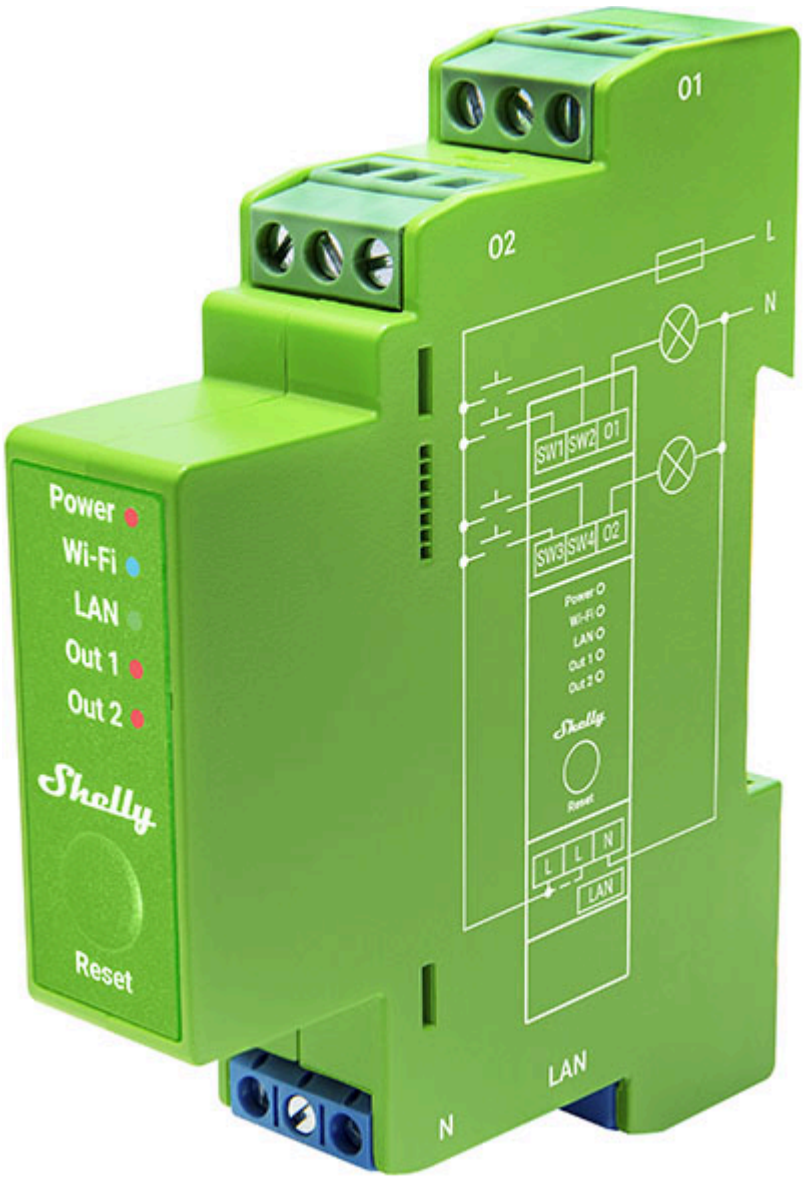
Shelly Pro Dimmer 2PM

Device image



Device identification

- Device name: **Shelly Pro Dimmer 2PM**
- Device model: **SPDM-002PE01EU**

- Device SSID: **ShellyProDM2PM-XXXXXXXXXXXX**
- Device Bluetooth ID: **0x200E**

Short description

Shelly Pro Dimmer 2PM (the Device) is a DIN-rail mountable, two-channel smart dimmer. It can work standalone in a local Wi-Fi network or it can also be operated through cloud home automation services. The Device can be accessed, controlled, and monitored remotely from any place where the User has internet connectivity, as long as it is connected to a Wi-Fi router and the Internet. Shelly Pro Dimmer 2PM has an embedded Web Interface which can be used to monitor and control the Device, as well as adjust its settings.

Main features

- **DIN rail mountable**
- **Automatic dimming calibration:** Provides smooth dimming throughout the entire range.
- **Switch/Button input mode:** Allows flexible input control through switches or buttons.
- **One/dual button dimming control:** Allows to use the full functionalities of the Device for dimming control with any wall switch configuration.
- **Night mode:** Enables to set a specific brightness of input lights during nighttime.
- **Min/Max brightness:** Reframes the range of the dimming signal to get more precise brightness control on the output.
- **Button fade rate:** Controls how quickly the output brightness changes while holding the button(s).
- **Transition duration:** Controls the time for dimming from 0 to 100 %.
- **Weekly schedules:** Supports daily schedules and routines, including setting of brightness, transition duration, and flip value of the dimming signal.
- **Auto on/off timers:** Enables auto on/off timer setting.
- **Local actions:** Allows creating automation scenarios within the local Wi-Fi network, including setting of brightness, transition duration, and flip value of the dimming signal.
- **Webhooks:** Support automation through lightweight, event-driven communication with other devices.
- **BLE Gateway:** Facilitates communication between BLE and Wi-Fi-enabled devices.
- **Wi-Fi Range Extender:** Retransmits the Wi-Fi signal and extends its reach.

- **Scripting:** Allows creating automation scenarios through scripts.
- **Compatibility:** Highly compatible with 3rd Party home automation systems.
- **No need for hub:** Ready for use locally or remotely via Shelly Smart Control or 3rd Party systems.

Use cases

- Control brightness of dimmable lights within the 110-240 V range to set the perfect brightness.
- Create smart schedules to have lights automatically adjust their brightness throughout the day.
- Retrofit your existing lighting system with the Pro Dimmer and continue using your current switches.
- Sync your lights with sunrise and sunset times easily using smart schedules.
- Activate a night mode for reduced brightness during nighttime hours.
- Integrate the Pro Dimmer with third-party systems like Home Assistant, Google Home, Alexa, and SmartThings for expanded control options.
- Utilize the device to dim lights up or down with a single or double button press.
- Monitor and measure power usage of connected lights for energy management.
- Achieve precise and customized lighting control for professional installations on DIN rail.

Integrations

Amazon Alexa supported capabilities

- Yes

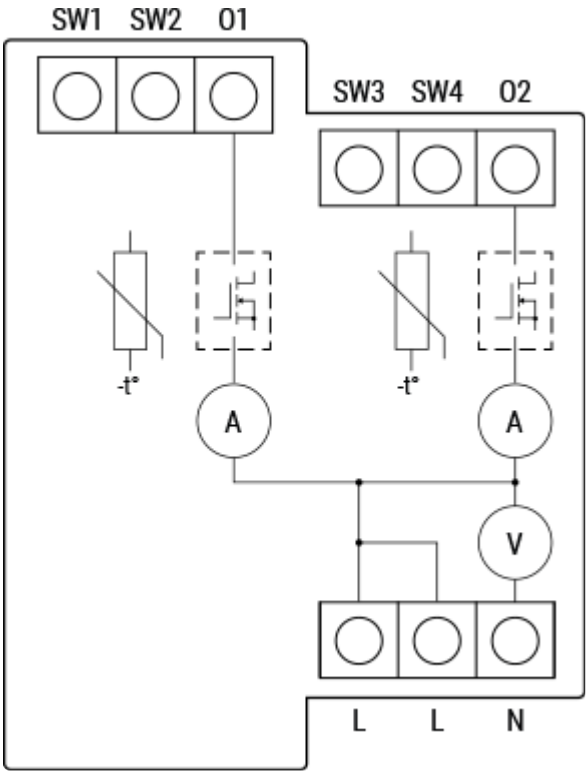
Google Smart Home supported traits

- Yes

Samsung SmartThings supported capabilities

- Yes

Simplified internal schematics



Device electrical interfaces

Inputs

- 4 switch/button inputs on screw terminals: **SW1**, **SW2**, **SW3**, and **SW4**
- 3 power supply inputs on screw terminals: 2 **L** and 1 **N**

Outputs

- 2 outputs: **O1** and **O2**

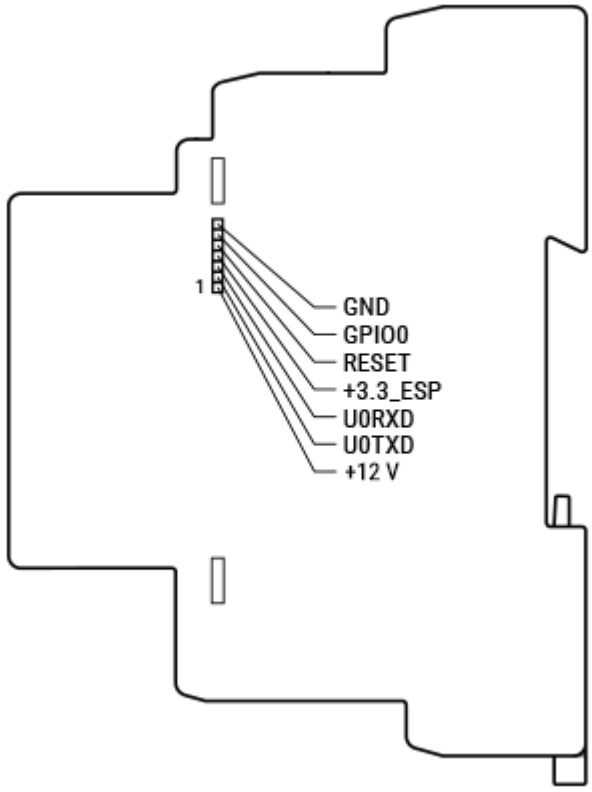
Ethernet port

- 1 RJ45 connector

⚠**CAUTION!** Plug in or unplug the LAN cable only when the Device is powered off! The LAN cable connector must not be metallic in the parts touched by the user to plug in or unplug the cable.

Add-on interface

- Shelly proprietary serial interface



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

Connectivity

- Wi-Fi
- Ethernet
- Bluetooth

Safety function

- Overheating protection
- Overvoltage protection

- Overcurrent protection
- Overpower protection

Supported load types

- Dimmable LED lamps: up to 200 W per channel
- Incandescent bulbs: up to 200 W per channel
- Halogen lamps: up to 200 W per channel
- Iron-core transformer with low-voltage incandescent lamps: up to 200 VA per channel
- Dimmable electronic transformers: up to 200 W per channel

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 indication
    - Power (red): Red light indicator will be on if power supply is connected.
    - Wi-Fi (varies):
        - Blue light indicator will be on if in AP mode.
        - Red light indicator will be on if in STA mode and not connected to a Wi-Fi network.
        - Yellow light indicator will be on if in STA mode and connected to a Wi-Fi network. Not connected to Shelly Cloud or Shelly Cloud disabled.

- Green light indicator will be on if in STA mode and connected to a Wi-Fi network and to the Shelly Cloud.
- The light indicator will be flashing Red/Blue if OTA update is in progress.

- LAN (green): Green light indicator will be on if LAN is connected.
- Out 1 (red): Red light indicator will be on if the Output 1 is on.
- Out 2 (red): Red light indicator will be on if the Output 2 is on.

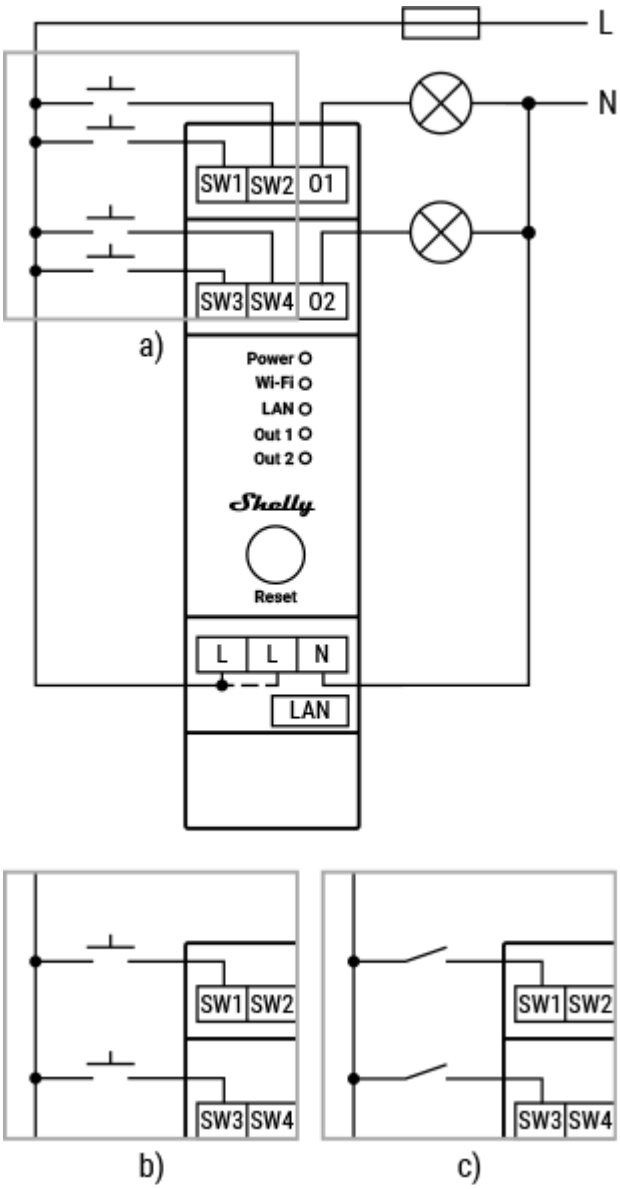
Specifications

Quantity	Value
Physical	
Size (HxWxD):	94x19x69 mm / 3.70x0.75x2.71 in
Weight:	75 g / 2.7 oz
Screw terminals max torque:	0.4 Nm / 3.54 lbin
Conductor cross section:	0.5 to 2.5 mm² / 20 to 14 AWG (green connectors) 0.5 to 1.5 mm² / 20 to 16 AWG (blue connector) (solid, stranded, and bootlace ferrules)
Conductor stripped length:	6 to 7 mm / 0.24 to 0.28 in (green connectors) 5 to 6 mm / 0.20 to 0.24 in (blue connector)
Mounting:	DIN rail
Shell material:	Plastic
Shell color:	Lime
Environmental	

Ambient working 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:	110 - 240 V~ 50/60 Hz
Power consumption:	< 2 W
External protection:	10 A, tripping characteristic B or C, 6 kA interrupting rating, Energy limiting class 3
Dimming type:	Trailing edge
Output circuits ratings	
Max. output power:	200 W per channel
Sensors, meters	
Voltmeter (AC):	Yes
Ammeter (AC):	Yes
Power and energy meters:	Yes
Internal-temperature sensor:	Yes
Radio	
Wi-Fi	
Protocol:	802.11 b/g/n

RF band:	2401 - 2483 MHz
Max. RF power:	< 20 dBm
Range:	Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors (Depends on local conditions)
Bluetooth	
Protocol:	4.2
RF band:	2400 - 2483.5 MHz
Max. RF power:	< 4 dBm
Range:	Up to 10 m / 33 ft indoors and 30 m / 100 ft outdoors (Depends on local conditions)
Microcontroller unit	
CPU:	ESP32-D0WDQ6
Flash:	8 MB
Firmware capabilities	
Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	Yes
MQTT:	Yes

Basic wiring diagrams



Legend

Terminals		Wires	
SW1, **SW2**	Switch/button input terminals controlling O1	**L**	Live (110-240 V) wire
SW3, **SW4**	Switch/button input terminals controlling O2	**N**	Neutral wire
O1, **O2**	Load circuit output terminals		
L	Live (110-240 V) terminals		

N	Neutral terminal		
LAN	Local Area Network RJ 45 connector		

Troubleshooting

--- DESCRIBE POSSIBLE CAUSES AND THE WAYS TO ALLEVIATE THEM ---

Components and APIs

- This device
- All Shelly devices and services

Compliance

- Shelly Pro Dimmer 2PM multilingual EU declaration of conformity.pdf
- Shelly Pro Dimmer 2PM UK PSTI ACT Statement of compliance.pdf

Printed user guide

- Shelly Pro Dimmer 2PM multilingual printed user and safety guide.pdf

Installation guides

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