



Shelly

Wave 1PM

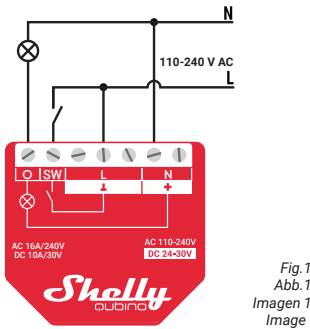


Fig.1/ Abb.1/ Imagen 1/ Image 1

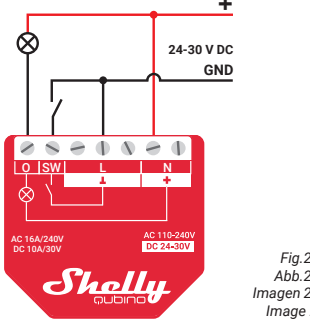


Fig.2/ Abb.2/ Imagen 2/ Image 2

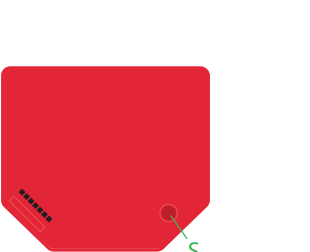


Fig.3/ Abb.3/ Imagen 3/ Image 3

EN

USER AND SAFETY GUIDE

Z-Wave™ smart switch with power measurement

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 of damage or cost 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 adding (inclusion), removing (exclusion), 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 Wave 1PM device.

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. 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.

ABOUT THE WAVE 1PM

The Wave 1PM (Device) is a single product that enables the control of the on/off function for one electrical device such as bulb, ceiling fan, heater, etc. It measures power consumption of the connected device. The Device is compatible with push-buttons and switches (default).

ELECTRICAL DIAGRAM (110–240 V AC / 24 V DC)

Connecting to the power grid with power supply 110-240 V AC (fig. 1), or 24-30 V DC (fig. 2).

INSTALLATION INSTRUCTIONS

The Device can control a various type of loads (e.g., bulbs) in one electrical circuit up to 3.5 kW / 240 V AC. It can be retrofitted into standard electrical wall boxes, behind power sockets and light switches or other places with limited space.

CAUTION! Danger of electrocution. Mounting/installation of the Device to other places 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! Do not shorten the antenna.

RECOMMENDATION: Place the antenna as far away as possible from metal elements as they can cause signal interference.

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!

RECOMMENDATION: Connect the Device using solid single-core wires with increased insulation heat resistance not less than PVC T105°C (221°F).

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 phase tester or multimeter.

CAUTION! When you are sure that there is no voltage, you can proceed to connecting the wires.

LEGEND

Device terminals:

- N: Neutral terminal
- L: Live terminal (110–240 V AC)
- SW: Switch/push-button input terminal (controlling O)
- O: Load circuit output terminal
- +24-30 V DC positive terminals
- 24-30 V DC ground terminals
- S: S button (Fig. 3)

Wires:

- N: Neutral wire
- L: Live wire (110–240 V AC)
- +24–30 V DC positive wire
- GND: 24–30 V DC ground wire

DE

LEGENDE

Geräteanschlüsse:

- N: Klemme für Neutralleiter
- L: Klemme für Phase (110-240 V AC)
- SW: Schalter-/Tasterangangsleitung (Steuerung O)
- O: Ausgangsklemme des Lastkreises
- +24–30 V DC positive Anschlussklemmen
- 24–30 V DC Erdungsklemmen
- S: Die S-Taste (Abb. 3)

Kabel:

- N: Neutralleiter
- L: Phasenleiter (110-240 V AC)
- +24–30 V DC Pluskabel
- GND: 24–30 V DC Massekabel

IT

LEGENDA

Terminali del Dispositivo:

- N: Terminale neutro
- L: Terminale sotto tensione (110-240 V AC)
- SW: Terminale di ingresso interruttore/pulsante (controllo O)
- O: Terminale di uscita del circuito di carico
- +24-30 V DC positive terminali
- 24-30 V DC terminali di terra
- S: Pulsante S (Fig. 3)

Fili:

- N: Filo neutro
- L: Filo sotto tensione (110-240 V AC)
- +24–30 V DC Filo Pluskabel
- GND: Filo di terra 24–30 V DC

CE

RoHS

RECYCLING

WARRANTY

IMPORTANT: The PIN code must not be lost.

Removing (exclusion) with a switch/push-button:

1. Connect the Device to a power supply.

Factory reset with a switch/push-button:

1. To enter the Setting mode, quickly press and hold the S button on the Device until the LED turns Solid blue.
2. Press the S button multiple times until the LED turns Solid red.
3. Press and hold (> 2s) the S button on the Device until the red LED starts blinking in Mode 3. Releasing the S button will start the factory reset.
4. During factory reset, the LED will turn solid green for about 1s, then the blue and red LED will start blinking in Mode 3 for approx. 2s.
5. The blue LED will be blinking in Mode 1 if the Factory reset is successful.

Factory reset with the S button:

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NOTE: For more information about this Device refer to the Extended User Guide available at <https://kb.shelly.cloud/>

LED SIGNALIZATION

	LED blinking modes
Mode 1	0,5s On/2s Off
Mode 2	0,5s On/0,5s Off
Mode 3	0,1s On/0,1s Off
Mode 4	(1x to 6x - 0,2s On/0,2s Off) + 2s Off
Mode 5	0,2s On blue/0,2s On red

Normal mode	Colour	LED mode
Removed/Excluded	Blue	Mode 1
Added/Included	Green	Mode 1
Setting mode (with S button)		
Adding/Removing (Inclusion/Exclusion) menu selected	Blue	Solid
Adding/Removing (Inclusion/Exclusion) menu - while pressing S button - Adding/Removing (Inclusion/Exclusion) process selected	Blue	Mode 3
Factory reset menu selected	Red	Solid
Factory reset - while pressing S button - Factory reset process selected	Red	Mode 3
Setting in progress mode		
Factory reset and reboot	Blue / Red / Green	**
Adding/Removing (Inclusion/Exclusion)	Blue	Mode 2
Checking power supply 230 V AC frequency or 24 V DC voltage	Blue / Red	Mode 5
OTA firmware updating	Blue / Red	Mode 2
Alarm mode		
Over-current detected O	Red	Mode4(1x)
Overheat detected	Red	Mode4(2x)
Power supply fault (power supply 230 V AC frequency or 24 V DC voltage fault)	Red	Mode4(3x)

** The LED will turn solid green for about 1s, then the blue and red LED will start blinking in Mode 3 for approx. 2s.

OPERATIONAL INSTRUCTIONS

If the SW is configured as a switch (default), each toggle of the switch will change the output O state to the opposite state - on, off, etc.

If the SW is configured as a push-button in the Device settings, each press of the push-button will change the output O state to the opposite state - on, off, on, etc.

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)

SPECIFICATIONS

Power supply	110-240 V AC / 24–30 V DC
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	30 V
Max. switching current DC	10 A
Overheating protection	Yes
Overload 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 (frequency band(s))	< 25 mW
Size (H x W x D)	37x42x16 ±0.5 mm / 1.46x1.65x0.63 ±0.02 in
Weight	27 g / 0.95 oz.
Mounting	Wall console
Screw terminals max. torque	0.4 Nm / 3.5 lbf in
Conductor cross section	0.5 to 1.5 mm ² / 20 to 16 AWG
Conductor stripped length	5 to 6 mm / 0.20 to 0.24 in
Shell material	Plastic

NOTE: In case of Security 2 (S2) adding (inclusion), a dialog will appear asking you to enter the corresponding PIN code (5 underlined digits) that are written on the DSK label on the side of the Device and on the DSK label inserted in the packaging.

IMPORTANT: The PIN code must not be lost.

Removing (exclusion) with a switch/push-button:
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Factory reset with a switch/push-button:
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Mode 5	0,2s On blue/0,2s On red

Normal mode	Colour	LED mode
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Factory reset menu selected	Red	Solid
Factory reset - while pressing S button - Factory reset process selected	Red	Mode 3
Setting in progress mode		
Factory reset and reboot	Blue / Red / Green	**
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Checking power supply 230 V AC frequency or 24 V DC voltage	Blue / Red	Mode 5
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- Capacitive (capacitor banks, electronic equipment, motor start capacitors)
- Inductive with RC Snubber (LED light drivers, transformers, fans, refrigerators, air-conditioners)

SPECIFICATIONS

Power supply	110-240 V AC / 24–30 V DC
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	30 V
Max. switching current DC	10 A
Overheating protection	Yes
Overload 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 (frequency band(s))	< 25 mW
Size (H x W x D)	37x42x16 ±0.5 mm / 1.46x1.65x0.63 ±0.02 in
Weight	27 g / 0.95 oz.
Mounting	Wall console
Screw terminals max. torque	0.4 Nm / 3.5 lbf in
Conductor cross section	0.5 to 1.5 mm ² / 20 to 16 AWG
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