Shelly Pro 1 v.1

Shelly Pro 1 v.1 is a modification of Shelly Pro 1 (SPSW-001XE16EU)

Shelly Pro 1 is now obsolete and out of sale.

Differences with Shelly Pro 1 are marked by the ≠ symbol in the text below.

Main changes:

- Power supply: no more 12 VDC option.
- Relay: no more DC switching
- Connectors: 3-terminal connectors are replaced by 2-terminal ones.
- PCBs: relay 2-layer PCBs are replaced by 4-layer ones for better thermal performance.
- LAN: improved high voltage electrical distances.
- Plastics shell: improved dielectric performance.

Device identification (≠)

- Device name: **Shelly Pro 1 v.1**
- Device model: **SPSW-201XE16EU**
- Device SSID: **ShellyPro1-XXXXXX**

Short description

Shelly Pro 1 is a DIN rail mountable smart relay with potential-free contacts. Enhanced with all the gen2 firmware flexibility and LAN connectivity, it provides professional integrators with many more options for end customer solutions. It can work standalone in a local Wi-Fi network or it can also be operated through cloud home automation services.

Shelly Pro 1 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.

Shelly Pro 1 has an embedded Web Interface which can be used to monitor and control the device, as well as adjust its settings.

Main applications

- Residential
- MDU (Multi Dwelling Units – apartments, condominiums, hotels, etc.)
- Light commercial (small office buildings, small retail/restaurant/gas station, etc.)
- Industrial (factories, power plants, water processing, refineries, etc.)
- Government/municipal

* University/college

Integrations

* Google
* Alexa
* Samsung SmartThings

Simplified internal schematics (≠)

Device electrical interfaces (≠)

Inputs

* 2 switch/button inputs on screw terminals: **SW1** and **SW2**
* 2 powers supply inputs on screw terminals: 1 **N** and 1 **L**
* 1 relay input: **I**

Outputs

* 1 relay output: **O**

Ethernet port

* 1 RJ45 connector

Addon interface

* Shelly proprietary serial interface

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

Connectivity

* Wi-Fi
* Ethernet
* Bluetooth (for inclusion purposes)

Safety features

* Overheating protection

Supported load types

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

User interface

Inputs

- One tactile dome button
  - Press and hold 5 sec to reboot.
  - Press and hold 10 sec to factory reset.

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 relay is closed.

Components and APIs

- This device
- All Shelly devices and services

Printed User Guide

Download printed user guide – English, Deutsch, Italiano, Español, Português, Français

# Compliance

- Declaration of conformity

Specifications (≠)

Type	Value
Physical	
Size (HxWxD):	94x19x69 mm / 3.70×0.75×2.71 inch
Weight:	63 g / 2.22 oz.
Mounting:	DIN rail
Screw terminals max torque:	0.4 Nm / 3.54 lbin (green connector) 0.5 Nm / 4.43 lbin (blue connectors)
Conductor cross section:	0.5 to 2.5 mm² / 20 to 14 AWG (green connector) 0.5 to 1.5 mm² / 20 to 16 AWG (blue connectors)
Conductor stripped length:	6 to 7 mm / 0.24 to 0.28 inch (green connector) 5 to 6 mm / 0.20 to 0.24 inch (blue connectors)
Shell material:	Plastic
Color:	Blue
Environmental	
Ambient 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 voltage AC:	110 – 240 V
Power supply voltage DC:	N/A
Power consumption:	< 3 W
Neutral not needed:	No

Output circuits ratings

Max switching voltage AC:	240 V
Max switching voltage DC:	N/A
Max switching current AC:	16 A
Max switching current DC:	N/A

Sensors, meters

Temperature sensor:	Yes

Radio

Wi-Fi

Protocol:	802.11 b/g/n
Frequency:	2412 – 2472 MHz; (Max. 2495 MHz)
Max. RF output power:	13.35 dBm

Range:	Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors (Depends on local conditions)
Bluetooth	
Protocol:	BLE 4.1
Frequency:	2402 – 2480 MHz (Max. 2483.5 MHz)
Max. RF output power:	4.25 dBm
Range:	Up to 10 m / 33 ft indoors and 30 m / 100 ft outdoors (Depends on local conditions)
MCU	
CPU:	ESP32
Flash:	8 MB
Firmware capabilities	
Schedules:	20
Webhooks (URL actions):	20 with 5 URLs per hook
Scripting:	mJS
MQTT:	Yes
CoAP:	No

Basic wiring diagram (≠)
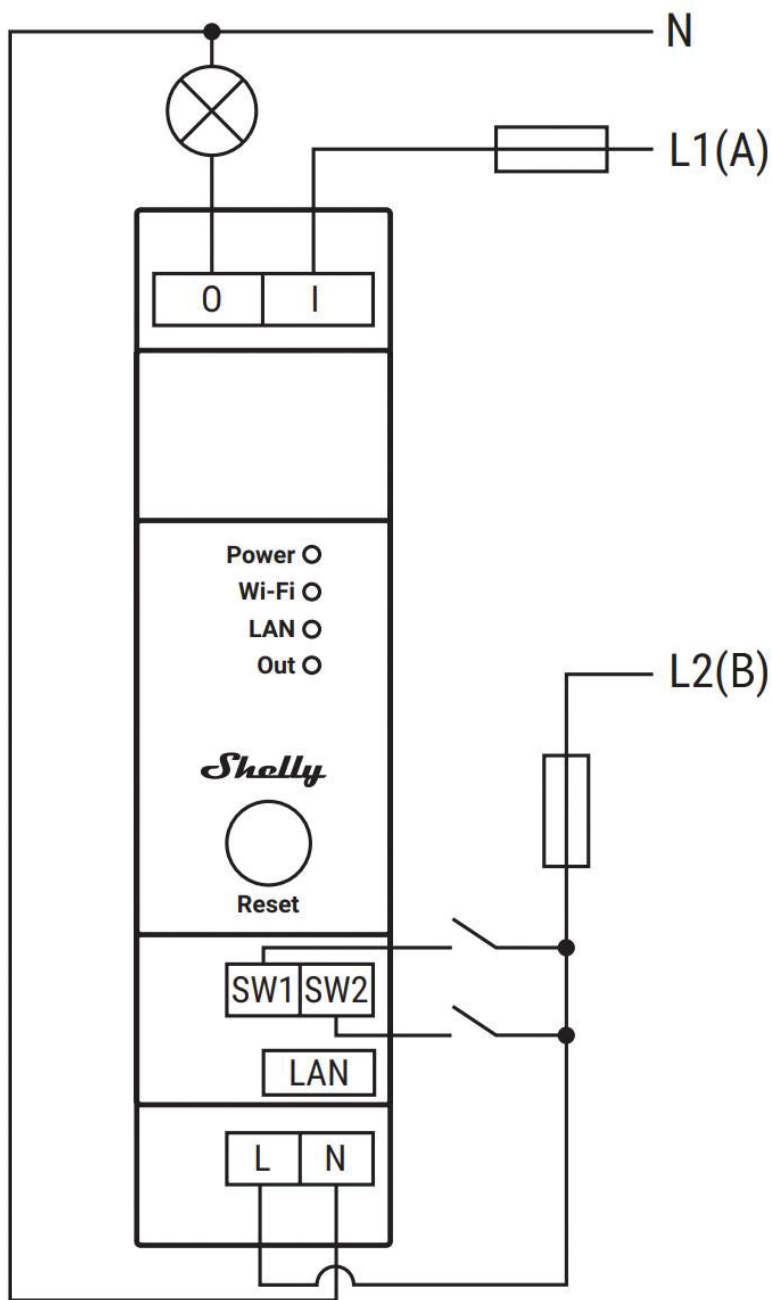
Legend

Terminals		Cables	
I	Load circuit input terminal	**L1(A)**	Load circuit live (110-240 V) cable
O	Load circuit output terminal	**L2(B)**	Device power supply live (110-240 V) cable
SW1, SW2	Switch/button input	**N**	Neutral cable

	terminals		
L	Live (110-240 V) terminal		
N	Neutral terminal		
LAN	Local Area Network RJ 45 connector		

Wiring diagrams

How to connect

Shelly PRO 1 v.1 Wiring (New version, no DC support)