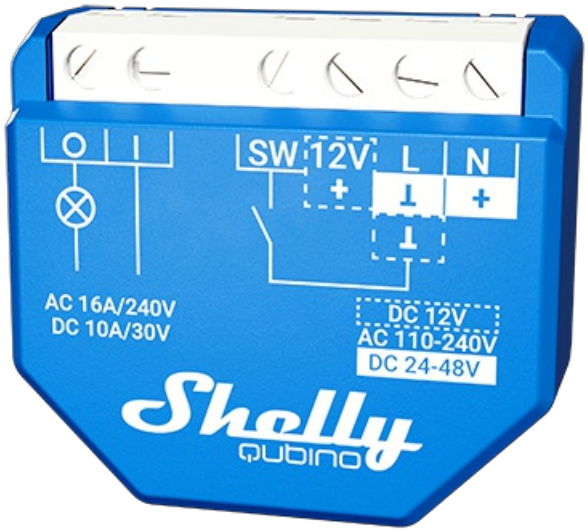
Wave 1 (EU)

***Note**: The product line known as "**Shelly Qubino Wave**" will now be referred to as "**Shelly Wave**". This name change will not impact the functionality of any devices. The only modification will be the use of the new name in all future documentation.*



Device identification

Device: Wave 1 (EU)
EU Part number/Ordering Code: QNSW-001X16EU
Z-Wave Product type ID: 0x0002
Z-Wave Product ID: 0x0083
Z-Wave Manufacturer: Shelly Europe
Z-Wave Manufacturer ID: 0x0460

Terminology

Device - In this document, the term "**Device**" is used to refer to the Shelly Qubino device that is a subject of this guide.
Gateway (GW) - 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, 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.

Short description

The Device controls on/off function for one electrical appliance, e.g., bulb, ceiling fan, IR heater, electrical locks, garage doors, irrigation system, etc. The output contact is potential-free (dry contact), so different power supply loads (up to 16 A) can be connected to the Device. It is compatible with push-buttons and switches (default).

Switch/push-button connected to input terminal SW (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.

Switch connected to input terminal SW (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.

Change switch position once: Change the state of the output O (O1) state to the opposite state and send the command to the associated devices in associated groups 2 and 3 (check chapter Z-Wave Association).

Switch-memory connected to input terminal SW (SW1)

If the SW (SW1) is configured as a switch-memory, than:

Switching to Close switch-memory contact: Change the state of the output state O (O1) to the On state and send command to the associated devices in associated groups 2 and 3 (check chapter Z-Wave Association)
Switching to Open switch-memory contact: Change the state of the output state O (O1) to the Off state and send command to the associated devices in associated groups 2 and 3 (check chapter Z-Wave Association)

Push-button connected to input terminal SW (SW1)

If the SW (SW1) is configured as a push-button in the Device settings, each press of the push-button changes the output state O (O1) to opposite - ON, OFF, ON, etc.

1x click: Change the state of the output state O (O1) to the opposite one and send command to the associated devices in associated groups 2 and 3 (check chapter Z-Wave Association)
2x click: If the delay between first in second click is less then 500ms, this is interpreted as double clik. Send command to the associated devices (dimmers, shutters,….) in associated groups 2 and 3 (check chapter Z-Wave Association)
Hold: Send command to the associated devices in associated group 3 (check chapter Z-Wave Association)
Release: Send command to the associated devices in associated group 3 (check chapter Z-Wave Association)

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

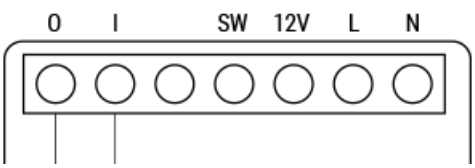
Integrations

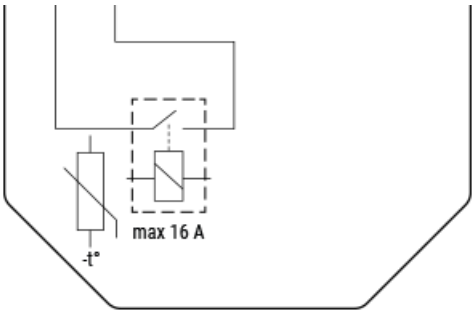
Shelly Qubino Wave devices are developed on the **world's leading technology for smart homes – Z-Wave**®.

This means Shelly Qubino Wave works with all **certified** gateways supporting Z-Wave communication protocol.

To make sure the functions of Shelly Qubino Wave products are supported on your gateway, we are regularly executing compatibility tests of our devices with different Z-Wave gateways.

Simplified internal schematics





Device electrical interfaces

Inputs

1 switch/push-button input on screw terminal

1 potential-free contact relay input on screw terminal

3 power supply inputs on screw terminals: N (+), L (⏚) and 12V

Outputs

1 potential-free contacts relay output on screw terminal

Connectivity

Z-Wave - Unsecure, S0 Security, S2 Unauthenticated Security, S2 Authenticated Security

Safety features

Overheat protection

switch off its own relay
sends the Notification Report to the Gateway (Overheat detected)
the led lights react as specified above (check blinking mode for Overheat detected)

Any of next activities reset this alarm: power cycle, short press on S button, press any switch-push button connected to any SW (SW, SW1, SW2, …) terminal.

NOTE: The Overheat protection is always active and cannot be disabled.
Additional description above under chapter **Notification for Overheat detected**.

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

S button and operating modes

Settings mode:

Is required to start the desired procedure, for example: adding (inclusion), removing (exclusion), factory reset, etc. It has a limited operating time.

After completing the procedure in Setting mode, the Device automatically switches to Normal mode.

Entering Setting mode:

Press and hold the S button on the Device until the LED turns solid blue.
An additional quick press on the S button changes the menu in an infinite loop.
The Menu LED status has a timeout of 10s before entering again into Normal mode.

S button's functions

Manually adding the Device to a Z-Wave network
Manually removing the Device from a Z-Wave network
Factory Reset the Device

LED Signalisation

Click to see the LED Signalisation

LED blinking modes

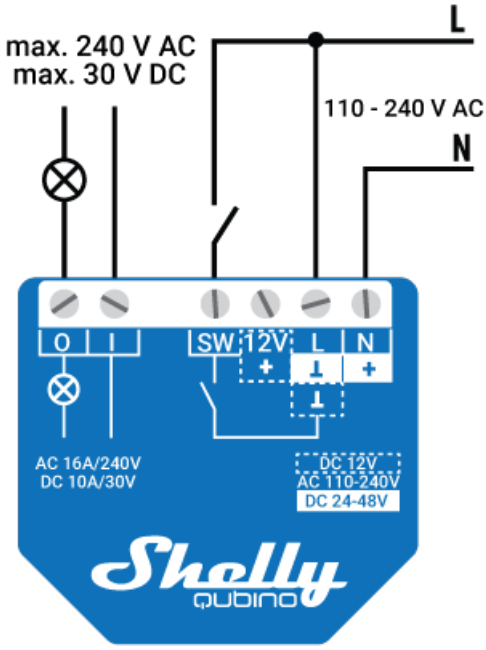
Click to see the LED blinking modes

Specifications

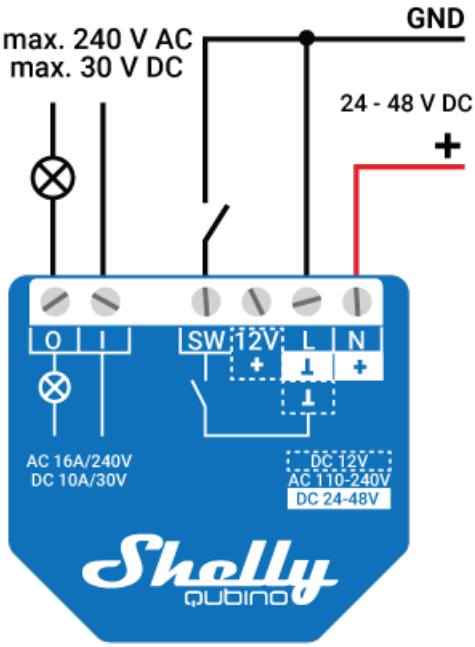
Power supply	110-240 V AC / 24-48 V DC / 12 V DC ± 10%
Power consumption	< 0.3 W
Max. switching voltage AC	240 V
Max. switching current AC	16 A
Max. switching voltage DC	30 V
Max. switching current DC	10 A
Overheating protection	Yes
Distance	Up to 40 m indoors (131 ft.) (depends on local condition)
Z-Wave® 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)	37x42x16 ±0.5 mm / 1.46x1.65x0.63 ±0.02 in
Weight	26 g / 0.92 oz.
Mounting	Wall console
Screw terminals max. torque	0.4 Nm / 3.5 lbin
Conductor cross section	0.5 to 1.5 mm² / 20 to 16 AWG
Conductor stripped length	5 to 6 mm / 0.20 to 0.24 in
Shell material	Plastic
Color	Blue

Ambient temperature	-20°C to 40°C / -5°F to 105°F
Humidity	30% to 70% RH
Max. altitude	2000 m / 6562 ft

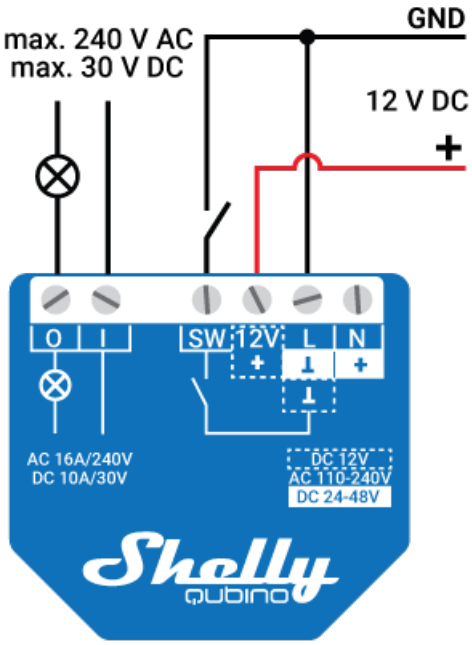
Basic wiring diagram



AC power supply



24 - 48 VDC power supply



12 VDC power supply

Installation Video Guidelines

Legend

Terminals		Cables	
N	Neutral terminal	**N**	Neutral wire
L	Live terminal (110–240 V AC)	**L**	Live (110 - 240 VAC) wire
SW	Switch/push-button input terminal (controlling O)	**+**	12 / 24 - 48 VDC positive wire
I	Load circuit input terminal	**GND**	12 / 24 - 48 VDC ground wire
O	Load circuit output terminal		
12V+	12 V DC positive terminal		
+	24 - 48 VDC positive terminal		
⏚	12 / 24 - 48 VDC ground terminal		

About Z-Wave®

Adding the Device to a Z-Wave® network (inclusion)

Click to see how to add, remove and reset the Device

Z-Wave® Security and Device Specific Key (DSK)

Click to see about the Security and the DSK

Z-Wave® Parameters

Click here to see the Z-Wave Parameters

Z-Wave® Command Classes

Click to see the Z-Wave Command Classes

Z-Wave® Notifications Command Class

Click to see the Z-Wave Notification Command Class

Z-Wave® Associations

Click to see the Z-Wave Associations

Z-Wave® Important disclaimer

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-level devices.

Troubleshooting

For troubleshooting please visit our support portal: Support

Compatibility

Wave 1	**functions - reports**		
Gateway	On/Off	SW On/Off	Notes
Home Assistant	✓	✓	
Fibaro HC 3 / Z-Wave engine 3	✓	✓	
Homey	✓	✓	
Homee Cube Gen 7	✓	✓	
Homee Cube Gen 5	✓	✓	
SmartThings	✓	✓	with the Shelly Wave edge driver

Jeedom	✅	✅
Hubitat	✅	✅
Notes		

Legend

Symbol	State
✅	Working / Possible
☐	Not Working / Not Possible
P	Partially
N/T	Not Tested
TBD	To be done

Function	Meaning
On/Off	tested if device respond to the app UI On/Off command
SW On/Off	tested if device reports On/Off changes by SW input
Watts	tested if Watts are reported (unsolicited)
kWh	tested if kWh are reported (unsolicited)
Up/Down	tested if device respond to the app UI Up/Down command
SW Up/Down	tested if device reports Up/Down changes by SW input
Slats	tested if the slats respond to the app UI command
SW Slats	tested if the slats report the changes done by SW

Gateway guides

You may find useful guides on gateways in the Z-Wave Shelly Knowledge base.

Compliance

Wave 1 multilingual EU declaration of conformity.pdf

Wave 1 UK PSTI ACT Statement of compliance.pdf

Printed User Guide

Wave_1_multilang_2023_print_V11.pdf