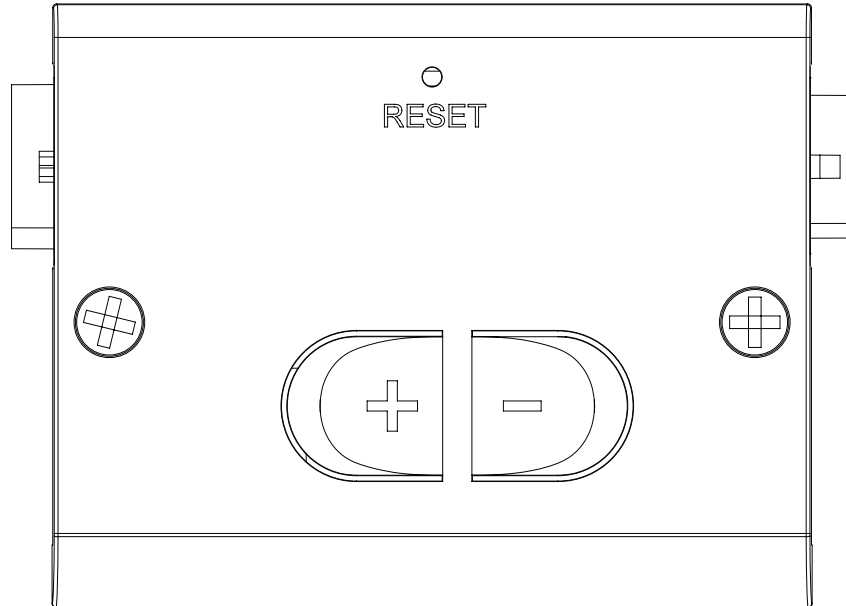# INSTRUCTION MANUAL
Z-WAVE DIMMER – 12387

RESET

+   −

KICHLER®

Z-Wave® DIMMER BASICS

The Kichler Z-Wave® full range dimmer is designed to allow your Kichler Design Pro LED fixtures to communicate with one another as well as to be added to an already existing Z-Wave network.

To begin using Z-Wave technology, it is helpful to understand that each Z-Wave dimmer communicate with each other using a low power radio transmitter and receiver. Large metal objects, house wiring, walls, furniture, refrigerators, microwaves and similar items can interfere with communication between the modules to reduce the range or even prevent communication. Therefore, placement of the Z-Wave dimmers is very important.

It is also important to understand that a Z-Wave network can have only one primary controller. The primary controller establishes the network identification number so that your network will not operate your neighbor's network and vice-versa.

The 12387 Z-Wave dimmer works with Z-Wave products from different vendors and product categories as part of the same network. This product is a listening node and will act as a repeater in a Z-Wave network. It will perform the repeater function with Z-Wave products from Kichler and from other Z-Wave vendors.

FCC and IC COMPLIANCE STATEMENT

Warning: Changes or modifications to this device not expressly approved by HomeRun Holdings Corp. could void the user's authority to operate the equipment.

FCC REGULATORY STATEMENTS

"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."

INDUSTRY CANADA REGULATORY STATEMENTS

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users the antenna type and its gain should be chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than necessary for successful communication.

This device complies with Industry Canada license-exempt RSS standard(s). 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.

GLOSSARY

Dimmer – Kichler Lighting's Z-Wave® dimmer module, 12387BK/WH

Primary dimmer – The first dimmer used to set up your Z-Wave network and associations.

Note: Only the primary dimmer can be used to include or delete additional dimmers from a network.
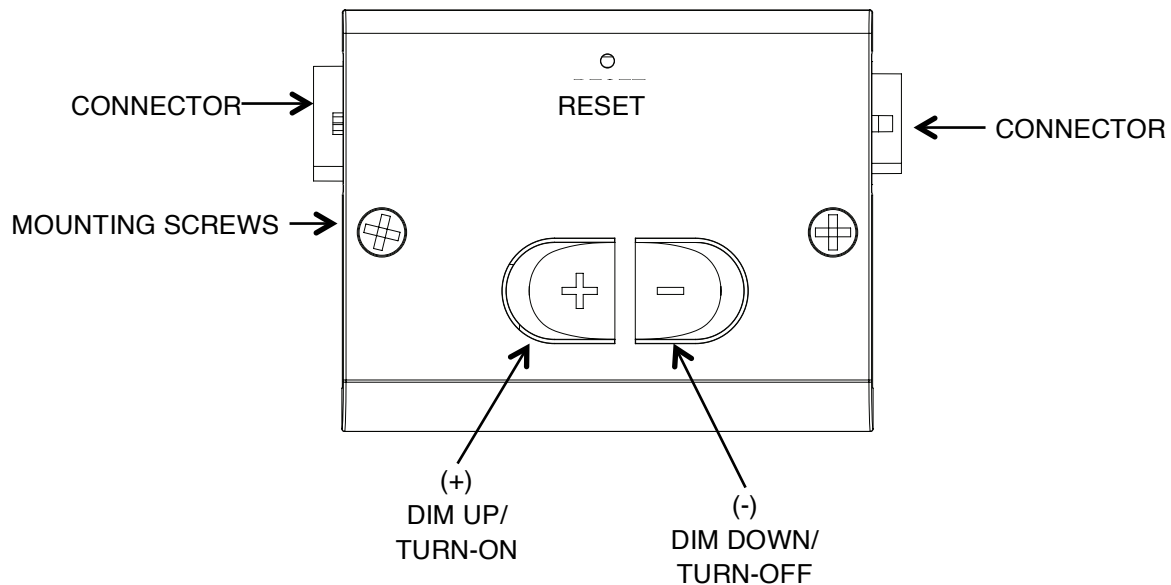
Secondary – Any dimmer that is set up after the primary dimmer. Secondary dimmers cannot include or delete other dimmers to the network.

Fixture – Any light unit that is connected to a dimmer.

Exclude – Remove a dimmer from a network.

Include – Add a dimmer to a network.

Network – A collection of devices controlled by primary and secondary controllers or dimmers operating on the same system. Each network has its own unique identification code so that no one else can control the system.

CONNECTOR

RESET

CONNECTOR

MOUNTING SCREWS

(+)
DIM UP/
TURN-ON

(-)
DIM DOWN/
TURN-OFF

Before Installing:
- Read all instructions thoroughly before starting installation.
- All installations should comply with National and local electrical codes.
- If you have any doubts concerning installation, contact a qualified, licensed electrician.
- If possible, it is recommended to do any programming of the dimmer modules prior to installation.
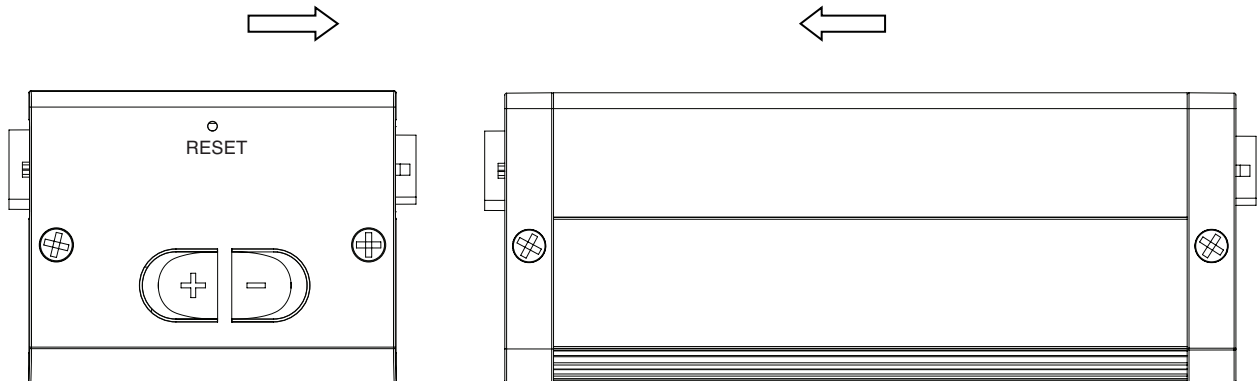
NOTE:
- The Z-Wave® dimmer can be directly mounted to a Kichler LED fixture OR installed in-line using a Kichler LED interconnect cable.
- The dimmer can be connected between any two fixtures or at either end of a connected run of fixtures.
- For use only with Kichler LED 24VDC Class 2, 5 AMP MAX Lighting fixtures and accessories.

INSTALLING Z-WAVE DIMMER DIRECTLY TO FIXTURES
1) Align connector on end of dimmer with connector on end of fixture.
2) Push dimmer to fixture until the fixture and the dimmer are flush and connectors snap together.
3) Drive pre-installed screws into mounting surface until fixture is secure. If screws are difficult to install, remove screws, mark holes, and drill 1/16" pilot holes.

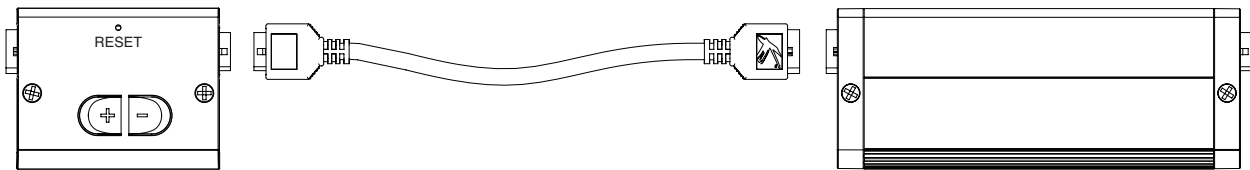**NOTE:** DO NOT OVER TIGHTEN SCREWS.

INSTALLING Z-WAVE DIMMER IN-LINE USING INTERCONNECT CABLES

1) Determine best location for dimmer.
2) Drive pre-installed screws into mounting surface until fixture is secure. If screws are difficult to install, remove screws, mark holes, and drill 1/16" pilot holes. DO NOT OVER TIGHTEN SCREWS.
3) Select proper length interconnect cable, P/N 12341 (9"), 12342 (14"), 12343 (21") or 12345 (10').
4) Hold interconnect cable to mounting surface and determine best path for cable. If interconnect cable is being run from cabinet to cabinet a notch such as a "V" could be cut in cabinet side panels to help keep cable out of sight.

NOTE: Interconnect cable is UL rated Class 2. Installer should check with local building codes to determine if Class 2 wire is allowed to run through floors, walls and ceilings.

5) Peel backing off retaining clip(s) and affix to desired location(s). Surface should be as clean as possible.
6) Drive pre-installed screw into the cabinet surface to secure the retaining clip to the surface.
7) Slip Cable into clip(s) and snap closed.

Z-WAVE DIMMER SETUP

Kichler's 12387 Z-Wave full range dimmer can be used in a variety of ways to meet individual needs and installations. The dimmers can be used independently, connected to other 12387 dimmers, connected to a 12388 Z-Wave wall dimmer, or added to an already existing Z-Wave network.

Determine how the system will be used from the set-up options below, and follow the instructions in that section.

Set Up Options

Option 1 - One dimmer on one fixture, or one set of fixtures.
This option will be used for dimming a single fixture or group of fixtures that are connected to each other. Using this option will not allow the use of wireless dimming.

Option 2 - Controlling one set of fixtures with two dimmers.
This option will allow multiple dimmers to work together on one group of fixtures.

Option 3 - Controlling two separately powered fixtures or sets of fixtures.
This option will allow two groups of fixtures that are powered separately to work in unison using either dimmer.

Option 4 - Multiple, separately powered fixtures or sets of fixtures controlled by any of the dimmers.
This will allow multiple sets of separately powered fixtures to work in unison using any of the dimmers.

Option 5 – Adding a 12387 dimmer to an existing Z-Wave network from a 3rd party vendor.
This option will be used if you are setting up, or have an existing Z-Wave network from a 3rd party vendor.

Option 6 – Dimming with 12388 Z-Wave wall dimmer.
Kichler's 12388 Z-Wave wall dimmer can be used together with any of the above options for wireless control of the light fixtures.

Option 1 - One dimmer on one fixture or one set of fixtures

Connect the dimmer at a convenient place in the set of fixtures. No programming is required.

Press and release the **(+)** button on the dimmer to turn on.
Press and release the **(-)** button to turn off.
Press and hold the **(+)** button, the lights will dim up.
Pressing and holding the **(-)** button will slowly dim the lights down.
Momentarily press and release the **(-)** to turn the lights off at the established dim level.
Momentarily press and release the **(+)** to turn the lights on. The lights will return to the last established light level.

Option 2 - Controlling one set of fixtures with two dimmers

Dedicate one of the dimmers in this installation to be the primary dimmer, the other to be the secondary dimmer. Three steps will need to be performed. First, a network needs to be created. Second, the secondary dimmer will need to be associated to the primary. Third, the secondary dimmer needs an in-line synchronization added.

NOTE:
- **Power must be on**
- Error is indicated by 10 dim blinks in succession.
- Success is indicated by 2 bright blinks in succession.

Step 1 **Create a network**

NOTE: There is a time limit of approx. 20 seconds to complete Step 1. If light fixture(s) blink 10 times while performing Step 1, this means that the time has expired and it will be necessary to repeat the process from the beginning.

On the primary dimmer:
1. Using as small object such as a paper clip, press & release recessed **RESET** button. (The primary dimmer light fixture will blink 2 times)
2. Press & hold **(+)** button until the primary dimmer light fixture blinks 2 times. (Hold for hold approx. 2 seconds)

On the secondary dimmer:
1. Press & release recessed **RESET** button. (The secondary dimmer light fixture will blink 2 times)
2. Press & hold both **(+)** button and **(-)** button until both the primary dimmer light fixture and secondary dimmer light fixture blink 2 times. (Hold for approx. 2 seconds)

Step 2 **Associate (link) dimmers together**

NOTE: Step 2 has no time limit.

On the primary dimmer:
1. Press & hold both **(+)** and **(-)** buttons until the primary dimmer LED light fixture blinks 2 times (hold approx. 2 seconds)
2. Press & release **(+)** button to put the primary dimmer into ASSOCIATION ADD MODE. (lights will blink 2 times)

On the secondary dimmer:
3. Press and release the **(+)** button. Both the primary dimmer fixture and secondary dimmer fixture will blink 2 times.

Option 3 - Controlling two separately powered fixtures or runs of fixtures

Dedicate one of the dimmers in this installation to be the primary dimmer, the other to be the secondary dimmer. Two steps will need to be performed. First, a network needs to be created. Second, the secondary controller needs to be associated to the primary.

NOTE:
- In order for 2 or more dimmers to work in unison, connect each dimmer to separate groups of light fixtures powered by different power supplies.
- **Power must be on**
- Error is indicated by 10 dim blinks in succession.
- Success is indicated by 2 bright blinks in succession.
- Dimmers must be installed within 50' of each other to be able to communicate.

Step 1 **Create a Network**

NOTE: There is a time limit of approx. 20 seconds to complete Step 1. If light fixture(s) blink 10 times while performing Step 1, this means that the time has expired and it will be necessary to repeat the process from the beginning.

On the primary dimmer:
1. Using a small object such as a paper clip, press & release recessed **RESET** button. (The primary dimmer light fixture will blink 2 times)
2. Press & hold **(+)** button until primary dimmer light fixture blinks 2 times. (Hold for hold approx. 2 seconds)

On the secondary dimmer:
1. Press & release recessed **RESET** button. (The secondary dimmer light fixture will blink 2 times)
2. Press & hold both **(+)** button and **(-)** button until both the primary dimmer light fixture and secondary dimmer light fixture blink 2 times. (Hold for approx. 2 seconds)

Step 2 **Associate (link) dimmers together**

NOTE: Step 2 has no time limit.

On the primary dimmer:
1. Press & hold both **(+)** and **(-)** buttons until the primary dimmer light fixture blinks 2 times (hold approx. 2 seconds)
2. Press & release **(+)** button to put the primary dimmer into ASSOCIATION ADD MODE. (lights will blink 2 times)

On the secondary dimmer:
1. Press and release **(+)** button. Both the primary and secondary dimmer light fixtures will blink 2 times.

Option 4 - Multiple, separately powered fixtures or sets of fixtures controlled by any of the dimmers

One of the dimmers in this installation will be the primary dimmer, the others will be the secondary dimmers.

Two steps will need to be performed. First, a network needs to be created. Second, the additional dimmers will need to be associated.

NOTE:
- In order for 2 or more dimmer modules to work in unison, connect each module to separate light fixtures powered by different power supplies.
- **Power must be on**
- Error is indicated by 10 dim blinks in succession.
- Success is indicated by 2 bright blinks in succession.

Step 1 **Create a Network**

NOTE: There is a time limit of approx. 20 seconds to complete programming between primary and secondary dimmers and then the primary and additional secondary controllers. If light fixture(s) blink 10 times while performing Step 1, this means that the time has expired and it will be necessary to repeat the process from the beginning.

On the primary dimmer:
1. Using a small object such as a paper clip, press & release recessed **RESET** button. (The primary dimmer light fixture will blink 2 times)
2. Press & hold **(+)** button until the primary dimmer light fixture blinks 2 times. (Hold for hold approx. 2 seconds)

On the secondary dimmer:
1. Press & release recessed **RESET** button. (The secondary dimmer light fixture will blink 2 times)
2. Press & hold both **(+)** button and **(-)** button until both the primary dimmer light fixture and secondary dimmer light fixture blink 2 times. (Hold for approx. 2 seconds)

For the additional dimmer(s):
1. Press & release recessed **RESET** button on the primary dimmer. (The primary dimmer light fixture will blink 2 times)
2. Press & hold **(+)** button until the primary dimmer light fixture blinks 2 times. (Hold for hold approx. 2 seconds)
3. Press & release recessed **RESET** button on third dimmer. (The third dimmer light fixture will blink 2 times)
4. Press & hold both **(+)** button and **(-)** button until both the primary dimmer light fixture and third dimmer light fixture blink 2 times. (Hold for approx. 2 seconds)
Repeat steps 1 – 4 above to include all additional dimmers into the network.

Step 2 **Associate (link) the dimmers**
In this step, each dimmer will be first linked to the primary dimmer and then to each other.
On the primary dimmer:
1. Press & hold both **(+)** and **(-)** buttons until the primary dimmer light fixture blinks 2 times (hold approx. 2 seconds)
2. Press & release **(+)** button to put dimmer into ASSOCIATION ADD MODE. (Lights will blink 2 times)
3. On the next dimmer, press and release **(+)** button. Both primary and next dimmer light fixtures will blink two times. These two dimmers are now associated.
Repeat these steps for associating each additional dimmer to the primary dimmer.

Now that each dimmer has been associated to the primary dimmer there are two options:
Option 1 – Leave set up as is. In this set up only the primary dimmer can be used to control all other dimmers.
Option 2 – Associate all dimmers so that any dimmer will control all others. Continue to Step 3.

Step 3 **Associate (link) the additional dimmers**

On the secondary dimmer:
1. Press & hold both **(+)** and **(-)** buttons until the secondary dimmer light fixture blinks 2 times (Hold approx. 2 seconds)
2. Press & release **(+)** button to put secondary dimmer into ASSOCIATION ADD MODE. (Lights will blink 2 times)
3. On the third dimmer, press and release **(+)** button. Both secondary and third dimmer will blink 2 times.

Step 3 will need to be repeated for all additional dimmers by associating each dimmer to all dimmers before it. Example: If 5 dimmers are being used, dimmer #2 will need to be associated to dimmers 3, 4, & 5. Dimmer #3 will need to be associated to dimmer 4 & 5, and dimmer #4 will need to be associated to dimmer 5.

Option 5 – Include a 12387 dimmer into an existing Z-Wave network from a 3rd party vendor

Step 1 **Place 3rd party controller into "include" or "add" mode.** (Refer to your controller's owner manual)

Step 2 **Include dimmer into the network**

1. Using a small object such as a paper clip, press & release recessed **RESET** button. (The light fixture will blink 2 times)
2. Press & hold both **(+)** and **(-)** buttons until the light fixture blinks 2 times (Hold approx. 2 seconds)

Option 6 – Dimming with 12388 Z-Wave Wall Dimmer

Before you start, install the 12388 wall dimmer in its intended location per the instructions included with the wall dimmer. Once installed, refer back to these instructions for programming.

NOTE: If you are using more than one 12387 dimmer, refer to Options 1-4 for programming the dimmers together firstly.

NOTE:
- **Power to the light fixtures and wall dimmer must be on**
- Error is indicated by 10 dim blinks in succession.
- Success is indicated by 2 bright blinks in succession.

Step 1 **Create a network**

NOTE: There is a time limit of approx. 20 seconds to complete Step 1. If light fixture(s) blink 10 times while performing Step 1, this means that the time has expired and it will be necessary to repeat the process from the beginning.

On the primary dimmer (12387 dimmer):
1. Press & release recessed **RESET** button. (The primary dimmer light fixture will blink 2 times)
2. Press & hold **(+)** button until the primary dimmer light fixture blinks 2 times. (Hold for hold approx. 2 seconds)

On the wall dimmer:
1. Rapidly press and release either the top or bottom switch two times. (The primary dimmer light fixture will blink 2 times)

Step 2 **Include the wall dimmer into the network**

NOTE: Step 2 has no time limit.

On the primary dimmer:
1. Press & hold both **(+)** and **(-)** buttons until the primary dimmer LED light fixture blinks 2 times (hold approx. 2 seconds)
2. Quickly press & release **(+)** button to put the primary dimmer into ASSOCIATION ADD MODE. (Lights will blink 2 times)

On the wall dimmer:
3. Rapidly press and release either the top or bottom switch two times. (The primary dimmer light fixture will blink 2 times)

NOTE: If using more than one 12387 dimmer, it will be necessary to repeat Step 2 for each additional dimmer to connect it with the wall dimmer.

Operating the 12388 Wall Dimmer

NOTE: The lights will always return to the last intensity level set by the primary dimmer when the lights are turned on using the 12388 wall dimmer. Adjust the lights to the most frequently desired intensity level using the primary dimmer. Now when the lights are turned on using the 12388 wall dimmer, they will return to the set intensity.

-To turn lights on, quickly press and release the upper switch paddle.
-To turn lights off, quickly press and release the lower switch paddle.
-To increase light intensity, press and hold the upper switch paddle.
-To decrease light intensity, press and hold the lower switch paddle.
-To return lights to their set intensity level (level set at primary dimmer), quickly press and release the upper switch paddle while lights are on.

DIMMER MODULE OPERATION

TURN LIGHTS ON: Momentarily press and release the **(+)** button on the dimmer module.
TURN LIGHTS OFF: Momentarily press and release the **(-)** button on the dimmer module.
INCREASE LIGHT LEVEL: Press and Hold the **(+)** button, release once desired light level is reached.
DECREASE LIGHT LEVEL: Press and Hold the **(-)** button, release once desired light level is reached.

Lights not working:
• Double check that all fixture, cable, and power connections are intact.
• Double check that power is on.

Continue getting 10 blinks while trying to program dimmers:
• Make sure to firmly press all buttons while going through the programming steps.
• Confirm that only one dimmer is being used as the "primary" dimmer.
• Reset dimmer(s) – see reset instructions under Additional Wireless Dimmer Programming Options.

ADDITIONAL WIRELESS DIMMER PROGRAMMING OPTIONS

Associations:
Once in the network, the dimmer can be associated with other devices in the Z-wave network. The Kichler Z-Wave dimmer supports one (1) association group with a maximum of 5 devices. Basic Set and Multilevel Set commands are sent to the associated devices in group 1 when the user operates the (+) and (-) buttons on the Kichler Z-Wave dimmer.

Manufacturer ID: 0x0114
Product ID: 0x0101
Device Class: Generic Type Switch Multilevel, Specific Type Not Used

Comman Classes Supported (in addition to COMMAND_CLASS_BASIC)
COMMAND_CLASS_MANUFACTURER_SPECIFIC
COMMAND_CLASS_ASSOCIATION
COMMAND_CLASS_SWITCH_MULTILEVEL

Remove an association to a dimmer:
On the primary dimmer:
1. Press and hold the **(+)** and **(-)** buttons until primary dimmer light fixture blinks 2 times. (Hold for approx. 2 seconds)
2. Press & release **(-)** button.

On the secondary dimmer (dimmer that is being un-associated):
1. Press & release **(-)** button. (Light fixture will blink 2 times)

Exclude a dimmer from the network:
On the primary dimmer:
1. Press & release recessed **RESET** button. (Primary dimmer light fixture will blink 2 times)
2. Press & hold **(-)** until the primary light fixture blinks 2 times. (Hold approx. 2 seconds)

On the secondary dimmer (dimmer that is being excluded):
1. Press & release recessed **RESET** button. (Secondary dimmer light fixture will blink 2 times)
2. Press & hold both **(+)** and **(-)** until both the primary and secondary dimmer light fixtures blink 2 times (Hold approx. 2 seconds)

Remove In-line Synchronization:
1. Press & hold the recessed **RESET** button on dimmer until attached lights blink 2 times. (Hold approx. 2 seconds)
2. Press the '+' button. (Lights will quickly turn off)

Reset Z-Wave Dimmer:
1. Press and hold the **(+)**, **(-)** and recessed **RESET** buttons simultaneously until attached light fixture blinks 4 times.

Note:
When resetting a dimmer, it may also be necessary to unplug or remove power from the dimmer in order to reset the "timing" in the dimmer.

Resetting the controller will clear the network and associations from the controller, as well as set the configuration parameters back to the default factory settings.