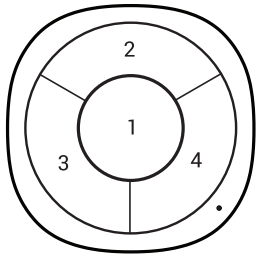


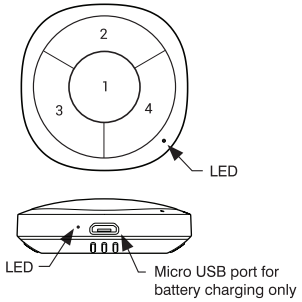
Ness Z-Wave
4 SCENE CONTROLLER
Part No. ZA-207001

The Scene Controller is a slave product that is wireless, portable and rechargeable . It can control a Z-Wave™ device, such as smart plug, smart dimmer through a Z-Wave gateway. You can also activate a scene like sleep scene, movie scene and entertainment scene with it.

The features list:
(1) Z-Wave Plus™certified for wide compatibility (500 series product).
(2) Support remote control anywhere and anytime.
(3) Scene Controller is capable of sending four different scene commands with four buttons.
(4) The battery is rechargeable.
(5) The battery will run for half a year per single charging.
(6) Support low battery alarm with a buzzer.
(7) Support communication failure alarm with a buzzer.
(8) Support firmware OTA.

Ⅰ. GENERAL INFORMATION ABOUT SCENE CONTROLLER

1. Product layout



2. Specifications

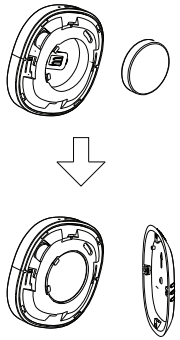
Power supply:	Single LIR2450 3.6V Battery *
Storage environment:	-10~50℃ 0%~85%
Operational temperature:	0~40℃
Radio protocol:	Z-Wave
Radio frequency:	921.42MHz (AU)
Range:	More than 100m outdoors About 30m indoors (depending on building materials)
Dimensions	50 x 50 x 16mm
Working current:	36mA
Standby current:	3uA

* IMPORTANT: Use only LIR2450 3.6V rechargeable battery.
DO NOT USE a 'CR' series battery as these are non-rechargeable and may overheat causing damage or fire.

Ⅱ. INSTALLATION

Open the cover:
Open the cover, as the figure below shows.

Insert your battery:
Insert your battery and close the cover, as the figure below shows.



Ⅲ. Z-WAVE NETWORK INCLUSION

Scene Controller can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

Included as a non-secure device
(1) Insert the LIR2450 battery.
(2) Set the Z-Wave network main controller into learning mode (see Z-Wave network controller operating manual).
(3) Triple click the Z-button.
(4) If the inclusion is successful, the LED will blink in blue less than for 5 seconds and then keep on for 15 seconds.

Included as a secure device
(1) Insert the LIR2450 battery.
(2) Set the Z-Wave network main controller into learning mode (see Z-Wave network controller operating manual).
(3) Pressing and holding the Z-button for 3 seconds.
(4) If the inclusion is successful, the LED will blink in green less than for 5 seconds and then keep on for 15 seconds.

TIP:
If you want your Scene Controller to be a security device that use secure/encrypted message to communicate in a Z-Wave network, then a security enabled Z-Wave controller is needed.

Ⅳ. REMOVING FROM Z-WAVE NETWORK

To remove the Scene Controller from the Z-Wave network:
(1) Insert the LIR2450 battery.
(2) Set the Z-Wave network main controller into excluding mode (see Z-Wave controller operating manual).
(3) Triple click the Z-button, if the exclusion is successful, LED will blink in orange for less than 5 seconds and then keep on for 3 seconds.

Ⅴ. RESET SCENE CONTROLLER

Reset procedure clears the Scene Controller's memory, including Z-Wave network information.

To reset Scene Controller:
Pressing and holding the Z-button for 20 seconds. Release the button after 20 seconds, LED will keep in yellow for 3 seconds. Scene Controller will be reset to factory defaults if you short press the button within this 3 seconds.

NOTE:
Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

Ⅵ. LOW BATTERY ALARM FUNCTION

Scene Controller will send battery report to the lifeline group when Z-Button is triggered during the sleep mode. If the battery level of the Scene Controller is less than 20%, the Scene Controller will beep 3 times when the button is pressed.

Ⅶ. COMMUNICATION FAILURE ALARM FUNCTION

The Scene Controller will beep one time when the communication between the Scene Controller and any one of the controlled device is failed.

Ⅷ. TESTING Z-WAVE NETWORK RANGE

Scene Controller's LED indicator can signal its communication quality with the Z-Wave main controller.
To start testing:
Press and hold the Z-button for 11 to 15 seconds, the LED will keep on in purple for 3 seconds, it will enter testing mode if you short press the Z-button during these 3 seconds.
Blink in green –Scene Controller establish a direct communication with the main controller, and still under checking.
Keep green – The green light should last about 2 seconds, which means the direct communication is stable.
Blink in orange –Scene Controller can communicate with the main controller in intermediate radio transmit power level, and still under checking.
Keep orange – The communication quality is moderate.
Keep Red – The communication is failed.

TIP:
1. This function works only when Scene Controller has been included into a Z-Wave network.
2. Click the Z button to exit the test.

Ⅸ. BATTERY CHARGING

Scene Controller has an internal rechargeable battery that will run for half a year under normal use conditions. If the battery level is less than 20%, it will activate the low battery level function which means you need to charge the battery.
The charger's output should be a micro USB terminal with 5V DC output.
The LED beside the micro USB port will be red during charging, and green when the charging is finished.

Ⅹ. ASSOCIATION

Association allows the Scene Controller to control another Z-Wave device directly, such as Smart Switch, Smart Dimmer, etc.

Scene Controller supports nine association groupings, every group relates to a specific button action. View details in the follow section of "Ⅻ. BUTTON FUNCTION".
Group 1 allows Scene Controller sends central scene notification command and battery report command when any button is triggered. Details shown as the below diagram 1. Association Group 1 as the Lifeline group.

Group 2 allows Scene Controller sends basic set command when the button 1 is triggered.
Group 3 allows Scene Controller sends switch multilevel set, multilevel start level change and multilevel stop level change command when the button 1 is triggered.

Group 4 allows Scene Controller sends basic set command when the button 2 is triggered.
Group 5 allows Scene Controller sends switch multilevel set, multilevel start level change and multilevel stop level change command when the button 2 is triggered.

Group 6 allows Scene Controller sends basic set command when the button 3 is triggered.
Group 7 allows Scene Controller sends switch multilevel set, multilevel start level change and multilevel stop level change command when the button 3 is triggered.

Group 8 allows Scene Controller sends basic set command when the button 4 is triggered.
Group 9 allows Scene Controller sends switch multilevel set, multilevel start level change and multilevel stop level change command when the button 4 is triggered.
Details shown as the below diagram 2

Diagram 1:

Button ID	1	2	3	4
Scene Number	1	2	3	4

Diagram 2:

Button ID	Group ID	Action & notification
Any button	1	Press: Central scene notification (Key Attributes=0) Hold: Central scene notification (Key Attributes=2) Release: Central scene notification (Key Attributes=1)
Button 1	2	Press: Basic Set Hold: Reserve Release: Reserve
	3	Press: Switch multilevel set Hold: Multilevel start level change Release: Multilevel stop level change
Button 2	4	Press: Basic Set Hold: Reserve Release: Reserve
	5	Press: Switch multilevel set Hold: Multilevel start level change Release: Multilevel stop level change
Button 3	6	Press: Basic Set Hold: Reserve Release: Reserve
	7	Press: Switch multilevel set Hold: Multilevel start level change Release: Multilevel stop level change
Button 4	8	Press: Basic Set Hold: Reserve Release: Reserve
	9	Press: Switch multilevel set Hold: Multilevel start level change Release: Multilevel stop level change

TIP:
1.The max number of associated nodes of all these 9 groups is 5.
2.Association allows for direct transmission of control command between devices and takes place without the participation of the main controller.

Ⅺ. WAKE UP

Wake up interval:
Available settings: **0**
Default setting: **0**
Pressing and holding Z-Button for 3 seconds. Led will turn to green, which means Scene Controller has successfully sent the wake up notification out.

NOTE:
The interval time must be set to 0. The wake up notification will not wake the Scene Controller, only the action of the button can you wake the Scene Controller.

Ⅻ. BUTTON FUNCTION

Scene Controller offers three button action types, including short press, held down and release.
Short press allows Scene Controller sends:
Central scene notification command to the associated nodes,
Basic set command to the associated nodes.
Switch multilevel set command to the associated nodes.

Held down (more than 1 second less than 20 seconds) allows Scene Controller sends:
Central scene notification command to the associated nodes,
Multilevel start level change command to the associated nodes.

Release allows Scene Controller sends:
Central scene notification command to the associated nodes,
Multilevel stop level change command to the associated nodes.

XIII. ADVANCED CONFIGURATION

Scene Controller offers a wide variety of advanced configuration settings. Below parameters can be accessed from main controllers configuration interface.

Parameter No.254 Enable/disable the configuration command
Lock/unlock all configuration parameters.
0 – Unlock.
1 – Lock.
Default setting: **0**
Parameter size: **1[byte]**

Parameter No.255 Reset Scene Controller
Reset the sensor or remove from the Z-Wave network
Value: **1431655765**
Default: **1**
Parameter size: **4[byte]**
Reset to factory default settings and removed from the Z-Wave network.
Value: **85**
Default: **1**
Parameter size: **1[byte]**
Reset the values of the configuration command to default setting.

XIV. NOTES FOR OTA

You may need the Over the Air (OTA) feature for the product's firmware upgrade. Your Scene Controller can not be used after OTA. In such a case, you need to activate the product by pressing and holding the Z-Button until the led turns on, this procedure may take you about 10 seconds. After these your Scene Controller will be usable.

XV .FCC NOTICE (for USA)

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.