Golden Security PIR Motion Sensor GS-ZWMS08 Manual

Contents

Golden Security

PIR Motion Sensor

SKU: GS-ZWMS08

Quickstart

This is a

secure
Alarm Sensor
for
CEPT (Europe).

Please make sure the internal battery is fully charged.

To add this device to your network execute the following action:
1 Power up the device.2 Set Z-Wave Controller into inclusion mode3 Press the button 3 times within 1.5s to enter inclusion mode.4 The device will be recognized and automatically included into Z-WaveNetwork.

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

This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

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.

Note : please use the reset procedure only when the primary controller is missing or inoperable.Operation: 1 Power up the device.2 Press and hold the button for 10s until led lights is on, then release thebutton.

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 Power up the device.2 Set Z-Wave Controller into inclusion mode3 Press the button 3 times within 1.5s to enter inclusion mode.4 The device will be recognized and automatically included into Z-WaveNetwork.

Exclusion

1 Power up the device.2 Set Z-Wave Controller into exclusion mode3 Press the button 3 times within 1.5s to enter exclusion mode

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:

Press the button briefly, Led will blink once.

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	Z-Wave Plus Lifeline, all nodes which associated in this group will receive the messages sent by device t hrough lifeline.
2	5	It is controlling group, all nodes associated in this group will be controlled through BASIC_SET command by the device when device detects a movement event or a tampering event.
3	5	It is is controlling group, all nodes associated in this group will be controlled through BASIC_SET comma nd by the device when device detects an ambient temperature alarm (Decided by configuration paramete r 16, 17).
4	5	It isis controlling group, all nodes associated in this group will be controlled through BASIC_SET comma nd by the device when device detects an ambient humidity alarm (Decided by configuration parameter 1 4, 15).

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: Motion Sensitivity

This parameter is configured the sensitivity that motion detect.
Size: 1 Byte, Default Value: 1

SettingDescription

1 – 100	This value is larger, the sensitivity is lower, and the distance for motion detecting is closer.

Parameter 10: Basic Set Level

This parameter is configured the value that BASIC_SET for nodes that associated in Group 2, 3, 4.100BASIC_SET = 0xFF (ON).0BASIC_SET = 0x00 (OFF).
Size: 1 Byte, Default Value: 100

SettingDescription

0 – 99	BASIC_SET = 0x00 ~ 0x63
100	BASIC_SET = 0xFF

Parameter 11: Sensor Measuring Interval

This parameter is configured the time interval for temperature and humidity sensor measure the ambient temperature and humidity value. This value is larger, the battery life is longer. And the value changed is not obvious.
Size: 2 Byte, Default Value: 180

SettingDescription

30 – 3600	set the time interval for temperature and humidity sensor measure the ambient temperature and humidity value.

Parameter 12: Temperature Differential Report

This parameter is configured the value that differential between current measured and previous report value. If the differential value larger than the settings, device will report this measured temperature value to nodes associated in lifeline.
Size: 1 Byte, Default Value: 10

SettingDescription

1 – 127	Differential Value =Value x 0.1

Parameter 13: Humidity Differential Report

This parameter is configured the value that differential between current measured and previous report value. If the differential value larger than the settings, device will report this measured relative humidity value to nodes associated in lifeline.
Size: 1 Byte, Default Value: 50

SettingDescription

1 – 127	Differential Value = Value x 0.1% RH

Parameter 14: Low Level Humidity Threshold

This parameter is configured the threshold value that low level for humidity.When the current ambient humidity value is lower than this configuration value, this will trigger a BASIC_SET = [Value] (The value is decided by Configuration Parameter 10) to control the devices in group 4.Otherwise, The BASIC_SET = 0x00 will be sent to devices in group 4 if these devices have been set to ON.
Size: 2 Byte, Default Value: 300

SettingDescription

10 – 999	Low Level Value = Value x 0.1% RH

Parameter 15: High Level Humidity Threshold

This parameter is configured the threshold value that high level for humidity.When the current ambient humidity value is larger than this configuration value, this will trigger a BASIC_SET = [Value] (The value is decided by Configuration Parameter 10) to control the devices in group 4.Otherwise, The BASIC_SET = 0x00 will be sent to devices in group 4 if these devices have been set to ON.
Size: 2 Byte, Default Value: 900

SettingDescription

10 – 999	High Level Value =Value x 0.1% RH

Parameter 16: Low Level Temperature Threshold

This parameter is configured the threshold value that low level for temperature.When the current ambient temperature value is lower than this configuration value, this will trigger a BASIC_SET = [Value] (The value is decided by Configuration Parameter 10) to control the devices in group 3.Otherwise, The BASIC_SET = 0x00 will be sent to devices in group 3 if these devices have been set to ON.
Size: 2 Byte, Default Value: 150

SettingDescription

0 – 500	Low Level Value = Value x 0.1

Parameter 17: High Level Temperature Threshold

This parameter is configured the threshold value that high level for temperature.When the current ambient temperature value is larger than this configuration value, this will trigger a BASIC_SET = [Value] (The value is decided by Configuration Parameter 10) to control the devices in group 3.Otherwise, The BASIC_SET = 0x00 will be sent to devices in group 3 if these devices have been set to ON.
Size: 2 Byte, Default Value: 300

SettingDescription

0 – 500	High Level Value =Value x 0.1

Parameter 2: Motion Window Time

This parameter is configured the specified time window (4s..16s) in which the amount of pulses will trigger a motion event.
Size: 1 Byte, Default Value: 2

SettingDescription

0 – 3	Window Time = [Value] * 4s + 4s

Parameter 3: Pulse Count

This parameter is configured amount of pulses during the specified time window which trigger a motion event.
Size: 1 Byte, Default Value: 1

SettingDescription

0 – 3	Amount of pluses = [Value] + 1.

Parameter 4: Motion Blind Time

This parameter is configured the no motion detected time after a motion event detects. The device will wait for setting times to ready to next detect.
Size: 1 Byte, Default Value: 1

SettingDescription

0 – 15	Blink Time = ([Value] + 1) * 0.5s.

Parameter 5: Motion Enable

This parameter is configured the motion detected if enable or not. If 1, Motion detected function is enable. Otherwise is disabled.
Size: 1 Byte, Default Value: 1

SettingDescription

0	Motion detected function is disabled
1	Motion detected function is enable

Parameter 6: Motion Clear Time

This parameter is configured the time to clear motion event after a motion event detected. Time to motion clear, the device will send a clear event report to controller. Unit: Second.
Size: 2 Byte, Default Value: 30

SettingDescription

10 – 3600	set the time to clear motion event after a motion event detected

Parameter 7: Motion Event Re-trigger Enable

This configuration sets Motion Event Re-trigger is enabled or disabled.
Size: 1 Byte, Default Value: 0

SettingDescription

0	Disabled. The motion event will be sent to controller only when the last motion event is cleared.
1	Enabled. The time interval for motion event detecting is defined by configuration No. 4.

Parameter 8: Led Indicate Enable

This parameter is configured the Led light on disable or enable.
Size: 1 Byte, Default Value: 1

SettingDescription

0	Disable led blink. This configuration is not affecting inclusion, exclusion and reset.
1	Enable Led blink when device detects a motion event.

Parameter 9: Binary Sensor Report Enable

This configuration sets binary sensor report is enabled or disabled.
Size: 1 Byte, Default Value: 0

SettingDescription

0	Disable sensor binary report when device detects a motion event.
1	Enable sensor binary report when device detects a motion event.

Technical Data

Hardware Platform	ZM5202
Device Type	Notification Sensor
Network Operation	Reporting Sleeping Slave
Firmware Version	HW: 17 FW: 1.80
Z-Wave Version	6.71.01
Certification ID	ZC10-18015965
Z-Wave Product Id	0x033A.0x0003.0x0100
Supported Notification Types	Home Security
Sensors	Air TemperatureHumidityMotion/No Motion (Binary)
Color	White
Security V2	S2_UNAUTHENTICATED
Frequency	XXfrequency
Maximum transmission power	XXantenna

Supported Command Classes

- Association Grp Info
- Association V2
- Battery
- Configuration
- Device Reset Locally
- Manufacturer Specific V2
- Multi Channel Association V3
- Notification V8
- Powerlevel
- Security
- Security 2
- Sensor Binary V2
- Sensor Multilevel V7
- Supervision

- Transport Service V2
- Version V2
- Wake Up 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.

References

- User Manual