




## GE Plug-in Smart Dimmer (Single Plug) 28167 (ZW3104) Manual

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GE

## Plug-in Smart Dimmer (Single Plug)

SKU: 28167 (ZW3104)



### Quickstart

This is a

Light Dimmer  
for  
**U.S. / Canada / Mexico.**

To run this device please connect it to your mains power supply.

To add this device to your network execute the following action:

1. Follow the instructions for your Z-wave certified controller to include the device to the Z-wave network. 2. Once the controller is ready to include your smart switch, single press and release the manual/program button on the smart dimmer to include it in the network.

Please refer to the  
[Manufacturers Manual](#) for more information.

## Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law.

The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material.

Use this equipment only for its intended purpose. Follow the disposal instructions.

Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

## What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section.

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.



This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to [www.z-wave.info](http://www.z-wave.info).

## Product Description

Transform any home into a smart home with the GE Z-Wave Smart Lighting Control Plug-in Smart Dimmer. The lamp module enables wireless control of on/off and dim functions for standard incandescent table and floor lamps, as well as dimmable fluorescent, LED and CFL fixtures and more! Use the dimmer control to customize the

lighting output and create the perfect ambiance for any room. The space-saving horizontal module plugs into a standard wall receptacle without blocking the second outlet or obstructing placement of furniture. The Dimmer provides one Z-Wave enabled outlet for the lamp you would like to control. Take control of your home lighting with GE Z-Wave Smart Lighting Controls!

## Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state**. Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

### Reset to factory default

This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

1. If plugged in, unplug the Switch from the receptacle.
  2. Press and hold the top button for at least 3 seconds while you plug the switch into a receptacle.
- Note: This should only be used in the event your networks primary controller is missing or otherwise inoperable.

## Safety Warning for Mains Powered Devices

ATTENTION: only authorized technicians under consideration of the country-specific installation guidelines/norms may do works with mains power. Prior to the assembly of the product, the voltage network has to be switched off and ensured against re-switching.

### Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

### Inclusion

1. Follow the instructions for your Z-wave certified controller to include the device to the Z-wave network.
2. Once the controller is ready to include your smart switch, single press and release the manual/program button on the smart dimmer to include it in the network.

### Exclusion

1. Follow the instructions for your Z-wave certified controller to exclude a device from the Z-wave network.
2. Once the controller is ready to Exclude your device, press and release the manual/program button on the smart switch to exclude it from the network.

## Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.

2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.
4. Never use sleeping battery devices without a central controller.
5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

## Association – one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a 'Basic Set' Command.

### Association Groups:

Group NumberMaximum NodesDescription

1	1	Z-Wave Plus Lifeline
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## Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

**IMPORTANT:** Controllers may only allow configuring signed values. In order to set values in the range 128 ... 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200 it may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

### Parameter 10: Dim Rate Adjustments (When manually controlled)

*PLEASE NOTE: Values should be entered using their signed values only, which means for example that a configuration value of 1 byte in size must have values in the range -128 to 127. Values specified here above or below the range specified by the value's size need to be converted to their 2's compliment value, or if your controller supports it, may be entered using hexadecimal notation.*

Size: 1 Byte, Default Value: 3

SettingDescription

1 – 255	Timing of the steps
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### Parameter 11: Dim Rate Adjustments (When receiving All-On/All-Off command)

Size: 1 Byte, Default Value: 1

SettingDescription

1 – 99	number of steps or levels
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## Parameter 12: Dim Rate Adjustments (When receiving All-On/All-Off command)

*Timing of the steps* PLEASE NOTE: Values should be entered using their signed values only, which means for example that a configuration value of 1 byte in size must have values in the range -128 to 127. Values specified here above or below the range specified by the value's size need to be converted to their 2's compliment value, or if your controller supports it, may be entered using hexadecimal notation.

Size: 1 Byte, Default Value: 3

SettingDescription

1 – 255	Timing of the steps
---------	---------------------

## Parameter 3: LED Light

Size: 1 Byte, Default Value: 0

SettingDescription

0	LED Light on when Z-Wave turned OFF (Default)
1	LED Light on when Z-Wave turned On
2	LED Light always OFF

## Parameter 7: Dim Rate Adjustments (From Z-Wave Controller)

Size: 1 Byte, Default Value: 1

SettingDescription

1 – 99	number of steps or levels
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## Parameter 8: Dim Rate Adjustments (From Z-Wave Controller)

*Timing of the steps* PLEASE NOTE: Values should be entered using their signed values only, which means for example that a configuration value of 1 byte in size must have values in the range -128 to 127. Values specified here above or below the range specified by the value's size need to be converted to their 2's compliment value, or if your controller supports it, may be entered using hexadecimal notation.

Size: 1 Byte, Default Value: 3

SettingDescription

1 – 255	Timing of the steps
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## Parameter 9: Dim Rate Adjustments (When manually Controlled)

Size: 1 Byte, Default Value: 1

SettingDescription

1 – 99	number of steps or levels
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## Technical Data

Hardware Platform	ZM5202
Device Type	Light Dimmer Switch
Network Operation	Always On Slave
Firmware Version	HW: 255
Z-Wave Version	6.51.06
Certification ID	ZC10-15080013
Z-Wave Product Id	0x0063.0x5044.0x3038
Frequency	XXfrequency
Maximum transmission power	XXantenna

## Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network.  
Controllers are typically Gateways, Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network.  
Slaves can be sensors, actuators and even remote controls.
- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announce that it is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.