ZLINK
Connecting Things That Matter

Z WAVE PLUS
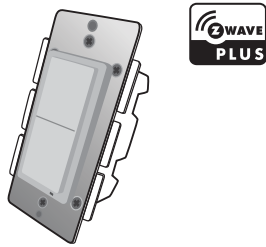
WS-100
In Wall Switch

This product speaks with other Z-Wave certified devices

INTRODUCTION

ZLINK's WS-100 is a Z-Wave Plus certified device with S2 security and SmartStart features. You can now add this device securely and with ease using QR code on the product with compatible gateways supporting S2 and Smart Start. ZLINK WS-100 replaces a standard in-wall light switch turning it into a Z-Wave controlled network device with manual and remote ON/OFF control. ZLINK WS-100 supports "Instant Feedback" of manual status to compatible gateways as well as Central Scene to allow setting multiple scene control throughout the home, with gateways supporting Central Scene. Each Z-Wave device serves as a node to repeat the signal in the network, thus, extending the overall Z-Wave mesh wireless network range. For more information on this and other quality ZLINK Products please visit www.ZLINKProducts.com

FEATURES

• Power 120 VAC, 60Hz, up to 1800 watts
• Region US: 908.4, 916 MHz
• Works with incandescent, CFL & LED lights
• Remotely or manually turns ON or OFF lights
• Fits standard wall plates (wall plate not included)
• Works with any certified gateway supporting Z-Wave
• Please find the QR code label with DSK on the front metal yoke of the device

RISK OF FIRE, ELECTRICAL SHOCK & BURNS
DO NOT USE WITH MEDICAL AND LIFE SUPPORT INSTRUMENT
No user serviceable parts are in this module
The appliance connected to WS-100 must not exceed 900W incandescent, 200W CFL/LED, ½ horsepower motor and 15A, 1800W resistive load.

IMPORTANT: WS-100 requires LINE, NEUTRAL and LOAD wires for every installation

SETUP

**Step 1** **WARNING! RISK OF SHOCK! Make sure power is OFF in the circuit before wiring!**

Step 2 Identifying the wiring terminals on the module

LINE (Hot) - Black (connected to power)
NEUTRAL - White (this wire is often tied to other neutral wires and may require the included jumper cable to connect with WS-100)
LOAD - Black (usually tied closely to Traveler wire)
TRAVELER — Red/Other (only used in 3-way circuits)
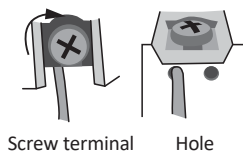GROUND — Green or Bare

wire hole Traveler (Red/Other) Neutral (White)

Ground (Green/Bare) Load (Black) Line (HOT) (Black)
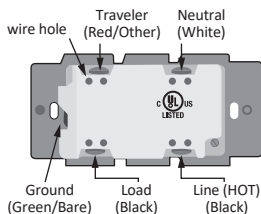
Step 3 Remove the wall plate and the existing switch (if mounted) at your preferred installation location. You should label the wires connected to the screw terminals before disconnecting the switch. Please check that the wiring configuration to the right is present in the wall switch box, otherwise consult a qualified electrician.

4 wires for 2-way circuit
5 wires for 3-way circuit
1. Line(Hot) - Black
2. Neutral - White
3. Ground – Green or bare
4. Traveler (for 3-way) – Red or other
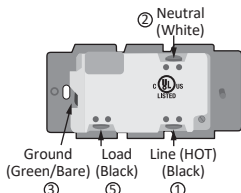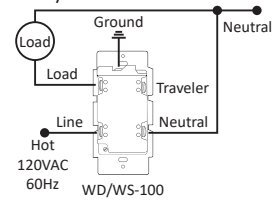5. Load - Black
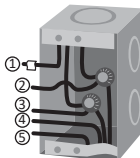
Wiring Information

Use copper wires only. UL specification: the tightening torque for the screws is 14 Kgf-cm (12 lbf-in)
Strip insulation 5/8" (16mm)
Wire connection can be made either to Screw terminal or Hole. A 14 gauge wire can use hole or screw terminal, all other gauges must use screw terminal.

Screw terminal   Hole

Making Connections

2-Way circuit

Load Ground Neutral
Load
Traveler
Line Neutral
Hot 120VAC 60Hz
WD/WS-100

3-Way circuit
WA-100 companion switch required

Load Ground Ground Neutral
Load Traveler Traveler
Line Neutral Neutral
Hot 120VAC 60Hz
WD/WS-100   WA-100

② Neutral (White)

Ground (Green/Bare) ③ Load (Black) ⑤ Line (HOT) (Black) ①

The Traveler terminal is not used in a 2-way circuit. Do not remove the insulation tape on the Traveler terminal in this application.

④ Traveler (Red/Other) ② Neutral (White)

Ground (Green/Bare) ③ Load (Black) ⑤ Line (HOT) (Black) ①
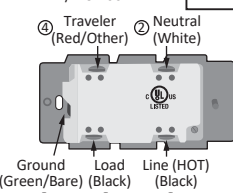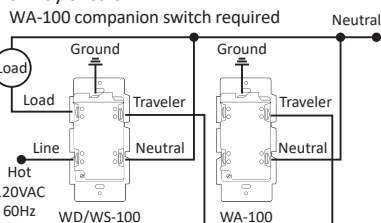
Please refer to WA-100 user manual for wiring instructions of the auxiliary switch. The maximum length of Traveler wire may not exceed 200ft.

Gang Box

To install the WS-100 in a multi-gang or J box, the tabs on the sides of the metal yoke may need to be removed. For single gang switch, no changes should be required. For dual or higher gang configuration where switches are next to each other, the tabs need to be removed. Simply take a pair of pliers, grab the tabs and wiggle until the tabs break off.
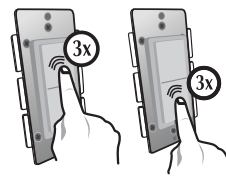
Step 4 When proper wiring is completed, secure the device to the wall box. Restore power to the circuit to test if the connected lighting can be turned ON or OFF manually by the rocker on the device before remounting the wall plate. Also observe the status change of the LED indicator to ensure the device is in normal operating mode. If WA-100 Auxiliary Switch is used for a 3-way connection, please also test if it can control the lighting.

Step 5 Add(Include) the device into your network by a Z-Wave certified controller. Please refer to the controller's instructions manual for details. Normally, this requires putting your controller software in Add New Device (inclusion) mode. When this process is initiated in the controller software, single click and release the rocker switch. The controller software should indicate that the action was successful. If the controller shows it was a fail, repeat the procedure.

Manual Reset

Note: If Inclusion still fails after the 2nd attempt, you need to first reset the device before repeating the above steps. The manual reset method is as follows:
1. Turn the connected lighting ON with the rocker
2. Quickly tap the top paddle 3 times then the bottom 3 times
If you see the lighting turns OFF and then ON, it means that the device has been reset successfully and you may retry Step. 5 above to add the device into your network. Otherwise, please repeat the manual reset procedures.
Use the manual reset procedure only in the event that the network primary controller is lost or otherwise inoperable.

BASIC OPERATION

The connected lighting can be controlled manually with a rocker
OR Wirelessly with a remote controller

ON   OFF
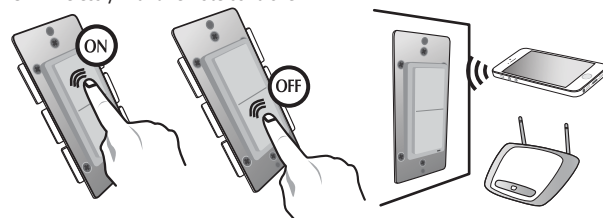
A Z-Wave certified controller is capable of setting up ZLINK products in your desired network. Once the device is added, you may assign it to a Group. Furthermore, it can be set in Association with another Z-Wave device to perform a specific triggered function such as turning lights on when motion is detected. Please refer to the instructions manual of your controller for details and procedures on how these settings can be done.

In the event of a power failure, the ZLINK device will return to the last setting after the power is restored.

About the rocker switch:
Turn the connected appliance ON/OFF by tapping the switch. Tapping and releasing the upper part of the rocker turns the appliance ON. Tapping and releasing the lower part of the rocker turns the appliance OFF.

You may also manually turn off LED with the rocker switch by the following procedure.

Quickly press the top (ON) rocker switch 2x and the bottom (OFF) of the rocker 2x. If successful, the LED indicator will always be OFF regardless of the load status. Repeating the procedures above restores the factory default.

2x → 2x
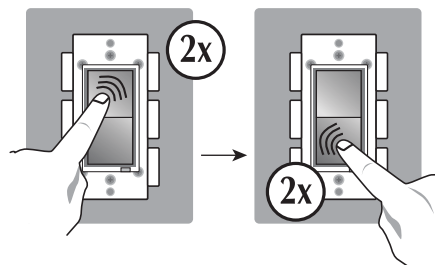
ADVANCED CONFIGURATION

Configurable Parameter Settings: If your controller supports Z-Wave configurable parameters, the following settings can be modified.

#	Description	Values	Default	Bytes
	Parameters			
3	Nightlight	When value = 0, the LED indicator will be OFF when the connected appliance is ON, and the LED indicator will be ON when the connected appliance is OFF. If value = 1, the LED indicator will be OFF when the connected appliance is OFF, and the LED indicator will be ON when the connected appliance is ON. If value = 2, the LED indicator will be always OFF regardless of the load status.	0	1
4	Inverting orientation of the ON/OFF on the rocker	Value= 0, the connected light will turn ON by pressing the top rocker Value= 1, the connected light will turn ON by pressing the bottom rocker	0	1

Depending on the capability of your controller or gateway software, the following simple to advanced operations can be performed. Please refer to the controller's or gateway manual for details.

Association:
1. WS-100 supports group one for lifeline communication.
2. You can associate up to five Z-Wave devices to group one.
3. Lifeline association only supports the "manual reset" event.
4. For instructions on how to "set lifeline associate", please refer to your controller/ gateway instructions.

Scene and Central Scene

WS-100 supports standard Z-Wave Scene control commands if supported by your controller. For example, double tapping the top or bottom paddles can create different scenes. Refer to user guide of your controller on how this works.

In addition, Z-Wave Plus introduced a new process for scene activation called "Central Scene Control". Press and release the button, it will send a certain command to the central controller via the lifeline association group 1. This allows the controller to react to key pressed, key released and key held down.

- Press and release the top button, Scene 1 preset by the Gateway will be turned ON.
- Press and release the bottom button, Scene 2 preset by the Gateway will be turned ON.

Again, this new feature needs to be supported by your controller in order to enjoy the benefits of this new function. Please consult your controller manufacturer.

SPECIFICATIONS

Model	ZL-WS-100
Input power	120 VAC, 60 Hz.
Max output loading	900W incandescent, 200W CFL/LED, ½ horsepower motor and 15A, 1800W resistive load.
Radio frequency	908.4/916 MHz.
Wireless range	up to 100ft line of sight between the controller and the other available nodes.
Normal operating temperature	77°F (25°C)
FOR INDOOR USE ONLY	

Interoperability with Z-Wave devices

A Z-Wave network can integrate devices from various classes of products, and these devices can be made by different manufacturers. The ZLINK product introduced in this instructions manual has a Z-Wave certification which allows such an interoperability.

IMPORTANT Your Z-Wave device has a unique Device Specific Key (DSK) on the product and packaging that is required to add or re-add the device to a network with a controller supporting Security 2 (S2). Be sure to save the DSK code for each device and store in a safe place. Do not remove the DSK from the product. Take a photo of the full DSK code on the packaging or write the full code here:

_____

Installation Date:_____

Device Location:_____