types

- Resistive (incandescent bulbs, heating devices)
- Capacitive (capacitor banks, electronic equipment, motor start capacitors)

- Inductive with RC Snubber (LED light drivers, transformers, fans, refrigerators, air-conditioners)

User interface

Inputs

- One (Reset) button
 - Press and hold for 5 seconds to enable Device access point and Bluetooth connection.
 - Press and hold for 10 seconds to factory reset the Device.

Outputs

- LED (monocolor) indication
 - AP (Access Point) enabled and Wi-Fi disabled:
1 second ON / 1 second OFF
 - Wi-Fi enabled, but not connected to a Wi-Fi network:
1 second ON / 3 seconds OFF
 - Connected to a Wi-Fi network:
Constantly ON
 - Cloud is enabled, but not connected:
1 second ON / 5 seconds OFF
 - Connected to Shelly Cloud:
Constantly ON
 - OTA (Over the Air Update):
½ sec ON / ½ second OFF
 - Button pressed and held for 5 seconds:
½ second ON / ½ second OFF
 - Button presses and held for 10 seconds:
¼ second ON / ¼ second OFF

The list above starts with the initial device status and the lowest priority. Every next state cancels the previous one.

Specifications

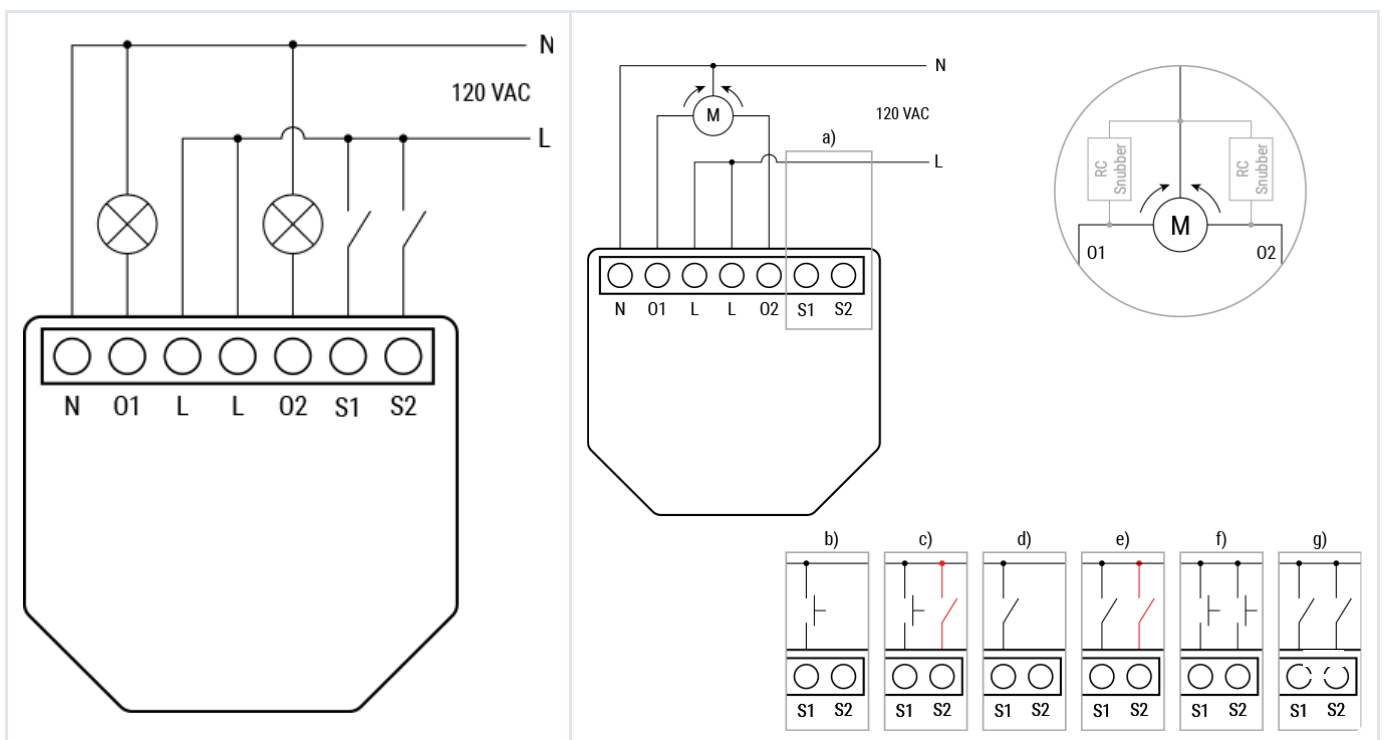


Type	Value
Physical	
Size (HxWxD):	37x42x16 mm / 1.46x1.65x0.63 in
Weight:	
Mounting:	Flush mounting
Screw terminals max torque:	0.25 Nm / 2.2 bin
Conductor cross section:	1.0 to 2.5 mm ² / 20 to 14 AWG
Conductor stripped length:	5 to 6 mm / 0.20 to 0.24 in
Shell material:	Plastic
Color:	Black
Environmental	
Ambient temperature:	-20 °C to 40 °C / -5 °F to 105 °F
Humidity	30 % to 70 % RH
Max. altitude	2000 m / 6562 ft
Electrical	

Power supply:	120 VAC, 50/60Hz
Power consumption:	< 1.4 W
Output circuits ratings	
Max switching voltage AC:	120 V
Max switching voltage DC:	N/A
Max switching current AC:	8 A (per channel), 16 A (total)
Max switching current DC:	N/A
Sensors, meters	
Internal-temperature sensor:	Yes
Voltmeter (AC)	Yes
Ammeter (AC)	Yes
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-U4WDH
Flash:	4 MB
Firmware capabilities	
Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	Yes
MQTT:	Yes
CoAP:	No

Basic wiring diagrams



Dual-channel switch mode, AC power supply	Cover mode
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Legend



Terminals		Wires	
N	Neutral terminal	N	Neutral wire
L	Live (120 VAC) terminal	L	Live (120 VAC) wire
O1, O2	Load circuit output terminals		
S1, S2	Switch input terminals		

Troubleshooting

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Web Interface guide

[Read the Shelly Plus 2PM, Plus 2PM UL web interface guide](#)

Components and APIs

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

Printed user guide

- [Shelly Plus 2PM UL bilingual printed user and safety guide.pdf](#)

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