

# Shelly 2PM Gen3



## Device identification

- Device name: **Shelly 2PM Gen3**
- Device model: **S3SW-002P16EU**
- Device SSID: **Shelly2PMG3-XXXXXXXXXXXX**
- BLE Model ID: **0x1005**

## Short description

Shelly 2PM Gen3 is a 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 device also has improved processor and increased memory compared to its predecessor. The device supports Venetian blinds.

Shelly 2PM Gen3 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.

Shelly 2PM Gen3 has embedded Web Interface which can be used to monitor and control the device, as well as adjust its settings.

## Main features

- **Smart Switch with Power Measurement:** Acts as a smart switch with the added capability of measuring power consumption, allowing you to monitor the energy usage of connected appliances.
- **Compact Design:** Designed as a small form factor switch, making it suitable for retrofitting into standard electrical wall boxes, behind power sockets, light switches, or other confined spaces.
- **Remote Control:** Enables remote control of electric appliances via a mobile phone, tablet, PC, or home automation system.
- **Local and Cloud Control:** Can function independently in a local Wi-Fi network and can also be operated through cloud home automation services.
- **Improved Processor and Memory:** Upgraded with an improved processor and increased memory for enhanced performance.

- **Remote Access:** Allows remote access, control, and monitoring from any location with internet connectivity, provided the device is connected to a Wi-Fi router and the internet.
- **Embedded Web Interface:** Features an embedded web interface for monitoring, control, and adjustment of settings.
- **BLE Gateway:** Bridge between your Shelly BLU devices and the wider Shelly ecosystem. It receives Bluetooth signals and sends them to the cloud or locally to another non-bluetooth device.
- **Wi-Fi Range extender for IoT devices:** A Wi-Fi extender is employed to expand the reach of your Wi-Fi network by receiving your current Wi-Fi signal, enhancing its strength, and then transmitting the enhanced signal over a wider area.
- **Scripting:** <https://shelly-api-docs.shelly.cloud/gen2/Scripts/ShellyScriptLanguageFeatures/>
- **Wide range of integrations:** The device can be integrated with 3rd party home systems, documented HTTP API, MQTT (s), Web Hooks over HTTP and HTTPS, UDP
- **KNX:** Supports [KNXnet/IP](#) communication (Switch mode only with firmware 1.5.0 and later).
- **Schedules:** Allows scheduling of complex operations to be executed in predefined time window. Users can specify time windows based on date, time of day, weekdays, hours, minutes and seconds.
- **Virtual Components:** <https://shelly-api-docs.shelly.cloud/gen2/DynamicComponents/Virtual/>
- **Venetian blinds mode:** The Device enables remote control of motorized blinds, roller shutters, venetian blinds, awnings, etc. It measures power consumption of the connected device. It is recommended to use only motors with electronic or mechanical limit switches. The motor limit switches must be set correctly before connecting the Device to the motor.
  - [Controls position of blinds, rollers, shades, venetian blinds, etc.](#)
  - [Controls tilt position of the slats of venetian blinds](#)

## Use cases

- **Appliance Control:** Use it to remotely control and automate the operation of various electric appliances such as lights, fans, or other devices.
- **Power Monitoring:** Monitor the power consumption of connected appliances in real-time. This is useful for understanding energy usage patterns and promoting energy efficiency.
- **Home Automation:** Integrate the Shelly 2PM Gen3 into your home automation system to create custom scenes and schedules for your devices.
- **Energy Efficiency:** Leverage the power measurement feature to identify energy-hungry appliances and make informed decisions to improve overall energy efficiency in your home.
- **Remote Monitoring:** Keep an eye on your devices even when you're away from home. The remote access feature allows you to monitor and control connected appliances from anywhere with internet connectivity.

## Integrations

### Amazon Alexa supported capabilities

Yes

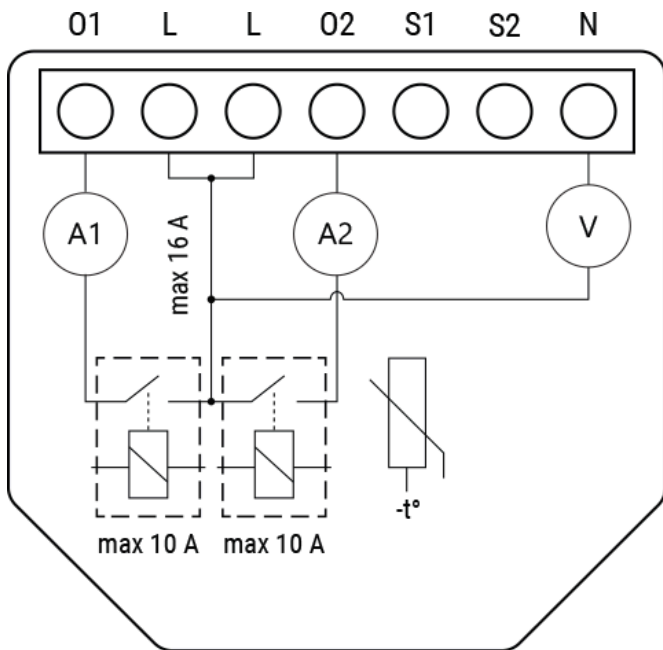
### Google Smart Home supported traits

Yes

### Samsung SmartThings supported capabilities

Yes

### Simplified internal schematics



## Device electrical interfaces

### Inputs

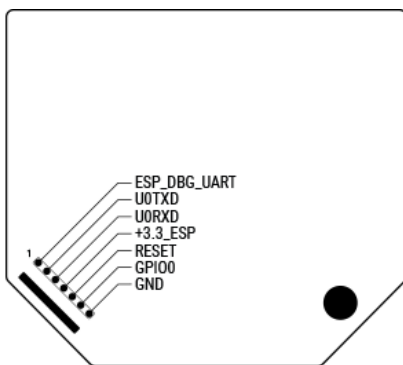
- 2 switch/button inputs on screw terminal: S1 and S2
- 3 power supply inputs on screw terminals: 1 N (+) and 2 L (L)

### 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 functions

- Overheating protection
- Overvoltage protection
- Overcurrent protection

- Overpower protection
- Obstacle detection (cover mode)
- Safety switch (cover mode)

## Supported load types

- Resistive (incandescent bulbs, heating appliances)
- Capacitive (capacitor banks, electronic equipment, motor starting capacitors)
- Inductive with RC Snubber (LED light drivers, transformers, fans, refrigerators, air-conditioners, washing machines, tumble dryers)

## User interface

### Inputs

- One (Control) 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.

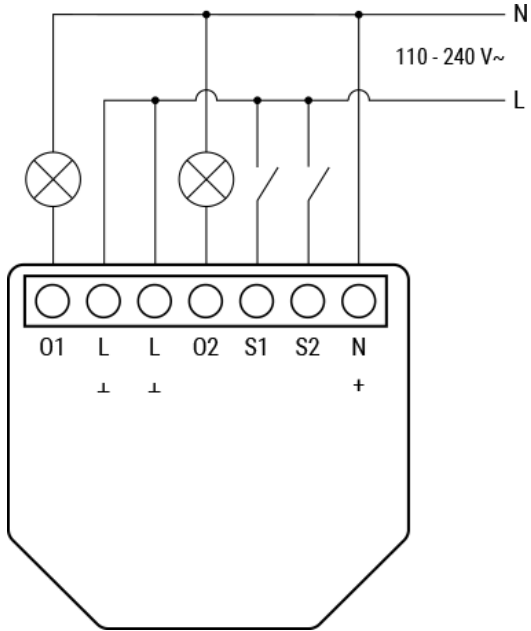
## Specifications

Quantity	Value
<b>Physical</b>	
Size (HxWxD):	37x42x16 ±0.5 mm / 1.46x1.65x0.63 ±0.02 in
Weight:	30 g / 1.06 oz
Screw terminals max torque:	0.4 Nm / 3.5 lbin
Conductor cross section:	0.5 to 4 mm <sup>2</sup> / 20 to 11 AWG (solid, stranded, and bootlace ferrules)
Conductor stripped length:	6 to 7 mm / 0.24 to 0.28 in
Mounting:	Wall box
Shell material:	Plastic
Shell color:	Black
Terminals color:	Black
<b>Environmental</b>	

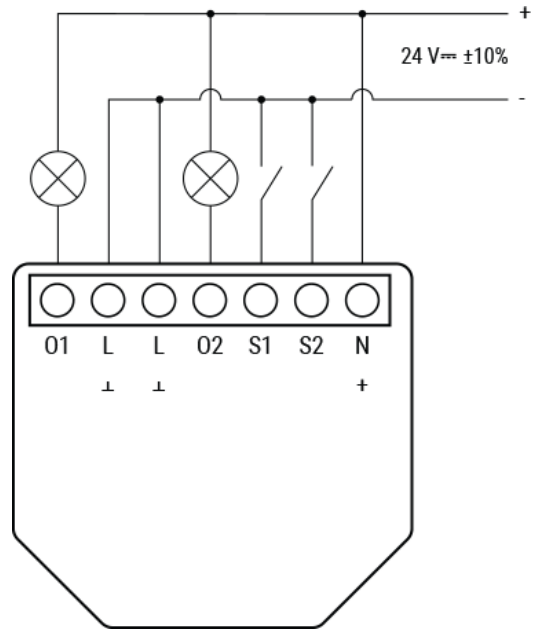
Ambient working temperature:	-20°C to 40°C / -5°F to 105°F
Humidity:	30% to 70% RH
Max. altitude:	2000 m / 6562 ft
<b>Electrical</b>	
Power supply:	110 - 240 V~ / 24 V= ±10%
Power consumption:	< 1.4 W
External protection:	Tripping characteristic B or C, 16A max. rated current, min. 6 kA interrupting rating, energy limiting class 3
<b>Output circuits ratings</b>	
Max. switching voltage:	<ul style="list-style-type: none"> <li>• 240 V~</li> <li>• 30 V=</li> </ul>
Max. switching current AC:	10 A (per channel), 16 A (total), 18 A (total peak)
Max. switching current DC:	10 A
<b>Sensors, meters</b>	
Voltmeter (AC):	Yes
Ammeter (AC):	Yes
Internal-temperature sensor:	Yes
<b>Radio</b>	
<b>Wi-Fi</b>	
Protocol:	802.11 b/g/n

RF band:	2412 - 2472 MHz
Max. RF power:	< 20 dBm
Range:	Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors (Depends on local conditions)
<b>Bluetooth</b>	
Protocol:	4.2
RF band:	2402 - 2480 MHz
Max. RF power:	< 4 dBm
Range:	Up to 10 m / 33 ft indoors and 30 m / 100 ft outdoors (Depends on local conditions)
<b>Microcontroller unit</b>	
CPU:	ESP-Shelly-C38F
Flash:	8MB
<b>Firmware capabilities</b>	
Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	Yes
MQTT:	Yes

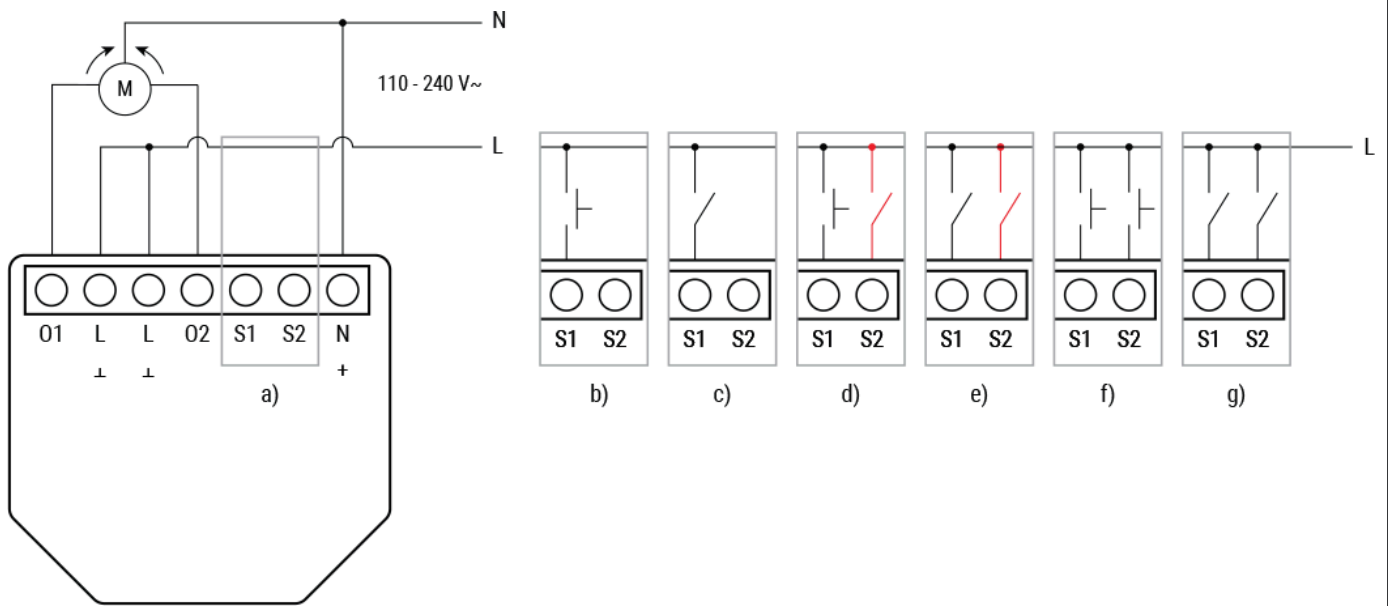
## Basic wiring diagrams



Dual-channel switch mode, AC power supply



Dual-channel switch mode, DC power supply



Cover mode

## Legend

Terminals		Wires	
O1, O2:	Load circuit output terminals	N:	Neutral wire
L:	Live terminal (110-240 VAC)	L:	Live wire (110-240 V~)
S1, S2:	Switch input terminals	+:	24 V= positive wire

S1, S2	Switch input terminals	-	24 V $\bar{=}$ negative wire
+	24V $\bar{=}$ positive terminal		
L:	24V $\bar{=}$ negative terminal		

## Troubleshooting

### 1. Ensure that the device is properly powered:

- Check power cables, outlets, and any power indicators on the device.

### 2. Inspect Connections:

- Verify that all connections, including cables and wiring, are secure and properly seated. Loose connections can lead to functionality issues.

### 3. Review Device Settings:

- If applicable, check and review the device settings. Ensure that configurations are correct and match your intended use.

### 4. Update Firmware/Software:

- Check if there are any available firmware or software updates for the device. Keeping the device up-to-date can resolve known issues and improve performance.

### 5. Restart or Reboot:

- Sometimes, a simple restart can resolve temporary glitches. Turn off the device, wait a few seconds, and then power it back on.

### 6. Check Network Connection:

- If the device is connected to a network, ensure that the network settings are correct. Test the network connection and consider restarting routers or switches if needed.

### 7. Inspect Physical Components:

- Physically inspect the device for any signs of damage, overheating, or unusual behavior.

### 8. Check Compatibility:

- Ensure that the device is compatible with other components in your system, including hardware and software. Incompatibility issues can lead to malfunctions.

### 9. Monitor Environmental Factors:

- Consider environmental factors such as temperature and humidity.

### 10. Inspect Power Supply Quality:

- Poor power quality, including voltage spikes or fluctuations, can affect device performance. Consider using a surge protector or voltage regulator if needed.

\*These are general troubleshooting steps, and the specific steps may vary based on the type of device or issue you are facing. If the issue persists and you are unable to resolve it, consider reaching out to our [technical customer support](#).

## Shelly Smart Control

- [Adding the device to the Shelly Smart Control](#)

## Shelly Web user interface

- [Shelly 2PM Gen3 Web user interface guide](#)

## Components and APIs

- [This device](#)