
# SE Devices Standalone Relay 2-Pole AR2P Manual



Contents



## SE Devices

# Standalone Relay 2-Pole

**SKU: AR2P**


## Quickstart

This is a
**secure**
**On/Off Power Switch**
for
**CEPT (Europe)**.

To run this device please connect it to your mains power supply.

To add this device to your network execute the following action:
To add the device to a Z-Wave network, the Z-Wave Controller must first be set into Add (Learn) mode. Then use a paperclip or a small pointy tool to push and hold the button in the button hole for approximately a second. The device LED will blink twice to indicate that it sends information to the Controller.

Please refer to the

Manufacturers Manual for more information.

## Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law.
The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material.
Use this equipment only for its intended purpose. Follow the disposal instructions.

Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

## 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

The Standalone 2-Pole Relay is exclusively Z-Wave controllable, and designed to handle loads up to 1800W and be concealed inside Wall Boxes. The Relay switches both Live and Neutral phase, and makes it suitable for use in installation where this is required. The Relay can be used to switch both Heat Sources and Light fixtures. The product also contains a fail-safe mechanism which will switch the relay ON and OFF at fixed intervals, in case communication from a controlling device is lost.The Relay measures the immediate and accumulated power consumption of an attached load, which is reported at fixed intervals.

## 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.

WARNING! Executing a Factory Reset on a device may make it stop working as wanted and WILL remove it from the Z-Wave network. Please DO NOT execute this procedure unless its absolutely necessary.Press and Hold the Add/Remove button for about 15 seconds – until LED indicator starts blinking. Then release the button. The device will now be factory reset and removed from the Z-Wave network.The button is located about 10 mm down in the middle of the three holes on the front. A thin tool (a very small screwdriver, a toothpick, a paper clip or similar) is needed to access the button.

## Safety Warning for Mains Powered Devices

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

## 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

To add the device to a Z-Wave network, the Z-Wave Controller must first be set into Add (Learn) mode. Then use a paperclip or a small pointy tool to push and hold the button in the button hole for approximately a second. The device LED will blink twice to indicate that it sends information to the Controller.

## Exclusion

To remove the device from a Z-Wave network, the Z-Wave Controller must first be set into Remove (Learn) mode. Then use a paperclip or a small pointy tool to push and hold the button in the button hole for approximately a second. The device LED will blink twice to indicate that it sends information to the Controller.

## 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 NumberMaximum NodesDescription

| | | |
|---|---|---|
| 1 | 5 | The Lifeline group where all Root Device events are reported. All unsolicited Reports for the supported command classes will be issued to this group. Supports both normal and Multichannel Association.Commands Issued: – Sensor Multilevel Report – Reports Power Consumption and Temperatures – Meter – Reports power consumption to the Controller every 15 minutes. – Device Reset LocallyReports factory resets to the Controller |
| 2 | 5 | Associated devices will be controlled according to local state changes. Supports Multichannel Association in addition to standard association. Command Issued: Basic Set |

### 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 200â€ˆit 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: Hardware Combination Identifier

*READ-ONLY: Byte which uniquely describes the combination of form factor and functionality for the current SE Devices unit. Always return 16 for this device.*
Size: 1 Byte, Default Value: 16

SettingDescription

| | |
|---|---|
| 19 | Hardware Combination Identifier |

### Parameter 16: Functionaltiy Identifier

*READ-ONLY: Provides an Identifier for the local device functionality, which is the same across all devices in the SEdevices product range.Always return 0 for 2-Pole Relays*
Size: 1 Byte, Default Value: 0

SettingDescription

| | |
|---|---|
| 6 | Functionaltiy Identifier |

### Parameter 4: Safety Activate Delay

*Safety Mode is activated after the configured number of seconds has elapsed. It will start by turning OFF the Back Unit when activated. A 0 value Disables Safety Mode. The MAX limit is 32767 seconds (9 hours, 6 minutes and 7 seconds)*
Size: 2 Byte, Default Value: 0

SettingDescription

| | |
|---|---|
| 0 – 32767 | Safety Activation Delay |

### Parameter 5: Safety OFF Period

*The number of seconds to stay in OFF mode when Safety is activated. The Back unit turns ON when the timer have elapsed. If value is 0, the Back Unit will not turn back ON. The MAX limit is 32767 seconds (9 hours, 6 minutes and 7 seconds)*
Size: 2 Byte, Default Value: 600

SettingDescription

| | |
|---|---|
| 0 – 32767 | Safety OFF Period |

### Parameter 6: Safety ON Period

*The number of seconds to stay in ON mode when Safety is activated. The Back Unit turns back OFF when the timer have elapsed (and continues to turn ON and OFF alternately). If value is 0, the Back Unit WILL NOT turn ON at all. The MAX limit is 32767 seconds (9 hours, 6 minutes and 7 seconds)*
Size: 2 Byte, Default Value: 300

SettingDescription

| | |
|---|---|
| 0 – 32767 | Safety ON Period |

### Technical Data

| | |
|---|---|
| Hardware Platform | ZM5202 |
| Device Type | On/Off Power Switch |
| Network Operation | Always On Slave |
| Firmware Version | HW: 30 FW: 3.00:03.00 |
| Z-Wave Version | 6.71.01 |
| Certification ID | ZC10-18046086 |
| Z-Wave Product Id | 0x024F.0x0003.0x1010 |
| Supported Meter Type | Electric Energy |
| Electric Load Type | FluorescentIncandescentInductive (e.g. Motor)LEDMLV (Magnetic) |
| Sensors | CurrentPowerVoltage |
| Firmware Updatable | Updatable by Professional/Technician |
| Neutral Wire Required | ok |
| Security V2 | S2_UNAUTHENTICATED |
| Frequency | XXfrequency |
| Maximum transmission power | XXantenna |

### Supported Command Classes

- Association Grp Info
- Association V2
- Basic
- Configuration
- Device Reset Locally
- Firmware Update Md V4
- Manufacturer Specific V2
- Meter V2
- Multi Channel Association V3
- Powerlevel
- Security
- Security 2
- Sensor Multilevel V5
- Supervision
- Switch Binary
- Transport Service V2
- Version V3
- Zwaveplus Info V2

### Controlled Command Classes

- Basic
- Multi Channel V4

### 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.