

✦ Use with AI

Shelly Pro Dimmer 0/1-10V PM



Device identification

- Device name: **Shelly Pro Dimmer 0/1-10V PM**
- Device model: **SPCC-001PE10EU**
- Device SSID: **ShellyPro0110PM-XXXXXXXXXXXX**
- BLE Model ID: **0x2011**

Short description

Shelly Pro Dimmer 0/1-10V PM (the Device) is a smart DIN-mountable dimming controller which allows to control remotely dimming drivers 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 is a current sourcing controller and provides support for 0-10V and 1-10V types of drivers.

Main features

- **DIN rail mountable**
- **Power measurement:** Precise monitoring of energy consumption.
- **Bluetooth connectivity:** The Device complies with the Bluetooth standard and can connect with other Bluetooth devices to exchange data over short distances.
- **BLE Gateway:** Facilitates communication between BLE and Wi-Fi-enabled devices.
- **Wi-Fi:** The Device can connect to a wireless network.
- **Wi-Fi Range extender:** Retransmits the Wi-Fi signal and extends its reach.
- **Ethernet connectivity**
- **Scripting:** Allows creating automation scenarios through scripts.
- **Basic Schedules:** Supports weekly schedules and routines, including setting of brightness, transition duration, and flip value of the dimming signal.
- **Advanced Schedules:** Supports detailed schedules and routines throughout the year with a broad range of time adjustments from seconds to months, 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:** Supports automation through lightweight, event-driven communication with other devices.
- **Compatibility:** Highly compatible with third-party home automation systems, including [KNX](#).
- **No need for hub:** Ready for use locally or remotely via Shelly Smart Control or third-party systems.
- **Activity log:** Stores detailed history of events.
- **KVS (Key-value storage):** KVS service provides a basic persistent storage of key-value pairs.
- **KNX:** Supports [KNXnet/IP](#) communication
- **Safety:** Over current/voltage/power protections
- **Virtual and BTHome components:** A special set of components that do not exist in the device initially and are created dynamically by the user.
- **Diverse driver integration:** Supports 0-10V and 1-10V types of drivers (lights, motors, valves, etc.). In both operational modes, at 0% brightness, no light is emitted from the source, and the relay is switched off. In the device's web interface and Shelly Smart Control app, the light appears switched on, because no action has been performed to turn it off.
- **Night Mode:** Enables to set a specific brightness of input lights during nighttime.
- **Switch/Button input mode:** Allows flexible input control through switches and/or button:
 - One button dimming control
 - Dual button dimming control
- **Transition duration:** Controls the time it takes to transition from the current brightness level to the desired brightness level on request.
- **Minimum brightness on toggle On:** Sets brightness to 3% (default value) when toggled on, if the current brightness is below 'Min brightness on toggle.' This does not apply if a custom transition is defined in Schedules or Actions.
- **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). The default value is 3x.
- **Button presets:** State to be applied on double-push (double-click) event. The default value is 100%

Use cases

- Control brightness of dimmable lights within the 0-10 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 Dimmer 0/1-10V PM Gen3 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 Dimmer 0/1-10V PM Gen3 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.

Integrations

Amazon Alexa supported capabilities

Yes

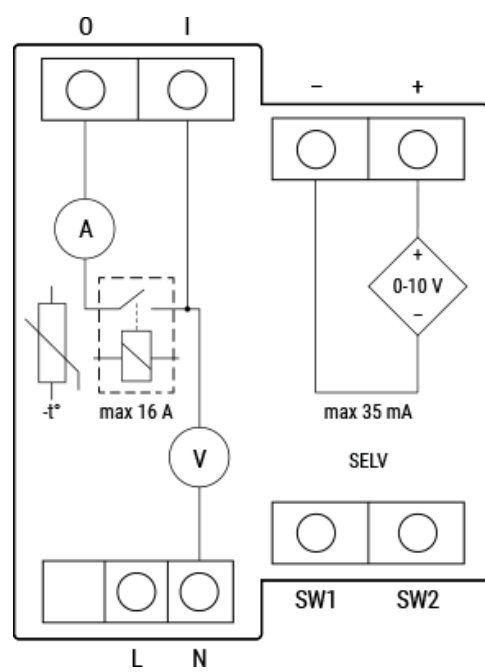
Google Smart Home supported traits

Yes

Samsung SmartThings supported capabilities

Yes

Simplified internal schematics



Device electrical interfaces

Inputs

- 2 switch/button inputs on screw terminals: **S1** and **S2**
- 2 power supply inputs on screw terminals: 1 **N** and 1 **L**
- 1 relay input with power measurement on screw terminal

Outputs

- 2 0-10V outputs on screw terminals: **+** and **-**
- 1 relay output with power measurement on screw terminal

Connectivity

- Ethernet
- Wi-Fi
- Bluetooth

Safety function

- Overheating protection
- Overvoltage protection
- Overcurrent protection
- Overpower protection

Supported load types

- 0-10V signal control for multiple types of drivers (lights, motors, valves, etc.)
- 1-10V signal control

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 (red): Red light indicator will be on if the Output is on.

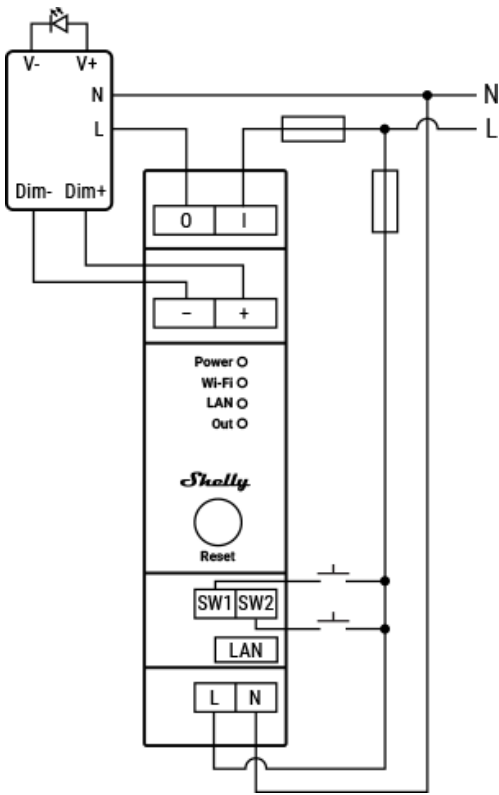
Specifications



Quantity	Value
Size (HxWxD):	94x19x69 ±0.5 mm / 3.70x0.75x2.71 ±0.02 in
Weight:	70 g / 2.5 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 connectors)
Conductor stripped length:	6 to 7 mm / 0.24 to 0.28 in (green connector) 5 to 6 mm / 0.20 to 0.24 in (blue connectors)
Mounting:	DIN
Shell material:	Plastic
Shell color:	Blue
Connectors color:	• Green • Blue
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~
Power consumption:	< 3 W
Neutral not needed:	No
0-10V/1-10V voltage control type:	Current sourcing
External protection:	16 A, tripping characteristic B or C, 6 kA interrupting rating, Energy limiting class 3
Output circuits ratings	
Max. switching voltage:	240 V~
Max. switching current:	16 A
Sensors, meters	
Voltmeter (AC):	Yes

Ammeter (AC):	Yes
Power and energy meters:	- Active and apparent power - Active and apparent energy - Power factor - Fundamental active and fundamental reactive energy
Measurement data storage:	No
Internal-temperature sensor:	Yes
Radio	
Wi-Fi	
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)
Bluetooth	
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)
Microcontroller unit	
CPU:	ESP32-D0WDQ6
Clock frequency:	40 Mhz
Flash:	8 MB
Firmware capabilities	
Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	Yes
MQTT:	Yes
Advanced schedules	Yes
KVS (Key-Value Store):	Yes

Basic wiring diagrams



Legend



Terminals		Wires	
O	Relay output terminal	L	Live (110-240 V~) wire
I	Relay input terminal	N	Neutral wire
+	0-10 V _{DC} positive terminal		
-	0-10 V _{DC} negative terminal		
SW1	Switch/button input terminals for light control		
SW2	Switch/button input terminals for light control		
LAN	Local Area Network RJ 45 connector		
L	Live (110-240 V~) terminal		
N	Neutral terminal		
Dim+/Dim-	Positive/negative terminal of the LED driver		
V+/V-	Positive/negative output of the LED driver		

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:**

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Physically inspect the device for any signs of damage, overheating, or unusual behavior.
8. **Check Compatibility:**

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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:**

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Consider environmental factors such as temperature and humidity.
10. **Inspect Power Supply Quality:**

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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](#)

Components and APIs

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

Compliance

- [Shelly Pro Dimmer 01-10V PM multilingual EU declaration of conformity 110 2025-07-21.pdf](#)

Compliance archive

Printed user guide

- [Shelly Pro Dimmer 0_1-10V PM multilingual printed user and safety guide.pdf](#)

Installation guides

