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Black Cat Cat's Eye Water Detector Quick Start Guide

Product Code	Z Wave Frequency
ZWBCWD-AUS	921.4
ZWBCWD-EURO	868.4
ZWBCWD-USA/Canada	908.4
ZWBCWD-JP	922.5

Black Cat Cat's Eye Water Leakage Detector.

Inside the front casing, there is button that is used to carry out include, exclude or reset factory default settings on PCB Board. When power is first supplied, the LED will flash on and off alternately at one second intervals within 5 seconds if the detector has been added a Z-Wave network. Please get familiar with the terms below before starting the operations.

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.

Add the Sensor to Z-Wave Network

1. Remove the sensor cover.
2. Make sure the sensor is powered.
3. Set Z-Wave controller or Z-Wave gateway into inclusion mode (Refer to the controller or gateway operating manual)
4. Press the button three times within 1.5 second, the device will enter inclusion mode. And the LED will flash on and off alternately five times.

Delete the Sensor from Z-Wave Network

1. Remove the device cover.
2. Make sure the sensor is powered.
3. Set Z-Wave controller or Z-Wave gateway into exclusion mode (Refer to the controller or gateway operating manual)

Restore the Sensor to Factory Default Settings

1. Reset procedure will delete all information on the Z-Wave network and Z-Wave controller or Z-Wave Gateway, and restore the sensor to factory default settings.
2. Remove the device cover.
3. Make sure the sensor is powered.
4. Press and hold the button for 10 seconds, led will blink once.
5. Release the button.
6. Note: to use the reset procedure only when the primary controller is missing or inoperable

Wakeup the Sensor Manual

The User can press button once to wake-up this sensor to send wakeup notification to controller, the LED will blink one time.

Associations (Association Command Class Version 2)

This Sensor supports four association groups. This has the effect that when the sensor is triggered, all devices associated with the sensor will receive the relevant reports. Through an association the sensor may control another Z-Wave network device, e.g. siren device, wall plug, lamp etc.

GROUP 1 is lifeline service that assigned to Sensor (Water leakage detector) status. It enables the sensor to send reports and readings to Z-Wave Controller or Z-Wave Gateway whenever the sensor is triggered. This Group Support:

NOTIFICATION_REPORT_V4,
BATTERY_REPORT,
SENSOR_BINARY_REPORT_V2,
DEVICE_RESET_LOCALLY_NOTIFICATION

GROUP 2 allows for sending control commands to associated devices such as relay module, lighting, etc. This association group is configured through the advanced parameters no. 1 and 2. This Group Support:

BASIC_SET.

GROUP 3 allows for Send Notification to associated devices in this group. This Group Support:

NOTIFICATION_REPORT_V4

GROUP 4 allows for Send Notification to associated services in this group. This Group Support: SENSOR_BINARY_REPORT_V2

Advanced Configuration



Fig.1 Alarm Time Setting Figure

Configuration Parameters

Parameter Number	Size	Available Settings	Default
1	1	0 ~ 255 (minute)	120(minute)
2	1	1 ~ 255 (minute)	1(minute)
3	1	5 ~ 255 (second)	5(second)
4	1	5 ~ 255 (second)	5(second)
5	1	0, 1	1
6	1	0, 1	1
7	1	0 ~ 99, 255	255

1. Configuring Alarm Duration Time

This configuration parameter that can be used to adjust the time for beep and LED turned on when water leakage is detected. If this parameter is set to '0', the beep and LED will be turn on always until water leakage is not detected. Refer to Figure 1.

2. Configure Alarm Interval

This Parameter defines beep on /off interval time when water leakage is detected. Refer to Figure 1.

3. Configure First Alarm On Time Duration

This parameter defines beep on duration first time when water leakage is detected. Refer to Figure 1.

4. Configure Alarm on Time Duration

This parameter defines beep on duration after first beep on when water leakage is detected.

5. Configure Alarm Enable/Disable

This parameter defines beep on is enabled or disabled when water leakage is detected. '0' indicate beep on is disable, but LED will be turned on when water leakage detected. '1' indicate beep on is enabled, the BEEP and LED will be turned on when water leakage detected.

6. Configure Water Leakage Detected Enable/Disable

This parameter defines the function than water leakage detect is enabled or disabled. '0' indicate disable water leakage detect, '1' indicate enable water leakage detect.

7. Basic Set Level

Basic Set Command will be sent where contains a value when the door/window is opened or closed, the receiver will take it for consideration; for instance, if a lamp module is received the Basic Set Command of which value is decisive as to how bright of dim level of lamp module shall be.

Notification Command Class

Once the detector detected a water leakage, it will send NOTIFICATION_REPORT and SENSOR_BINARY_REPORT to the nodes of lifeline to inform there is a water leakage event. When water leakage is not detected, NOTIFICATION_REPORT and SENSOR_BINARY_REPORT will be sent again to the nodes in lifeline.

Notification Report Command:

Event Present:

Command Class: COMMAND_CLASS_NOTIFICATION

Command: NOTIFICATION_REPORT

Notification Type: NOTIFICATION_TYPE_WATER_ALARM

Event:

NOTIFICATION_EVENT_WATER_ALARM_WATER_LEAK_DETECTED_UNKNOWN_LOCATION

Event Clear:

Command Class: COMMAND_CLASS_NOTIFICATION,

Command: NOTIFICATION_REPORT,

Notification Type: NOTIFICATION_TYPE_WATER_ALARM,

Event: NOTIFICATION_EVENT_WATER_ALARM_NO_EVENT

Binary Sensor Report Command:

Event Present:

Command Class: COMMAND_CLASS_SENSOR_BINARY

Command: SENSOR_BINARY_REPORT

Sensor Type: SENSOR_WATER

Value: 0xFF

Event Clear:

Command Class: COMMAND_CLASS_SENSOR_BINARY

Command: SENSOR_BINARY_REPORT

Sensor Type: SENSOR_WATER

Value: 0x00

Battery Check Command

The users can also enquire the battery status of the water leak by sending BATTERY_GET command. Once the water leak receives the command, it will return BATTERY_REPORT command. The water leak will send BATTERY_LEVEL = 0xFF command to the Z-Wave Controller to inform that the water leak is in dead battery status, otherwise BATTERY_LEVEL value range is 0% to 100%.

Wakeup Command Class

The water leak stays in sleep status for the majority of time in order to conserve battery life. The minimum wakeup interval is 300s

The maximum wakeup interval is 16,777,200s (about 194 days)

Allowable interval among each wakeup interval is 60 second, such as 360,420 etc.

Note: The default value is 12 hours. The longer the value the greater battery life.

Command Classes

This Sensor supports Command Classes as Below:

COMMAND_CLASS_ZWAVEPLUS_INFO (V2)

COMMAND_CLASS_VERSION (V2)

COMMAND_CLASS_MANUFACTURER_SPECIFIC (V2)

COMMAND_CLASS_DEVICE_RESET_LOCALLY (V1)

COMMAND_CLASS_POWERLEVEL (V1)

COMMAND_CLASS_BATTERY (V1)

COMMAND_CLASS_ASSOCIATION (V2)

COMMAND_CLASS_ASSOCIATION_GRP_INFO (V1)

COMMAND_CLASS_WAKE_UP (V2)

COMMAND_CLASS_NOTIFICATION (V4)

COMMAND_CLASS_SENSOR_BINARY (V2)

COMMAND_CLASS_CONFIGURATION (V1)

SPECIFICATIONS

Battery type: CR14250 (3.0V)

Power Consumption: 0.13W

Max Current: 35mA (In Radio Transmitter Mode)

EU Standards Compliance:

Radio Protocol: Z-Wave

Valid Range: Up to 80m outdoors

Up to 40m indoors (Depending on terrain and building structure)

Operational Temperature: 0 – 40



FCC ID: Z52NAS-WS01Z

Specifications are subject to change without notice due to continuing product development.

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FCC Interference Statement.

This equipment has been tested and found to comply with the limits for a Class B digital module, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

This module complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: