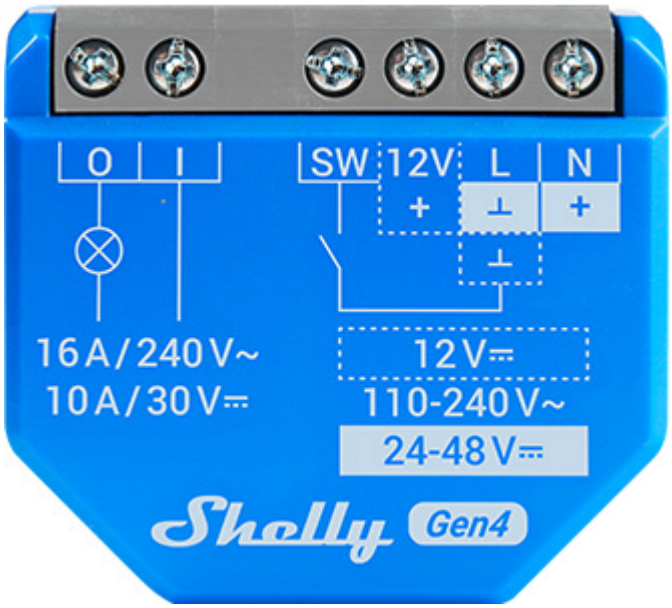


Device identification

- Device name: **Shelly 1 Gen4**
- Device model: **S4SW-001X16EU**
- Device SSID: **Shelly1G4-XXXXXXXXXXXX**
- Device Bluetooth ID: **0x1028**

Short description

Shelly 1 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.

Shelly 1 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 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 provides 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 Gen4 with popular smart home platforms, including Google, Alexa, and Samsung SmartThings. This enables voice control and automation

capabilities through these platforms.

- **Local and Cloud Control:** Can function independently in a local Wi-Fi network and can also be operated through cloud home automation services.
- **Bluetooth Connectivity:** Bluetooth and BLE gateways are available for inclusion purposes, which may be useful during the setup process.
- **Zigbee Connectivity:** Zigbee is 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 support for Zigbee connectivity.
- **Embedded Web Interface:** Features an embedded web interface for monitoring, control, and adjustment of settings.
- **Wireless Connectivity:** The device supports Wi-Fi (802.11 b/g/n/ax) and Bluetooth 5.0 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.
- **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.
- **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.
- **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 Gen4 is connected to a Wi-Fi router.
- **Home Automation:** Shelly 1 Gen4 enables automatic control of power appliances for more relaxing and enjoyable experience.

Home Automation Use Cases

Light Control

- Remote control of standard lights (LED, incandescent, halogen).
- Set timers or schedules for lights (e.g., porch lights on at sunset).
- Use with motion sensors (for example Shelly BLU Motion) for occupancy-based lighting.

Garage Door Automation

- Act as a smart trigger to open/close garage doors.
- Monitor door status with a sensor input i.e using Shelly Plus Add-on.
- Integrate with voice assistants for hands-free control.

Fan or Ventilation Control

- Automate bathroom or kitchen fans based on humidity sensors (like Shelly BLU H&T).
- Turn on ventilation during specific times of day or based on occupancy.

Heater or Towel Rail Switching

- Control electric towel warmers or heaters (Max. switching current: 16A).
- Schedule operation or link to temperature thresholds via sensors (like Shelly BLU H&T).

Commercial Applications

Lighting Automation in Small Offices or Shops

- Control light zones based on business hours.
- Use with motion detectors (for example Shelly BLU Motion) for energy savings.

Meeting Room Occupancy

- Enable or disable equipment like projectors depending on occupancy.

Security and Access Systems

- Remotely unlock gates or doors for deliveries.
- Monitor open/close state of access points.

Industrial/Utility Use Cases

Equipment Monitoring & Control

- Power cycling routers, modems, or network switches.

Pump or Motor Control

- Automate irrigation pumps in greenhouses or fields (Max. switching current: 16A).
- Remotely control or valves (i.e. Shelly Add-On Mechanical Manipulator).

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

Integrations

Amazon Alexa supported capabilities

- Turn On/Off

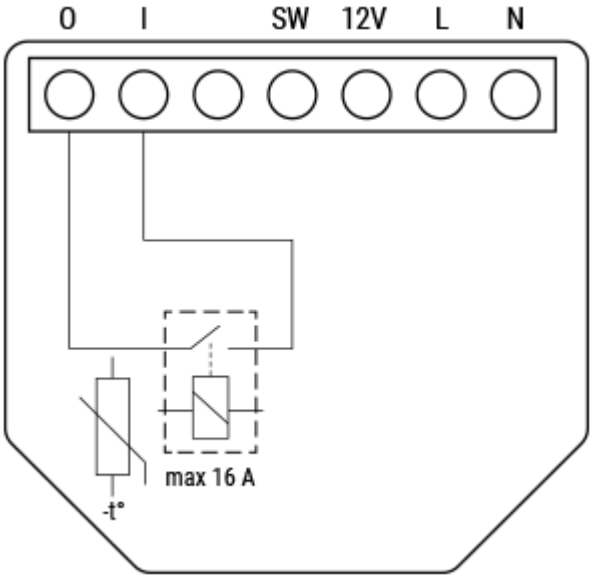
Google Smart Home supported traits

- Turn On/Off

Samsung SmartThings supported capabilities

- Turn On/Off

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 function

- Overheating protection

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.
  - 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 presses 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

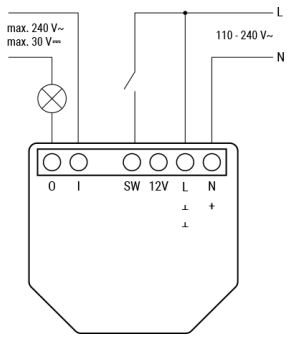
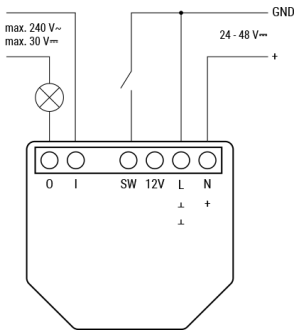
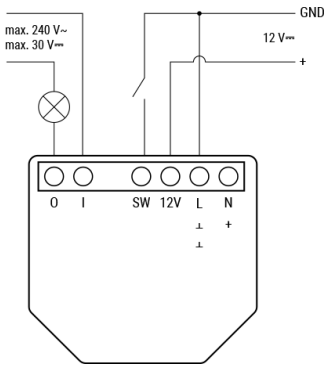
Quantity	**Value**
Physical	

Size (HxWxD):	37x42x16 mm / 1.46x1.65x0.63 inch
Weight:	26 g / 0.92 oz
Screw terminals max torque:	0.4 Nm / 3.5 lbin
Conductor cross section:	0.5 to 4 mm² / 20 to 11 AWG (solid, stranded, and bootlace ferrules)
Conductor stripped length:	6 to 7 mm / 0.24 to 0.28 in
Mounting:	Wall console
Shell material:	Plastic
Shell color:	Blue
Terminals color:	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~ • 24-48 V⎓ • 12 V⎓
Power consumption:	< 1 W
Neutral not needed:	No
External protection:	Cable protection switch in accordance with EN60898-1 (tripping characteristic B or C, max. 16 A rated current, min. 6 kA interrupting rating, energy limiting class 3)
Output circuits ratings	
Max. switching voltage:	• 240 V~ • 30 V⎓
Max. switching current:	• 16 A/240 V~ • 10 A/30 V⎓

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
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
Zigbee repeater:	Yes
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:	8MB
Firmware capabilities	
Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook

Scripting:	Yes
MQTT:	Yes

Basic wiring diagrams

		
110-240 V~ power supply	24-48 V⎓ power supply	12 V⎓ stabilized power supply

Legend

Terminals		**Wires**	
I	Load circuit input terminal	**L**	Live wire (110-240 V~)
O	Load circuit output terminal	**N**	Neutral wire
SW	Switch (controlling O) input terminal	+	12/24-48V ⎓ positive wire
+12V	12 V⎓ positive terminal	**GND**	12/24-48V⎓ ground wire
L	Live terminal (110-240 V~)		
N	Neutral terminal		
+	24-48 V⎓ positive terminal		
⊥	12/24-48V⎓ ground terminal		

Shelly Smart Control

- Adding the device to the Shelly Smart Control

Shelly Web user interface

- Shelly 1 Gen4 Web user interface guide

Components and APIs

- This device
- All Shelly devices and services

Compliance

Shelly 1 Gen4 multilingual EU declaration of conformity 2025-07-25.pdf

Shelly 1 Gen4 UK PSTI ACT Statement of compliance.pdf

Compliance archive

Shelly 1 Gen4 multilingual EU declaration of conformity 75 2025-03-10.pdf

Printed user guide

Shelly 1 Gen4 multilingual printed user and safety guide.pdf

- Ръководство за употреба и безопасност

Installation guides