AEO_DSD31
Plugable Z-Wave Siren

Firmware Version : 1.23

Quick Start

A This device is a wireless Z-Wave actor. For Inclusion and Exclusion push the Action button one time.

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.
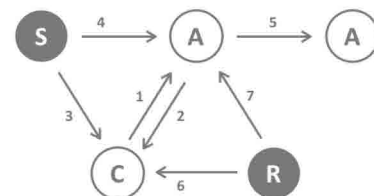
There are two different role a controller can have. There is always one single primary controller that is managing the network and including/excluding devices. The controller may have other functions - like control buttons - as well. All other controllers don't manage the network itself but can control 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 siren will warn everybody in the building by a loud sound and a flashing light about an alarm. This product is especially suited for security applications in combination with other Z-Wave devices such as door or windows sensors or motion detectors. The siren gives a loud sound and a flashing warning light, so everybody in the building will know immediately that an alarm has occurred. The noise level of the siren is > 105 dB in range of 1 meter. The device can be plugged into any typical electrical outlet. During a power failure, the siren can operate with a internal lithium battery.

When included securely the device is able to accept secure commands and to send secure commands to other devices. The commands and the receiver of the commands sent out on single click and on double click of the rocker can be defined in configuration parameters and association groups.

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

The device can be installed on every Schuko plug without any further restrictions.

Behavior within the Z-Wave network

| I | 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.

After you have set the controller in the inclusion / exclusion mode, press the action button once to confirm the inclusion / exclusion of the device.

During this process, the sirens LEDs lights and goes out after successful inclusion / exclusion .

Operating the device

Is the siren in the normal mode, the LED is off. Once an alarm from an associated Z-Wave device is triggered, the siren goes into alarm mode. The volume and type of siren is dependent on the configuration

Functions of the Action button:

- **Short click the Action button:**: Cancel Alarm / Bring Siren into Learnmode

- **Press and hold the action button for 5-8 seconds**: Cancels the alarm and starts the alarm test (during 1...5 second: 'Network'-LED flashes quickly, after 5 seconds: Alarm will sound and all LEDs flash quickly for 3 seconds)

- **Press and hold the action button for 20 seconds**.

  - Sets the siren to factory state: Make sure the power is supplied to the siren. If you press the action button for 20 seconds, the 'Network'-LED lights up for 2 seconds to confirm factory default.

  - **Note:** Resetting to factory condition has the following consequences: (1) It removes the device from the Z-Wave network, it (2) clears all associations and (3) it resets all parameters and settings to the 'default' values

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.

Sirensound and Volume (Parameter Number 37, Parameter Size 2)
The Value1(low byte) is used to select the Siren sound. The Value2(high byte) is used to adjust the volume. Other values will be ignored.

Value	Description
0	do not change the current sound.
1	Siren sound 1 is selected.
2	Siren sound 2 is selected.
3	Siren sound 3 is selected.
4	Siren sound 4 is selected.
5	Siren sound 5 is selected.

Send Notifications (Parameter Number 80, Parameter Size 1)
Enable to send notifications to associated devices when the state of Siren changed.

Value	Description
0	nothing (Default)
1	hail CC
2	basis CC Report

Partner ID (Parameter Number 200, Parameter Size 1)

Value	Description
0	AEON Labs Standard Product (Default)

Enable/Disable "Lock" - Configuration (Parameter Number 252, Parameter Size 1)

Value	Description
0	disable (Default)
1	enable

Factoryreset (Parameter Number 255, Parameter Size 4)
Reset to factory default setting and removed from z-wave network.

Value	Description
0	Resets the device to factory state

Command Classes

Supported Command Classes

- Binary Switch (version 1)
- Scene Activation (version 1)
- Scene Actuator Configuration (version 1)
- Association Group Information (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)
- Security (version 1)

- Device Reset Locally (version 1)

- Hail (version 1)

Controlled Command Classes

- Device Reset Locally (version 1)

- Hail (version 1)

Technical Data

Explorer Frame Support	No
SDK	
Device Type	Slave with routing capabilities
Generic Device Class	Binary Switch
Specific Device Class	Specific Device Class not used
Routing	Yes
FLiRS	No
Firmware Version	1.23

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.