Z-Wave In-Wall Dimmer Switch

• ZW315 •

switch x1

wiring x1

Z-WAVE INTEROPERABILITY

This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase the reliability of the network.
This Device supports Lifeline (association group 1) supporting 1 node for lifeline communication.
Group 1 must be assigned the Node ID of the primary controller where unsolicited notifications will be sent. The Z-Wave controller should set this association automatically after inclusion.
Lifeline association only supports the "Device Reset Locally" function. Refer to the instructions of your controller for any available details on how this can be set.

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Part 1. Introduction

Basic Operation
The connected light can be turned ON/OFF in two ways:
1. Manually from the front panel of the In-wall Switch
2. Remotely with a Z-Wave Controller

Manual Control
The Front Panel Paddle Switch allows the user to:
Turn ON/OFF the connected fixture

Air-Gap Switch:
The "air gap switch" will cut power to the device if it's pulled up. It's located right below the main switch itself, often next to the LED. Pull up for Bulb replacement, push down for normal use.

CHANGING THE COLOR OF THE PADDLE(OPTIONAL)
This step is optional. Before you start you may want to change the color of the paddle to match your wallplate or decor.
1. Push side tabs in on one side and then the other to release paddle. Lift the cover up and off.
2. Simply put the new paddle onto the switch by side tabs and snap securely into place.Once this step has been completed please proceed to part 2 wiring.

Model: ZW315
Power: 125VAC, 60Hz
Frequency: 908.42 MHz
Maximum Load: 150W LED, 500W incandescent (300W with both sides of heat sink tabs off)
Minimum Load: 5W for LED bulbs
Range: Up to 100 feet line of sight Operating
Temperature Range: 32-104° F (0-40° C)

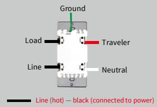
For indoor use.

Specifications subject to change without notice due to continuing product improvement
Approval: Z-Wave Plus Certified

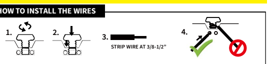
A Few Quick Reminders

A quick note before we give out the wiring schematics. Please do not try installing this device if you are unsure of how electrical circuits operate within your home. As exciting as it is to have a smart switch installed, it can be dangerous and even life-threatening if you do not install this correctly. Please consult a qualified electrician if necessary. With that said, here are a few other warnings we'd like to point out for your safety:

HOW TO INSTALL THE WIRES



- Line (hot) — black (connected to power)
- Neutral — white
- Load — black (connected to lighting)
- Traveler — red/other (only in 3-way installations)



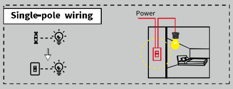
1. Unscrew: carefully turn the screw counterclockwise to leave enough space for the wire to be inserted. Do not unscrew the screws completely.
2. Press down: Once loosened, use your finger so it catches the thread.
3. Insert the wire: make sure the wire is completely straight, then insert it into the terminal while holding down the screw. Do not wrap the wire around the screw!
4. Tighten: Turn the screw clockwise to tighten the wire. Make sure the wires are locked!
Note: There are 2 holes for each terminal can be used in the connection.You can use a jump wire or the second hole at the terminal to connect.

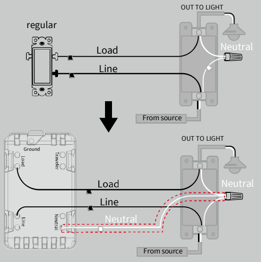
Note before installation

1) The Z-Wave In-wall Smart Switch must not exceed **150W LED, 500W** incandescent.
2) Work with **regular 3-way on/off** for 2 locations control. It can only be connected with regular 3-way on/off switch, **don't use a smart switch or a dimmer switch! Couldn't work with an add-on switch!**
3) The colors of your wires may not match the ones in our diagrams so please make sure you've **identified all wires correctly** based on their source, not color only.
4) Please check your original 3-way wiring circuit in your home before installation, and then **follow the wiring diagram option 1 or 2** in the manual.
5) Install the smart switch in the switch box which directly connects to the power **Line and Neutral.**
6) This switch **requires a Neutral for installation**, or the installation will not succeed.
7) Not recommended for fan.

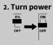
Part 2. Wiring Diagram

Single-pole wiring

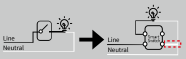




1. **Tool:** Please prepare a flat head screwdriver.
2. **Turn power OFF at circuit breaker or fuse box.**



3. **Remove wallplate.**
4. **Remove the switch mounting screws.**
5. **Carefully remove the switch from the switch box.** (DO NOT disconnect the wires.)
6. **There are up to five screw terminals on the smart switch, these are marked** (Please check **<HOW TO INSTALL THE WIRES>**)
7. **Fix the wallplate with screws after wiring succeed.** (Please use our screws.)
8. **The Ground was excluded from the diagram to simplify the illustration.** Please Make sure all ground wires are connected to all switches respectively.

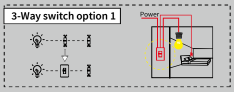


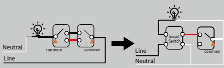
IMPORTANT

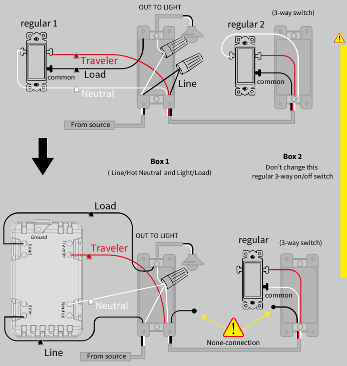
1) **Neutral required**. If the box do not have a Neutral, please stop! Connect the **white wire to neutral terminal**(use a white jump wire form the package or the second hole at the terminal to connect.)

2) Insert the Line wire to Line terminal and Load wire to Load terminal. **LOAD and LINE Can't be swapped**, please make sure to identify them correctly!

3-Way switch option 1







Box 1
(Line/Hot Neutral and Light/Load)

Box 2
Don't change this regular 3-way on/off switch

IMPORTANT

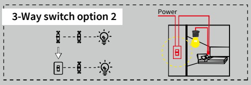
1) **Neutral required.** If the switch box do not have a Neutral, please stop! Connect the **white wire to neutral terminal** (use a white jump wire form the package or the second hole at the terminal to connect.)

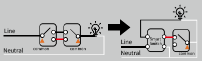
2) Insert the Line wire to Line terminal and Load wire to Load terminal. **LOAD and LINE Can't be swapped,** please make sure to identify them correctly!

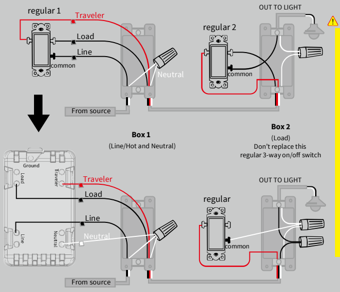
3) Install the smart switch in the switch box which directly connects to the power **Line, Load and Neutral.**

4) Only work with **regular 3-way on/off** for 2 locations control. It can only be connected with regular 3-way on/off switch, **don't use a smart switch or a dimmer switch! Couldn't work with an add-on switch!**

3-Way switch option 2







Box 1
(Line/Hot and Neutral)

Box 2
(Load)
Don't replace this regular 3-way on/off switch

IMPORTANT

1) **Neutral required.** If the switch box do not have a Neutral, please stop! Connect the **white wire to neutral terminal** (use a white jump wire form the package or the second hole at the terminal to connect.)

2) Insert the Line wire to Line terminal and Load wire to Load terminal. **LOAD and LINE Can't be swapped,** please make sure to identify them correctly!

3) Install the smart switch in the switch box which directly connects to the power **Line and Neutral.**

4) Only work with **regular 3-way on/off** for 2 locations control. It can only be connected with regular 3-way on/off switch, **don't use a smart switch or a dimmer switch! Couldn't work with an add-on switch!**

Part 3. Network Configuration

Adding Device To Z-Wave Network:

1. Follow the instructions for your Z-Wave certified controller to add a device to the Z-Wave network.
2. Once the controller is ready to add your device, **press the "down" button on the swtich 3 times quickly.**
   The blue LED will blink quickly.
   Now, you have complete control to turn your fixture ON/OFF or set dim levels according to groups, scenes, schedules and interactive automation programmed by your controller. If your Z-Wave certified controller features remote access, you can control your fixture from your mobile devices.
   Again: If you have issues with pairing/including, please move the hub as close as possible to the deviceand try again.
   Note: If the Blue LED indicator doesn't light up after pressed the "down" button 3 times, please reset the device: **click the button 2 times quickly then hold for at least 10 seconds.** This operation could be done when manual control is functional--single press can turn on/off the light.

This Z-Wave device is equipped Smart Start feature. With SmartStart, the device is able to recognize and connect with the hub with a quick app scan of its QR code.
Please check the QR code on the device. Or you can find the complete DSK code on the box.
Keep the box well in case you need it.

To Remove The Device:

1. Follow the instructions for your Z-Wave certified controller to remove a device from the Z-Wave network.
2. Once the controller is ready to remove your device, press the "down" button on the swtich 3 times quickly.

To Return The Device To Factory Defaults:

Manual: Click the swtich button 2 times quickly then hold for at least 10 seconds.
Host reset: Remove it from the host connection and the device will factory reset.
Note: This should only be used in the event your network's primary controller is missing or otherwise inoperable.

Works with Alexa & Google Assistant
It must be connected to a supported hub in order to interact with the Amazon Alexa / Google Home services.

Association Group:

(LED flashes 2 times when the configuration parameter changed.)
Group 1 supports 5 node ID,
Group 2 Supports maximum of 5 node ID's
Association group_1: Z-Wave Plus Lifeline
Association Group 2: Send Basic Set ON / Off

Part 4. Manual Control

Operation	LED Status	Switch
Press down	On (blue)	Power off (default)
Press up	Off (blue)	Power on (default)
Hold	/	Dimmer up or dimmer down
Press 2x quickly	/	Send scene 1 / scene 2
Press 3x quickly (see below)	Green LED solid 2 seconds	Inclusion or exclusion success
	Red LED solid 2 seconds	Inclusion or exclusion fail
Press "down" 10x quickly	Green LED flash 3 times (configuration success) OR Red LED flash 3 times (configuration fail)	Change led status
Press "up" 8x quickly		Change locally button function
Press "down" 8x quickly		Restores state after power failure
Tap-tap then hold 10 seconds	Purple LED flash	Factory reset start
	Purple LED solid 2 seconds	Factory reset finish
Press "up/down" 5x quickly	Orange LED flash	Max/Min brightness level setting

Minimum Brightness Value Setting
1: Press the **"down"** button 5 times quickly, the blue indicator flashes slowly. The bulb will dim to the minimum brightness automatically.
2: Press and hold the **"up or down"** button to adjust the brightness of the bulb, and select the appropriate brightness to set the minimum brightness.
3: After selecting, press the **"down"** button 5 times to confirm.
4: The minimum brightness setting is completed.

Maximum Brightness Value Setting
1: Press the **"up"** button 5 times quickly, the blue indicator flashes slowly. The bulb will bright up to the maximum brightness automatically.
2: Press and hold the **"up or down"** button to adjust the brightness of the bulb, and select the appropriate brightness to set the minimum brightness.
3: After selecting, press the **"up"** button 5 times to confirm.
4: The maximum brightness setting is completed.

Part 5.Parameter Settings

- **Locally Button function**
  This parameter can access you to set the up button to turn the light on/off, or if you'd like any paddle to change the state of the light.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Operation: Quickly press the switch "up" button 8 times(Please note: the switching of each value is in order, a quick press on the "up" button 8 times will switch once. eg: Switching from value 0 to value 2 needs 2 switching.)
  Parameter =1 Size=1
  Value=0 (Default)The up button turn the light on and down button turn lights off.
  Value=1 ——— The up button turn the light off and down button turn lights on.
  Value=2 ——— The up/down button both can changes the state of the light.
- **LED Indicator**
  This parameter can access you to choose the led indicator to be on when the switch(light) is on/off, or LED indicator remains on/off all times.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Operation: Quickly press the switch "down" button 10 times(Please note: the switching of each value is in order, a quick press on the "down" button 10 times will switch once. eg: Switching from value 0 to value 3 needs 3 switching.)
  Parameter=2, Size=1, Default =0
  Value=0 (default) LED is On when the switch(light) Off and LED is Off when the switch (light) On.
  Value=1 ——— LED is On when switch(light) On and LED is Off when the switch(light) Off.
  Value=2 ——— LED is always Off.
  Value=3 ——— LED is always On.
- **Auto Turn-Off Timer**
  This parameter can access you to set a timer to make the switch turn off automatically after the switch turned on.The numberentered as value corresponds to number of minutes.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Operation: Set up on the hub.
  Parameter=4, Size=4, Default =0(minutes)
  Values: 0 – 65535 (minutes);
- **Auto Turn-On Timer**
  This parameter can access you to set a timer to make the switch turn on automatically after the switch turned off.The numberentered as value corresponds to number of minutes.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Operation: Set up on the hub.
  Parameter=6, Size=4, Default =0(minutes)
  Values: 0 – 65535 (minutes);
- **Restores state after power failure**
  This parameter can access you to set the switch to be on/off after power failure.
  Operation: Quickly press the switch "down" button 8 times (Please note: the switching of each value is in order, a quick press on the "down" button 8 times will switch once. eg: Switching from value 0 to value 2 needs 2 switching.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Parameter=8, Size=1, Default =2
  Value=0 ——— The switch is off regardless of the state prior to power failure.
  Value=1 ——— The switch is on regardless of the state prior to power failure.
  Value=2(default) memory state before power failure
  This switch will be return to state prior to the power failure after power is restored.
- **Dimmer speed (ON/OFF Control)**
  This parameter can access you to set the time from maximum brightness to minimum brightness or minimum brightness to maximum brightness (Only when turn ON/OFF the light)
  Operation: Set up on the hub.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Parameter=9, Size=1, Default = 2
  Value=1 ——— from 0x63 to 0x00 or from 0x00 to 0x63 need 1s
  Value=2 ——— from 0x63 to 0x00 or from 0x00 to 0x63 need 2s
  ..
  Value=10 from 0x63 to 0x00 or from 0x00 to 0x63 need 10s
- **Dimmer speed (only for local press & hold)**
  This parameter can access you to set the time from maximum brightness to minimum brightness or minimum brightness to maximum brightness.
  (Only when hold to change the brightness or control from HUB).
  Operation: Set up on the hub.
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Parameter=10, Size=1, Default = 4
  Value=1 ——— from 0x63 to 0x00 or from 0x00 to 0x63 need 1s
  Value=2 ——— from 0x63 to 0x00 or from 0x00 to 0x63 need 2s
  ..
  Value=10 ——— from 0x63 to 0x00 or from 0x00 to 0x63 need 10s
- **Multilevel minimum value can be set**
  This parameter can access you to set Min brightness level setting
  Operation: Quickly press the switch "down" button 5 times
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  -Parameter=11, Size=1, Default = 10
  Value=0 ——— disable
  Value=1
  ..
  Value=99
- **Multilevel maximum value can be set**
  This parameter can access you to set Max brightness level setting
  Operation: Quickly press the switch "up" button 5 times
  (GREEN LED flashes 3 times when the configuration parameter changed.)
  Parameter=12, Size=1, Default = 99
  Value=0 ——— disable
  Value=1
  ..
  Value=99
- **Association Group:**
  Group 1 supports 1 node ID,
  Group 2 Supports maximum of 5 node ID's
  Association group_1: Z-Wave Plus Lifeline
  Association Group 2: Send Basic Set ON / Off
- **Locally Button Press function:**
  1: press 1x: turn output ON (to last set brightness level) or OFF
  2: hold: dimmer up or dimmer down relate to Parameter 1
  3: quickly press 2x: send scne1/scene2
  4: quickly press 3x: inclusion or exclusion
  5: quickly press down 5x: Set the minimum brightness
  6: quickly press up 5x: Set the maximum brightness
  7: quickly press down 10x: change LED indicator
  8: quickly press up 8x: change locally button function
  9: quickly press down 8x: change restores state after power failure
  10: Factory reset: click Z-Wave button 2 times quickly, and hold for at least 10 seconds.

Generic Device Class:
0x11– GENERIC_TYPE SWITCH_MULTILEVEL
Specific Device Class:
0x01–SPECIFIC_TYPE POWER_SWITCH_MULTILEVEL
Command Classes:
0x5E - COMMAND_CLASS_ZWAVEPLUS_INFO
0x26 - COMMAND_CLASS_SWITCH_MULTILEVEL
0x85 - COMMAND_CLASS_ASSOCIATION
0x8E - COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
0x59 - COMMAND_CLASS_ASSOCIATION_GRP_INFO
0x55 - COMMAND_CLASS_TRANSPORT_SERVICE
0x86 - COMMAND_CLASS_VERSION
0x72 - COMMAND_CLASS_MANUFACTURER_SPECIFIC
0x5A - COMMAND_CLASS_DEVICE_RESET_LOCALLY
0x73 - COMMAND_CLASS_POWERLEVEL
0x70 - COMMAND_CLASS_CONFIGURATION
0x5B- COMMAND_CLASS_CENTRAL_SCENE
0x9F - COMMAND_CLASS_SECURITY_2
0x6C - COMMAND_CLASS_SUPERVISION
0x7A - COMMAND_CLASS_FIRMWARE_UPDATE_MD

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

CONTROLLING APPLIANCES

Please exercise EXTREME CAUTION when using Z-Wave devices to control appliances. Reason being is because the appliance you want to control may be in a separate room and if unintentional behavior occurs (such as a device turning on or off - either intentionally via schedules, or unintentionally via network error) this event may lead to a hazardous condition. For these reasons, please note the following suggestions:
1) Do not include Z-Wave devices in Groups or Scenes if they control appliances.
2) Do not use Z-Wave devices to control electric heaters or any other appliances which may present a hazardous condition due to unattended, unintentional, or automatic power control.

CAUTION - PLEASE READ!

This device is intended for installation in accordance with the National Electric Code and local regulations in the United States, or the Canadian Electrical Code and local regulations in Canada. If you are unsure or uncomfortable about performing this installation consult a qualified electrician.

WARNING - SHOCK HAZARD

TURN OFF THE POWER to the circuit for the switch and lighting fixture at the service panel (circuit breaker) prior to installation.

ALL WIRING CONNECTIONS MUST BE MADE WITH THE POWER OFF to avoid personal injury and/or damage to the switch.

OTHER WARNINGS

Risk of Fire
Risk of Electrical Shock
Risk of Burns

MEDICAL EQUIPMENT

Please DO NOT use this switch to control Medical or Life Support equipment. Z-Wave devices should never be used to control the On/Off status of Medical and/or Life Support equipment.

WARRANTY

Our Products warrants this product to be free from manufacturing defects for a period of one year from the original date of consumer purchase. This warranty is limited to the repair or replacement of this product only and does not extend to consequential or incidental damage to other products that may be used with this product. This warranty is in lieu of all other warranties, expressed or implied. Some states do not allow limitations on how long an implied warranty lasts or permit the exclusion or limitation of incidental or consequential damage, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

V1.0 2020.12

Part 6. Troubleshooting

Possible Problem	Possible Cause	Solution
1. The connected LED is flashed/too bright when set it to the Minimum brightness level.	LED brightness minimum setting is incorrect.	Please set the minimum brightness level according to the manual.
2. Couldn't pair with hub/your hub cannot recognize the device.	The device needs to be resetted before pairing.	Please reset the device according to the manual.
3. The device couldn't trun lights on/off manually.	Wiring error	Please check the wiring diagram on the manual.
4. The smart switch is working and the 3-way switch does not.	3-way Wiring error	Please check the wiring diagram on the manual.