

Quick start: Scene Controller EU

Technical specifications

Normal operating voltage	2x AAA 1,5V batteries
Frequency range	868.42 MHz
Wireless range	Up to 30 meters in line of sight



Basic operations

- Switch lifestyles
- Activate scenes
- Easy control your lights and curtains together by one pushbutton
- Long battery lifetime
- Available with double press buttons

How it operates

The *Scene Controller* has seven buttons.

If 1 of the 7 buttons is pressed a CENTRAL_SCENE_NOTIFICATION Z-Wave message is sent to the associated node with the corresponding value. This message can trigger a scene in a controller.

Use

The *Scene Controller* can be used to activate a Scene or a Lifestyle.

Include into a Z-Wave network ¹

1. Press and hold button 5 for two seconds and release to start the exclude process.
2. When classic inclusion failed, the product will start Network Wide Inclusion automatically.

Exclude into a Z-Wave network

1. Press and hold the button 5 for 12 seconds until the led starts blinking, than release to start the exclude process, if you keep holding the button it will only send wakeup message.
2. Make sure the *Scene Controller* is in direct range of the controller.



¹ Make sure your Z-Wave controller is in the correct operation mode (include or exclude).

Technical Manual: Scene Controller EU

Caution:

- This device is using a radio signal that passes through walls, windows and doors. The range is strongly influenced by local conditions such as large metal objects, house wiring, concrete, furniture, refrigerators, microwaves and similar items. On average, the indoor range is approximately 30 meters.
- Do not expose this product to excessive heat or moisture.
- Prevent long term exposure to direct sunlight.
- Do not attempt to repair this product. If the product is damaged or if you are in doubt about the proper operation, take the product back to the place of purchase.
- Do not clean the product with any liquid.
- Indoor use only.

Technical details

Normal operating voltage	2x AAA 1,5V batteries From 2,3Vdc to 4,0Vdc Do not use rechargeable batteries
Normal battery lifetime	Approximately 5 years
Frequency range	868.42 MHz
Wireless range	Approximately 100 meters in line of sight Min. 150 meters with a good mesh network (max 4 hops)
Storage temperature	-5 °C to +65 °C
Storage humidity	10% to 70%
Operating temperature	0 °C to 50 °C
Operating humidity	30% to 80%

Product dimensions (length x width x height)

Scene Controller is 125 x 40 x 20 mm

Indication mode

The indicator light gives various statuses of the device as follows:

- | | |
|--------------------------------|--|
| 1. Ready for learn mode: | indicator light blinks every second |
| 2. Learn in progress (add): | indicator light 2 times every second |
| 3. Learn in progress (remove): | indicator light 3 times every 1.5 second |
| 4. Learn mode success: | indicator light is on for one second |
| 5. RF message send success | indicator light is on for one second |
| 6. RF message send failed | indicator light blinks 6 times rapidly |
| 7. No association is set | indicator light blinks 6 times rapidly |



Supporting Command Classes:

Basic type: BASIC_TYPE_ROUTING_SLAVE
Generic type: GENERIC_TYPE_SWITCH_MULTILEVEL
Specific type: SPECIFIC_TYPE_NOT_USED
Listening: False, Z-Wave Lib: 4.54

COMMAND_CLASS_ASSOCIATION
COMMAND_CLASS_BATTERY
COMMAND_CLASS_WAKE_UP
COMMAND_CLASS_VERSION
COMMAND_CLASS_MANUFACTURER_SPECIFIC
COMMAND_CLASS_CONFIGURATION,
COMMAND_CLASS_MARK,
COMMAND_CLASS_CENTRAL_SCENE,
COMMAND_CLASS_BASIC



Not listening routing slave

This Z-Wave product will be used as routing slave. Slave nodes are nodes in a Z-Wave network that receive commands and perform actions based on the command. This device will always be in sleep mode because it works on batteries. In sleep mode the device is not active listening, the device will wake up according to the wakeup command class.

Include initiator

The include initiator is used when Primary and Inclusion Controllers include nodes into the network. When both the include initiator have been activated simultaneously the new node will be included to the network (if the node was not included previously).

Exclude initiator

The exclude initiator is used by Primary Controllers to exclude nodes from the network. When the exclude initiator and a slave initiator are activated simultaneously, it will result in the slave being excluded from the network (and reset to Node ID zero). Even if the slave was not part of the network it will still be reset by this action.

Z-Wave compatibility

Because this is a Z-Wave device, it means it can co-operate with other Z-Wave devices of other manufacturers. It can co-exist in a Z-Wave network existing with product from other manufacturers.

Hops & retries

The Z-Wave range has a range of up to 30 meters in line of sight. This signal is not limited to the 30 meter range due to routing the Z-Wave message to other nodes in the network. This way the range of the Z-Wave network can be expanded to 150 meters indoors (limit of 4 hops).

class: 0x20 COMMAND_CLASS_BASIC

The supporting role of the Basic command class is mapped to the Switch Binary command class.

class: 0x86 COMMAND_CLASS_VERSION

This command class is used to obtain information about the *Scene Controller*. The Z-Wave library type, the Z-Wave protocol version and the application version will be reported.

class: 0x72 COMMAND_CLASS_MANUFACTURER_SPECIFIC

This will report information about the manufacturer. This product will contain the manufacturer ID of *BeNext*. Manufacturer ID of *BeNext* is 138, the ID of this product is 23.

class: 0x5B COMMAND_CLASS_CENTRAL_SCENE

This command class is used to send a CENTRAL_SCENE_NOTIFICATION to a controller to activate a scene. With seven buttons is possible to activate seven scenes. With an additional seven scenes when buttons are double pressed.

- Press button 1-7 once notify scenes 1-7
- Press button 1-7 twice (within 0.2 sec) notify scenes 8-14

class: 0x70 COMMAND_CLASS_CONFIGURATION

Configure parameters:

0. Not used

1. Set to default

Description:	Set all configuration values to default values (factory settings). Read more in chapter Configuration Reset.
Size:	1 byte*
Param1:	If 0xFF then set to default
Param2,3,4:	Not used

2. Not used

3. Not used

4. Not used

5. Not used

6. Not used

7. Not used

8. Not used

9. Not used

10. Not used

11. Not used

12. Not used

13. Not used

14. Not used

15. Not used

16. Double press time

Description:	The time that a user has to activate the double button pressed scene, if time is passed then the single pressed button scene is notified.
Default:	0x14
Size:	1 byte*
Param1:	Numeric value 0 – 255 (*10 ms)

* If a size is other then given size the frame is ignored totally so configuration values are **not** changed.

class: 0x85 COMMAND_CLASS_ASSOCIATION

The Association command class is used to associate other devices with the *Scene Controller*. The devices that are associated can be controlled on application level.

The *Scene Controller* can be associated into a grouping. If so, the *Scene Controller* can control other Z-Wave device (does not have to be a controller).

The *Scene Controller* has one association group.

Group 1

Maximum supported nodes: 8

All CENTRAL_SCENE_NOTIFICATION messages are sent to the nodes in this group.

Class: 0x80 COMMAND_CLASS_BATTERY

This class is used to request and report battery levels for a given device.

When battery level is lower than 20% the Scene Controller will send a battery warning (value 255) after every wake up notification. A battery get will report the actual value even if below 20%.

When the batteries are placed a unsolicited battery report is sent (when included).

class: 0x84 COMMAND_CLASS_WAKE_UP

The Wake Up command class is used at battery-operated devices. This class allows the *Scene Controller* to wake up occasionally to notify others devices, that the *Scene Controller* is ready to receive commands. After receiving the commands the *Scene Controller* will go into sleep mode again. The wake up interval can be set using the WAKE_UP_INTERVAL_SET command.

The default value is $0x15180 = 86400 \text{ sec} = 24 \text{ hour}$

The default node is $0xFF = 255$ (broadcast)

It is possible to send a **wake up notification** on user interaction. To do this you have to press and hold the Scene Controller for 14 seconds. Ignore the blinking of the led and keep the button pressed for at least 14 seconds.

When the wake up time is set to 0 the **wake up notification** is never send periodically, only on user interaction.

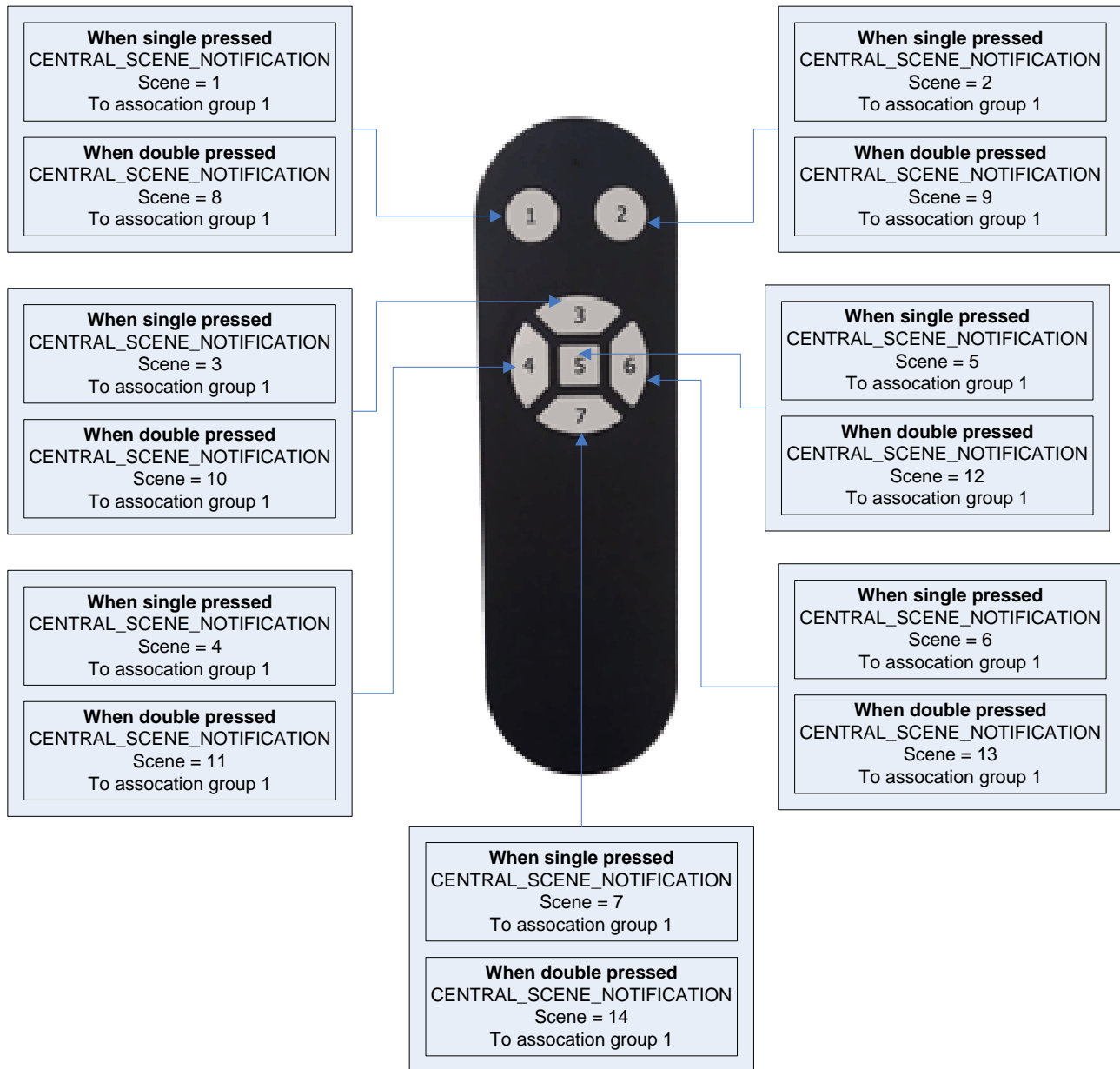
Operation mode

With the Scene Controller it is possible to activate up to 14 different scenes.

Scene 1-7 with single press: press one of the buttons once within 200 milliseconds.

Scene 8-14 with double press: press one of the buttons twice within 200 milliseconds.

Below figure shows an overview of the Z-Wave frames, values and association groups.



Configuration reset

The Scene Controller supports a configuration resets function. Configuration reset means:

- All configuration values are defaulted

This function can be activated by sending a configuration set frame:

CONFIGURATION_SET

Parameter: 0x01

Size: 0x01 (can't be different from 1)

Value: 0xFF (can be any value except for 0x55 or 0xAA)

When the value of configuration value is requested two possible values can be returned.

CONFIGURATION_REPORT

Parameter: 0x01

Value 0x55: Device doesn't have all his configuration settings anymore.

Even when a configuration parameter is changed back to the default value

Value 0xAA: Devices still has all his factory settings.

This are only configuration parameters, wake up interval can be changed.

Frequently Asked Questions

Q: I can't have my *Scene Controller* included into my Z-Wave network, what am I doing wrong?

A:

1. Is the controller ready to include any device into the Z-Wave network? If the controller is not in Include or exclude mode, the *Scene Controller* will not be included or excluded.
2. The *Scene Controller* is already included in a Z-Wave network (check your led feedback!). Exclude the *Scene Controller* and try again.

Q: I have configured a value but when I request it, it is not changed?

A: It is mandatory that the correct size is used while configure a parameter; go to the documentation about the configuration command class to check if the right size is used during configuration. If the wrong size is used the frame is ignored totally.

Q: I have configured a new value and when I request it the correct value is returned but the behavior is still the same?

A: Some configuration parameters have limits of what they can do, go to the documentation about configuration to check if the value of the configured parameter is out off limit.

Q: How to force a wakeup notification?

A: Keep the pushbutton pressed for more than 18 seconds.