

NodOn

## NodOn wall switch (white/gray)



### Quick start

This is a **Remote Control - Multi Purpose** for **Europe**. Please make sure the internal battery is fully charged. Push 3 times (quickly) on the button 1. The LED blinks in blue.

### What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section.

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.



If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

### Product Description

The NodOn® wall switch controls any compatible receivers Z-Wave® or Z-Wave Plus®, such as the Smart Plug NodOn®. It can address, directly, up to 4 groups of 8 devices and sent up to 16 different scenes to a Home Automation Gateway. This controller can operate on its own (“Standalone” Mode) or as gateway’s assistant (“Gateway” Mode). The product integrates a LED, which give an intuitive feedback for each operation you perform.

Based on an innovative technology, the NodOn® wall switch is only powered with a CR2032 battery, offering 2 years’ autonomy.

The NodOn® wall switch can be screwed or bonded thanks of the adhesive tape included.

The NodOn® wall switch is based on brand new 500 series Z-Wave® module from Sigma Designs®, and supports all the new features of Z-Wave Plus® standard: Longer range (up to 40 meters indoor), lower power consumption, higher data rate transmission, and many more new features.

## Prepare for Installation / Reset

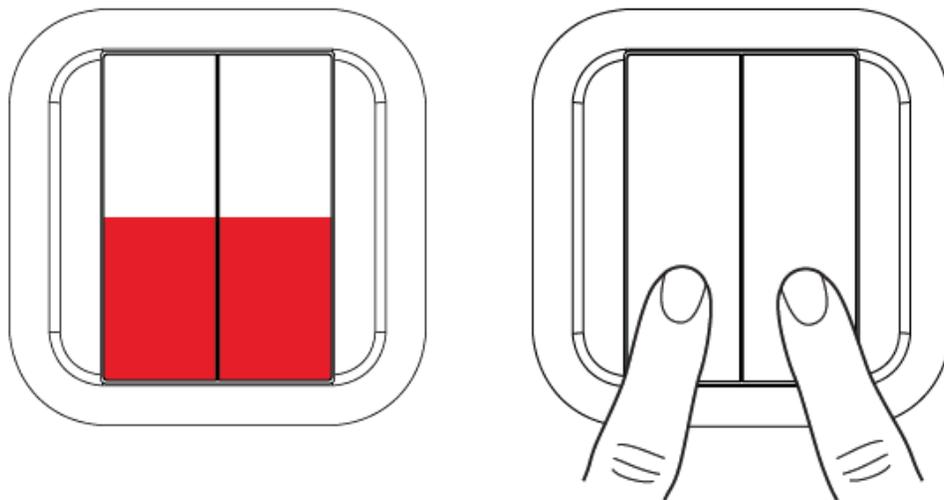
Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state**. Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

### Reset to factory default

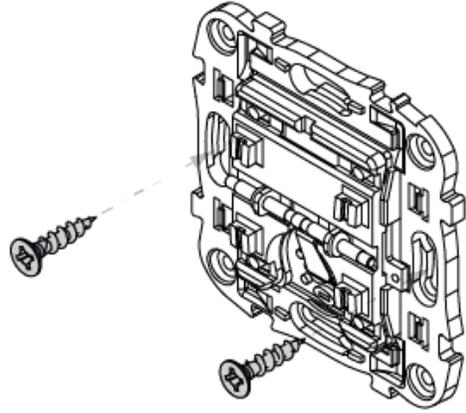
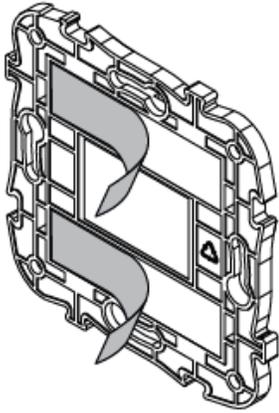
This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

Simultaneously push on buttons 3 and 4, during 1 second. The LED will blink red and green to validate the factory reset.

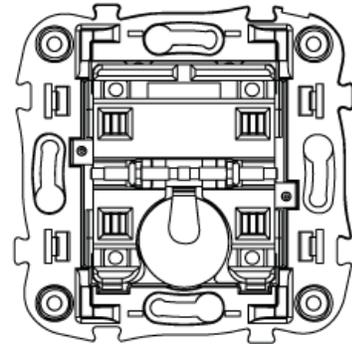
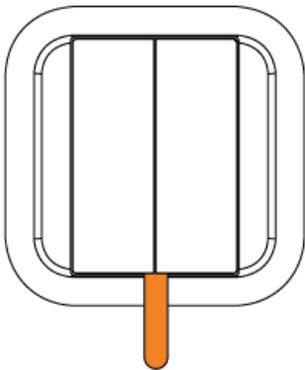


## Installation

The wall switch can be screwed (screws not included) or bonded thanks of the adhesive tape included.



When you put in place your wall switch on a plane surface, make sure that the battery holder is on the bottom part.



## Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

#### **Inclusion**

- 1) Push 3 times (quickly) on the button 1. The LED blinks in blue.
- 2) Place the device you want to add in “Learning” Mode. To do so, please refer to your device’s user guide. The LED blinks in green to confirm the inclusion.

**Note:** If you wish to include and associate a device, please refer to "Other Special Features"

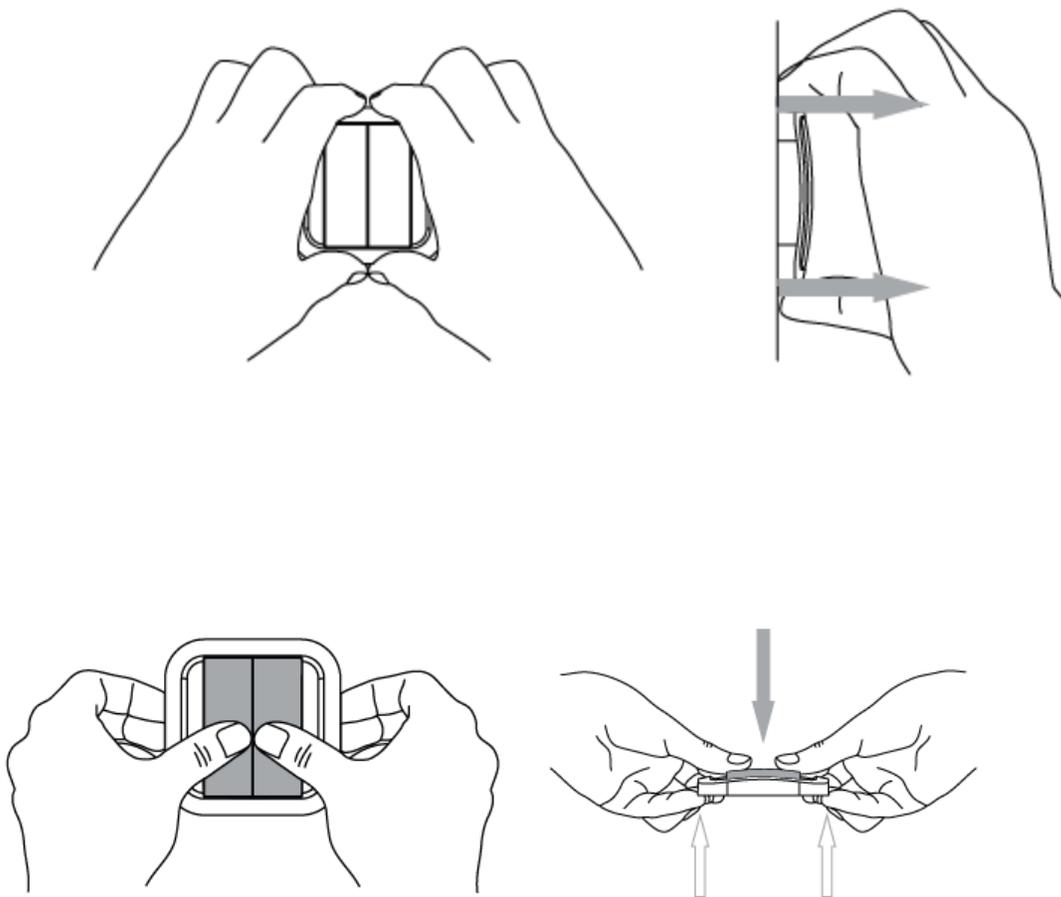
#### **Exclusion**

- 1) Push 3 times (quickly) on the button 4. - The LED blinks in blue.
- 2) Place the device you want to remove in “Learning” Mode. To do so, please refer to your device’s user guide. The LED blinks in green to confirm the exclusion.

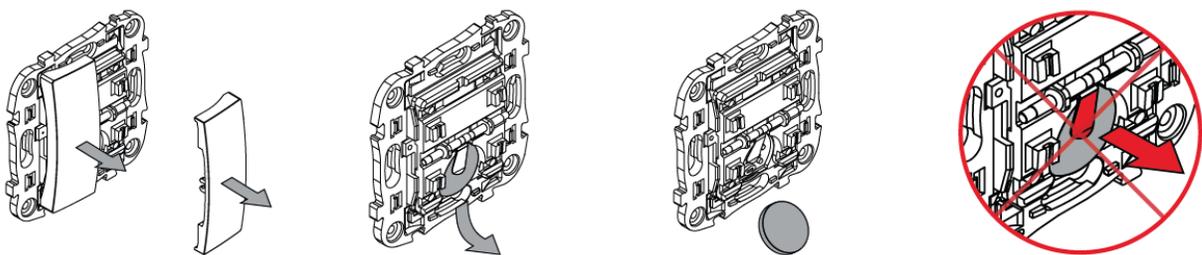
## **Product Usage**

### **BATTERY CHANGE**

The wall switch NodOn® works thanks to a CR2032 battery (included). In order to change the battery, detach the frame of the wall switch and pull out then the two buttons from their support.



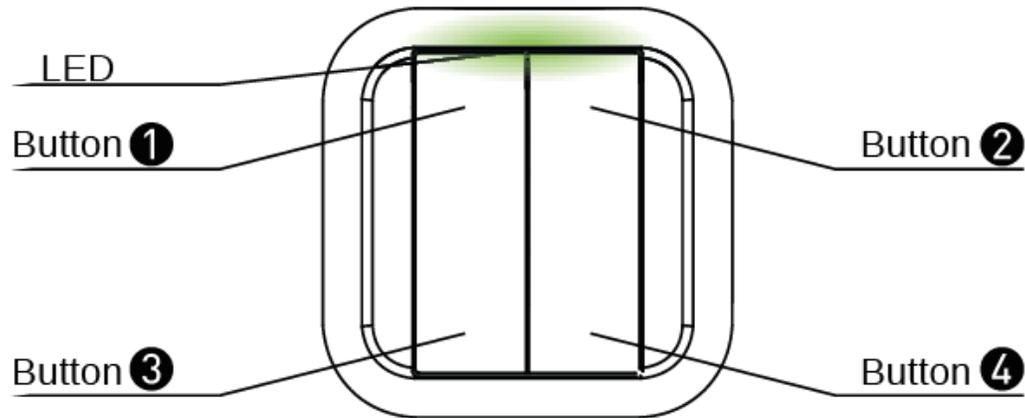
Slide the battery with your thumb without pull on the battery contact holding the battery.



**Careful:** If you pull too much on the battery contact in order to change the battery, you risk to break it.

## WALL SWITCH INTERFACE

The wall switch has 4 buttons and one LED located on the top of the product.



## BATTERY LEVEL

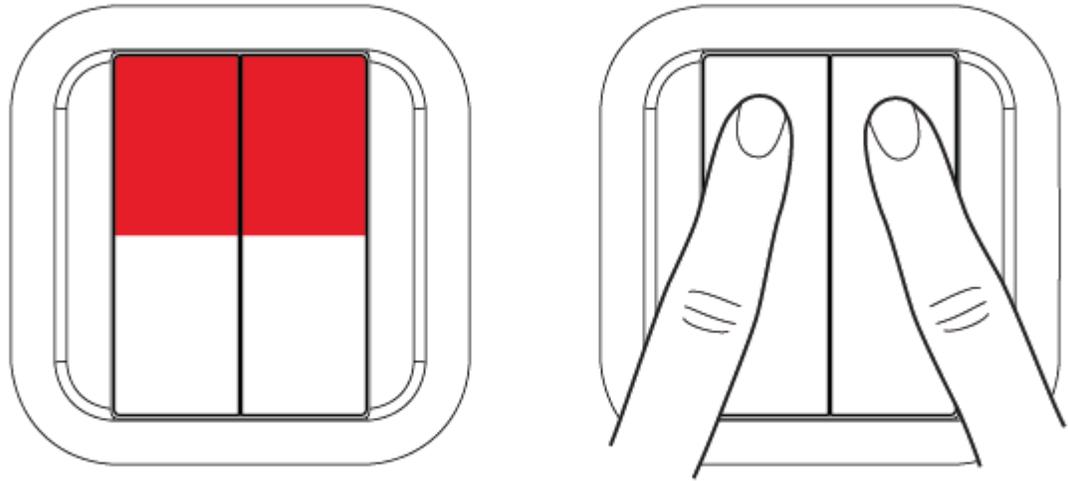
In order to know the battery level, a simultaneous short press on 1 and 2 must be performed. The LED will display the battery level according to below table:

LED state Battery level

*Green* Above 50%

*Orange* Between 50 and 20%

*Red* Below 20%



### **Communication to a Sleeping device (Wakeup)**

This device is battery operated and turned into deep sleep state most of the time to save battery life time. Communication with the device is limited. In order to communicate with the device, a static controller **C** is needed in the network. This controller will maintain a mailbox for the battery operated devices and store commands that can not be received during deep sleep state. Without such a controller, communication may become impossible and/or the battery life time is significantly decreased.

This device will wakeup regularly and announce the wakeup state by sending out a so called Wakeup Notification. The controller can then empty the mailbox. Therefore, the device needs to be configured with the desired wakeup interval and the node **ID** of the controller. If the device was included by a static controller this controller will usually perform all necessary configurations. The wakeup interval is a tradeoff between maximal battery life time and the desired responses of the device. To wakeup the device please perform the following action: When the product in "Gateway" mode, any action on button will send a wake up notification to the gateway.

### **Quick trouble shooting**

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.
2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.

4. Never use sleeping battery devices without a central controller.
5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

## Association - one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a 'Basic Set' Command.

### Association Groups:

Group Number	Maximum Nodes	Description
1	1	Lifeline. This group is used to report information of the Wall Switch to the Main Controller of the network.
2	8	<p>Button 1 - MONO - Controlled nodes.</p> <ul style="list-style-type: none"> <li>- A short press will activate (ON) your associated devices</li> <li>- A second short press will deactivate (OFF) your associated devices.</li> </ul> <p>If some of the associated devices have dimming features (light dimmer, roller shutter, etc.):</p> <ul style="list-style-type: none"> <li>- A long press will dim up your associated devices (light, roller shutter, etc.) until you release the button</li> <li>- A second long press on the same button will dim down your associated devices (light, roller shutter, etc.) until you release the button.</li> </ul>
3	8	<p>Button 2 - MONO - Controlled nodes.</p> <ul style="list-style-type: none"> <li>- A short press will activate (ON) your associated devices</li> <li>- A second short press will deactivate (OFF) your associated devices.</li> </ul> <p>If some of the associated devices have dimming features (light dimmer, roller shutter, etc.):</p> <ul style="list-style-type: none"> <li>- A long press will dim up your associated devices (light, roller shutter, etc.) until you release the button</li> <li>- A second long press on the same button will dim down your associated devices (light, roller shutter, etc.) until you release the button.</li> </ul>
4	8	<p>Button 3 - MONO - Controlled nodes.</p> <ul style="list-style-type: none"> <li>- A short press will activate (ON) your associated devices</li> <li>- A second short press will deactivate (OFF) your associated devices.</li> </ul> <p>If some of the associated devices have dimming features (light dimmer, roller shutter, etc.):</p> <ul style="list-style-type: none"> <li>- A long press will dim up your associated devices (light, roller shutter, etc.) until you release the button</li> <li>- A second long press on the same button will dim down your</li> </ul>

		associated devices (light, roller shutter, etc.) until you release the button.
5	8	<p>Button 4 - MONO - Controlled nodes.</p> <ul style="list-style-type: none"> <li>- A short press will activate (ON) your associated devices</li> <li>- A second short press will deactivate (OFF) your associated devices.</li> </ul> <p>If some of the associated devices have dimming features (light dimmer, roller shutter, etc.):</p> <ul style="list-style-type: none"> <li>- A long press will dim up your associated devices (light, roller shutter, etc.) until you release the button</li> <li>- A second long press on the same button will dim down your associated devices (light, roller shutter, etc.) until you release the button.</li> </ul>
6	8	<p>Buttons 1&amp;3 - DUO - Controlled nodes</p> <ul style="list-style-type: none"> <li>- A short press on button 1 will activate (ON) your associated devices.</li> <li>- A short press on button 3 will deactivate (OFF) your associated devices.</li> </ul> <p>If some of the associated devices have dimming features (light dimmer, roller shutter, etc.):</p> <ul style="list-style-type: none"> <li>- A long press on button 1 will dim up your associated device (light, roller shutter, etc.) until you release the button.</li> <li>- A long press on button 3 will dim down your associated device (light, roller shutter, etc.) until you release the button.</li> </ul>
7	8	<p>Buttons 2&amp;4 - DUO - Controlled nodes</p> <ul style="list-style-type: none"> <li>- A short press on button 2 will activate (ON) your associated devices.</li> <li>- A short press on button 4 will deactivate (OFF) your associated devices.</li> </ul> <p>If some of the associated devices have dimming features (light dimmer, roller shutter, etc.):</p> <ul style="list-style-type: none"> <li>- A long press on button 1 will dim up your associated device (light, roller shutter, etc.) until you release the button.</li> <li>- A long press on button 3 will dim down your associated device (light, roller shutter, etc.) until you release the button.</li> </ul>

## Special Operations as Z-Wave Controller

As long as this device is not included into a Z-Wave network of a different controller it is able to manage its own Z-Wave network as primary controller. As a primary controller the device can include and exclude other devices in its own network, manage associations, and reorganize the network in case of problems. The following controller functions are supported:

### Inclusion of other devices

Communication between two Z-Wave devices only works if both belong to the same wireless network. Joining a network is called inclusion and is initiated by a controller. The controller needs to be turned into the inclusion mode. Once in this inclusion mode the other device needs to confirm the inclusion - typically by pressing a button.

If current primary controller in your network is in special SIS mode this and any other secondary controller can also include and exclude devices.

To become primary a controller, have to be reset and then include a device.

1) Push 3 times (quickly) on the 3 buttons.

*The LED blinks in blue*

2) Place the device you want to add in “Learning” Mode, within 10 seconds. To do so, please refer to your device’s user guide.

*The LED blinks in green to confirm the inclusion*

#### **Exclusion of other devices**

The primary controller can exclude devices from the Z-Wave network. During exclusion the relationship between the device and the network of this controller is terminated. No communication between the device and other devices still in the network can happen after a successful exclusion. The controller needs to be turned into the exclusion mode. Once in this exclusion mode the other device needs to confirm the exclusion - typically by pressing a button.

**Attention:** Removing a device from the network means that it is turned back into factory default status. This process can also exclude devices from it's previous network.

1) Push 3 times (quickly) on the 4 button.

*The LED blinks in blue*

2) Place the device you want to remove in “Learning” Mode, within 10 seconds. To do so, please refer to your device’s user guide.

*The LED blinks in green to confirm the exclusion*

#### **Management of Association in the controller ASSOCIATION**

1) Push 3 times (quickly) on the 1 button to activate the “Association” Mode.

*The LED glows in blue*

2) Choose which button will control your device, within 10 seconds.

- A short press on one of the buttons of the wall switch (1, 2, 3 or 4 will activate the MONO Profile. The pressed button will then control your device.
- A long press on the 1 button will activate the DUO Profile, combined with the 3 button. The 1 (ON) and 3 (OFF) buttons will then control your device.
- A long press on the 2 button will activate the DUO profile, combined with the 4 button. The 2 (ON) and 4 (OFF) buttons will then control your device.

*The LED blinks in blue to confirm your choice*

3) Place the device you want to associate in “Learning” Mode, within 10 seconds. To do so, please refer to your device’s user guide.

The LED of the wall switch blinks green to confirm the association process

**Careful :** In case of a too long association process or others problems during the process, the LED will blink red. Please restart the procedure.

## DISASSOCIATION

The disassociation deletes any association relationship between the device and the wall switch’s buttons. However, your device will remain in your wall switch’s Z-Wave® network.

1) Push 3 times (quickly) on the 2 button.

*The LED blinks in blue*

2) Place the device you want to disassociate in “Learning” Mode, within 10 seconds. To do so, please refer to your device’s user guide.

*The LED blinks in green to confirm the disassociation*

## Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

**IMPORTANT:** Controllers may only allow configuring signed values. In order to set values in the range 128 ... 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200 it may be needed to set a value of 200 minus 256 = minus 56. In case of a two-byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

### Parameter 1: Buttons 1 & 3 Profile

*To set-up the profile of buttons 1 & 3s*

Size: 1 Byte, Default Value: 0

Setting	Description
0	SCENE. Product sends - Central Scene Notification Commands or Scene Activation Commands.
1	MONO. Button 1 is not paired with button 3.
2	DUO. Button 1 is paired with button 3.

### Parameter 2: Buttons 2 & 4 Profile

*To set-up the profile of buttons 2 & 4*

Size: 1 Byte, Default Value: 0

Setting	Description
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<b>0</b>	SCENE. Product sends Central Scene Notification Commands or Scene Activation Commands.
<b>1</b>	MONO. Button 1 is not paired with button 3.
<b>2</b>	DUO. Button 1 is paired with button 3.

**Parameter 3: Scene Type**

*To choose the way of sending Scene to the gateway*

Size: 1 Byte, Default Value: 0

Setting	Description
<b>0</b>	Use CENTRAL SCENE Commands.
<b>1</b>	Use SCENE ACTIVATION Commands.

**Parameter 4: Button 1 Configuration**

*To set-up the how button 1 behaves, when set in MONO Profile*

Size: 1 Byte, Default Value: 0

Setting	Description
<b>0</b>	Single Press sends Basic Setup Command to associated devices in Group 2.
<b>1</b>	Single Press sends broadcast Switch All On Command.
<b>2</b>	Single Press sends broadcast Switch All Off Command.

**Parameter 5: Button 2 Configuration**

*To set-up the how button 2 behaves, when set in MONO Profile*

Size: 1 Byte, Default Value: 0

Setting	Description
<b>0</b>	Single Press sends Basic Set Command to associated devices in Group 3.
<b>1</b>	Single Press sends broadcast Switch All On Command.
<b>2</b>	Single Press sends broadcast Switch All Off Command.

**Parameter 6: Button 3 Configuration**

*To set-up the how button 3 behaves, when set in MONO Profile*

Size: 1 Byte, Default Value: 0

Setting	Description
<b>0</b>	Single Press sends Basic Set Command to associated devices in Group 4.
<b>1</b>	Single Press sends broadcast Switch All On Command.

2	Single Press sends broadcast Switch All Off Command.
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#### Parameter 7: Button 4 Configuration

*To set-up the how button 4 behaves, when set in MONO Profile*

Size: 1 Byte, Default Value: 0

Setting	Description
0	Single Press sends Basic Set Command to associated devices in Group 5.
1	Single Press sends broadcast Switch All On Command.
2	Single Press sends broadcastSwitch All Off Command.

#### Parameter 8: Led Management

*How to set up LED behaviour*

Size: 1 Byte, Default Value: 0

Setting	Description
0	Led does not acknowledge button action and does not acknowledge result of radio command sent.
1	When the end-user performs a Single press, Double press or Hold Press on a button, led blinks blue to acknowledge the button action.
2	When the end-user sends a controlled command: (Basic Set Command, Central Scene Notificationu Command, Multilevel Switch Stop Level Change Command Led blinks GREEN to acknowledge transmission success or blinks RED to acknowledge transmission failed.)
3	Combined behaviors of 1 and 2 modes.

## Technical Data

<b>Dimensions</b>	80x80x15 mm
<b>Weight</b>	52 gr
<b>Hardware Platform</b>	ZM5202
<b>EAN</b>	3700313920268
<b>IP Class</b>	IP 20
<b>Device Type</b>	Remote Control - Multi Purpose
<b>Network Operation</b>	Portable Controller
<b>Z-Wave Version</b>	6.51.06

<b>Certification ID</b>	ZC10-15070008
<b>Z-Wave Product Id</b>	0x0165.0x0002.0x0003

## Supported Command Classes

- Association
- Association Group Information
- Battery
- Central Scene
- Configuration
- Device Reset Locally
- Manufacturer Specific
- Powerlevel
- Version
- Wake Up
- Zwaveplus Info

## Controlled Command Classes

- Switch All
- Application Status
- Basic
- Central Scene
- Scene Activation
- Switch Multilevel
- Wake Up
- Zwaveplus Info

## Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network. Controllers are typically Gateways, Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network. Slaves can be sensors, actuators and even remote controls.
- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announce that it is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.

