Square D Z-Wave Plus Dimmer SQR22102**Z (** means the color code) Manual

Contents

Square D

Z-Wave Plus Dimmer

SKU: SQR22102Z (** means the color code)**

Quickstart

This is a
secure
Multilevel Switch
for
.

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

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 Square D 600W Z-Wave Plus Energy Monitoring Dimmer is the professionals choice for secure reliable lighting control. For use in areas where variable lighting is a requirement like the living room where you want bright light for reading on the couch or dim lighting for watching a movie. Perfect for monitoring energy usage and determining cost savings associated with dimming lights. It works with any Z-Wave hub and can be grouped with up to 5 other Z-Wave Plus devices.

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.

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.

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	Members of this group will receive unsolicited messages related to the status of theDimmer.Switch Multilevel Report:Changings of load caused by user action or receiving of Switch Multilevel Set or Basic Set CC willtrigger this cc.Meter Report:Power or energy changings will trigger this cc.Device Reset Locally:Long press the Dimmer Reset Button fot more than 20 seconds will trigger this cc.Indicator Report:Receiving Indicator Set will trigger this CC.
2	5	Switch Multilevel set:Sends Switch Multilevel set to associated devices, when press UP Button and DOWN Button atsame time.Switch Multilevel Start Level Change:Sends Switch Multilevel Start Level Change to associated devices, when Press and Hold(>1s) UPButton and DOWN Button at same time.Switch Multilevel Stop Level Change:Sends Switch Multilevel Stop Level Change to associated devices, when Release UP Button andDOWN Button at same time.

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: LED indicator Status

Synchronization of load power and LED indicator
Size: 1 Byte, Default Value: 1

SettingDescription

0	Power On, LED Off;
1	Power On, LED On;

Parameter 2: Delayed OFF Time

Delay off means when users press button to turn off the load,theres a reaction time.
Size: 1 Byte, Default Value: 0

SettingDescription

0 – 240	Delay off time.

Parameter 3: Power On Status

When the device is powered on, theinitial status
Size: 1 Byte, Default Value: 0

SettingDescription

1	Off
2	On(max level)
3	Last State

Parameter 4: Child Lockout Enable

Child lockout feature can enabled anddisabled local control
Size: 1 Byte, Default Value: 0

SettingDescription

0	Disable
1	Enable

Parameter 5: Dimmer Fading up Time

This changes the speed in which theattached light dims up or down. Asetting of 0 should turn the lightimmediately on or off (almost like anon/off switch). Increasing the valueshould slow down the transitionspeed. The value represents the timerequired to adjust the brightnessto100%.
Size: 1 Byte, Default Value: 3

SettingDescription

0 – 180	Fading up time (the time from off to full brightness)

Parameter 6: Kickstart Enable

This feature ensures lamp start-upeven at low dim levels, Kickstartlevel: 40%.
Size: 1 Byte, Default Value: 0

SettingDescription

0	Disable
1	Enable

Parameter 7: Set Min. Dim Level

The minimum level that the dimmer allows the bulb to be dimmed to.Useful when the user has an LEDbulb that does not turn on or flickersat a lower level.
Size: 1 Byte, Default Value: 1

SettingDescription

1 – 45	Set Min. Dim Level

Parameter 8: Set Max. Dim Level

The maximum level that the dimmerallows the bulb to be dimmed to.Useful when the user has an LEDbulb that reaches its maximum levelbefore the dimmer value of 99.
Size: 1 Byte, Default Value: 99

SettingDescription

55 – 99	Set Max. Dim Level

Technical Data

Hardware Platform	ZGM130
Device Type	Multilevel Switch
Network Operation	Always On Slave
Firmware Version	HW: 1 FW: 1.10
Z-Wave Version	7.13.6
Certification ID	ZC12-21050230
Z-Wave Product Id	0x0447.0x000E.0x1202
Security V2	S2_UNAUTHENTICATED ,S2_AUTHENTICATED
Frequency	XXfrequency
Maximum transmission power	XXantenna

Supported Command Classes

- Application Status
- Association Grp Info V3
- Association V2
- Basic V2
- Configuration V4
- Device Reset Locally
- Firmware Update Md V5
- Indicator V3
- Manufacturer Specific V2
- Meter V5
- Multi Channel Association V3
- Powerlevel
- Protection V2

- Security 2
- Supervision
- Switch Multilevel V4
- Transport Service V2
- Version V3
- Zwaveplus Info V2

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.