JASCO®

Wireless High Power
Outdoor Module

Z-Wave® Certified
Wireless Lighting Control

45734
ZW4004
Made in China

Introduction

Thank you for your purchase of a Jasco SmartHome™ 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 Z-Wave product family includes a variety of devices to enable and 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.
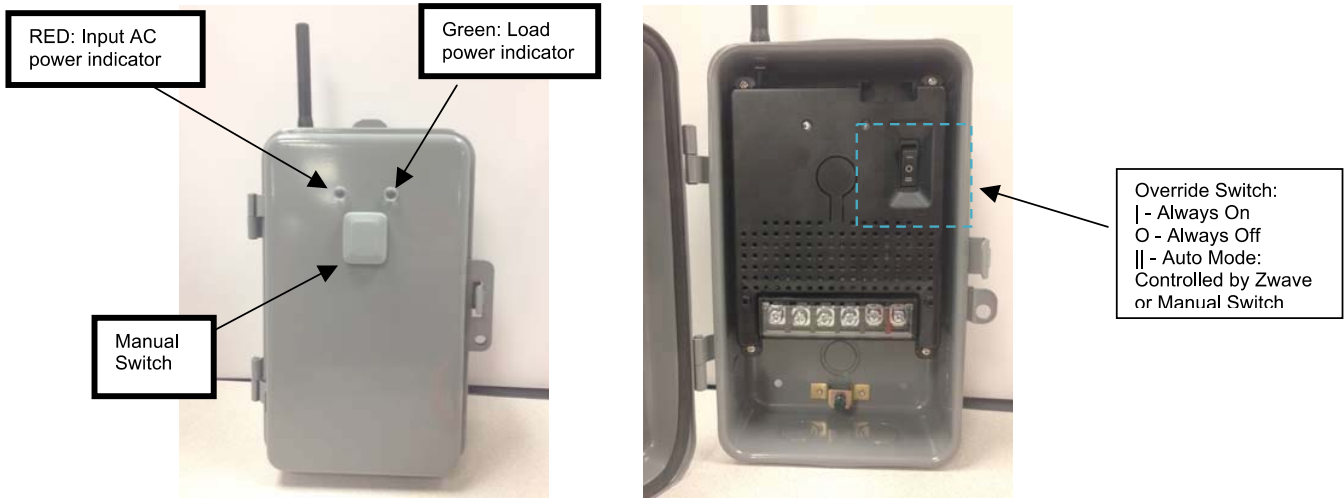
This module is one component of a Z-Wave® control system and is designed to work with all other Z-Wave enabled devices in a home control network. It will also act as a wireless repeater to insure that commands intended for another device in the network are received, thereby extending the range of the 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.

There are no user serviceable parts in this unit.

Applications

• Fans
• Pumps
• Pool Heaters
• Air Conditioning
• Blowers
• Lighting
• Heating and Ventilation Systems

RED: Input AC power indicator

Green: Load power indicator

Manual Switch

Override Switch:
| - Always On
O - Always Off
|| - Auto Mode:
Controlled by Zwave
or Manual Switch

WARNING

RISK OF FIRE
RISK OF ELECTRICAL SHOCK
RISK OF BURNS

Z-Wave connected devices should always be disconnected from AC power before performing any service or maintenance of the devices. Mount above ground with receptacle pointed down using mounting tab.

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 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 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. Do Not use the Z-Wave device as a disconnect

    6. Do Not remove Z-Wave module from metal enclosure or separate internal thermal pad from the metal enclosure and the Z-wave module.

SETUP

Knockouts

Each metal box comes with ½ " and ¾" knockouts. Follow the pictures below to remove knockouts.

For ½" knockout place small blade screw driver as pictured above. Tap lightly to punch knockout loose.

For ¾" knockout first use screwdriver to punchout ½" knockout then use pliers to remove outer ring.

Final result of ¾" knockout

Mounting the Power Module

1. Select the location for the timer and use the three holes provided for mounting.

Mounting holes

2. Hold the box in place and mark the holes on the mounting surface.

3. If mounting to drywall:
   a. Drill a 3/16" size hole for the drywall anchors at the marked locations
   b. Insert an anchor in each hole gently tap the open end of anchor with a hammer until the anchor is almost flush with the wall.
   c. Mount the box to the anchors using the anchor screws.
4. If mounting to plywood drill a 3/32" size hole and mount the box to the surface using #5 size screws.

Antenna Setup

1. Make sure the black antenna wire is routed through the externally threaded hole on top of the unit.
2. A plastic, weather resistant antenna cover is included in the metal casing. Place the plastic antenna cover over the wire and screw down securely around the black antenna wire.
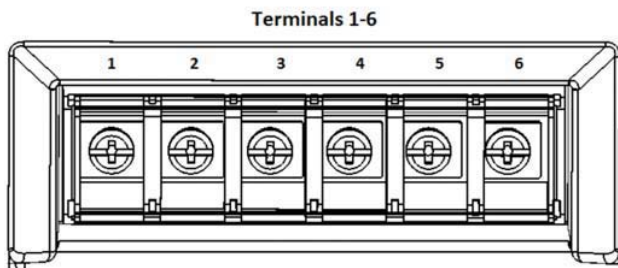

Wiring

WARNING	
• Recommended installation by licensed electrician. • High Voltage (**There may be more than one** source of supply) disconnect all power sources before servicing. • Risk of electric shock - All temrinals are live. • Use copper wire only. • Close the cover after setting. • Tighten connections to 25 lbf-in.	• Use correct gouge wire (8 - 14 AWG) based on local electrical code of at least 105C rating. • Approved for outdoor use. • Wire strip length 1/2" • GROUNDING; National Electrical Code requires that grounding must be continuous and in proper electrical contact in all grounding conductors, metallic conduits and grounding terminals.

MIN. COPPER WIRE SIZE (AWG)	MAX LOAD (AMP)	MINIMUM INSULATION TEMP (°C)
14	15	60
12	20	60
10	30	60
8	40	105
USE CORRECT GAUGE WIRE PER LOCAL ELECTRICAL CODE		

PRESSURE PLATE
TERMINAL SCREW
MAKE SURE WIRE
INSULATION CLEARS
PRESSURE PLATE

240 VAC Setup

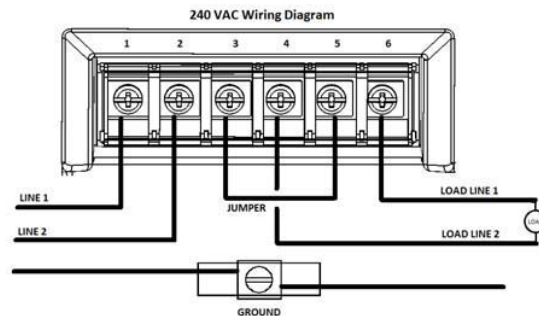Terminals 1-6

Connections:
Terminal 1: 240V Line 1
Terminal 2: 240V Line 2
Terminal 3/5: Jumper Connection between Terminals (L1 Sense to Relay Commons)
Terminal 4: Line 2 to Load
Terminal 6: Line 1 to Load

Step 1: Flip Up Plastic Guard Covering Terminals 1-6

Step 2: Connect the Input Voltage

1. Connect 240VAC Line 1 (Black) input to Terminal 1
2. Connect 240VAC Line 2 (Black) input to Terminal 2
3. Connect the bare wire to the ground lug

Tighten the screw terminals to 25in-lb.

Improper tightening can cause heating and equipment failure

Step 3: Connect Jumper between Terminals 3 and 5

Tighten the screw terminals to 25in-lb.

Improper tightening can cause heating and equipment failure
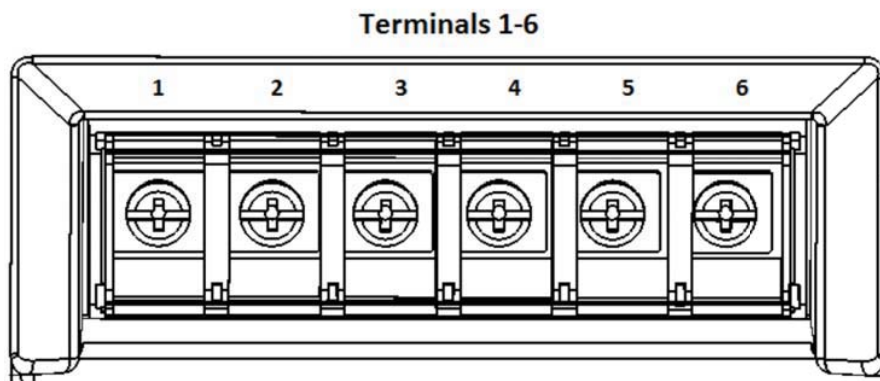
Step 4: Complete the Circuit to the Load

1. Connect Load Line 1 (Black) to Terminal 6
2. Connect Load Line 2 (Black) to Terminal 4
3. Connect the bare wire to the ground lug

Tighten the screw terminals to 25in-lb.

Improper tightening can cause heating and equipment failure

Step 5: Lock Clear Plastic Guard Cover Over Terminal

120 VAC Single Load Setup

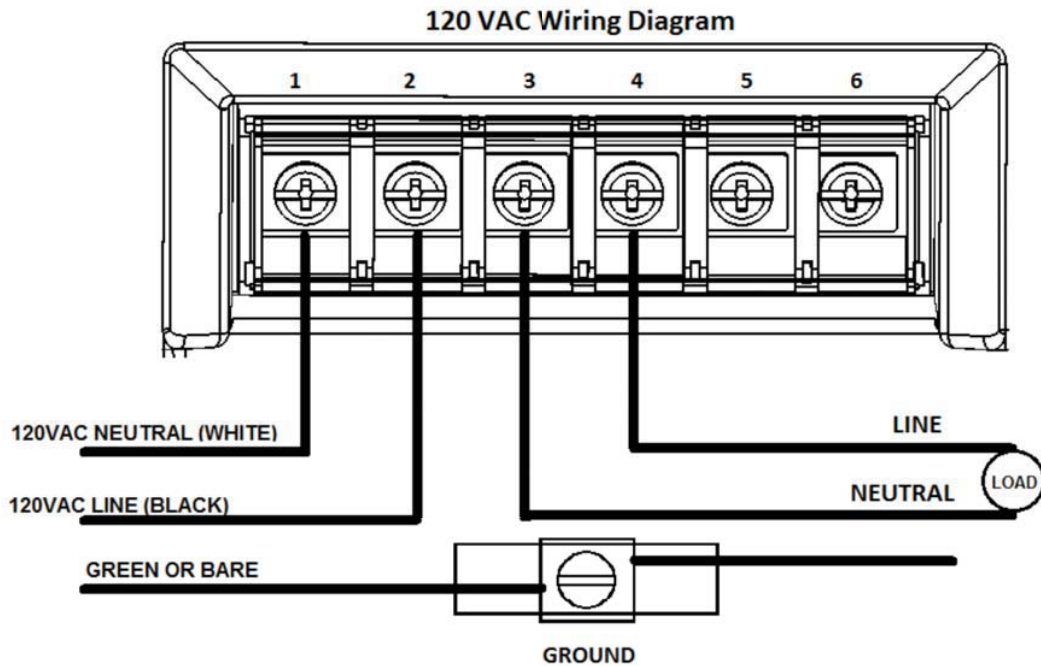**Connections**
Terminal 1: 120V Neutral
Terminal 2: 120V Line
Terminal 3: Load Neutral
Terminal 4: Load Line
Terminal 5: NO Connection
Terminal 6 NO Connection

120 VAC Wiring Diagram

Step 1: Flip Up Plastic Guard Covering Terminals 1-6

Step 2: Connect the Input Voltage

1. Connect 120VAC Neutral (White) to Terminal 1
2. Connect 120VAC Line (Black) to Terminal 2
3. Connect the green or bare wire to the ground lug

Tighten the screw terminals to 25in-lb.

Improper tightening can cause heating and equipment failure

Step 3: Complete the Circuit to the Load

1. Connect Load Neutral (White) to Terminal 3
2. Connect Load Line (Black) to Terminal 4
3. Connect the bare wire to the ground lug

Tighten the screw terminals to 25in-lb.

Improper tightening can cause heating and equipment failure

Step 4: Lock Clear Plastic Guard Over Terminals

Wireless Range
This device complies with the Z-Wave standard of open-air, line of sight transmission distances of 100 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. Every Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which help eliminate "RF dead-spots".

Things to consider regarding RF range:
- Each wall or obstacle (i.e.: refrigerator, big screen TV, etc.) between the remote 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 50%) 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**
	0**	100'	80'	100'	80'
Number of Walls	1	70'	56'	60'	48'
or Obstacles	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

Key Features
- One Z-Wave remote controlled high power outdoor module
  - Remote ON/OFF control via the Z-Wave controller
  - Manual ON/OFF control with the pushbutton
- Weather resistant housing; Suitable for use outdoors in damp or wet conditions
- Lockable tamper resistant metal case keeps dirt & debris out when the module is not in use
- Power consumption metering capability allows remote monitoring with compatible systems
- Manual Override switch allows operation without requiring networked connection

Basic Operation

The connected device can be turned ON in two ways:
1. With a remote
2. Manually with the pushbutton switch on the Z-Wave module

Manual Control

The override switch inside the metal enclosure must be set to Auto Mode for the manual switch to function.

The Pushbutton on the 45734 Power Module allows the user to:
1. Manually turn the connected equipment ON or OFF by pressing the button.

2. Include or exclude the module from the Z-Wave home control network.
   - Refer to the instructions for your primary controller to access the network setup function and include or exclude devices.
   - When prompted by your primary controller, tap the button.
   - 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 45734 module defaults to the previous ON/OFF state.

ADVANCED OPERATION

The following Advanced Operation parameters require that you have an advanced controller like the GE model 45633 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 outdoor 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 command (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.

Restoring Factory Defaults

All network settings and configuration parameters can all be restored to their factory default settings by using your master controller to reset the device. **Please note: The Model 45633 controller is designed to do this. Use the controller's "Setup / Reset Unit" menu to restore defaults. Not all controllers are capable of this; your controller must be designed to perform this function.**

Over-Current Protection

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 basic remote is designed only for controlling Z-Wave devices using the lighting control classification. The GE 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) if the unit should prove defective within the warranty period,

JASCO Products Company
Building B
10 E Memorial Rd.
Oklahoma City, OK 73114

CERTIFICATIONS

IC: 6924A-ZW4004

CAN ICES-3(B)/NMB-3(B)

FCC

ID: U2ZZW4004

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: 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.

Compliance with IC Rules AND Regulations

IC: # 6924A-ZW4004
CAN ICES-3B/NMB-3B
Jasco Products Company
Model: 45734 / ZW4004

"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 interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

SPECIFICATIONS

Power: 120-277 VAC, 60Hz, Single Phase

RF Signal (Frequency):   908.42 MHz

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

Contact Ratings: 120-277 V ac, 40 A Resistive Single Phase
                          120-277 V ac, 20A Ballast (Inductive)
                          125 V ac, 15 A Tungsten
                          250 V ac, 5 A Tungsten
                          1HP@120VAC,
                          2HP @ 240VAC

Energy Monitor Accuracy
        Voltage and Power: >40W 2%
        Current and PF: >80W 2%

Operating Temperature Range: 5 to 130° F (-15 to 55° C)
Storage Temperature: -22 to 140° F (-30 to 60° C)

For outdoor use in dry, damp or wet locations

Z-wave is a registered US trademark of Zensys A/S

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Hecho en China

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45734
ZW4004
Rev 07/11/13