# Aeotec

Harmonizing the Digital Home



## Micro Double Switch G2
## Micro Double Smart Energy Switch G2
### (Generation 2)
(In-Wall Z-Wave Appliance Module w/ Energy Monitor)

### Introduction:

The Aeotec Micro Double Smart Energy Switch G2 is a low-cost Z-Wave appliance module specifically used to enable Z-Wave command and control (on/off) of existing in-wall switches. It can control 2 loads independently. It can also report immediate wattage consumption or kWh energy usage over a period of time.

The wireless module is powered from the mains supply and is a three-wire design which requires a neutral connection. In the event of power failure, non-volatile memory retains all programmed information relating to the units operating status.

It also is a repeater in the Z-Wave network. Acting as a bridge for communication, it will forward Z-Wave command messages to their destinations if the originating controller is out of range from the destination node.
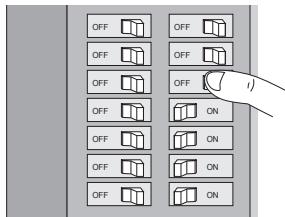
By taking advantage of the Z-Wave mesh network, commands can be routed to their destination via intermediary "listening" Z-Wave products. Products that are Z-Wave certified can be used and communicate with other Z-Wave certified devices.

### IMPORTANT:

A licensed electrician with knowledge and understanding of electrical systems and electrical safety should complete the electrical installation inside the main circuit box (usually located outside of your house).
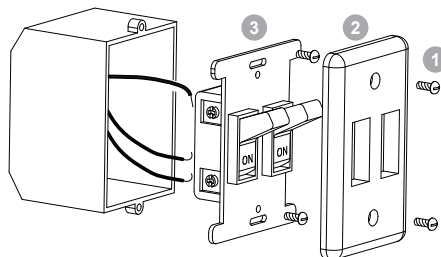
## In-Wall Electrical Installation Instructions:

**Step 1** **IMPORTANT:** The electricity to the circuit must be shut off during installation for safety and to ensure that wires are not short circuited during installation thus causing damage to the Micro Module.



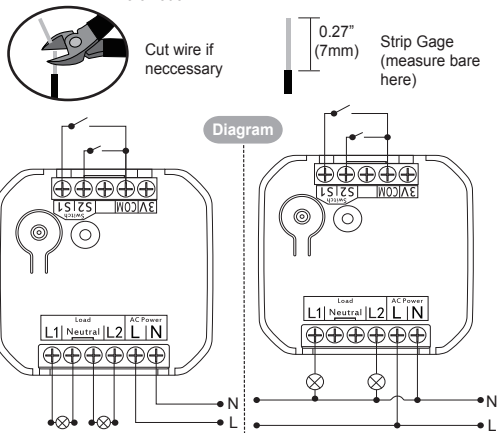**Step 2** **Dismounting In Wall Box.**
1. Remove the two screws securing the cover plate.
2. Remove the wall switch cover plate.
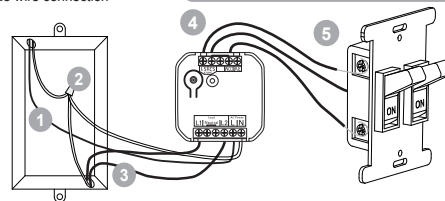3. Remove the two screws securing the wall switch to the wall box. Disconnect both wires from the wall switch.



**Step 3** **Preparing and Connecting Wires**
The Aeotec Micro Double Smart Energy Switch G2 must first be powered by a 3-wire system in order to operate. The wiring diagram is as follows:

Note: The "3V Out" terminal should be used only with the Aeon Micro Touch.

Cut wire if neccessary

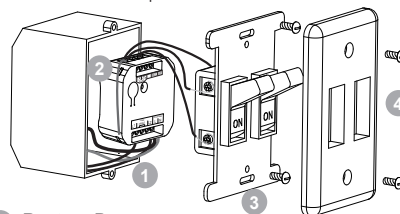0.27" (7mm) Strip Gage (measure bare here)

**Diagram**



1. Live / hot wire (Black wire). Connect to Live terminal of Micro Double Smart Energy Switch G2.
2. Neutral (White wire). Note: If this wire is not present in the box, a neutral wire must be pulled into the box.
3. Load wire. Connect to Load terminal of Micro Double Smart Energy Switch G2.
4. Signal connection: Using three 18 AWG copper wires, connect the terminals of the wall switch to Micro Double Smart Energy Switch G2 as shown.
5. Side wire connection

- Make sure that the ends of the wires from the wall box are straight (cut if neccessary).
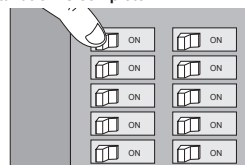- Remove insulation from each wire and the wall box as shown.



**Step 4** **Mounting In Wall Box.**
1. Position all wires to provide room for the device. Place Micro Double Smart Energy Switch G2 inside the wall box towards the back of the box.
2. Position the antenna towards the back of the box, away from all other wiring.
3. Reinstall the wall switch to the wall box.
4. Reinstall the cover plate onto the wall box.



**Step 5** **Restore Power**
Restore power at the circuit breaker or fuse.
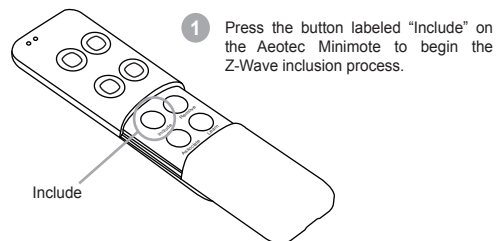**Installation is complete.**



### Z-Wave Network Instructions:

The Aeotec Micro Double Smart Energy Switch G2 must be paired (included) into a Z-Wave network before it can receive Z-Wave commands to turn on/off and report its energy usage. The Micro Double Smart Energy Switch G2 can only communicate to devices within it's own Z-Wave network.
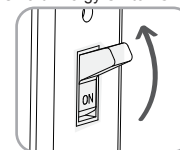
**Note:** The LED on the Micro Double Smart Energy Switch G2 will blink if it is currently not paired into a Z-Wave network.

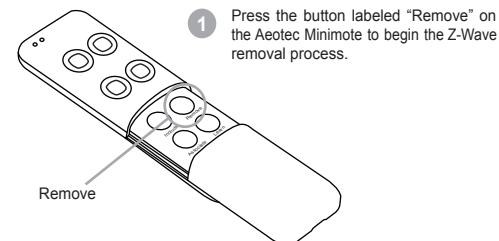#### Adding/Including/Pairing the Micro Double Smart Energy Switch G2 into a Z-Wave Network



**1** Press the button labeled "Include" on the Aeotec Minimote to begin the Z-Wave inclusion process.

Include

**2** While the Micro Double Smart Energy Switch G2 is powered in a 3-wire system, each external switch/button can be toggled to initiate pairing into the Z-Wave network. Or the internal button can be pushed to initiate pairing into the Z-Wave network if the Micro Double Smart Energy Switch G2 was not put into in-wall box.
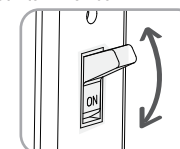


**Troubleshooting:** If the Aeotec Micro Double Smart Energy Switch G2 was not successfully included into any Z-Wave network, the LED will blink continuously slowly continually. If the Aeotec Micro Double Smart Energy Switch G2 was successfully included to a Z-Wave network, the Status Indication LED will either be solid on or off (depending on if the switch is on or off) .

#### Removing/Resetting the Micro Double Smart Energy Switch G2 from your Z-Wave Network



**1** Press the button labeled "Remove" on the Aeotec Minimote to begin the Z-Wave removal process.

Remove

**2** While the Micro Double Smart Energy Switch G2 is powered in a 3-wire system, each external switch/button can be toggled 10 times in quick succession to initiate removing from the Z-Wave network. Or the internal button can be pushed to initiate pairing into the Z-Wave network if Micro Double Smart Energy Switch G2 was not put into in-wall box.



**Troubleshooting:** If the Aeotec Micro Double Smart Energy Switch G2 was removed from the Z-Wave network, the Status Indication LED will be blinking. If the Aeotec Micro Double Smart Energy Switch G2 was not successfully removed from the Z-Wave network, the Status Indication LED will either be solid on or off (depending on if the switch is on or off).

**Note**: If the Micro Double Smart Energy Switch G2 was not put into an in-wall box, another way to reset Aeotec Micro Double Smart Energy Switch G2 is to press and hold the button which is on Micro Double Smart Energy Switch G2 for 20 seconds.

## AEON LABS

# Continued

## Turning On/Off the Micro Double Smart Energy Switch G2

Use any of the following methods to allow power through, or cut power from, the Micro Double Smart Energy Switch G2.

• Through the used of Z-Wave commands built into Z-Wave certified controllers and gateways. (The specific Z-Wave commands supporting this function are the Basic Command Class, Binary Switch Command Class, Multi Channel Command Class, and Scene Activation Command Class) Please consult the operation manual for these controllers for specific instructions on controlling the Micro Double Smart Energy Switch G2.

• Pressing the button on the Micro Double Smart Energy Switch G2 will toggle power flow (on/off) through the Micro Double Smart Energy Switch G2.

## Change Mode on the External Switch/Button Control

• The Aeotec Micro Double Smart Energy Switch G2 is set to be controlled via 2-state(flip/flop) external wall switch by default. Pushing and holding the button 6 seconds on the Micro Double Smart Energy Switch G2 will swap between this default mode and the momentary push button external wall switch mode.

• Through the usage of Z-Wave command built into Z-Wave certified controllers and gateways. (The specific Z-Wave command supporting this funtion is Configuration Command Class) Please consult the operation manual for these controllers for specific instructions on changing external wall switch mode of the Aeotec Micro Double Smart Energy Switch G2.

## Monitoring Energy Consumption

The Aeotec Micro Double Smart Energy Swtich G2 can report total wattage energy usage or kWh energy usage to a Z-Wave gateway or controller when requested. If this function is supported by the gateway/controller, the energy consumption will be displayed in the user interface of the gateway/controller. (The specific Z-Wave commands supporting energy monitoring are the Meter Command Class. Automatic reports are sent to association group 1, which is setup via the Association Command Class.) Please consult the operation manual for these gateways/controllers for specific instructions on monitoring the Micro Double Smart Energy Switch G2.

Note: The Micro Double Switch G2 (without the words "Smart Energy") does not have the ability to monitor energy consumption.

## Technical Specifications

• USA:
120V 60Hz input, 600W of each way or 5A max of each way output.

• EU/AU/IN/BR/CN:
230V 50Hz input, 1150W of each way or 5A max of each way output.

# Warranty

Aeotec warrants to the original purchaser of Products that for the Warranty Period (as defined below), the Products will be free from material defects in materials and workmanship. The foregoing warranty is subject to the proper installation, operation and maintenance of the Products in accordance with installation instructions and the operating manual supplied to Customer. Warranty claims must be made by Customer in writing within thirty (30) days of the manifestation of a problem. Aeotec' sole obligation under the foregoing warranty is, at Aeotec' option, to repair, replace or correct any such defect that was present at the time of delivery, or to remove the Products and to refund the purchase price to Customer.

The "Warranty Period" begins on the date the Products is delivered and continues for 12 months.

Any repairs under this warranty must be conducted by an authorized Aeotec service representative and under Aeotec' RMA policy. Any repairs conducted by unauthorized persons shall void this warranty.

Excluded from the warranty are problems due to accidents, acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophes, misuse, misapplication, storage damage, negligence, electrical power problems, or modification to the Products or its components.

Aeotec does not authorize any person or party to assume or create for it any other obligation or liability in connection with the Products except as set forth herein.

Aeotec will pass on to Customer all manufacturers' Material warranties to the extent that they are transferable, but will not independently warrant any Material.

Customer must prepay shipping and transportation charges for returned Products, and insure the shipment or accept the risk of loss or damage during such shipment and transportation. Aeotec will ship the repaired or replacement products to Customer freight prepaid.

Customer shall indemnify, defend, and hold Aeotec and Aeotec' affiliates, shareholders, directors, officers, employees, contractors, agents and other representatives harmless from all demands, claims, actions, causes of action, proceedings, suits, assessments, losses, damages, liabilities, settlements, judgments, fines, penalties, interest, costs and expenses (including fees and disbursements of counsel) of every kind (i) based upon personal injury or death or injury to property to the extent any of the foregoing is proximately caused either by a defective product (including strict liability in tort) or by the negligent or willful acts or omissions of Customer or its officers, employees, subcontractors or agents, and/or (ii) arising from or relating to any actual or alleged infringement or misappropriation of any patent, trademark, mask work, copyright, trade secret or any actual or alleged violation of any other intellectual property rights arising from or in connection with the products, except to the extent that such infringement exists as a result of Aeotec' manufacturing processes.

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THE INDEMNITY AND WARRANTY IN ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER INDEMNITIES OR WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

# FCC NOTICE (For USA):

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

STORE INDOORS WHEN NOT IN USE. SUITABLE FOR DRY LOCATIONS. DO NOT IMMERSE IN WATER. NOT FOR USE WHERE DIRECTLY EXPOSED TO WATER.

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. 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.

# UL NOTICE (For USA):

1. Install only in a UL Listed junction box sized 3X2X2.75 inch (75X50X70mm) or larger,minimum Volume 14 $in^3$ (230 $cm^3$ )
2. Use Copper Conductors Only.
3. CAUTION - Risk of Electric Shock - More than one disconnect switch may be required to de - energize the equipment before servicing.
4. WARNING - This device shall not be used in combination with a wall switch controlling a receptacle.

## Warning:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

## Certifications (regional):

CE   RoHS