



If successful, the LED Bulb 6 Multi-White will flash twice to indicate that it successfully reset itself to factory defaults. Your LED Bulb 6 Multi-White is now ready to be paired to a new Z-Wave network.

## 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

1. Install the device according to the instructions.
2. Switch ON the bulb.
3. LED Bulb's LED will blink 2x times to indicate that it is looking for a Z-Wave network to connect to.

### Exclusion

1. Turn on the Bulb.
2. Switch the Bulb off and on 3 times in a row (between 0.5 - 2 seconds per re-power).

### Auto-Inclusion

Beside the standard inclusion this devices supports the so called **auto inclusion**. Right after powering up the device remains in inclusion state and can be included by (any) gateway without further actions on the device itself. The auto inclusion mode will time out after some time.

## 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, typically a 'Basic Set' Command.

### Association Groups:

Group Number	Maximum Nodes	Description
1	1	Lifeline

## 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 80: Notification

Enable to send notifications to associated devices (Group 1) when the state of LED Bulb is changed.

Size: 1 Byte, Default Value: 1

Setting	Description
0	Nothing
1	Basic CC report

### Parameter 81: Adjusting the color temperature in warm white color component.

Size: 2700 Byte, Default Value: 2

Setting	Description
2700 - 4999	in Kelvin

### Parameter 82: Adjusting the color temperature in cold white color component.

Size: 2 Byte, Default Value: 5000

Setting	Description
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## Technical Data

<b>Dimensions</b>	120 x 60 mm
<b>Weight</b>	130 gr
<b>Hardware Platform</b>	ZM5101
<b>EAN</b>	1220000016101
<b>IP Class</b>	IP 20
<b>Voltage</b>	230 V
<b>Load</b>	9W
<b>Device Type</b>	Bulb
<b>Generic Device Class</b>	Multilevel Switch
<b>Specific Device Class</b>	Routing Multilevel Switch
<b>Firmware Version</b>	02.00
<b>Z-Wave Version</b>	04.3d
<b>Certification ID</b>	ZC10-18036060
<b>Z-Wave Product Id</b>	0x0371.0x0003.0x0001
<b>Frequency</b>	Europe - 868,4 Mhz
<b>Maximum transmission power</b>	5 mW

## Supported Command Classes

- Basic
- Switch Multilevel
- Scene Activation
- Scene Actuator Conf
- Switch Color
- Association Grp Info
- Device Reset Locally
- Zwaveplus Info
- Supervision
- Configuration
- Manufacturer Specific
- Powerlevel
- Firmware Update Md
- Association
- Version
- Security
- Transport Service
- Security 2

## Controlled Command Classes

- Transport Service
- Security 2

## 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.

- **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.