AD147 Z-Wave Dimmer Plug

WARNING:


CAUTION

Read operator's manual

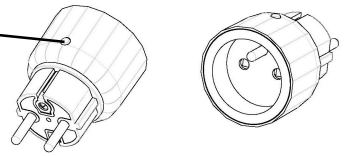
For safety concerns:
- Do not connect any appliances other than luminary products.
- Do not connect any appliances to this remote controlled socket-outlet which are radiating heat and may cause ignition or burning of surrounding materials (for example radiation heaters, portable heaters, portable floodlights, desk lamps, etc).
- Take into consideration that connected appliances might be moved by pets, cleaning staff or other persons who are not aware of the remote control functions.
- The connection/installation of this product should be in a suitable area with the remote controlled socket-outlet easily readable and accessible for disconnection actions.

The mini Dimmer Plug is a Z-Wave™ enabled device which is fully compatible with any Z-Wave™ enabled network. Z-Wave™ enabled devices displaying the Z-Wave™ logo can also be used with it regardless of the manufacturer, and ours can also be used in other manufacturer's Z-Wave™ enabled networks. Inclusion of this unit on other manufacturer's Wireless Controller menu allows remote operation of the unit and the connected load.

The mini Dimmer Plug is designed to control the on/off status of lighting in your house. The unit also provides dimmer function which is only applicable to light bulbs. At 220-240V voltage, this Dimmer Plug can support connected load of 6W - 250W.

Product Overview

On/Off Button
& Link Key
(with LED light)



Adding to Z-Wave™ Network

On the unit you can find a link key which is used to carry out the function of inclusion, exclusion, and reset. When power is applied for the first time, the LED will flash on and off alternately and repeatedly, implying that it has not been assigned a node ID and cannot work with other Z-Wave devices yet. This unit supports the Auto Inclusion function when power is applied and no node ID is stored in the memory.

Auto Inclusion

The module may automatically execute the function of inclusion when...
1. The power is applied for the first time and no node ID has been stored in the module.
2. The execution of reset is successful where the stored node ID is cleared.

Note: The duration for Auto Inclusion is about 4 minutes. Unlike the "inclusion" procedure shown in the table below, the execution of Auto Inclusion is automatic without the necessity of pressing the link key.

Action/Status	Description	LED indication
No node ID	The Controller does not allocate a node ID to the unit.	2-second on, 2-second off
Auto Inclusion	The power is applied for the first time and no node ID has been stored in the module, or after executing reset.	
Inclusion	1. Put the Z-Wave Controller into inclusion mode.	
	2. Press the link key three 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 link key three times within 1.5 seconds to put the unit into exclusion mode.	
Reset (This procedure should only be used when the network primary controller is inoperable.)	1. Press the link key three times within 1.5 seconds to put the unit into exclusion mode.	
	2. Within 1 second of step 1, press link key again and hold it until LED is off (about 5 seconds).	
	3. Node ID is excluded. The device reverts to factory default state and will be in auto-inclusion mode for 4 minutes.	
※ Failed or successful results in including/excluding the node ID can be viewed on the Controller.		

Operation

Under normal operation mode, press the on/off button on the unit to control the on/off status of the connected load. When power is on, the LED indicator will turn on for 5 seconds and then turn off (or slow flash if no node ID is stored). The unit can also be controlled by receiving command signals from the Z-Wave Controller.

The unit is able to remember the status of the relay when power is cut off (such as power black-out). When power is supplied again, the unit will resume the last status of the relay (on or off) automatically. The last brightness of light will also be restored if a dimmable lighting fixture is connected.

Note: Pressing and holding the button can adjust the brightness of the dimmable lighting fixture connected to the plug.

Programming

Z-Wave Group Support

The unit supports two association groups with 1 node support for Grouping 1 and 4 nodes support for Grouping 2. This has the effect that when the unit is operating, all devices associated with the unit will receive the relevant reports.

- 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 Multilevel Switch Report to the node of Group 1.
- Device Reset: When performing Reset the unit will send Device Reset Locally Notification to the node of Group1.
- The minimum interval time between two reports sent from this unit to the node of Group 1 is 3 seconds. Refer to **Configuration** parameter 2 for more information.
- When the button on the unit or the wall switch 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.

Z-Wave Plus Info

Role Type	Node Type	Installer Icon	User Icon
Slave Always On	Z-Wave Plus node	Light Dimmer Switch	Light Dimmer Switch

Version

Protocol Library	3 (Slave_Enhance_232_Library)
Protocol Version	3.95 (6.51.02)
Firmware 0 Version	1V1
Hardware Version	2
Firmware 1 Version	0V6

Manufacturer

Manufacturer ID	Product Type	Product ID
0x0060	0x0003	0x0003

AGI (Association Group Information) Table

Group	Profile	Command Class & Command (List) N bytes	Group Name(UTF-8)
1	General:NA	Multilevel Switch Report, Notification Report, Device Reset Locally Notification	Lifeline
2	Control:Key1	Basic Set	On/Off control (Button1)

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.

Basic Set Value	Description
0x00	Device OFF
0x01 ~ 0x63	Device ON, output Level as the specified Value.
0xFF	Device ON, output Level as the last memorized Level.

Notification

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

Configuration

The configurable values are as following:

Basic Set Command value:

Parameter Number	Size	Range	Default
1	2	0~99 , 255(0xFF)	255 (0xFF)

The delaying time to report to Group 1:

Parameter Number	Size	Range	Default
2	1	3 - 25 (seconds)	3

Remember the last status:

Parameter Number	Size	Range	Default
3	1	1/0	1: remember (0: do not remember)

Output mode setting: Dimming, On/Off

Parameter Number	Size	Range	Default
4	1	1/0	0: Dimming (1: On/Off)
Note: When set to 1, the operation mode is not changed; only the light would be turned on with 100% brightness immediately.			

Command Classes

The module supports Command Classes including…

- COMMAND_CLASS_ZWAVEPLUS_INFO_V2
- COMMAND_CLASS_VERSION_V2
- COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2
- COMMAND_CLASS_DEVICE_RESET_LOCALLY_V1
- COMMAND_CLASS_ASSOCIATION_V2
- COMMAND_CLASS_ASSOCIATION_GRP_INFO_V1
- COMMAND_CLASS_POWERLEVEL_V1
- COMMAND_CLASS_BASIC_V1
- COMMAND_CLASS_NOTIFICATION_V4
- COMMAND_CLASS_CONFIGURATION_V1
- COMMAND_CLASS_SWITCH_MULTILEVEL
- COMMAND_CLASS_SWITCH_ALL_V1
- COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2

Additional Command Classes Supported

- Power Level: For test purpose during product installation.
- Multilevel Switch: Refer to Basic.
- Switch All: The device turns on when receiving “Switch All On”, and turns off upon receiving “Switch All Off”.
- Firmware Update: For OTA function.

Troubleshooting

Symptom	Cause of Failure	Recommendation
Device not responding and LED not displaying	The device is not connected to the mains power correctly	Check if connection is correct, or voltage is too high or too low
	Device malfunction	Send the device to be repaired
LED displaying, but cannot control On/Off status of connected load	The connected load has its own on/off switch	Turn the switch of the connected load to On.
Can press button to control, but cannot control by RF	RF interference is occurring. Someone nearby might be emitting RF signal of the same frequency	Wait for a while and retry the operation

Specification

Power Input	220-240V/50Hz
Supported Load	6W - 250W

Transmission Range	30 meters (Indoor; Open space)
Working Temperature	-10°C - 40°C

Specifications are subject to change without notice

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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.