

## 45652

Wireless Lighting Control

### Energy Monitoring Lamp Dimmer

Z-Wave® Certified Wireless Lighting Control

Add callouts for Z-Wave outlet and Program/Manual control pushbutton



Thank you for your purchase of a GE Z-Wave® control device. Z-Wave technology is designed to automate lighting/home control and provide easy remote operation of all your Z-wave enabled devices. The GE Z-Wave product family includes a variety of devices to control lighting in your home. It is up to you whether you want to control one room or your entire house and whether you want to do it all now or start with one room and add more over time.

This module is one component of a Z-Wave® control system and is designed to work with all other Z-Wave enabled devices in a home control network. It will also act as a wireless repeater to insure that commands intended for another device in the network are received, thereby extending the range of the wireless controller. Z-Wave devices of other types and brands can be added to the system and will also act as range extenders if they support this function of repeating the signal received to other nodes in the system.

*The incandescent lighting plugged into the Z-Wave controlled outlet on this module must not exceed 400 watts. **DO NOT use with fluorescent lighting.** Plugging a non-resistive load such as fluorescent lighting or a device with a motor into the Z-Wave controlled outlet may result in damage to the Lamp Module and will void the warranty.*

***There are no user serviceable parts in this unit.***

*To reduce the risk of electric shock, this product has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type power outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.*



**RISK OF FIRE  
RISK OF ELECTRICAL SHOCK  
RISK OF BURNS**

The Load-Sense feature on this Z-Wave product will turn the power to the connected device ON when a change in the load is detected. Z-Wave connected devices should always be unplugged before performing any service or maintenance of the devices.

**Controlling Appliances:**

Exercise extreme caution when using Z-Wave devices to control appliances. Operation of the Z-Wave device may be in a different room than the controlled appliance, also an unintentional activation may occur if the wrong button on the remote is pressed. Z-Wave devices may automatically be powered on due to timed event programming. Depending upon the appliance, these unattended or unintentional operations could possibly result in a hazardous condition. For these reasons, we recommend the following:

1. Assign Z-Wave controlled appliances to device numbers 10 – 18 on the GE remote. The likelihood of unintentionally turning on the appliance will be reduced significantly because the “Shift” button will need to be pressed before pressing device numbers 10-18.
2. Z-Wave devices controlling appliances should be removed from “All” control setting. Instructions on how to do this are included in the manual for your GE remote.
3. Do Not include Z-Wave devices in Groups or Scenes if they control appliances.
4. Do Not use Z-Wave devices to control electric heaters or any other appliances which may present a hazardous condition due to unattended or unintentional or automatic power on control.
5. Double check programs for accuracy before using them.

**NOT FOR USE WITH MEDICAL OR LIFE SUPPORT EQUIPMENT**

Z-Wave enabled devices should never be used to supply power to or control the On/Off status of medical and/or life support equipment!

***Wireless Range***

This device complies with the Z-Wave standard of open-air, line of sight transmission distances of 65 feet. Actual performance in a home depends on the number of walls between the remote controller and the destination device, the type of construction and the number of Z-Wave enabled devices installed in the control network. Most Z-Wave enabled devices act as a signal repeater and multiple devices result in more possible transmission routes which helps eliminate “RF dead-spots”.

Things to consider regarding RF range:

- Each wall or obstacle (i.e.: refrigerator, big screen TV, etc.) between the remote or a Z-Wave device and the destination device will reduce the maximum range of 100 feet by approximately 25-30%.
- Brick, tile or concrete walls block more of the RF signal than walls made of wooden studs and plasterboard (drywall).
- Wall mounted Z-Wave devices installed in metal junction boxes will suffer a significant loss of range (approximately 20%) since the metal box blocks a large part of the RF signal.

## Effects of Home Construction on Wireless Range Between Z-Wave Enabled Devices

**Note:** The distances shown in the table below are typical examples. Actual performance in your home will vary.

From the Remote (or repeating Z-Wave module) to destination device:

		Type of Construction			
		Wood Frame w/Drywall		Brick, Tile or Concrete	
		Plastic J-Boxes*	Metal J-Boxes	Plastic J-Boxes*	Metal J-Boxes
<b>Number of Walls or Obstacles</b>	0**	100'	80'	100'	80'
	1	70'	56'	60'	48'
	2	49'	39'	36'	29'
	3	34'	27'	21'	17'

\* For Plug-in Modules or In-Wall Devices Installed in Plastic Junction Boxes

\*\* Line of Sight / no obstructions

**Please Note:** Z-Wave home control networks are designed to work properly alongside 802.11 wireless computer networks, Bluetooth and 2.4GHz, 5.8GHz or DECT devices. Some baby cams, wireless video devices and older cordless phones using the 900MHz frequency range may cause interference and limit Z-Wave functionality. Many 900MHz products have a switch to select channel "A" or "B". You may find that one of these channels will cause less interference than the other.

## Key Features

- One Z-wave controlled AC outlet for standard incandescent lighting
  - Remote ON/OFF and Brightness control via the Z-Wave controller
  - Manual ON/OFF and Brightness control with the front panel pushbutton
  - Load-Sensing turns the light ON if the switch on the connected light is used instead of the remote or pushbutton on the Z-Wave module
- Monitors and reports energy values and Watts consumed by the connected device
- Space efficient design
  - Does not block the lower outlet when plugged in to the upper outlet of a duplex wall receptacle. (This assumes that the duplex receptacle is mounted with the ground pin down.)
  - Plugs and cords for connected devices route to the side allowing close placement of furniture
- Grounded 3-wire power connection for safety

## Energy Monitoring

This unit incorporates special circuitry to capture and report energy values and the Wattage consumed by the device plugged into it.

- This energy related data includes Voltage (V), Current (A), Watts (W), Kilowatt hours (KWh) and Power Factor (PF). V, A, W & PF are instant readings taken at the time of the request while KWh is an accumulated value.
- This unit is capable of storing readings up to 10,000 KWh. It will automatically reset to zero and start over when it reaches 10,000. It will also reset and start over if the power to it is turned off.
- The Z-Wave controller must poll (request) the information from the device.
- The energy data is transmitted using Z-Wave's Meter Command Class v3. If the unit receives a request for this data from a controller supporting the Meter CC v1, it will report KWh as its default scale.
- Meter Reset is supported so if desired, the unit can delete its previous meter readings and start accumulating new KWh data.

## Basic Operation

The connected light can be turned ON in three ways:

1. With a remote
2. Manually with the pushbutton on the Z-Wave module
3. By the Load-Sensing feature. Normally, the Z-Wave module controls the ON/Off state of the connected light and power is either turned On or Off at the module (either manually or by the remote). If the switch on the connected light is used, the Z-Wave control circuitry automatically senses that the light is being turned On and activates the Z-wave controlled outlet, providing power to the connected device. This feature is disabled by default; see the section on advanced operation for instructions on how to enable it.

## Remote Control

GE Z-Wave remotes provide control of an Individual device, Groups of devices and Scenes. Other brands of Z-Wave Certified remotes may not offer as much flexibility in how you can set up your lighting control network. Please refer to your remote control's instructions for details on its capabilities and instructions for adding and controlling devices.

## Manual Control

The Front Panel Pushbutton on the 45652 Lamp Module allows the user to:

1. Manually turn the connected lighting ON/OFF by pressing the button.
  - This is a toggle switch; if the light is OFF, pressing the button turns the light ON and vice versa.
2. Adjust the brightness level of the connected lighting by pressing and holding the button. Release the button when the desired level is attained.
  - This is also a toggle function. The lighting will dim until the minimum level is attained or the button is released. The next time the button is pressed and held, the level will increase until the maximum level is attained or the button is released.
3. Include or exclude the module from the Z-Wave home control network with your primary controller.
  - Refer to the instructions for your primary controller to access the setup function and include or exclude devices.
  - When prompted by your primary controller, tap the button (press and release).
  - The primary controller should indicate that the action was successful. If the controller indicates the action was unsuccessful, please repeat the procedure.
  - Once the module is part of the network, the same basic procedure is used to add the module to groups or scenes. Refer to the primary controller's instructions for details.

Please Note: After a power failure, the 45652 module returns to its last used ON/OFF/DIM state.

## ADVANCED OPERATION

The following Advanced Operation parameters require that you have an advanced controller like the GE model 45601 LCD remote. Advanced remotes from other manufacturers may also be able to change these settings; however, basic remotes do not have this capability.

### All On/All Off

Depending upon your primary controller, the 45652 lamp module can be set to respond to ALL ON and ALL OFF commands in up to four different ways. Some controllers may not be able to change the response from its default setting. Please refer to your controller's instructions for information on whether or not it supports the configuration function and if so, how to change this setting.

The four possible responses are:

- It **will** respond to ALL ON and the ALL OFF commands (default).
- It **will not** respond to ALL ON or ALL OFF commands.
- It **will** respond to the ALL OFF command but **will not** respond to the ALL ON command.

- It **will** respond to the ALL ON command but **will not** respond to the ALL OFF command.

## Load Sensing

Load sensing is disabled when shipped from the factory. This feature can be enabled if desired. Setting parameter 29 to a value of 1 will enable the Load Sense function.

- Parameter No: 29
- Length: 1 Byte
- Valid Values = 0 or 1 (default 0)

**Note:** When replacing a burned-out light bulb, the load sensing feature (if enabled) will automatically turn the light ON when the new bulb is installed even if the Z-wave module was previously turned OFF.

## Dim Rate Adjustments

Both the number of steps (or levels) that the dimmer will change and the timing of the steps can be modified to suit personal preferences. The timing of the steps can be adjusted in 10 millisecond intervals. As an example, the default setting for parameter 8 is "3". This means that the lighting level will change every 30 milliseconds when the Dim Command is received. A value of 255 would mean that the level would change every 2.55 seconds. Combined, the two parameters allow dim rate adjustments from 10 milliseconds to 4.2 minutes to go from maximum-to-minimum or minimum-to-maximum brightness levels.

1. **When Receiving a Z-Wave Dim Command**
  - **Parameter 7 (number of steps or levels)**
  - **Parameter 8 (timing of the steps)**
  - **Length: 1 Byte**
  - **Valid Values:**  
Parameter 7 (default = 1) Valid Values: 1-99  
Parameter 8 (default = 3) Valid Values: 1-255
2. **Manual Control Dimming (pressing the Dimmer's rocker)**
  - **Parameter 9 (number of steps or levels)**
  - **Parameter 10 (timing of the steps)**
  - **Length: 1 Byte**
  - **Valid Values:**  
Parameter 9 (default = 1) Valid Values: 1-99  
Parameter 10 (default = 3) Valid Values: 1-255
3. **When Receiving an All-On or All-Off Command**
  - **Parameter 11 (number of steps or levels)**
  - **Parameter 12 (timing of the steps)**
  - **Length: 1 Byte**
  - **Valid Values:**  
Parameter 11 (default = 1) Valid Values: 1-99  
Parameter 12 (default = 3) Valid Values: 1-255

### Ignore Start Level When Receiving Dim Commands

Please note: Every "Dim" command from your remote controller includes a start level embedded in it.

The 45652 can be set to ignore the start level that is part of the dim command. Setting parameter 5 to a value of 0 will cause the 45652 to dim or brighten from the start level embedded in the command.

- **Parameter No: 5**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default 1)**

## Restoring Factory Defaults

All network settings and configuration parameters can all be restored to their factory default settings by using your master controller to delete it from your network.

## Software Fuse

This Lamp Module is designed to protect itself against loads that exceed its maximum power rating. An overload is automatically sensed by the module and all power to the load is shut OFF immediately.

Troubleshooting: Verify that the lamp wattage does not exceed the 400W rating if the module doesn't seem to work properly. Normal operation can be restored by remote when the load is reduced to the proper rating.

## Over-Current Protection

Additional over-current protection is provided by an internal fuse which is not user serviceable. Check your home's circuit breakers before concluding that the product must be replaced.

## Interoperability with Z-Wave™ Devices

A Z-Wave™ network can integrate devices of various classes, and these devices can be made by different manufacturers. Although every Z-Wave certified product is designed to work with all other Z-Wave certified products, your controller must include the appropriate device classifications in order to control non-lighting Z-wave devices. As an example, the GE 45600 basic remote is designed only for controlling Z-Wave devices using the lighting control classification. The GE 45601 deluxe remote with LCD readout can control other Z-Wave certified devices like thermostats as well as lighting.

## WARRANTY

JASCO Products warrants this product to be free from manufacturing defects for a period of two years 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. Please contact Customer Service at 800-654-8483 (option 4) between 7:30AM – 5:00PM CST or via our website ([www.jascoproducts.com](http://www.jascoproducts.com)) if the unit should prove defective within the warranty period,

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## FCC

U2ZZW3102

The Federal Communication Commission Radio Frequency Interference Statement includes the following paragraph: The 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 uses, generates and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. 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

Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

**Important Note:**

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC/IC RF Radiation Exposure Statement:

1.To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

2.This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

## ***Compliance with IC Rules and Regulations***

IC: 6924A-ZW3102

Jasco Products Company

Model: 45652

ZW3102

This Class B digital device complies with Canadian ICES-003.

## ***SPECIFICATIONS***

Power 120VAC, 60Hz

Signal (Frequency) 908.42 MHz

Maximum load: 3.3A, 400W Incandescent

Z-Wave controlled outlet is fused @ 6.3A. This fuse is not user serviceable.

Range: Up to 100 feet line of sight between the Wireless Controller and the closest Z-Wave receiver module.

Energy Monitoring Values: Voltage (V), Current (A), Watts (W), Kilowatt hours (KWh) and Power Factor (PF)

Operating Temperature Range: 32-104° F (0-40° C)

For indoor use only.

Specifications subject to change without notice due to continuing product improvement

Z-Wave is a registered US trademark of Sigma Designs

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