



Steinel

RS LED D2 Indoor LED

SKU: STEERSLEDD2



Quickstart

This is a **On/Off Power Switch** for **Europe**. To run this device please connect it to your mains power supply. Briefly press button 5 on the device to set it to inclusion mode.

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. (For more information about frequency regulations please refer to [the frequency coverage overview at Sigma Designs Website](#)).

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

Sleek, attractive lines. Opting for the RS LED D2 designer indoor luminaire, you'll be giving your home a real designer highlight with pleasant LED illumination. With its stunning looks and intelligent technology, this light provides the last word in stylish home convenience. Once fitted to the wall or ceiling, the high-frequency sensor switches it 'ON' and 'OFF' in complete silence and all automatically. The light is child's play to install and the function settings on the product are easy to understand too. Your neighbours will be amazed.

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.

- 1 Briefly press button e and directly afterwards keep it pressed for 5 seconds.
- 2 Status LED h briefly flashes to show that the light has been reset.
- 3 The device is now no longer included in the Z-Wave system and has been returned to factory settings.

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.

Installation

Connection to a dimmer will result in damage to the sensor-switched light.

1. Hold enclosure a against the wall and mark drill holes. When doing so, pay attention to wiring runs in the wall/ceiling.
2. Drill the holes, insert wall plugs (Ø 6 mm).
3. Pierce sealing plug for power supply lead.
4. Feed through the power supply cable.
5. Screw on enclosure a.
6. Connecting the mains supply lead (see illustration).

The mains power supply lead is a 3-core cable:

L = Phase conductor (usually black or brown)

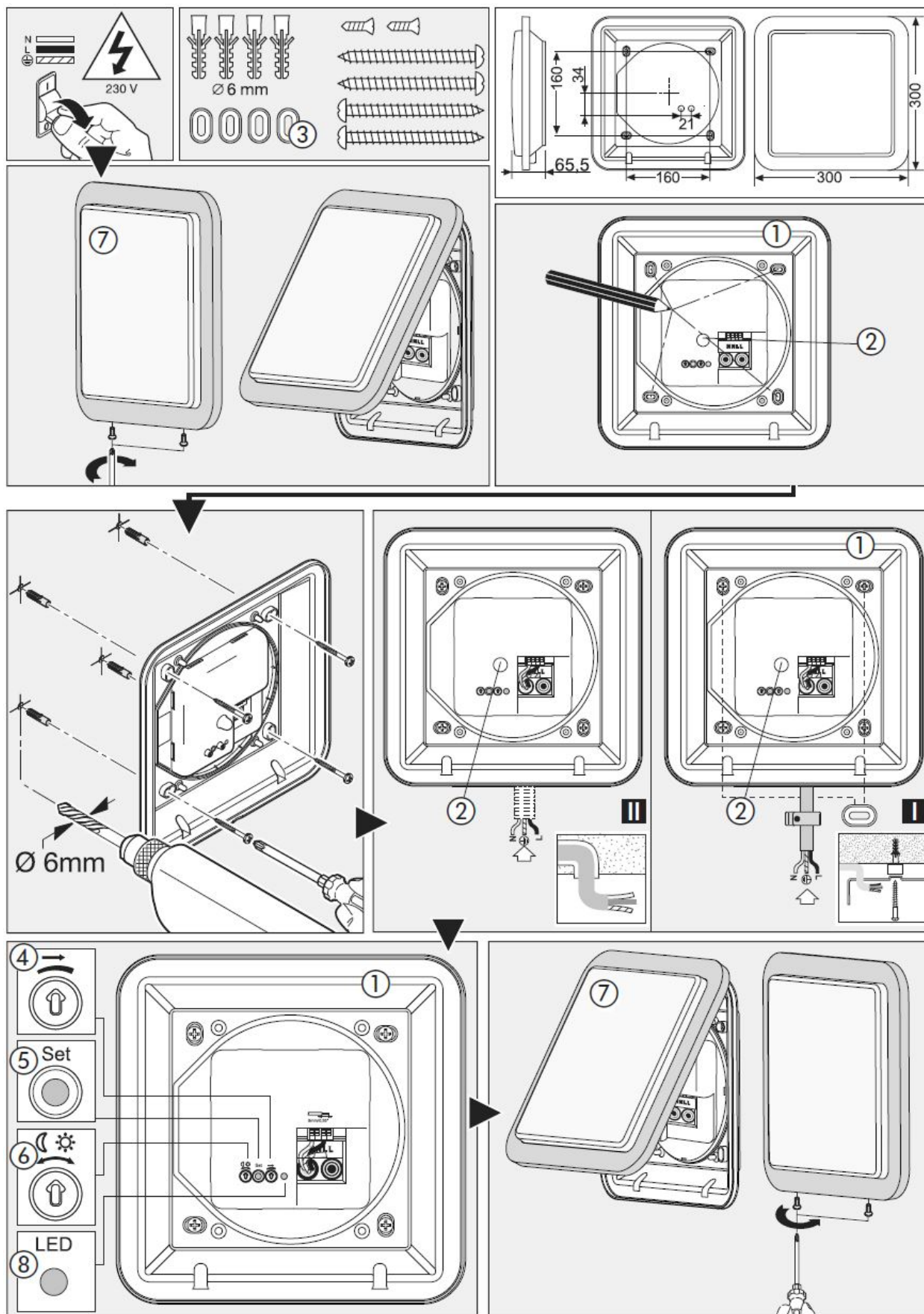
N = Neutral conductor (usually blue)

PE = Protective-earth conductor (green/yellow)

If you are in any doubt, identify the conductors using a voltage tester; then disconnect from the power supply again. Connect the phase conductor (L) and neutral conductor (N) to the terminal block. Isolate any PE protective-earth conductor with adhesive tape.

7. Set functions d, e, f.

8. Fit light diffuser.



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

Briefly press button 5 on the device to set it to inclusion mode. Status LED 8 lights up to show that this mode is selected.

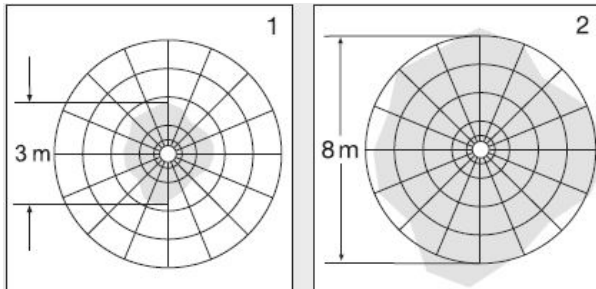
Exclusion

Briefly press button e on the device to set it to exclusion mode. The red status LED h lights up to show that this mode is selected.

Product Usage

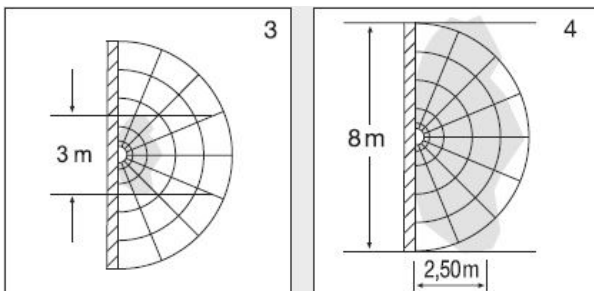
Detection zones for ceiling mounting:

- 1) Minimum reach (Ø 3 m)
- 2) Maximum reach (Ø 8 m)



Detection zones for wall mounting:

- 3) Minimum reach (Ø 3 m)
- 4) Maximum reach (Ø 8 m)



Important: Persons or objects moving towards the light are detected best.

The sensor-switched light can be put into service after mounting the enclosure and connecting to the mains powersupply. The light will also work without being integrated into a Z-Wave network. In this case, the time setting is permanently set to 3 minutes. When putting the light into operation, the light will switch OFF after the 10-second calibration phase and is then activated for sensor mode. This light can now be integrated into the Z-Wave network.

The settings can be made via the control dials or via Z-Wave network. The settings last selected will always be in effect regardless of whether they were made via the control dials or via Z-Wave network.

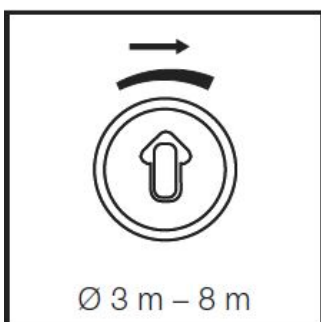
Reach setting (sensitivity)

Factory setting: 8 m.

Reach can be infinitely varied from 3 m to 8 m.

Turned fully anticlockwise = min. reach (3 m)

Turned fully clockwise = max. reach (8 m)



Reach is the term used to describe the diameter of the more or less circular detection zone produced on the ground after mounting the sensor-switched light at a height of 2.5 m.

Twilight setting (response threshold)

Factory setting: 2000 lux

The response threshold can be infinitely varied from 2 – 2000 lux.

Adjustment control set to:

Moon = Night-time operation (2 lux)

Sun = Daylight operation (2000 lux)

The control dial must be turned to sun, when adjusting the detection zone and performing the functional test in daylight.

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 Number	Maximum Nodes	Description
1	1	Z-Wave Plus Lifelin
2	16	On/Off Control-Basic Set
3	16	Motion begin/end
4	16	Ambient light- Multilevel Sensor Report

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 1: TIME

Duration of light after motion detection.

Size: 2 Byte, Default Value: 180

Setting	Description
5 - 900	seconds

Parameter 2: LIGHT

Light threshold [lx]

Size: 2 Byte, Default Value: 2000

Setting	Description
0	run Learn ambient light sequence (the level is set automatically)
2 - 1999	lux
2000	2000 - is used as daylight (always night mode)

Parameter 5: SENSITIVITY

Motion Sensor (radar) Sensitivity [%]Value can be controlled via potentiometer - potentiometer value is used as the default value and any potentiometer movement rewrites the current setting

Size: 1 Byte, Default Value: 100

Setting	Description
2 - 100	%

Parameter 6: BRIGHTNES MEAS INTERVAL

Brightness measuring interval [minutes]Interval for ambient light measuring when lamp is on (lamp switches off shortly and measures). 0=function is off

Size: 1 Byte, Default Value: 0

Setting	Description
0	function is off
5 - 120	minutes

Parameter 8: GLOBAL_LIGHT

Use External Ambient Light ValueWhen GLOBAL_LIGHT mode is ON - device overrides its own lightsensor values and uses Light report values from any Z-Wave lightsensor instead - this has to be configured appropriately to send lightautomatically.If the last remote light level value is older than 30 minutes, the internallight value is used again until the next external value is received.

Size: 1 Byte, Default Value: 1

Setting	Description
0	OFF function
1	ON function

Parameter 9: SLAVE_MODE

Can disable sensor controllu201cStupidu201d mode (bit 2 = 1): - has higher priority then slave mode. - lamp is permanently on (usefull for simple power wall switch controlling).Slave mode (bit 0 = 1):- only if included in Z-Wave network- usefull for controlling via third-party sensor- lamp is directly controlled via Z-Wave, internal sensors are not used for controlling it.Central unit checking (bit 1 = 1):(usefull especially for controlling via gateway) When Slave bit is 0:- lamp signalises fail of lifeline connection (if this bit is zero fail of lifeline connection is not signalised) When slave bit is 1:- lamp checks presence of Z-Wave device in lifeline group (gateway). If it is not present for 2 minutes (testing repeatedly every 30 seconds) device switches to normal mode in the same way as after the end of local disabled mode (ON_BEHAVIOUR)- The device checks every 1 minute for recovery of Lifeline connection.- if no lifeline specified - it works in normal modeBe careful with this option, lamp stops using itu2019s own motion sensor in Slave and Stupid mode.

Size: 1 Byte, Default Value: 2

Setting	Description
0	Normal mode
1	Slave mode without gateway checking
2	Normal mode with lifeline error signalisation
3	Slave mode with gateway checking
4	"Stupid mode" - lamp permanetly on

Parameter 10: OFF_BEHAVIOUR

Behaviour after BASIC OFF (and similar commands).If a transition (even with zero change) with a non-default duration isto be processed, the transition cannot be interrupted by any motionevent in any case.for values 1-209 - Lamp is switched off and remains so until after a specified timeout once a new motion event (local or remote) is received.

Size: 2 Byte, Default Value: 10

Setting	Description
0	Lamp is switched off and remains so until any new motion event (local or remote) is received.
1 - 100	timeout: 1 second (1) to 100 seconds (100) in 1-second resolution
101 - 200	timeout: 1 minute (101) to 100 minutes (200) 1-minute resolution
201 - 209	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution
255	Lamp is switched off for TIME (cfg 1). It does not wait for a motion event and works normally via current motion evaluation

Parameter 11: ON_BEHAVIOUR

Behaviour after BASIC ON (and similar commands).If a transition (even with zero change) with a non-default duration is to be processed, the transition cannot be interrupted by any motion event in any case.for values 1-209 - Lamp is switched on and remains so until after a specified timeout once a new motion event (local or remote) is received. It then works normally via current motion evaluation.

Size: 2 Byte, Default Value: 255

Setting	Description
0	Lamp is switched on and remains so until any new motion event (local or remote) is received. It then works normally via current motion evaluation. Notice - during the day, this mode cannot be ended remotely due to motion events not being transmitted - only via local motion sensor if enabled.
1 - 100	timeout: 1 second (1) to 100 seconds (100) in 1-second resolution
101 - 200	timeout: 1 minute (101) to 100 minutes (200) 1-minute resolution
201 - 209	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution
255	Lamp is switched on for TIME (cfg 1). It does not wait for a motion event and works normally via current motion evaluation.

Parameter 12: ON_TIME_OVER

Time limit to stop waiting for motion after timeout of ON_BEHAVIOURor OFF_ON_BEHAVIOUR (0-209) to prevent staying ON forever whenis no motion.

Size: 2 Byte, Default Value: 204

Setting	Description
0	o additional waiting for motion.
1 - 100	timeout: 1 second (1) to 100 seconds (100) in 1-second resolution
101 - 200	timeout: 1 minute (101) to 100 minutes (200) 1-minute resolution
201 - 209	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution
255	Never stop waiting before motion.

Parameter 13: ON_OFF_BEHAVIOR

Behaviour after after a rapid sequence of BASIC ON and BASIC OFF commands. The intention is to use a much longer timeout value than the time after a single ON command which should then be followed by a short timeout value. The behaviour is almost the same as for parameter 10 (OFF_LOCAL_DISABLE) for values 1-209 - Lamp is switched off and remains so until after a specified timeout once a new motion event (local or remote) is received.

Size: 2 Byte, Default Value: 204

Setting	Description
0	Lamp is switched off and remains so until any new motion event (local or remote) is received.
1 - 100	timeout: 1 second (1) to 100 seconds (100) in 1-second resolution
101 - 200	timeout: 1 minute (101) to 100 minutes (200) 1-minute resolution
201 - 209	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution
255	device ignores ON - OFF sequence and uses OFF behavior

Parameter 14: OFF_ON_BEHAVIOUR

Behaviour after after a rapid sequence of BASIC OFF and BASIC ON commands. The intention is to use a much longer timeout value than the time after a single OFF command which should then be followed by a short timeout value. The behaviour is almost the same as for parameter 11 for values 1-209 - Lamp is switched on and remains so until after a specified timeout once a new motion event (local or remote) is received. It then works normally via current motion evaluation.

Size: 2 Byte, Default Value: 204

Setting	Description
0	Lamp is switched on and remains so until any new motion event (local or remote) is received. It then works normally via current motion evaluation. Notice - during the day, this mode cannot be ended remotely due to motion events not being transmitted - only via local motion sensor if enabled.
1 - 100	timeout: 1 second (1) to 100 seconds (100) in 1-second resolution
101 - 200	timeout: 1 minute (101) to 100 minutes (200) 1-minute resolution
201 - 209	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution
255	device ignores OFF - ON sequence and uses ON behaviour

Parameter 15: SEQUENCY_TIME

Time in [100 miliseconds] of maximum delay between BASIC ON and BASIC OFF (and vice versa) to consider this as a sequence. It is typically 1 second, but can be exceptionally longer due to retransmissions and overload - in this case, a longer interval can be allowed (upto 5 seconds).

Size: 1 Byte, Default Value: 255

Setting	Description
10 - 50	tenth of second

Parameter 16: MOTION_DISABLE

Motion disable timeout after BASIC SET to motion endpoint when the internal motion sensor is not used for evaluating the behaviour of the lamp and groups 2 and 3. Events are, however, still transmitted to the Lifeline, and the lamp can be controlled via remote motion sensors. for values 1-209 - Internal motion sensor is disabled for specified timeout after BASIC SET 0x00 to Motion endpoint.

Size: 2 Byte, Default Value: 0

Setting	Description
0	BASIC SET to Motion endpoint ignored, Motion sensor still enabled
1 - 100	timeout: 1 second (1) to 100 seconds (100) in 1-second resolution
101 - 200	timeout: 1 minute (101) to 100 minutes (200) 1-minute resolution
201 - 209	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution
255	timeout: 1 hour (201) to 9 hours (209) in 1-hour resolution

Technical Data

Dimensions	300 x 300 x 65,5 mm
Weight	1044 gr
Hardware Platform	ZM5202
EAN	4007841029852
IP Class	IP 20
Voltage	230 V
Device Type	On/Off Power Switch
Network Operation	Always On Slave
Firmware Version	00.30
Z-Wave Version	04.26
Certification ID	ZC10-17035489
Z-Wave Product Id	0x0271.0x0001.0x1a74
Neutral Wire Required	ok
Supported Notification Types	Home SecuritySystem
Sensors	LuminanceMotion/No Motion (Binary)
Z-Wave Scene Type	Scene
Color	White
Firmware Updatable	Updatable by Consumer by RF
Outdoor Use	ok
Electric Load Type	LED

Supported Command Classes

- Basic
- Application Status
- Switch Binary
- Switch All
- Scene Activation
- Scene Actuator Conf
- Sensor Multilevel
- Association Grp Info
- Device Reset Locally
- Zwaveplus Info
- Multi Channel
- Configuration
- Alarm
- Manufacturer Specific
- Powerlevel
- Node Naming
- Firmware Update Md
- Association
- Version
- Multi Channel Association

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.

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