Ring Flood Freeze Sensor 4SF1S80EN0 Manual

Contents

Ring

Ring Flood Freeze Sensor

SKU: 4SF1S80EN0

Quickstart

This is a
secure
Alarm Sensor
for
U.S. / **Canada** / **Mexico**.

Please make sure the internal battery is fully charged.

To add this device to your network execute the following action:
To include begin the setup process near your Ring Alarm Base Station.- In the Ring app, tap Set Up a Device. Choose Security Devices, then Sensors,then Ring Flood/Freeze Sensor, then tap Add Device.- To complete the setup process, follow the in-app instructions.- When prompted, scan the QR Code or enter the PIN.- This begins the pairing process. – When prompted, open the lid and pull out the clear tab.- Twist the lid to the left to unlock, then lift it to remove. Next, pull out the clear battery tab. This turns on the Sensor.- Your Base Station finds it automatically.Note: The QR Code and PIN are on the back of your sensor and in the product packaging.

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

Ring Flood/Freeze Sensor is a smart sensor for your Ring Alarm system. Place the Alarm Flood and Freeze Sensor on the floor or any flat surface near a sink, refrigerator or any other water source, and get alerts when water or low temperatures are detected.

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.

To factory reset, press and hold the Setup button for 10 seconds. When the LED ring stops blinking, the Sensor has reset.This process disconnects the Sensor from Ring Alarm. To begin using the Sensor again, repeat the setup process in the Ring app.Note; “Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.”

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 include begin the setup process near your Ring Alarm Base Station.- In the Ring app, tap Set Up a Device. Choose Security Devices, then Sensors,then Ring Flood/Freeze Sensor, then tap Add Device.- To complete the setup process, follow the in-app instructions.- When prompted, scan the QR Code or enter the PIN.- This begins the pairing process. – When prompted, open the lid and pull out the clear tab.- Twist the lid to the left to unlock, then lift it to remove. Next, pull out the clear battery tab. This turns on the Sensor.- Your Base Station finds it automatically.Note: The QR Code and PIN are on the back of your sensor and in the product packaging.

Exclusion

To remove this Sensor from your system:- Open the side menu in the Ring app and tap Devices, then Base Station. – Next, select your Sensor, then tap the gear- shaped icon, and tap Remove Device.- When prompted, open the sensor and remove and reinstall the battery to complete the removal.

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:

The sensor will wake up every so often and when the case is closed to send a Wake-Up Notification to allow the life line master node controller that the sensor is now available for any queued messages that the controller may have for the sensor. The time between Wake-Up Notifications can be configured with the Wake-Up Notification command class to be between 1 and 24 hours with interval steps of 1 minute.

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

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: Heartbeats

This parameter is the number seconds between heartbeats. Heartbeats are automatic battery reports on a timer after the last event.
Size: 2 Byte, Default Value: 4200

SettingDescription

255 – 4200	Heartbeats

Parameter 2: One shot timer

Writing to this parameter prompts the sensor to send a wakeup notification one time after this parameter's number of seconds. After which it is reset back to 0.
Size: 2 Byte, Default Value: 0

SettingDescription

1 – 32767	One shot timer

Parameter 3: Application level retries

Number of application level retries of messages either not ACKed or messages encapsulated via supervision get that did not receive a report.
Size: 1 Byte, Default Value: 5

SettingDescription

0 – 5	application level retries of messages

Parameter 4: Retry Base Wait Time Period

Application Level Retry Base Wait Time Period:The number base seconds used in the calculation for sleeping between retry messages.
Size: 1 Byte, Default Value: 6

SettingDescription

1 – 60	Application Level Retry Base Wait Time Period

Parameter 5: Supervisory Report response time

The number of milliseconds waiting for a Supervisory Report response to a Supervisory Get encapsulated command from the sensor.
Size: 2 Byte, Default Value: 1500

SettingDescription

500 – 5000	The number of milliseconds waiting for a Supervisory Report response to a Supervisory Get encapsulated command from the sensor

Technical Data

Hardware Platform	ZM5101
Device Type	Notification Sensor
Network Operation	Reporting Sleeping Slave
Firmware Version	HW: 1 FW: 10.12
Z-Wave Version	6.81.02
Certification ID	ZC10-19016344
Z-Wave Product Id	0x0346.0x0501.0x0101
Supported Notification Types	Water Alarm
Firmware Updatable	Updatable by Consumer via Internet
Color	White
Security V2	S2_UNAUTHENTICATED ,S2_AUTHENTICATED
Frequency	XXfrequency
Maximum transmission power	XXantenna

Supported Command Classes

- Association Grp Info
- Association V2
- Battery
- Configuration
- Device Reset Locally
- Manufacturer Specific V2
- Notification V8
- Powerlevel
- Security 2
- Supervision
- Transport Service V2
- Version V3
- Wake Up V2
- Zwaveplus Info V2

Controlled Command Classes

- Supervision

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.