Shelly Wave Pro 1PM Relay Switch

Shelly Wave Pro 1PM Relay Switch User Guide

Contents

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Product Information

Important Disclaimer

- Ordering Code: QPSW-0A1P16XX

Frequently Asked Questions

- **Q:** Can the Wave Pro 1PM be used with all types of electrical devices?
  - **A:** The Wave Pro 1PM is compatible with switches and push-buttons and supports various load types including resistive, capacitive, and inductive with RC Snubber.
- **Q:** Is the Wave Pro 1PM suitable for outdoor use?
  - **A:** The Wave Pro 1PM is designed for indoor use only. Avoid exposing it to moisture or extreme temperatures.

LEGEND

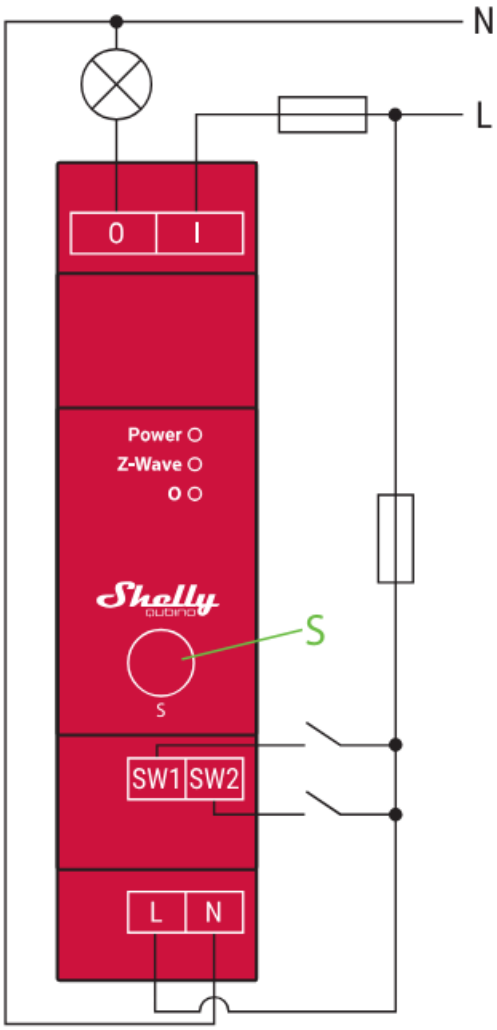

Fig.1/

- **Device terminals:**
  - **N:** Neutral terminal
  - **L:** Live terminal (110–240 V AC)
  - **SW (SW1):** Switch/push-button input terminal (controlling O (O1))
  - **SW2:** Switch/push-button input terminal
  - **I:** Load circuit input terminal
  - **O (O1):** Load circuit output terminal (1)
- **Wires:**
  - **N:** Neutral wire
  - **L:** Live wire (110-240 V AC)
- **Button:**
  - **S:** S button

READ BEFORE USE

This document contains important technical and safety information about the Device, its safe use and installation.

CAUTION! Before beginning the installation, please read carefully and entirely this guide and any other documents accompanying the Device. Failure to follow the installation procedures could lead to malfunction, danger to your health and life, violation of law or refusal of legal and/or commercial guarantee (if any). Shelly Europe Ltd. is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure of following the user and safety instructions in this guide.

TERMINOLOGY

- **Gateway –** A Z-Wave® gateway, also referred to as a Z-Wave® controller, Z-Wave® main controller, Z-Wave® primary controller, or Z-Wave® hub, etc., is a device that serves as a central hub for a Z-Wave® smart home network. The term “gateway” is used in this document.
- **S button –** The Z-Wave® Service button, which is located on Z-Wave® devices and is used for various functions such as inclusion (adding), exclusion (removing), and resetting the device to its factory default settings. The term “S button” is used in this document.
- **Device –** In this document, the term “Device” is used to refer to the Shelly Qubino device that is a subject of this guide.

ABOUT SHELLY QUBINO

Shelly Qubino is a line of innovative microprocessor-managed devices, which allow remote control of electric circuits with a smartphone, tablet, PC, or home automation system. They work on Z-Wave® wireless communication protocol, using a gateway, which is required for the configuration of devices. When the gateway is connected to the internet, you can control Shelly Qubino devices remotely from anywhere. Shelly Qubino devices can be operated in any Z-Wave® network with other Z-Wave® certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network. Devices are designed to work with older generations of Z-Wave® devices and gateways.

WAVE PRO SERIES

Wave Pro series is a line of devices suitable for homes, offices, retail stores, manufacturing facilities, and other buildings. Pro devices are DIN-mountable inside the breaker box, and highly suitable for new building construction. All Wave Pro devices can be controlled and monitored through the Z-Wave® network.

ABOUT THE DEVICE

- The Device is a DIN rail mountable smart switch with power measurement.
- It controls the on/off function for one electrical device with a load up to 16 A. It is compatible with switches (default) and push-buttons.

INSTALLATION INSTRUCTIONS

The Device can be DIN-mounted inside the breaker box.
For the installation instructions, refer to the wiring scheme (Fig. 1) in this user guide.

- **CAUTION!** Danger of electrocution. Mounting/installation of the Device to the power grid has to be performed with caution, by a qualified electrician.
- **WARNING!** Danger of electrocution. Every change in the connections has to be done after ensuring there is no voltage present at the Device terminals.
- **CAUTION!** Use the Device only with a power grid and appliances that comply with all applicable regulations. A short circuit in the power grid or any appliance connected to the Device may damage it.
- **CAUTION!** Do not connect the Device to appliances exceeding the given max. load!
- **CAUTION!** Allow at least 10 mm of space around each Pro device if you expect currents higher than 5 A per channel.

- **CAUTION!** Connect the Device only in the way shown in these instructions. Any other method could cause damage and/or injury.
- **CAUTION!** Do not install the Device where it can get wet.
- **CAUTION!** Do not use the Device if it has been damaged!
- **CAUTION!** Do not attempt to service or repair the Device yourself!
- **CAUTION!** Before starting the mounting/installation of the Device, check that the breakers are turned off and there is no voltage on their terminals. This can be done with a mains voltage tester or multimeter. When you are sure that there is no voltage, you can proceed to connecting the wires.
- **CAUTION!** Do not shorten the antenna.
- **RECOMMENDATION:** Place the antenna as far away as possible from metal elements as they can cause signal interference.
- **RECOMMENDATION:** Connect the Device using solid single-core cables or stranded cables with ferrules. The cables should have insulation with increased heat resistance, not less than PVC T105°C (221°F).
- **RECOMMENDATION:** For inductive appliances that cause voltage spikes during switching on/off, such as electrical motors, fans, vacuum cleaners and similar ones, RC snubber (0.1 µF / 100 Ω / 1/2 W / 600 V AC) should be connected parallel to the appliance.
- **CAUTION!** Do not allow children to play with the push-buttons/switches connected to the Device. Keep the devices for remote control of Shelly Qubino (mobile phones, tablets, PCs) away from children.

EXTENDED USER GUIDE

For more detailed installation instructions, use cases, and comprehensive guidance on adding/removing the Device to/from a Z-Wave® network, factory reset, LED signalization, Z-Wave® command classes, parameters, and much more, refer to the extended user guide at: **https://shelly.link/WavePro1PM-KB**

SPECIFICATIONS

Power supply	110-240 V AC, 50/60 Hz
Power consumption	< 0.3 W
Power measurement (W)	Yes
Max. switching voltage AC	240 V
Max. switching current AC	16 A
Max. switching voltage DC	N/A
Max. switching current DC	N/A
Overheating protection	Yes
Overload protection	Yes
Overvoltage protection	Yes
Distance	Up to 40 m indoors (131 ft.) (depends on local condition)
Z-Wave® repeater	Yes
CPU	Z-Wave® S800

Z-Wave® frequency bands	868,4 MHz; 865,2 MHz; 869,0 MHz; 921,4 MHz; 908,4 MHz; 916 MHz; 919,8 MHz; 922,5 MHz; 919,7-921,7-923,7 MHz; 868,1 MHz; 920,9 MHz
Maximum radio frequency power transmitted in frequency band(s)	< 25 mW
Size (H x W x D)	94 x 19 x 69 ±0.5 mm / 3.7 x 0.75 x 2.71 ±0.02 in
Weight	61 g / 2.15 oz.
Mounting	DIN rail
Screw terminals max. torque	0.4 Nm / 3.5 lbin
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 (white 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 (white connectors)
Shell material	Plastic
Color	Red
Ambient temperature	-20°C to 40°C / -5°F to 105°F
Humidity	30% to 70% RH
Max. altitude	2000 m / 6562 ft.

OPERATIONAL INSTRUCTIONS

- **SW1:** If the SW (SW1) is configured as a switch (default), each toggle of the switch will change the output O (O1) state to the opposite state – on, off, on, etc. If the SW (SW1) is configured as a push-button in the Device settings, each press of the push-button will change the output O (O1) state to the opposite state – on, off, on, etc.
- **SW2:** No relay control – used only for associations.

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)

IMPORTANT DISCLAMER

Z-Wave® wireless communication may not always be 100% reliable. This Device should not be used in situations in which life and/or valuables are solely dependent on its functioning. If the Device is not recognized by your gateway or appears incorrectly, you may need to change the Device type manually and ensure that your gateway supports Z-Wave Plus® multi-channel devices.

- **ORDERING CODE:** QPSW-0A1P16XX
- XX – Values define product version per region.

DECLARATION OF CONFORMITY

Hereby, Shelly Europe Ltd. (former Allterco Robotics EOOD) declares that the radio equipment type Wave Pro 1PM is in compliance with Directive 2014/53/ EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The full text of the EU declaration of Conformity is available at the following internet address: **https://shelly.link/WavePro1PM-DoC**

Contact

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Changes in the contact data are published by the Manufacturer at the official website.

Documents / Resources

	Shelly Wave Pro 1PM Relay Switch [pdf] User Guide Wave Pro 1PM, Wave Pro 1PM Relay Switch, Relay Switch, Switch

References

- **User Manual**