Powering Business Worldwide

ENGLISH

RF96APM - Z-WAVE PLUS WIRELESS ON/OFF PLUG-IN MODULE, 1400 W 1/2 HP

The ON/OFF Plug-In Module is a Z-Wave Plus enabled device and is fully compatible with any Z-Wave enabled network. The device can be set up in a Z-Wave network to communicate directly with other end devices such as PIR motion detector, or to report directly to a Z-Wave controller.
This product supports the S2 security protocol that uses encrypted Z-Wave Plus messages to communicate to other security-enabled Z-Wave Plus products. A security-enabled Z-Wave Plus Controller must be used in order to fully utilize the security features of this product.
This ON/OFF Plugin module is designed to control the on/off status of lighting and appliances in the home. Control the connected load by associating it with another end device such as a sensor or switch, or through automations, schedules, and mobile apps by pairing with a compatible Z-Wave controller. Each module is also designed to act as a repeater to re-transmit the Z-Wave signal to ensure that it is received at its intended destination by routing the signal around obstacles and signal dead spots.

Adding Z-Wave Wireless switch to a Z-Wave Network:

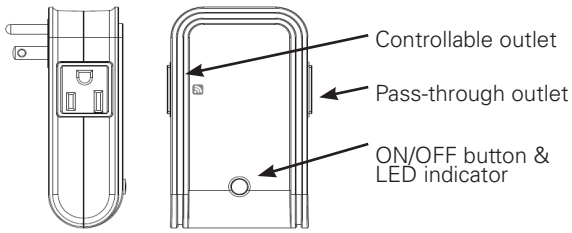
Auto Inclusion

This ON/OFF plug supports Auto Inclusion feature where it will automatically enter Inclusion mode when first powered up after a factory reset.
1. There is an ON/OFF button on the front of the device which is used to carry out inclusion, exclusion or association.
2. Put your Z-Wave Controller into inclusion/exclusion mode.
3. Plug this ON/OFF Plug-in module into a wall outlet near the load to be controlled.
4. The Inclusion process should be completed when the LED stops blinking.

Note: If Auto Inclusion fails, refer to the Troubleshooting section regarding Manual Inclusion

Testing
1. From the Z-Wave Controller's interface, turn on the newly added ON/OFF Plug-in Module (refer to the Controller's user manual for instructions). The LED indicator on the module should turn ON.
2. Turn OFF the module before connecting any appliance to it.

Operating Instructions:
• Plug this ON/OFF Module into a wall outlet near the appliance/lighting load to be controlled.
• Plug the appliance into the Controllable outlet of the module, indicated by a wireless icon printed on the module.



Note: There are two outlets at opposite sides of the module. Loads plugged into the controllable outlet can be controlled by this module whereas the other side is non-controllable and acts only as an electrical pass-through outlet.
Important: Make sure the total load of both sides do not exceed 1400 watts. For instance, if the load of controllable outlet is 1400 watts, the other should be 0 watt; while if the load of controllable outlet is 1100 watts, the other should be 300 watts.
• Set the switch on the load permanently to the ON position.
• To control the load manually from the module, simply press the module's ON/OFF button. When the red indicator LED turns ON (for about 5 seconds) this indicates electrical power is directed into the appliance. When the LED turns OFF, electrical power is cut off from the appliance.

Programming

Z-Wave Group

The unit supports two Z-Wave Association Groups:
Group 1: Association with 1 Controller node.
Group 2: Association with 4 nodes (i.e. end devices such as detectors or other lighting switches).This allows the ON/OFF module to receive commands directly from these end devices without the participation of the controller.
Group 1 commands:
• When the unit is powered for the first time, the unit will send a Notification Report to the node of Group 1.
• When setting the unit or changing the unit's status, the unit will send a Binary Switch Report to the node of Group 1. When the unit is OFF, Switch Binary Report Value = 0x00. When the unit is ON, Switch Binary Report Value = 0xFF.
• Device Reset: When performing Factory Reset the unit will send Device Reset Locally Notification to the node of Group1
Group 2 commands:
• When the button on the unit is pressed, the unit will send a Basic Set command to the nodes of Group 2. When the unit is OFF, Basic Set Value = 0x00. When the unit is ON, Basic Set Value = 0xFF

AGI Group (Association Group Information)

Group (UTF-8)	Profile	Command Class & Command (List) N bytes
Group 1 (lifeline)	General: A	Binary Switch Report, Notification Report Device Reset Locally Notification
Group 2 (Basic Set)	Control: Key 1	Basic Set

Basic
• Basic Get: Inquire about the status of the device
• Basic Report: Report the status of the device
• Basic Set: Set the status of the device

Notification
The device will send notifications
(Notification Type =0x08, Event = 0x01)
upon being powered ON.

Configuration parameters:

The configurable values are as following:
Remember the last status:

Parameter	Size	Range	Default
13	1	1/0	1: remember (0: do not remember)

Troubleshooting Guides

The table below lists the several steps involved when adding or removing the unit from the Z-Wave network.

Action/Status	Description	LED indication
No node ID Status	The unit has not been added to the Z-Wave network	2-second ON, 2-second OFF
Auto Inclusion	Inclusion starts immediately when power is applied for the first time (This occurs only if no node ID is stored in the module, usually after Exclusion or after executing a Factory Reset)	
Manual Inclusion	If auto inclusion fails: 1. Put the Z-Wave Controller into Inclusion mode 2. Press the ON/OFF button 3 times within 1.5 seconds to put the unit into Inclusion mode	
Exclusion	1. Put the Z-Wave Controller into Exclusion mode 2. Press the ON/OFF button 3 times within 1.5 seconds to put the unit into Exclusion mode	
Factory Reset (Please use this procedure only when the network primary controller is missing or otherwise inoperable)	1. Press the ON/OFF button 3 times within 1.5 seconds to put the unit into exclusion mode 2. Within 1 second of step 1, press and hold the button for 5 seconds 3. Node ID is deleted. The device reverts to factory default state	2-second ON, 2-second OFF

* Failure or success in including/excluding the ID can be viewed on the Z-Wave Controller.

Note: If you are connecting this unit to a Z-wave Controller that utilizes the S2 security protocol, you may be asked to enter a 5 digit Device Specific Key (DSK) that is unique to each unit by your controller.
This can be found in one of two places:
- on the QR code label on the back of the unit
- on the insert card inside the packaging

Table below lists typical problems encountered:

Symptoms	Possible Cause	Solution
The unit is not working and LED is always off even when knob is pressed.	The unit is not plugged into the electrical outlet properly	Check power connections to the unit
The unit's LED turns on but connected appliance does not turn ON	1. The connected appliance has its own power switch set to OFF 2. The appliance requires a separate remote control to turn	1. Set the ON/OFF switch of the appliance itself to ON position 2. Appliances turned ON/OFF by with remote control cannot be controlled by this ON/OFF plug module
The module works if operated manually but cannot be controlled wirelessly by end devices in Group 2 mode	1. Z-Wave Association process was not implemented 2. Frequency interference 3. Out of range	1. Carry out Z-Wave Association 2. Wait for a while to re-try 3. Move the device or module closer to each other

Specification

Operating Voltage	120V AC, 60Hz
Maximum Load	1400W
Range	Up to 100 meters line of sight
Frequency Range	US: 908.42 MHz
FCC ID	UH2-RF96APM
IC	4706C-RF96APM

* Specifications are subject to change without notice

FCC STATEMENT
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.
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.
FCC CAUTION:
Any changes or modifications not expressly approved by Eaton Wiring Devices could void the user's authority to operate the equipment This device complies with Industry Canada's license-exempt RSSs. 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.
RADIATION EXPOSURE STATEMENT:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
INDUSTRY CANADA STATEMENT:
This device complies with ISED's licence-exempt RSSs. 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.
Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.
RADIATION EXPOSURE STATEMENT:
This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
DÉCLARATION D'EXPOSITION AUX RADIATIONS:
Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.
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. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

EATON WIRING DEVICES LIMITED 2 YEAR WARRANTY
Eaton Wiring Devices warrants its switch to be free of defects in materials and workmanship in normal use and service for a period of two years from date of original purchase. THIS TWO (2) YEAR LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS, OR LIABILITIES, EXPRESSED OR IMPLIED (INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE THAT IS IN DURATION IN EXCESS OF TWO YEARS FROM THE DATE OF ORIGINAL CONSUMER PURCHASE). NO AGENT, REPRESENTATIVE, OR EMPLOYEE OF EATON HAS AUTHORITY TO INCREASE OR ALTER THE OBLIGATIONS OF EATON UNDER THIS WARRANTY.
To obtain warranty service for any properly installed Eaton switch that proves defective in normal use send the defective switch prepaid and insured to Quality Control Dept., Eaton Wiring Devices, 203 Cooper Circle, Peachtree City, GA 30269; in Canada: Eaton Wiring Devices, 5925 McLaughlin Road, Mississauga, Ontario L5R 1B8. Eaton will repair or replace the defective unit, at its option. Eaton will not be responsible under this warranty if examination shows that the defective condition of the unit was caused by misuse, abuse, improper installation, alteration, improper maintenance or repair of damage in shipment to Eaton. EATON SHALL HAVE NO RESPONSIBILITY FOR INSTALLATION OF THE SWITCH, OR FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR ANY SPECIAL, INCIDENTAL, CONTINGENT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, RESULTING FROM DEFECTS IN THE SWITCH OR FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT.
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Read enclosed instructions carefully. If you have any questions concerning use or care of this product, please write: Consumer Service Division, Eaton Wiring Devices, 203 Cooper Circle, Peachtree City, GA 30269.