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LEEDARSON Motion sensor Pet immunity_Z-Wave

Motion Sensor Pet immunity

Quick Start Guide

1. Product Introduction

The Motion Sensor lets you know when movement is detected in a certain area and can trigger different actions in response to that movement (or lack of movement). It supports the pet immunity up to 80 lbs. This sensor integrated Z-Wave communication module to connect with Z-Wave gateway, and this device can be adapted to EU(868.42Mhz) or US(908.42MHz).

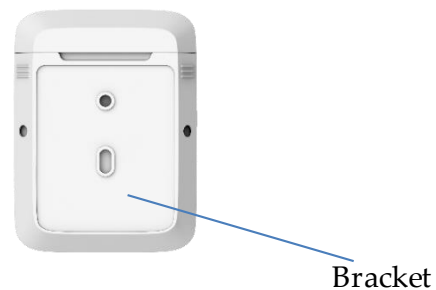
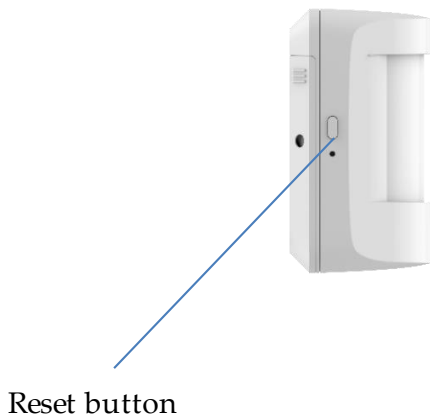
If you want your Motion Sensor to be a security device that use secure/encrypted message to communicate in a Z-Wave network, then a security enabled Z-Wave controller is needed.

The motion sensor 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.

2. Product Appearance

Product appearance and function overview.





Button:

- Short press reset button into learning mode, then the sensor can inclusion or exclusion from the Z-Wave network.
- Hold the key for 5s to reset the sensor, after reset, Sensor will send “Device_Reset_Locally” to the main controller and exclude from the Z-Wave network when the Button is released, this procedure will reset the Sensor to factory default.
- Short press button for 3 times then the sensor sending wake up notification to gateway, and LED will fast blink when sending data, send over then the LED turn off.

Specification	
Detection angle	80 degrees
Detection distance	8 meters / 26.25 feet
Pet immune	80 lbs (36 kgs)
Mounting height	6.23 ft. to 7.55 ft. (1.9m to 2.3m)
Light sensor	20 lux for day/night(bright/dark)
Protocol	Z-Wave 908.42MHz (US) 868.42MHz(EU), 868.40MHz,868.42MHz, 869.85MHz 921.42MHz (AU)
Power source	Battery-powered
Battery type	CR123A X 1
Battery life	3 years
Anti-Tamper	YES
Low power alarm	YES
Certifications	CE/FCC

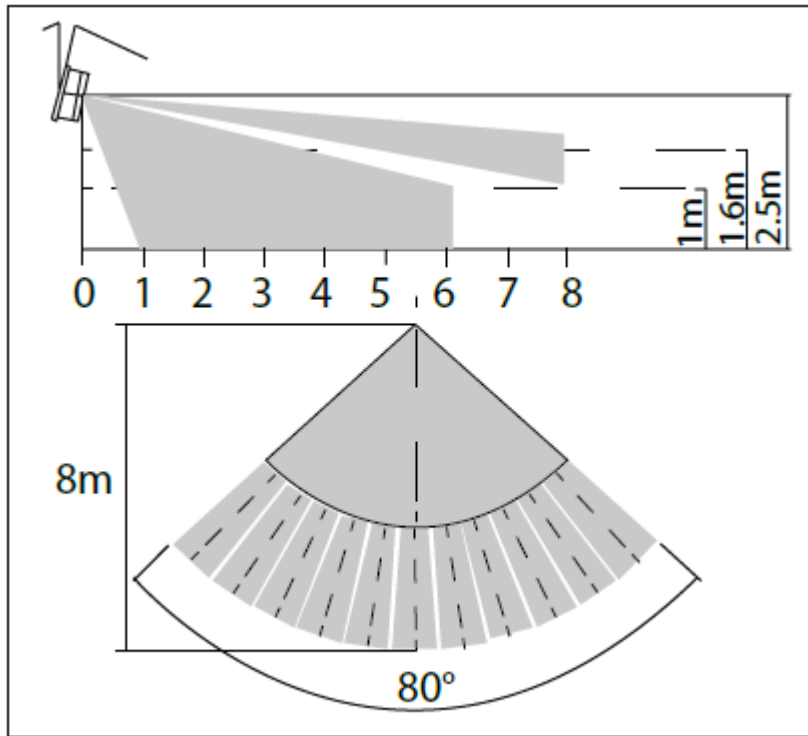
3. Features/Capabilities:

- ◆ Supports pet immunity up to 80 lbs (36 kgs)
- ◆ Use PIR & Fresnel lens technology
- ◆ Easy installation with bracket
- ◆ Low battery alarm
- ◆ Equipped with an anti-tamper switch that reports any tampering

4. Installation Position and Notes

1. Installation position should be chosen at the area which the pass-by will be across, try to make the pass-by in the detection area as below.

Side view



Top view

2. Do avoid installation near air-conditioner, electric fans, refrigerators, ovens or other places where temperature easy change.
3. In order not to affect the detecting result, there should be no object in front of the produces lens.
4. Building (such as the wall) will shorten the distance of wireless communication.
5. This device can be mounted on the wall only, it cannot be installed on the ceiling.

5. Product Installation

Adding the device as accessories, install it according to the diagram below:

- ① Choose the installation location on the wall, fix the bracket by screw or 3M adhesion tape on the wall.
- ② Take off the bracket in the back, and draw out the battery insulation sheet, then assembly the bracket.
- ③ Assembly the main body to the bracket.

6. Product Usage

Function of Action Button:

6.1 All functions of each trigger:

Function Of Action	
Trigger	Description
Power on	In the network: Send Battery report and Wake up notification, the LED turn on within 1 second.
	Not in the network: Only the LED turn on within 5 second.
Short press button one time	<p>Add the Motion Sensor into the Z-Wave network:</p> <ol style="list-style-type: none"> 1. Power on your Motion Sensor, and let your Z-Wave controller into add/inclusion mode. 2. Implement the button action, the Motion Sensor will send out a node info security CC in command class list (Security inclusion), the LED will be fast blink for 60 seconds. 3. If the inclusion is successful, the LED will be turn on within 2 seconds. If failed, LED will be turn off forever, and please repeat the steps in above. <p>Remove Motion Sensor from a Z-Wave network:</p> <ol style="list-style-type: none"> 1. Power on your Motion Sensor, and let the Z-Wave primary controller into remove mode. 2. Press the button on the Motion Sensor, the LED will be turn on for 60 seconds. 3. If Motion Sensor has been successfully removed from your Z-Wave network, the LED will be fast blink 2 seconds. If failed, LED will be turn off forever, and please repeat the steps in above.
	Short press button three time
Not In the network: NOP.	
Press and hold more than 5 seconds	<p>Reset Motion Sensor to factory default.</p> <p>NOTE:</p> <ol style="list-style-type: none"> 1. Triggering this action, in 5 seconds LED will be fast blink. The LED will be turn on within 2 second until hold time is equal to 5 seconds. Motion Sensor will send "Device_Reset_Locally" to the main controller and exclude from the Z-Wave network when the button is released, this procedure will reset the sensor to factory default. 2. Please use this procedure only when the network primary controller is missing or otherwise inoperable. 3. When not in the network, ignore this operation.

Motion is triggered	In the network: Send Notification report and Sensor multilevel report and Basic set (Setup configuration parameter 0x0E to 0x01), and the LED will be blink 0.5 second.
	Not in the network: NOP.
Tamper switch is triggered	In the network: Send Notification report, and the LED will be blink 0.5 second.
	Not in the network: Only the LED will be blink 0.5 second.

6.2 Caution:

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Hereby, Corporation declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU

6.3 Low voltage alarm to remind changing battery.

This product has low voltage detection reminder, when the battery voltage is in low status, the detector will give out low battery signal to controller.

6.4 Z-Wave command.

Special Rule Of Each Command Class

Z-Wave Plus Info Report Command Class

Parameter	Value
Z-Wave Plus Version	0x01
Role Type	0x06 (ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_SLEEPING_REPORTING)
Node Type	0x00 (ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE)

Installer Icon Type	0x0C06 (ICON_TYPE_SPECIFIC_SENSOR_NOTIFICATION_ACCESS_CONTROL)
User Icon Type	0x0C06 (ICON_TYPE_SPECIFIC_SENSOR_NOTIFICATION_ACCESS_CONTROL)

Association Command Class

Motion Sensor supports 2 association groups and max 5 nodes for each group.

Association Group Info Command Class

Association Group Info

Grouping identifier	Group Name	Profile MS	Profile LS
01	Lifeline	0x00	0x01
02	On/Off control	0x71	0x07

Association Group Command List

Group 1	Command List Support
Command Class	COMMAND_CLASS_NOTIFICATION(0x71)
Command	NOTIFICATION_REPORT(0x05)
Command Class	COMMAND_CLASS_BATTERY(0x80)
Command	BATTERY_REPORT(0x03)
Command Class	COMMAND_CLASS_DEVICE_RESET_LOCALLY(0x5A)
Command	DEVICE_RESET_LOCALLY_NOTIFICATION(0x01)
Command Class	COMMAND_CLASS_SENSOR_MULTILEVEL(0x31)
Command	SENSOR_MULTILEVEL_REPORT(0x05)
Group 2	Command List Support
Command Class	COMMAND_CLASS_BASIC(0x20)
Command	BASIC_SET(0x01)

Notification Commands

Notification Type	Notification Event
HOME_SECURITY (0x07)	(0x00) NO_EVENT
	(0x03) TAMPERING_COVERING_REMOVED
	(0x08) MOTION_DETECTION_UNKNOWN_LOCATION
POWER_MANAGEMENT (0x08)	(0x0A) REPLACE_BATTERY_SOON
	(0x0B) REPLACE_BATTERY_NOW
	(0x00) NO_EVENT

Wake Up Interval Capabilities Report CC

Parameter	Value
WAKEUP_PAR_DEFAULT_SLEEP_TIME	0x0E10
WAKEUP_PAR_MAX_SLEEP_TIME	0x28DE80
WAKEUP_PAR_MIN_SLEEP_TIME	0x3C
WAKEUP_PAR_SLEEP_STEP	0x3C

Manufacturer Specific Report

Parameter	Value	
Manufacturer ID 1	0x03	
Manufacturer ID 2	0x00	
Product Type ID 1	0x03	
Product Type ID 2	EU	0x00
	NA	0x01
Product ID 1	0x00	
Product ID 2	0x26	

Configuration Set Command Class

Command Format

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_SET							
Parameter Number							
Default	Reserved				Size		
Configuration Value 1(MSB)							
Configuration Value 2							
.....							
Configuration Value n(LSB)							

Parameter Number Definitions (8 bit)

Parameter Number	Description	Default Value	Size
0x0A (10)	Low battery power level of alarm threshold values: the value range are 0~50 for percentage, the battery low power level can setting 0%~50%.	0x0A	1

0x0C (12)	Setup the PIR detects functionality. 0 = Disable the PIR 1 = Enable the PIR	0x01	1
0x0D (13)	Setup the wait time of PIR for clear the motion. Valid values: 0x05~0x3BC4	0x001E	2
0x0E (14)	When the Motion Sensor is triggered, if this parameter is 0x01 then it will send Basic set command to group 1. 0 = Don't send. 1 = Send.	0x00	1
0x0F (15)	PIR triggers the correspondence between the value of the Basic set and the PIR state. -If this value is 0x00 : PIR triggers send the basic set with 0xFF, PIR alarm release send the basic set with 0x00. -If this value is 0x01 : PIR triggers send the basic set with 0x00, PIR alarm release send the basic set with 0xFF. Only support 0x00 and 0x01 values as valid value.	0x00	1

7. Attention

1. If need to clean the sensor, please use a soft cloth with a little alcohol to wipe it after you cut off the power.
2. This product is just for indoor use.
3. Replace the battery timely on low battery warning to ensure the detector works properly. Please remove the battery and safe keeping, if you don't use this product for a long time.
4. This device can be mounted on the wall only, it cannot be installed on the ceiling.
5. The reference range template of PIR detection is tested at the indoor temperature (the range is 20°C ~ 25°C), the target of the test is 77kg ± 10kg weight and 1.71m ± 0.3m height, the target of the test across movement speed is 4m/s ± 0.15m/s.

6. In order to prevent the PIR sensor's abnormal fault, please don't mounting and operating sensor in the bellow conditions,

Firstly, product mounting should prevent installed in the air flow environment such as in front of the door, window, heater, air conditioner and so on.

Secondly, the PIR detection area should not be shielded by other screen.

Thirdly, if the operating temperature range is out of the defined range of product specification may result in some product faults, which is not in the technique commitment of manufacturer.

Fourthly, this product has not pet immunity function, so when some animals go through in front of the product may trigger PIR function reported.

FCC Statement

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

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, 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 uses 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 or more 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

RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS



Dispose of the device separately from household waste at an official collection point. Professional recycling protects people and the environment against potential negative effects.