

LZW60

Instructions

Next Gen Smart Lighting

We're excited to have you on this journey with us and we're here for you every step of the way. Not only are we smart home owners ourselves, but we build all of our products alongside 1,000's of passionate community members. To see how the project came to life and how everyone contributed, please see Page 42 or visit: inov.li/grandslam. It's truly amazing working with people of all walks of life and even more humbling to see everyone's dedication to making some of the best smart home products.

Thank you so much for your trust in us and welcome to the next generation of smart lighting with Inovelli.

Eric H. - Founder/CEO

Eric M. - Founder/CTO

Handwritten signatures of Eric H. and Eric M. in black ink. Eric H.'s signature is a stylized 'E' followed by 'H.', and Eric M.'s signature is a stylized 'E' followed by 'M.'.

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Navigating this Manual

We designed this manual as if we were installing the sensor ourselves. We suggest reviewing the full manual before beginning the installation process. There are four areas this manual covers:

1. Getting to know your sensor
2. Installing the sensor
3. Connecting to your hub/gateway
4. Configuring your sensor (optimize the settings)

As we continue to work with hub manufacturers, and improve our products. It may be necessary to periodically update this manual. You can always find the latest version of this manual by visiting: inov.li/lzw60

Quick Setup & Inclusion.

Quick Setup Notes

We get it, you're ready to go. No need to flip through the manual, you want the abridged version.

This section assumes you know how to enter the Z-Wave pairing mode on your hub/gateway (and have a Z-Wave compatible hub/gateway).

To see which hubs are compatible, please visit: inov.li/lzw60hubs

While these instructions likely won't change, for the most up-to-date instructions, we recommend visiting: inov.li/lzw60QS

Including Your Sensor

Pairing: The sensor will start the inclusion process when you press on the sensor button (B) one (1) time. To let you know the sensor is in inclusion mode, the red LED Indicator (A) on the front will flash red. Once the sensor is in inclusion mode, start the Z-Wave inclusion process on the hub at any time. If successful, the LED Indicator will turn solid red.

If the sensor is unsuccessful during inclusion, you can exclude (reset) the sensor by putting your gateway in exclusion mode and pressing the sensor button (B) one (1) time. The LED Indicator will flash red and if successful the LED Indicator will turn solid red. Then try inclusion again.



Getting to Know Your Sensor

Please use the next couple pages to get to know your smart sensor. Your sensor can detect motion, temperature, humidity and luminance.

A. LED Indicator: This will show when your sensor is in inclusion/exclusion mode as well as when inclusion/exclusion is successful.

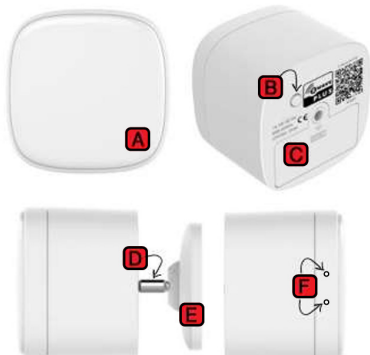
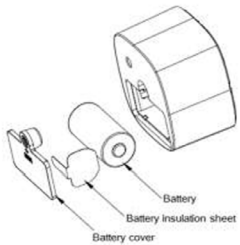
B. Sensor Button: Used to include/exclude and factory reset your sensor.

C. Battery Cover

D. Sensor Stem

E. Base

F. Sensor Holes



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Installing the Sensor

Sensor Placement Notes

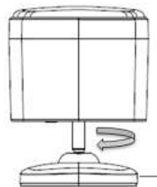
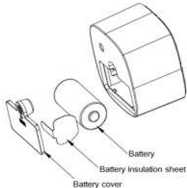
The following pages will help you determine whether or not you'd like a permanent or temporary mounting solution for your sensor.

Note that if you'd like to forgo the battery, you may use a Micro USB cord.

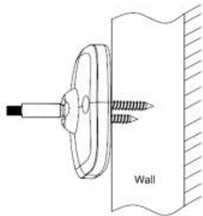
Either way you decide, it's important to have the sensor holes (F) pointing towards the ground for the most accurate reading.

Permanent Installation

If you'd prefer a permanent solution, please use the included screws to mount to a wall (use drywall anchors (included) if mounting in drywall). Please note that the Base (E) should be unscrewed first to make it easier to drill the screws into the wall and **ensure that the sensor holes (F) are pointed at the floor.**

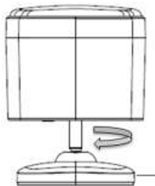
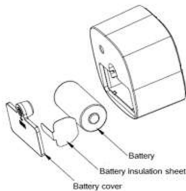
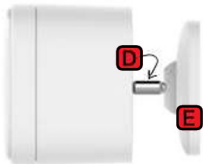


Rotate clockwise
to remove base



Temporary Installation

If you'd prefer a temporary solution, please use the included adhesive tape (to install, please clean the surface of the area you're mounting to, put the adhesive on the Base (E) and then mount on the wall, holding down for 30 seconds) and **ensure that the sensor holes (F) are pointed down at the floor.**



Rotate clockwise
to remove base

Hub/Gateway Setup.

Hub/Gateway Setup Notes

As manufacturers update their hub/gateway platforms, the setup process may change. We recommend checking our website for the latest directions, by visiting the relevant short-links below.

If you don't see your hub, please go to: inov.li/lzw600T

SmartThings

[inov.li/
lzw60ST](https://inov.li/lzw60ST)

Home Asst. Z-Wave JS

[inov.li/
lzw60ZWJS](https://inov.li/lzw60ZWJS)

Home Asst. Z-Wave JS UI

[inov.li/
lzw60ZWJSUI](https://inov.li/lzw60ZWJSUI)


Hubitat

[inov.li/
lzw60HE](https://inov.li/lzw60HE)

SmartThings Instructions

COMPATIBLE HUBS: Samsung SmartThings Hub V1, V2 and Samsung or Aeotec Hub V3 (NOTE: You will need to install an Edge Driver to ensure full functionality of the sensor. For more info, please go to: inov.li/lzw60STPrereqs).

Start by putting your SmartThings hub in inclusion mode:

- Open the SmartThings app and click on the devices icon 
- Tap on the (+) button and click, "Add Device"
- Click, "Scan nearby"
- Pull the tab out from the battery compartment (C) if it already hasn't been and press the sensor button (B) one (1) time - the Indicator Light (A) will blink red rapidly
- If successful, the Indicator Light (A) will turn red and your app will show the new sensor (feel free to rename it)

Home Assistant Instructions

COMPATIBILITY: We recommend either Z-Wave JS or Z-Wave JS UI (formerly Z-Wave JS2mqtt). NOTE: you will also need a compatible Z-Wave stick - a full list can be found here: Z-Wave JS = inov.li/lzw60ZWJSsticks or Z-Wave JS UI = inov.li/lzw60ZWJSUIsticks).

You didn't think we'd be able to fit the HA instructions in here, did you?! Please visit our website :)

Z-Wave JS Instructions


inov.li/lzw60ZWJS

Z-Wave JS UI Instructions

inov.li/lzw60ZWJSUI

Hubitat Instructions

COMPATIBLE HUBS: Hubitat C3, C4, C5 and C7 (NOTE: You may need to install a Device Driver to ensure full functionality of the sensor. We recommend doing this prior to pairing.

- Login to your Hubitat portal and click on the devices tab 
- Tap on the (+) Add Device button and click, "Z-Wave" under, "Add device manually"
- Click, "Start Z-Wave Pairing" and your hub should go into pairing mode, find and initialize the device
- Pull the tab out from the battery compartment (C) if it already hasn't been and press the sensor button (B) one (1) time - the Indicator Light (A) will blink red rapidly
- If successful, the Indicator Light (A) will turn red and your app will show the new sensor (feel free to rename it)

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Z-Wave Information.

About Z-Wave & This Device

As mentioned in the beginning of the manual, we're all smart home owners ourselves and have an amazing community of people who are eager to help and share their setups.

If you ever run into any issues, please do not hesitate to submit a ticket, or post in the community. We'd love to hear from you.

Community Link: inov.li/community

Submit a Ticket: inov.li/support

Thanks again for your support and we look forward to helping you get the most out of our smart home!

DSK Location

The DSK information required for some inclusion methods can be found either on the product (QR Code located at the top of the sensor), or on the back of the box at the bottom left (QR Code located at the bottom left). Please keep this in a safe space or write it down for your records.

Z-Wave Association Groups

Grouping Identifier	Max Nodes	Send Commands
Group 1	5	1. Notification Report
		2. Multilevel Sensor Report
		3. Battery Report
		4. Device Reset Locally
Group 2 (Light)	5	Basic Set

Group 1: Notification Report

Members of this group will send Notification Report when Motion Detection Unknown Location and (Event Inactive)

Group 2: Multilevel Sensor Report

Sensor will send Multilevel Sensor Report (Temperature, Humidity and Luminance) interval of 2 hours

Group 3: Battery Report

Sensor will send Battery Report when the battery level is low and the battery report's value is 0xFF

Z-Wave Parameters

An overview of the parameters can be found on pages 26 through 28, but the most up-to-date parameter documentation can be found on our website here: inov.li/lzw60parameters

#	Name	Range	Default	Size	FW Version
10	Low Battery Level Alarm	10-50	10	1	2.40+
12	PIR Sensitivity	0-10	8	1	2.40+
13	PIR Trigger (Time Between PIR Readings)	5-15300	30	2	2.40+

#	Name	Range	Default	Size	FW Version
14	Basic Set Command Send After PIR Trigger	0-1	0	1	2.40+
15	PIR Trigger Correspondence Action	0-1	0	1	2.40+
100	Change Parameters 101-104 to Default	1-1	N/A	1	2.40+
101	Temperature Reporting Interval	0-2678400	7200	4	2.40+
102	Humidity Reporting Interval	0-2678400	7200	4	2.40+

#	Name	Range	Default	Size	FW Version
103	Luminance Reporting Interval	0-2678400	7200	4	2.40+
104	Battery Reporting Interval	0-2678400	7200	4	2.40+
110	Change Parameters 111-114 to Default	1-1	N/A	1	2.40+
111	Temperature Threshold	1-500	10	2	2.40+
112	Humidity Threshold	1-32	5	1	2.40+
113	Luminance Threshold	1-65528	150	2	2.40+
114	Battery Threshold	0-100	10	1	2.40+

Sensor Button Functions

There are various button functions that the Sensor Button (B) has that can be found in the chart below.

Button Action	Trigger	In Network	Description
N/A	When device is initially powered on	Yes	LED will turn on for 5s (indicating sensor works and is included in network) and then off
N/A	When device is initially powered on	Yes	Sensor will send a Battery Report and Wakeup Notification
N/A	When device is initially powered on	Yes	LED will turn on for 5s and then turn off

Button Action	Trigger	In Network	Description
Short Press	Send Security Node	Yes	Device will send Security Node Info Frame
Short Press 1x	Inclusion Mode	No	Device will include to your primary controller
Short Press 1x	Exclusion Mode	Yes	Device will exclude from your primary controller
Short Press 3x	Wake Up Notification Cmd	Yes	Device will send a wakeup command to nodes with are assigned by the wakeup command
Press & Hold (5s)	Reset to Default	Yes or No	This will reset the device to factory default

Z-Wave Command Classes

Command Class	
Associaton Group Info	Security 2
Association V2	Sensor Multilevel V5
Battery	Supervision
Configuration	Transport Service V2
Device Reset Locally	Version V2
Firmware Update Metadata V4	Wake Up V2
Manufacturer Specific V2	Z-Wave+ Info V2
Notification V8	
Powerlevel	
Security	

Manufacturer Compatibility

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network. Each module is designed to act as a repeater, which will re-transmit a radio frequency (RF) signal by routing the signal around obstacles and radio dead spots to ensure that the signal is received at its intended destination (this sensor is a battery powered node and will not repeat). The Inovelli 4-1 Sensor is a security enabled Z-Wave Plus™ device. A security enabled Z-Wave Plus controller must be used in order to fully utilize the product.

Factory Reset / Exclusion Info

To factory reset your device, hold the Sensor Button (B) for 5 seconds (you may need to press the button 1x first to wake up the device). The sensor should blink red a few times followed by a long blink indicating it has been factory reset. You may also use a certified Z-Wave controller to remove the device from your network to factory default. Only use these procedures in the event that the primary controller is missing or otherwise inoperable.

Exclusion will reset your device as well and can be done directly from the hub. This is helpful if you're running into issues with inclusion. To exclude a device, start the exclusion process on your hub and press the Sensor Button (B) one (1) time. The LED Indicator will start blinking red and if successful, it will long blink red one time and then turn off.

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Product & Contact Info.

Product & Contact Info Notes

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Community Link: inov.li/community

Submit a Ticket: inov.li/support

Thanks again for your support and we look forward to helping you get the most out of our smart home!

FCC/IC Statements

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. 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.

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

FCC/IC Statements (Cont.)

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 or consult the dealer or an experienced radio/TV technician for help. This equipment should be installed and

operated with minimum distance 8in (20cm) between the radiator and your body.

IC Caution: This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

DECLARATION DE CONFORMITE D'INDUSTRIE CANADA: Ce périphérique a été testé et reconnu conforme aux limites spécifiées dans RSS-210. Son utilisation est soumise aux deux conditions suivantes: (1) il ne doit pas provoquer d'interférences gênantes et (2) il doit tolérer les interférences, notamment celles susceptibles d'en perturber le fonctionnement.

Product Info

Name: Smart 4-1 Sensor

SKU #: LZW60

Power: CR123A Battery (or Micro USB)

Signal (Frequency): 908.42 MHz

Operating Temperature Range: 32-104 °F (0-40 °C)

Range: Up to 100 meters line of sight between the Wireless Controller (HUB) and the closest Z-Wave Repeater.

Certifications: FCC/IC & Z-Wave Plus Certified

For indoor use. Specifications subject to change without notice due to continuing product improvement.

Company Info / Warranty

If you run into any issues, feel free to reach out to us at: contact@inovelli.com. We typically answer tickets within 24-48 hours and are staffed by actual smart home owners.

All Inovelli products come with a one (1) year warranty (defined as 365 days). This warranty protects you from breakdowns in the material or workmanship under normal use. This warranty is limited in a couple areas. Purchases must be made from Inovelli or an authorized reseller. The product should be used in the manner directed in the instructions. The product must only be used and/or installed in the United States or Canada.

For full warranty info, please visit: inov.li/warranty

Project Grand Slam

Project, "Grand Slam" was a no-name project for quite some time. We knew we wanted a multi-sensor and when our manufacturer came to us with their house model that was already developed, had Z-Wave's S2 Encryption and SmartStart, we were sold. Adding in the ability to be powered by USB or Battery was icing on the cake. We made a slight tweak to the user experience and plan on also adding in a recessed mount down the road so this can be placed in your ceiling. All that to say, we believe with the four sensors in one, we really hit a Grand Slam.

To see the project come to life, feel free to visit the project page: inov.li/grandslam

Thank You.

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