

Shelly 1 Mini Gen4



Device identification

- Device name: **Shelly 1 Mini Gen4**
- Device model: **S4SW-001X8EU**
- Device SSID: **Shelly1MiniG4-XXXXXXXXXXXX**
- BLE model ID: **0x1030**

Short description

Shelly 1 Mini Gen4 is a small form factor smart switch with potential-free contacts, 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 is an improved version of Shelly 1 Mini Gen3 with a more advanced processor and Zigbee connectivity.

Shelly 1 Mini Gen4 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 1 Mini Gen4 has embedded Web Interface which can be used to monitor and control the device, as well as adjust its settings. The device has multi-protocol wireless MCU which provide Zigbee and Bluetooth connectivity ensuring a secure connection.

This device is compatible with Matter.

Main features

- **Wi-Fi Connectivity:** The device can connect to your home Wi-Fi network, allowing you to remotely monitor humidity and temperature data through a smartphone app or other compatible devices.
- **Integration with Smart Home Platforms:** You can integrate the Shelly 1 Mini Gen4 with popular smart home platforms, including Google, Alexa, and Samsung SmartThings. This enables voice control and automation capabilities through these platforms.
- **Bluetooth Connectivity:** Bluetooth and BLE gateway are available for inclusion purposes, which may be useful during the setup process.
- **User-Friendly Interface:** The device provides a user-friendly interface with a reset button for manual interactions.
- **Improved Processor:** Upgraded with an improved processor and Zigbee connectivity for enhanced performance.
- **Zigbee Connectivity:** Zigbee is available for inclusion purposes, which may be useful during the setup process.
- **Wireless Connectivity:** The device supports Wi-Fi (802.11 b/g/n/ax), Bluetooth 5.0 and Zigbee protocols with specified indoor and outdoor range capabilities.
- **Dry Contact:** Allows switching on and off of lower voltage devices.
- **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.
- **Zigbee Range extender for IoT devices:** A Zigbee extender is employed to expand the reach of your Zigbee network by receiving your Zigbee signal, enhancing its strength, and then transmitting the enhanced signal over a wider area.
- **WiFi Range extender for IoT devices:** A WiFi extender is employed to expand the reach of your WiFi network by receiving your current WiFi 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
- **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/>
- **KNX net/IP support:** <https://shelly-api-docs.shelly.cloud/gen2/Integrations/KNX/>

Use cases

- **Remote Appliance Control:** Turn on or off electric appliances remotely using your mobile phone, tablet, PC, or home automation system.
- **Internet-Connected Convenience:** Access and control devices from anywhere with internet connectivity, as long as the Shelly 1 Mini Gen4 is connected to a Wi-Fi router.
- **Space-Efficient Retrofitting:** Retrofit the smart switch into standard electrical wall boxes, behind power sockets, light switches, or other locations with limited space.
- **Home Automation:** Shelly 1 Mini Gen4 enables automatic control of power appliances for more relaxing and enjoyable experience.

Integrations

Amazon Alexa supported capabilities

Yes

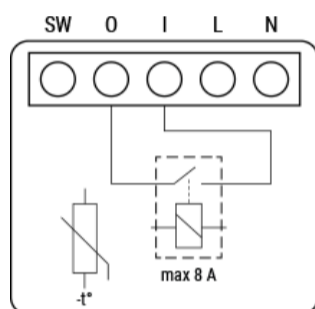
Google Smart Home supported traits

Yes

Samsung SmartThings supported capabilities

Yes

Simplified internal schematics



Device electrical interfaces

Inputs

- 1 switch/button input on screw terminal
- 1 potential-free contacts relay input on screw terminal
- 2 power supply inputs on screw terminals: N and L

Outputs

- 1 potential-free contacts relay output on screw terminal

Connectivity

- Wi-Fi
- Bluetooth
- Zigbee

Safety functions

- Overheating protection

Supported load types

- Resistive (incandescent bulbs, heating devices)
- Capacitive (capacitor banks, electronic equipment, motor start capacitors)
- Inductive (LED light drivers, transformers, fans, refrigerators, air-conditioners))

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.

- Press the button 5 times to switch the Device from Matter (default) to Zigbee profile. The Device enters inclusion mode for 3 minutes. Include the Device following the instructions of your Zigbee home automation system.
- Press the button 3 times to restart the inclusion mode for another 3 minutes if you missed the previous 3-minute window.

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 pressed 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.

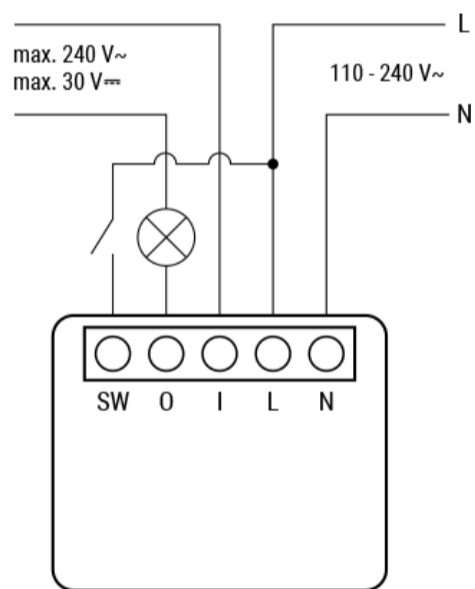
Specifications

Quantity	Value
Physical	
Size (HxWxD):	29x34x16 ±0.5 mm / 1.34x1.11x0.63 ±0.02 inch
Weight:	19 ±1 g / 0.65 ±0.04 oz
Screw terminals max torque:	0.4 Nm / 3.5 lbin
Conductor cross section:	0.5 to 4 mm ² / 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:	Blue, C-95%; M-53%; Y-0%; K-0%
Connectors color:	Grey (Mouse Grey)
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~
Relay:	Dry, NO contact, 1-pole, μ contact
Power consumption:	< 1.2 W
External protection:	Tripping characteristic B or C, max. 10A max. rated current, min. 6 kA interrupting rating, energy limiting class 3
Output circuits ratings	
Max. switching voltage:	<ul style="list-style-type: none"> • 240 V~ • 30 V\equiv
Max. switching current:	<ul style="list-style-type: none"> • 8 A/240 V~ • 5 A/30 V\equiv
Max. output power:	<ul style="list-style-type: none"> • 2000 W/240 V~ • 150 W/30 V\equiv
Voltage protection / Cutoff:	No
Current protection / Cutoff:	No
Max power protection / Cutoff:	No
Sensors, meters	
Internal-temperature sensor:	Yes
Radio	
Wi-Fi	
Protocol:	802.11 b/g/n/ax
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:	5.0
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)

Zigbee	
Protocol:	802.15.4
RF bands:	2400 to 2483.5 MHz
Max. RF power:	< 20 dBm
Range:	Up to 100 m / 328 ft indoors and 300 meters / 984 ft outdoors (Depends on local conditions)
Microcontroller unit	
CPU:	ESP-Shelly-C68F
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	
SW	Switch (controlling O) input terminal	L	Live (110 - 240 V~) wire
O	Load circuit output terminal	N	Neutral wire
I	Load circuit input terminal		
L	Live (110-240 V) terminal		
N	Neutral terminal		