domitech

DOMEZBULB
Z-Wave Dimmable LED Light Bulb

Firmware Version : 5.9

Quick Start

S This device is a Z-Wave actor. Turning on the power switch on the wall includes the device. For exclusion the device must be turned on and off 4 times in a row within 4 seconds.

Please refer to the chapters below for detailed information about all aspects of the products usage.

What is Z-Wave?

This device is equipped with wireless communication complying to the Z-Wave standard. Z-Wave is the **international standard for wireless communication** in smart homes and buildings. It is using the **frequency of 868.42 MHz** to realize a very stable and secure communication. Each message is reconfirmed (**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.

Z-Wave differentiates between Controllers and Slaves. Slaves are either sensors **(S)** transmitting metered or measured data or actuators **(A)** capable to execute an action. Controllers are either static mains powered controllers **(C)** also referred to as gateways or mobile battery operated remote controls **(R)**. This results in a number of possible communication patterns within a Z-Wave network that are partly or completely supported by a specific device.

1. Controllers control actuators
2. Actuators report change of status back to controller
3. Sensors report change of status of measured values to controller
4. Sensors directly control actuators
5. Actuators control other actuators
6. Remote controls send signals to static controllers to trigger scenes or other actions
7. Remote controls control other actuators.
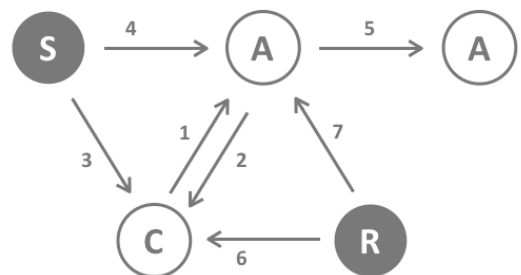
There are two different role a controller can have. There is always one single primary controller that is managing the network and including/excluding devices. The controller may have other functions - like control buttons - as well. All other controllers don't manage the network itself but can control other devices. They are called secondary controllers. The image also shows that its not possible to operate a sensor just from a remote control. Sensors only communicate with static controllers.

Product description

The Domitech BulbZ is a Z-Wave controllable and **fully-dimmable**, instant-on LED screw-in light bulb that provides **gorgeous soft-white illumination** (2700K). Equivalent to a 60-watt incandescent bulb and using only nine (9) watts of energy, BulbZ is estimated **to save approximately 140 EU** throughout its average lifespan. The Bulb can be **used even in two-wire electrical systems** where an installation of a standard Z-Wave switch or dimmer will fail. As with all Z-Wave products, BulbZ operates at the standard 868.42 MHz frequency, acts as **Z-Wave repeater** and gives users the convenience of wirelessly controlling lighting from a Z-Wave hub or controller.

Before Device is installed

Please read carefully the enclosed user manual before installation of the radio-actuator, in order to ensure an error-free functioning.

ATTENTION: only authorized technicians under consideration of the country-specific installation guidelines/norms may do works with 230 Volt mains power. Prior to the assembly of the product, the voltage network has to be switched off and ensured against re-switching.

The product is permitted only for proper use as specified in the user manual. Any kind of guarantee claim has to be forfeited if changes, modifications or painting are undertaken. The product must be checked for damages immediately after unpacking. In the case of damages, the product must not be operated in any case. If a danger-free operation of the equipment cannot be assured, the voltage supply has to be interrupted immediately and the equipment has to be protected from unintended operation.

Installation Guidelines

Just screw the bulb into a standard E27 light bulb socket.

Behavior within the Z-Wave network

On factory default the device does not belong to any Z-Wave network. The device needs to join an existing wireless network to communicate with the devices of this network. This process is called **Inclusion**. Devices can also leave a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller will be turned into exclusion respective inclusion mode. Please refer to your primary controllers manual on how to turn your controller into inclusion or exclusion mode. Only if the primary controller is in inclusion or exclusion mode, this device can join or leave the network. Leaving the network - i.e. being excluded - sets the device back to factory default.

If the device already belongs to a network, follow the exclusion process before including it in your network. Otherwise inclusion of this device will fail. If the controller being included was a primary controller, it has to be reset first.

Turning on the power switch on the wall includes the device. For exclusion the device must be turned on and off 4 times in a row within 4 seconds

Operating the device

The device can be controlled from the legacy wall switch and in parallel from any Z-Wave wireless controller. It can be dimmed and switch on and off. In case the legacy wall has turned off the bulb it can not be turned on by wireless command. To prevent this a two times off/on switching sequence on the wall switch within 2 seconds (switch remains in ON-position after this) will turn off the lamp be keeps it powered. All other mixed combinations of controls are possible:

- Wall Switch ON => Lamp ON => Wall Switch OFF => Lamp OFF

- Wall Switch ON => Lamp ON => Z-Wave OFF => Lamp OFF => Z-Wave ON => Lamp ON

- Wall Switch ON => Lamp ON => Z-Wave DIM => Z-Wave OFF => Lamp OFF => Z-Wave ON => Lamp dimmed

- Wall Switch ON => Lamp ON => Z-Wave DIM => Wall Switch OFF => Lamp OFF => Wall Switch ON => Lamp dimmed

- Wall Switch ON => Lamp ON => Z-Wave OFF => Lamp OFF => Wall Switch OFF/ON => Lamp ON

- Wall Switch OFF => Lamp OFF => Wall Switch ON => Lamp ON

- Wall Switch OFF/ON/OFF/ON => Lamp OFF => Z-Wave ON => Lamp ON

- Wall Switch OFF => Lamp OFF => no Z-Wave operation

Node Information Frame

NI   The Node Information Frame is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame.

In factory reset the device will issue a NIF every time when powered.

Associations

A   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 a common wireless command.

Association Groups:

1	Lifeline (max. nodes in group: 5)

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 to configure 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 two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Status on turn on the bulb after turning off (Parameter Number 1, Parameter Size 1)
The Bulb can be turned off wirelessly while the powerswitch on the wall remains in on-position. The bulb can be turned back on from the wall switch by shortly turning of and then turning on again This parameter defines

the status of the bulb after such an operation

Value	Description
0	back to 100 % (Default)
1	back to last dimming level

Command Classes

Supported Command Classes

- Basic (version 1)

- Multilevel Switch (version 1)

- All Switch (version 1)

- Association Group Information (version 1)

- Device Reset Locally (version 1)

- Z-Wave Plus Information (version 2)

- Configuration (version 1)

- Manufacturer Specific (version 2)

- Powerlevel (version 1)

- Firmware Update Meta Data (version 2)

- Association (version 2)

- Version (version 2)

Technical Data

IP Rating	IP 20
Frequency	868.42 MHz (SRD Band)
Wireless Range	up to 100 m outside, on average up to 20 m inside buildings
Explorer Frame Support	No
SDK	
Device Type	Slave with routing capabilities
Generic Device Class	Multilevel Switch
Specific Device Class	Multilevel Power Switch
Routing	Yes
FLiRS	No
Firmware Version	5.9

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 bringing 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 annonces that is is able to communicate.

- **Node Information Frame** — is a special wireless message issued by a Z_Wave device to announce its capabilities and functions.

Disposal Guidelines

The product does not contain hazardous chemicals.

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.