Popp

10 Year Smoke Detector

SKU: POPE700342

Quickstart

This is a **secure Alarm Sensor** for **Europe**. To run this device please insert fresh **1 * ER14250 1/2AA** batteries. Please make sure the internal battery is fully charged. Please insert the Z-Wave module including the battery into the smoke detector main device first. Pressing the "Z-Wave button" includes and excludes the device. Keeping the button pushed for 3 seconds will force secure inclusion.

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.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.

Product Description

This smoke detector will report smoke alarms wirelessly and securily into a Z-Wave network and is able to control other devices using associations The smoke detector's sensor head is certified with the Q quality label, conforms DIN EN 14604 and satisfies all contemporary legal requirements. The High-End 10-years smoke detector offers a large test button conveniently accessible even with a broomstick when mounted on the sealing. The smoke chamber is monitored electronically to avoid any malfunction and wrong alerts. The device will also report its end of life to make sure it is getting replaced on time. Tampering a smoke detector by removing it from the mounting base will issue a wireless alarm command as well.

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.

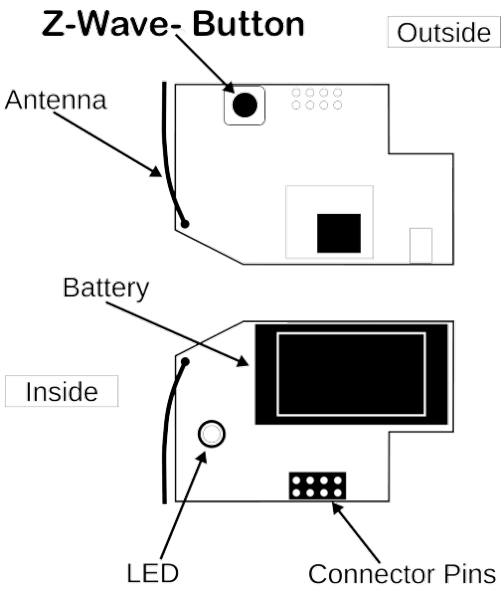
To reset the device keep the button pushed for 10 seconds. After 5 seconds the led starts flashing and after another 5 seconds there is a short beep signaling the successful reset back to factory defaults.

Safety Warning for Batteries
The product contains batteries. Please remove the batteries when the device is not used. Do not mix batteries of different charging level or different brands.

Installation

Please refer to the installation guide of the smoke sensor for information about how and where the smoke sensor should be installed. The installation guide complies with the norm DIN EN 14676.

- The first step is to mount the mounting base on the desired place in the home using screws.
- Remove the battery isolation strip from the wireless module. The red LED will start blinking.
- Include the Smoke Sensor into your existing Z-Wave based Smart Home Network using the Z-Wave button.
- Place the Smoke Detector on the mounting base and turn clockwise. Now the Smoke Detector is armed.
- Battery Change: The battery of the wireless module will be empty much earlier than the 10 years soldered in battery of the smoke sensor. To replace the battery, remove the Smoke Detector, pull off the wireless module from the smoke sensor. Then you can replace the 1/2 AA battery and replug the wireless module.



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
Secure Inclusion: Push the button for 3 seconds
Unsecure Inclusion: Push the button for 1 seconds

Exclusion
Push the button for 1 second

Product Usage

In case smoke is detected by the smoke detector the device will sound and the wireless module will issue a Z-Wave alarm command to the main controller and BASIC commands other associated devices. The value of the BASIC message is defined in Configuration Parameter 3 and 4. The device will report the battery level of the module but not the level of the built-in battery of the detector head. Once the device is placed on the mounting plate the tamper protection is active. Whenever the smoke detector head will be removed from the base for more then 4 seconds an tamper alarm will be sent wirelessly to the main controller. Note: All communication of the wireless module is performed with application level security if the device was included securely and all communication partners support secure communication as well. In case a non-secure device is associated for switching on smoke alarm (in association group 2), the smoke detector will detect this and change the communication style to non-secure for this very device only. This process happens one time and will take about 20 seconds. This delay will happen on first communication only.

Alarm Messages
The device will issue the following (unsolicited) alarm messages:

- Smoke Detected (this alarm message will be issued as well when the test button is pressed)
- Low Battery Alarm (when the battery of the wireless modules goes low), indicated by red LED
- Tamper Detected (ON, when the smoke detector head is removed from the base; OFF, when the detector head is mounted to the base)
- End of Life (issued, when the Detector Main Head has reached its end of life after 10+ years.)

Node Information Frame

The Node Information Frame (NIF) 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. To issue a NIF execute the following action: A single click on the Z-Wave sends out a NIF.

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: A double click on the Z-Wave button wakes up the device.

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

Firmware-Update over the Air

This device is capable of receiving a new firmware 'over the air'. The update function needs to be supported by the central controller. Once the controller starts the update process, perform the following action to confirm the firmware update: Once the firmware update process has been started on the controller wakeup the device with a double click. The device will check the firmware request. When accepted the LED will blink to await confirmation on the device. Double click on the button to finally start firmware update.

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	10	Z-Wave Plus Lifeline
2	10	Switching Command. All devices in this group will receive a BASIC SET command on Smoke Alarms. Configuration parameter 3 and 4 will define the BASIC command sent.

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 3: Value of ON-Command
This value is sent as BASIC Set to Association Group 2 when an Smoke Alarm occurs.
Size: 1 Byte, Default Value: 99

Setting	Description
0 - 99	Value
255	Value

Parameter 4: Value of Off-Command
This value is sent as BASIC Set to Association Group 2 when an Smoke Alarm is cleared.
Size: 1 Byte, Default Value: 99

Setting	Description
0 - 99	Value
255	Value

Technical Data

Dimensions	115x115x47 mm
Weight	202 gr

Hardware Platform	ZM5202
EAN	4251295700342
IP Class	IP 20
Battery Type	1 * ER14250 1/2AA
Device Type	Notification Sensor
Network Operation	Reporting Sleeping Slave
Firmware Version	3.05
Z-Wave Version	6.51.09
Z-Wave Product Id	0x0154.0x0004.0x000D

Supported Command Classes

- Association Group Information V2
- Association V2
- Battery
- Device Reset Locally
- Firmware Update Md V3
- Manufacturer Specific V2
- Notification V5
- Powerlevel
- Security
- Sensor Binary V2
- Version V2
- Zwaveplus Info V2

Controlled Command Classes

- Basic

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 announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.