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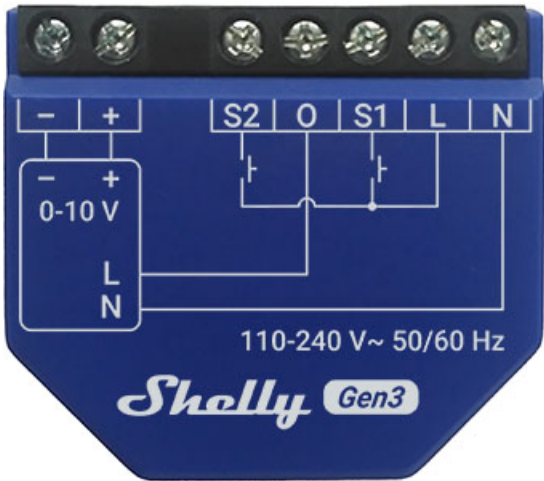


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# Shelly Dimmer 0/1-10V PM Gen3

## Device image



## Device identification

Device name: **Shelly Dimmer 0/1-10V PM Gen3**  
Device model: **S3DM-0010WW**  
Device SSID: **Shelly0110DimG3-XXXXXXXXXXXX**  
BLE Model ID: **0x1072**

## Short description

Shelly Dimmer 0/1-10V PM Gen3 (the Device) is a smart dimming controller which allows remote control 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

- Bluetooth:** The Device complies the Bluetooth standard and can connect with other Bluetooth devices to exchange data in short range.
- 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.
- 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.
- Shelly Plus Add-On compatible:** The Device supports connection with the sensor interface to the Shelly Plus devices.
- 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 3rd Party home automation systems.
- No need for hub:** Ready for use locally or remotely via Shelly Smart Control or 3rd Party systems.
- Activity log:** Stores detailed history of events.

**KVS (Key-value storage):** KVS service provides a basic persistent storage of key-value pairs.

**Customizable thresholds and offsets for temperature, humidity and light** when/if used with Plus Add-on

**Safety:** Over current/voltage/power protections

**Power measurement:** Precise monitoring of energy consumption. Information about voltage (V), current (A) and consumption (W) is displayed.

**Diverse driver integration:** Supports 0-10V and 1-10V types of drivers (lights, motors, valves, etc.).

**Night Mode:** Enables to set a specific brightness of input lights during nighttime.

If *night mode brightness* < *min\_brightness\_on\_toggle*, then *min\_brightness\_on\_toggle* is applied

**Switch/Button input mode:** Allows flexible input control through switches and/or buttons

- One button dimming control
- Dual button dimming control

**Transition duration:** Controls the time for dimming from 0 to 100 % on toggle On and from 100 to 0% on toggle Off.

**Minimum brightness on toggle On:** Brightness level (in percent) applied when there is a toggle On and current brightness is lower than 'Min brightness on toggle'. Default is 3%. Not applied when explicit (custom) transition is defined in Schedules and 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). Default is 3x.

**Button presets:** State to be applied on double-push (double-click) event. Default value is 100%

**Virtual components:** A special set of components that do not exist in the device initially and are created dynamically by the user.

## 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

## 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 0/1-10VPM 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 0/1-10VPM 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

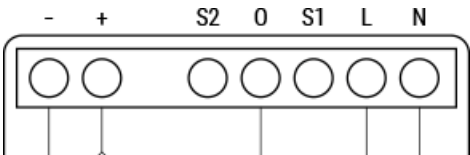
### Google Smart Home supported traits

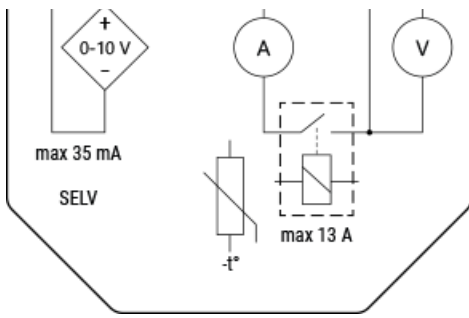
Yes

### Samsung SmartThings supported capabilities

Yes

## Simplified internal schematics





## Device electrical interfaces

### Inputs

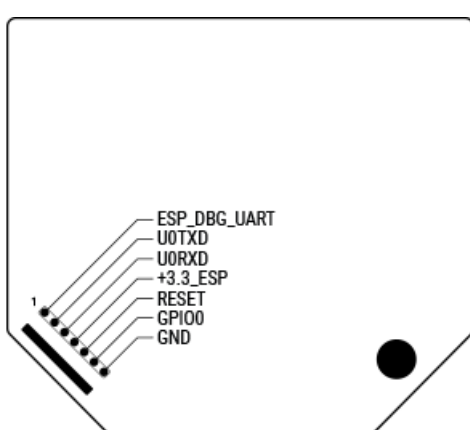
- 2 switch/button inputs on screw terminals: **S1** and **S2**
- 2 power supply inputs on screw terminals: 1 **N** and 1 **L**

### Outputs

- 2 0-10V outputs on screw terminals: **+** and **-**
- 1 relay output 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 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
- 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.

### 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):
    - $\frac{1}{2}$  sec ON /  $\frac{1}{2}$  second OFF
  - Button pressed and held for 5 seconds:
    - $\frac{1}{2}$  second ON /  $\frac{1}{2}$  second OFF
  - Button presses and held for 10 seconds:
    - $\frac{1}{4}$  second ON /  $\frac{1}{4}$  second OFF

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

## Specifications

Quantity	Value
<b>Physical</b>	
Size (HxWxD):	38.5x43.5x17mm / 1.52x1.71x0.67in
Weight:	28.5 g / 0.99 oz
Screw terminals max torque:	0.4 Nm / 3.5 lbin
Conductor cross section:	0.2 to 2.5 mm² / 24 to 14 AWG (solid, stranded, and bootlace ferrules)
Conductor stripped length:	5 to 6 mm / 0.20 to 0.24 in
Mounting:	Wall console/behind wall/ceiling construction
Shell material:	Plastic
Shell color:	Shell: Pantone 2736C (blue) Print: White
Connector 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~ 50/60 Hz
Power consumption:	< 1.5 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:	13 A
Max control current:	35 mA

### Sensors, meters

Voltmeter (AC):	110 V - 240 V
Voltmeter accuracy:	±10 %
Ammeter (AC):	50 mA - 16 A
Ammeter accuracy:	±10 %

Power and energy meters:	<ul style="list-style-type: none"> <li>• Active and apparent power</li> <li>• Active and apparent energy</li> <li>• Power factor</li> </ul>
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Measurement data storage:	No
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Internal-temperature sensor:	Yes
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### Radio

Wi-Fi	
Protocol:	802.11 b/g/n
RF band:	2401 - 2495 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

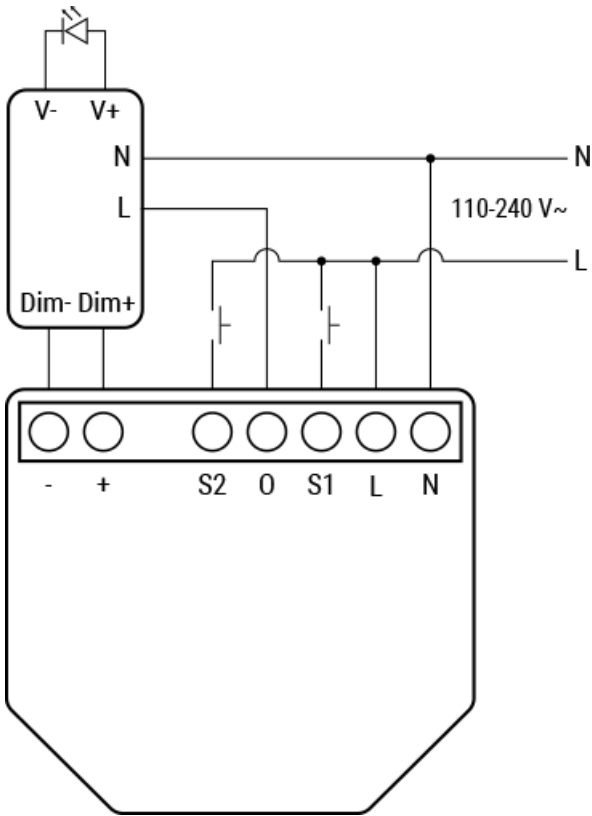
CPU:	Shelly ESP32 C3
Clock frequency:	40 Mhz
Flash:	8 MB

### Firmware capabilities

Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	Yes
MQTT:	Yes
Advanced schedules:	Yes

Advanced Schedules:	Yes
KVS (Key-Value Store):	Yes

## Basic wiring diagrams



### Legend

	Terminals	Wires
-	0-10 VDC negative terminal	<b>L</b> Live (110-240 V) wire
+	0-10 VDC positive terminal	<b>N</b> Neutral wire
<b>0</b>	Relay output	
<b>S1</b>	Switch/button input terminals for light control	
<b>S2</b>	Switch/button input terminals for light control	
<b>L</b>	Live (110-240 V) terminal	
<b>N</b>	Neutral terminal	
<b>Dim-/Dim +</b>	Positive/negative terminal of the LED driver	
<b>V-/V+</b>	Positive/negative output of the LED driver	

## Troubleshooting

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## Components and APIs

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

## Compliance and certification

### Compliance

[Shelly Dimmer 0\\_1-10VPM Gen3 multilingual EU declaration of conformity.pdf](#)

### Printed user guide

[Shelly Dimmer 0\\_1-10VPM Gen3 multilingual printed user and safety guide.pdf](#)

### Installation guides



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