Z-WAVE™ SMART SENSOR WITH NIGHT-LIGHT

- Multiple Sensor Technology
  - 15m Wide Angle PIR Motion Sensor
  - Temperature Sensor
  - Light Sensor
- Motion sensor look down ‘Creep Zone’
- White LED motion activated night-light
- Adjustable Pulse Count
- Adjustable Range
- High R.F. and E.S.D. immunity
- High white light immunity
- Z-Wave Plus™ certification
- Supports Firmware Over The Air (OTA) updates
- Capsule design with sealed electronics
- Long life Lithium batteries supplied
- Includes wall mounting bracket
- Optional ceiling bracket available

INSTALLATION & PROGRAMMING NOTES

Rev 1.0

DRAFT 10 inc AU&USA

Ness Corporation manufacturing processes are accredited to ISO9001 quality standards and all possible care and diligence has been applied during manufacture to ensure the reliable operation of this product. However there are various external factors that may impede or restrict the operation of this product in accordance with the product's specification.

These factors include, but are not limited to:

1. Erratic or reduced radio range. Ness radio products are sophisticated low power devices, however the presence of in-band radio signals, high power transmissions or interference caused by electrical appliances such as wireless routers, cordless phones, computers, TVs and other electronic devices may reduce the range performance. While such occurrences are unusual, they are possible. In this case it may be necessary to either increase the physical separation between the Ness receiver and other devices or if possible change the radio frequency or channel of the other devices.

2. Unauthorised tampering, physical damage, electrical interruptions such as mains failure, electrical spikes or lightning.

CORPORATION

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Certified System
Quality
ISO 9001
NSW Head Office only

MADE IN AUSTRALIA

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For products:
ZA-117001 Ness LUX Z-Wave PIR (ANZ)
ZU-117001 Ness LUX Z-Wave PIR (US)

INTRODUCTION

Ness LUX Z-WAVE PIR SENSOR is a unique Multi-Technology device with a 15m motion sensor, temperature sensor and light sensor and Z-Wave Plus connectivity.

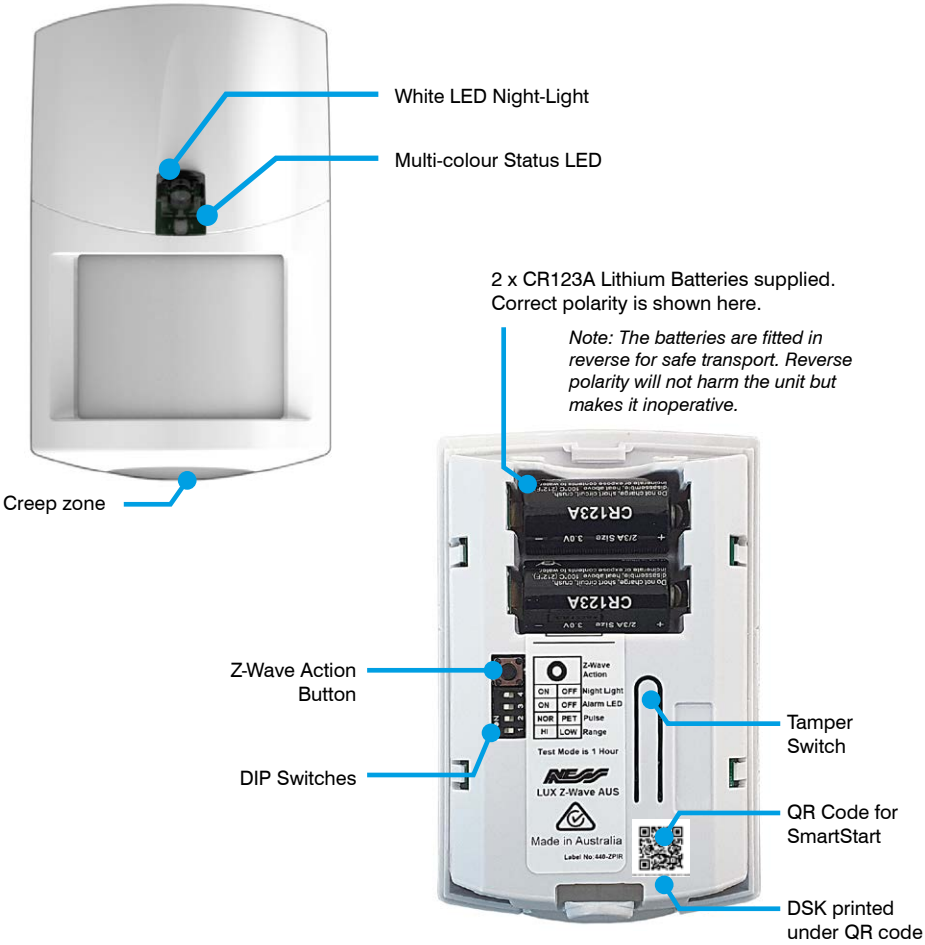
LUX Z-WAVE shares all the features and benefits of the Ness Radio PIR range including 15m x 15m detection coverage, look-down creep zone, high RF immunity, white light immunity, adjustable range, adjustable pulse count and long battery life.

The 3V Lithium batteries supplied are expected to give up to 2 years service under normal conditions.

For safety and convenience, LUX's night-light function provides a motion-activated cone of light to help you find your way at night and is configurable and controllable via Z-Wave commands.

Ness LUX's "capsule" design protects sensitive electronic components and provides easy access to the dipswitches and batteries.

Ness LUX Z-WAVE PIR SENSOR can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.



SEPARATING THE BACK HOUSING

Remove the LUX capsule from the back housing to access the batteries and switches.

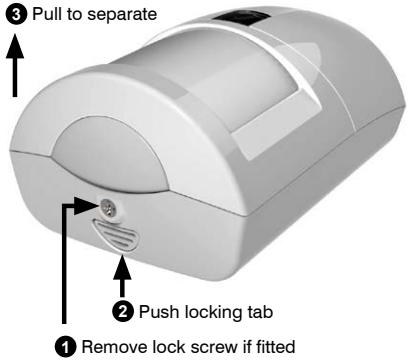


FIG 1.

STANDARD SWIVEL BRACKET

The Standard Swivel Bracket supplied can be used to wall mount the LUX and provides tilt and swivel adjustment.

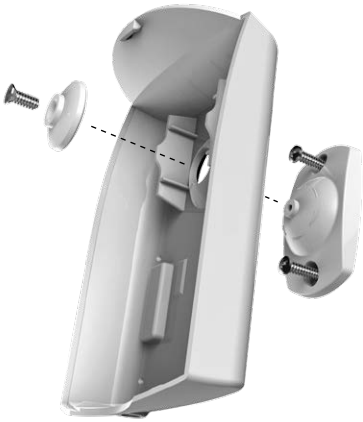


FIG 2. Installation of the Standard Swivel Bracket.

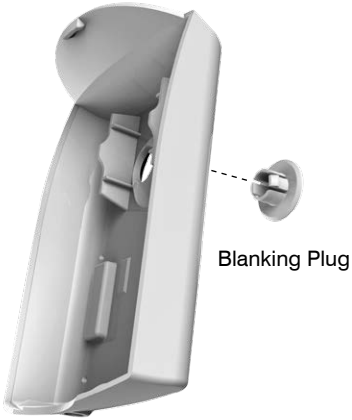
PRODUCT CONTENTS

1 x LUX Z-WAVE Sensor & back housing
1 x Standard Swivel Bracket & screws
1 x Blanking Plug
2 x CR123A Lithium batteries
1 x PIR locking screw

DIRECT WALL MOUNTING

If mounting direct to the wall without a bracket, first fit the blanking plug supplied to seal the bracket mounting hole in the back housing.

Drilling points for flat wall or corner mounting are provided on the inside of the housing.



MOUNTING LOCATION

The Ness LUX Z-Wave sensor is designed for indoor use only and can be installed in wall or corner mount locations.

The Standard Swivel Bracket supplied allows wall mount installation with vertical tilt and horizontal swivel for adjusting coverage to suit the chosen mounting height.

The optional Deluxe Swivel Bracket allows LUX to be ceiling mounting with a wide range of tilt and swivel adjustment.

LUX can also be installed direct to the wall without a bracket. In this case, the mounting height should be carefully chosen to provide the correct detection coverage for the room size.

Always ensure the sensor has a clear line of sight of the area to be protected as infra-red energy does not pass through solid objects, (including glass).

Mount the sensor in a location where an intruder is most likely to walk across the coverage pattern. Corner mounting usually gives the best detection coverage.

As with all PIR sensors, it is advisable to choose mounting positions which avoid direct sunlight, heating or cooling sources and avoid areas of high humidity which may cause condensation on the lens.

Always install the sensor away from metal surfaces which may shield radio transmissions. Before permanently mounting the sensor, it is recommended that you conduct a radio test with the sensor temporarily mounted in the intended position.

Use the signal strength meter on the alarm panel as a guide to the best mounting position. Often, a small change in position can have a dramatic effect on radio performance due to environmental effects on radio signals.

MOUNTING HEIGHT

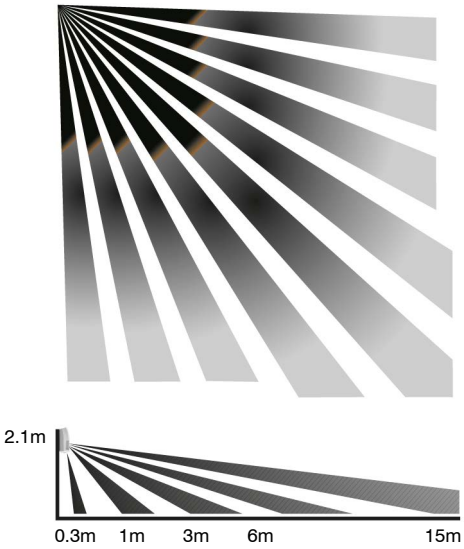
The LUX Z-Wave sensor is designed for indoor use and can be wall or corner mounted at heights between 2.1m and 2.4m using the Standard Swivel Bracket supplied.

Mounting height can higher or lower at the installer's discretion when using the optional Deluxe Swivel Bracket.

If LUX is direct mounted without a bracket, the installer's choice of mounting height and position will entirely determine the coverage.

DETECTION COVERAGE

At the recommended mounting height of 2.1m to 2.4m, motion coverage is up to 15m (HI range setting) or 12m (LOW range setting).



INSTALLATION

1 Remove the lock screw at the bottom of the LUX assembly (if fitted) then push the lock tab and lift the capsule out of the back housing. See Fig 1.

2 If using the Standard Swivel Bracket supplied, screw the bracket's base to the wall in your chosen location then fit the back housing over the bracket and secure it with the locking disc and small screw provided. Do not fully tighten the locking screw until you adjust the back housing's angle as required. See FIG 2. The Standard Swivel Bracket is designed for wall mounting only.

Installation is similar using the optional Deluxe Swivel Bracket - with the added benefit of wall or ceiling mounting. See Fig 3.

If mounting direct to the wall without a bracket, first fit the blanking plug supplied to seal the bracket mounting hole in the back housing.

3 Prepare your Z-Wave controller Learn signal from the device. (Refer to your Z-Wave controller's instructions for including devices)

4 Insert both batteries, observing correct polarity. Then refer to the sections Warm-Up Mode and Walk-Test Mode (page7), Z-Wave Setup (page 11).

5 Adjust the motion detection coverage as required by tilting the unit horizontally or vertically on the swivel bracket. If LUX is direct mounted without a bracket, the installer's choice of mounting height and position will entirely determine the coverage.

6 When you have finished walk testing, secure the unit to the back housing using the locking screw provided (small countersunk screw).

OPTIONAL ACCESSORIES

The **DELUXE SWIVEL BRACKET** provides wall or ceiling mounting with a wide range of vertical and horizontal adjustment.

Part No. 106-169

FIG 3. Installation of the optional Deluxe Swivel Bracket.

BATTERIES

Ness LUX Z-Wave sensor is supplied with 2 x CR123A Lithium batteries which have an expected service life of up to two years of normal use in domestic installations.

LUX's dual battery system allows the motion sensor and Z-Wave transmitter to operate independently of the night-light.

The motion sensor and Z-Wave will draw power from either battery, but battery A must be installed to power the night-light.

Battery A (top) provides power for the Night-Light, Motion Sensor and Radio Transmitter.

Battery B (bottom) provides power for the Motion Sensor, Radio Transmitter and blue alarm LED.

Correct polarity shown

Both batteries must be installed to maximise service life.

Spare batteries are available from Ness Corporation or resellers.

Always replace both batteries at the same time.

Use only CR123A 3V Lithium. Part No. 142-028. Batteries are sold individually.

BATTERY POLARITY

Note that LUX is supplied with both batteries fitted in reverse for safe transportation.

Note the correct polarity when inserting the batteries. Installing the batteries in reverse will not harm the unit but it will not operate correctly.

WARM-UP MODE

LUX will be in warm-up mode for 30 Seconds on power-up (batteries have been inserted).

• Event reporting is disabled during warm-up.

• LUX Z-Wave sensor also enters warm-up mode for 60 seconds once it has been added into a Z-Wave network - to allow the device to complete a Z-Wave interview.

• There is no warm up Mode after the device has been removed from a Z-Wave network - the unpaired device will function in Walk Test mode.

WALK-TEST MODE

LUX will be in Walk Test mode once it exits warm-up mode.

The duration of Walk Test Mode is configurable by CPN#13. Default is 30 minutes.

The Motion Alarm Retrigger Timer CPN#1 and Retrigger Mode CPN#2 are disabled during Walk-Test mode to allow the device to be tested without lock out timers. Motion events report whenever motion has detected.

Use Walk-Test Mode test the sensor's detection coverage and Z-Wave signal. Please note the Mounting Location and Mounting Height instructions for optimal performance.

• To exit Walk-Test mode, press and hold the Z-Wave Action Button for more than 3 Seconds then release.

Note: During Walk-Test Mode, for paired node, the battery level and the temperature value will be reported every 3 minutes regardless the setting in CPN#5, CPN#7 & CPN#8.

LOW BATTERY SIGNAL

The RED LED will flash continuously to indicate a low battery condition. A low battery signal will be transmitted to the Z-Wave controller.

Low battery condition is triggered when the battery voltage sinks to approximately 2.6 volts under load.

Both batteries should be replaced immediately.

Z-WAVE ACTION BUTTON

• Click one time: The device enters into inclusion/exclusion mode. During the inclusion/exclusion mode, if the device is not in Z-Wave inclusion processing, clicking the Action Button again will exit the inclusion/exclusion mode.

• Press and hold down over 3 seconds: Skip the warm up and walk test mode

• Press and hold for 20 seconds: Reset device to factory default

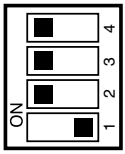
TAMPER SWITCH

The Tamper Switch transmits a Tamper signal when the unit is removed from the back housing. A Tamper restoral signal is sent when the unit is replaced.

DIP SWITCHES

Custom settings are set by turning dipswitches 1-4on or off. The dipswitches are easily accessible on the rear when LUX is removed from the back housing.

Use a small screwdriver or pen tip to set the switches



ON	OFF	NIGHT LIGHT
ON	OFF	ALARM LED
NOR	PET	PULSE
HI	LOW	RANGE

Default switch positions shown

DIP SWITCH SETTINGS

LIGHT (SW4)

Enable/Disable the night-light.

ON The night-light will function and draw power from battery A. (Default)

OFF The night-light is disabled.

Note: If battery A is not installed or is flat the night-light will not work regardless of the switch setting.

ALARM LED (SW3)

Enable/Disable the blue Alarm LED.

Note. The blue LED will always operate in Test Mode regardless of this switch setting.

ON The Alarm LED is enabled. (Default)

OFF The Alarm LED is disabled.

PULSE (SW2)

Sets the motion sensor pulse count.

NOR 1–2 Pulses or walk steps should cause an alarm. (Default)

PET 3–4 Pulses or walk steps should cause an alarm.

RANGE (SW1)

Sets the maximum detection range.

HI 15m x 15m max. coverage.

LOW 12m x 12m max. coverage. (Default)

LED OPERATION

LED	DESCRIPTION
White LED (Night Light)	1. In Walk Test Mode, it is on for 1 second for a motion alarm event report. 2. The Night Light provides smart safety lighting in a room for 10/30 seconds. It illuminates when: • The device is working in Security Mode. • Movement is detected • DIP4 switch is set in ON position. • When the light sensor is detecting full darkness (CPN#11 = 0) or when the light sensor is detecting a small amount of light (CPN#11 = 1) • The Night light ON duration depends on the value of CPN#10 The night light ON duration is 10 seconds if the value is 0. The night light ON duration is 30 seconds if the value is 1. Note: When the Night Light is illuminated and before the night light on timer expires, every subsequent motion detected will extend the night light on timer for another 10/30 seconds. When no further motion is detected and the night light on timer expires, the light night light will turn off 3. The Night Light also can be operated (on/off) by Z-Wave COMMAND_CLASS_SWITCH_BINARY, SWITCH_BINARY_SET command from a Z-Wave controller.
Green LED	The Green LED is used to indicate operations completed state as follows: • The Green LED is on for 2 seconds when the device is powered up. • The device inclusion/exclusion completed – is on for 1 second. • The device manual reset completed – is on for 1 second. • Motion alarm event reporting is on for 1 second for a device paired in to a Z-Wave network
Blue LED	The Blue LED is used to indicate motion detected for a device not paired in to a Z-Wave network. The Blue LED is on for 1 second indicating the motion detected.
Aqua LED (Green + Blue)	The Aqua colour LED flashes (1 second on, 2 seconds off) during warm up mode.

Continued next page

LED OPERATION

Red LED	The Red LED is used to indicate alarm state and operation processing state as follows: • Slow flashing (ON 100 MS, OFF 4 seconds) – continual slow flashing when a low battery level has been detected. • Fast flashing (ON 100 MS, OFF 100mS) – when the action button has been clicked and the device is in learn mode. • Inclusion/exclusion: Click the action button once, the device is entering learn mode, the Red LED will start fast flashing. • Click the action button again before the learning processing will cancel the learn mode, the Red LED will stop fast flashing • When inclusion/exclusion is completed, the Red LED stops fast flashing and the green LED will turn on for 1 second. • Manually reset the device: Press and hold the action button down for more than 20 seconds. • When the action button has been held down over 3 seconds, the Red LED starts fast flashing, and the fast flashing will stop after a 20 seconds timeout. And then, release the action button; the Green LED turns on for 1 second indicating the device has been reset. • Releasing the action button before the red LED still in fast flashing state (before 20 seconds) will cancel the device reset process; the Red LED Fast flashing will stop. • ON (for 1 second) – when inclusion/exclusion results in an error state

ADDING LUX Z-WAVE SENSOR INTO A Z-WAVE NETWORK

Power up LUX Z-Wave sensor by inserting the batteries (or fit the batteries in the correct polarity).

You may need to refer to your Z-Wave controller's instructions for adding devices.

1. Put your primary Z-Wave gateway into inclusion mode, the gateway should confirm that it is waiting to add a new device,
2. Press the Z-Wave Action button on your LUX Z-Wave sensor for 1 second.
3. The LED on the LUX Z-Wave sensor will blink Red rapidly, followed by a solid Green LED for 1 second for successful inclusion, or a solid red LED for 1 second for a failed inclusion.

Tip: If you have difficulty including your LUX Z-Wave sensor, try sending an exclusion message from your gateway first to ensure it is not in an enrolled state.

ADDING LUX Z-WAVE SENSOR WITH Z-WAVE SECURITY

LUX Z-Wave sensor is Z-Wave Security Enabled and supports the following security command classes:

- Security 0
- Security 2 Unauthenticated
- Security 2 Authenticated*

**If your Z-Wave controller supports S2 Security 2 Authenticated encryption and DSK, enter the first 5 digits of the DSK printed at the bottom of the QR image on the rear of LUX Z-Wave sensor.*

There is no difference in functionality whether the device is included via secure or non-secure mode with the exception of communications to the Z-Wave network.

A Security Enabled Z-Wave Controller must be used in order to include the device in Security mode.

ADDING WITH SmartStart*

LUX Z-Wave sensor is a SmartStart enabled device allowing it to be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

**Requires a SmartStart compatible controller and app. LUX Z-Wave sensor must be within network range.*

1

Scan the QR code on the rear of LUX Z-Wave sensor

2

Power up LUX Z-Wave sensor (insert the batteries)

REMOVING LUX Z-WAVE SENSOR FROM A Z-WAVE NETWORK

You may need to refer to your Z-Wave gateway's instructions for removing devices.

1. Put your primary Z-Wave gateway into exclude mode, the gateway should confirm that it is waiting to remove a device,
2. Press the Z-Wave Action button on your LUX Z-Wave sensor for 1 second.
3. The LED on the LUX Z-Wave sensor will display a solid Green LED for 1 second after successful exclusion.

TO FACTORY DEFAULT LUX Z-WAVE SENSOR

To reset all LUX Z-Wave sensor settings to factory default, press and hold the Z-Wave Action button for 20 seconds. This will remove any previous Z-Wave network inclusion credentials and reset any user set parameters.

Please use this procedure only when the network primary controller is missing or otherwise inoperable.

Z-WAVE SETUP

Z-WAVE PLUS 2 INFO			
Role Type	Node Type	Installer Icon Type	User Icon Type
Listening Sleeping Slave (LSS)	Z-Wave Plus node	0x0C07 Sensor Notification Device Type (Home Security)	0x0C07 Sensor Notification Device Type (Home Security)

ASSOCIATION GROUP INFORMATION			
Group ID	Group Name	Max Nodes	Description
1	Lifeline	5	BATTERY_REPORT, NOTIFICATION_REPORT, SENSOR_MULTILEVEL_REPORT, DEVICE_RESET_LOCALLY_NOTIFICATION, INDICATOR_REPORT
2	Basic Set	5	Basic Set (motion alarm/clear value - 0xFF/0x00) Only the Basic Set command reports to this group

MANUFACTURER			
Model	Manufacturer ID	Product Type	Product ID
ZA-117001	0x0189 Ness	0x0204 0x02 – ANZ; 0x04 - Z-Wave Plus 2	0x0301 0x03 - Sensor PIR; 0x01 - Hardware V1
ZU-117001	0x0189 Ness	0x0104 0x01 – US; 0x04 - Z-Wave Plus 2	0x0301 0x03 - Sensor PIR; 0x01 - Hardware V1

VERSION			
Protocol Library	Protocol	Firmware	Hardware
0x03 Slave_Enhance_232_Library	0x070E SDK V7.14	0x010B V1.11	0x01

NOTIFICATION REPORTS			
Event	Event Type	Event	CPN#
PIR Alarm	HomeSecurity0x07	Motion alarm event 0x08 Detection Unknown Location	1
PIR Alarm Clear	HomeSecurity0x07	Motion Clear event 0x00 for alarm event 0x08	3
Cover Removed	HomeSecurity0x07	Cover removed tampering0x03	12
Cover Restored	HomeSecurity0x07	Cover restored event 0x00 for event 0x03	12

BASIC SET EVENT REPORT				
Event	Command Class	Command	Value	CPN#
PIR Alarm Basic set	Basic	Basic Set	0xFF	1
PIR Alarm Clear Basic set	Basic	Basic Set	0x00	3

Note:
- The Basic Set commands send to every nodes listed in “Basic Set” association group 2
- There is no Basic Set commands sent if the “Basic Set” association group 2 is empty

MULTILEVEL SENSOR REPORTS						
Event	Command Class	Scale	Precision	Size	Value	CPN#
Air temperature	Sensor Multilevel	Celcius (C) 0x00	1	2	2 bytes	7&8
Luminance	Sensor Multilevel	Lux 0x01	0	2	2 bytes	6

BATTERY EVENT REPORTS				
Event	Command Class	Command	Value	CPN#
Battery Level	Battery	Battery Report	%	5
Low Battery	Battery	Battery Report	0xFF	4

DEVICE DEFAULTED MANUALLY EVENT REPORTS			
Command Class	Indicator ID	Property ID	Details
Indicator	Node Identify 0x50	0x03 On/Off Periods	
		0x04 On/Off Cycles	
		0x05 On time within an On/Off period	

COMMAND CLASSES SUPPORTED

1 COMMAND_CLASS_ZWAVEPLUS_INFO_V2
2 COMMAND_CLASS_ASSOCIATION_V2*
3 COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3*
4 COMMAND_CLASS_ASSOCIATION_GRP_INFO_V3*
5 COMMAND_CLASS_TRANSPORT_SERVICE_V2
6 COMMAND_CLASS_VERSION_V3*
7 COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2*
8 COMMAND_CLASS_DEVICE_RESET_LOCALLY_V1*
9 COMMAND_CLASS_CONFIGURATION_V4*
10 COMMAND_CLASS_INDICATOR_V3*
11 COMMAND_CLASS_POWERLEVEL_V1*
12 COMMAND_CLASS_BATTERY_V1*
13 COMMAND_CLASS_SECURITY
14 COMMAND_CLASS_SECURITY_2
15 COMMAND_CLASS_SENSOR_MULTILEVEL_V5*
16 COMMAND_CLASS_NOTIFICATION_V8*
17 COMMAND_CLASS_SUPERVISION_V1
18 COMMAND_CLASS_FIRMWARE_UPDATE_MD_V5*

*Items marked with an asterisk are Highest granted command classes.

1. This device does not support the Basic Command class.

However, the unsolicited BasicSet (0xFF/0x00) command is used to report unsolicited PIR motion Alarm/ Clear event to the nodes listed in “Basic Set”association group.

The PIR sensor sends an unsolicited Basic Set 0xFF command when the PIR motion detected and sends an unsolicited BasicSet 0x00 command for motion clear event.

2. This device supports COMMAND_CLASS_CONFIGURATION V4, however, the CONFIGURATION_BULK_ SET, CONFIGURATION_BULK_GET and CONFIGURATION_BULK_REPORT commands are not supported.

CONFIGURATION PARAMETERS

In addition to the user set dip switches on the rear of the LUX Z-Wave sensor, there are a number of Z-Wave configuration parameters that can be set via your Z-Wave Gateway.

CONFIGURATION PARAMETERS TABLE

Parameter (Hex/ASCII)	Description	Default Value	Valid Values	Size (bytes)
0x01 / **1**	Motion Alarm Retrigger Duration The duration in seconds that the motion alarm would not be send since last motion alarm reported. The motion alarm report is enabled only when the duration timer has expired. Range: 10 ~ 3600; Default: 240; Value = 10 disable motion alarm report. Any valid value greater than 10 enables motion alarm report.	240	10 ~ 3600	2
0x02 / **2**	Motion Alarm Retrigger Modes This option will select how the motion alarm retrigger duration timer(CPN#1) to be reset. Range: 0~1. • Value=0, in this mode, the motion alarm retrigger duration timer(CPN#1) will be reset to zero once the motion event is detected. Hence, the motion alarm retrigger duration timer will start recounting which extends the retrigger duration. This mode will extend the battery life and reduce unnecessary motion alarm reports (default). • Value = 1, in this mode, the motion alarm retrigger duration timer (CPN#1) would not be reset once the motion event has detected. The motion alarm reports will be enabled to send once the motion alarm retrigger duration timer has expired. In this mode, it will report the motion alarm event with greater fidelity. This setting might be used where the device will be used for automation tasks	0	0 : 1	1
0x03 / **3**	MotionClearDuration The period of time in seconds to send motion clear report after motion alarm has reported in Security Mode. Range: 0 ~ 3600; Default: 10; value = 0 disable motion clear report.	10	0 ~ 3600	2
0x04 / **4**	Low battery setting (%). Report battery low warning message when battery level reaches this value. Range:=10~50(10% to 50%) The battery level range: 100%-3V; 0%-2.4V	10	10 ~ 50	1

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CONFIGURATION PARAMETERS TABLE

Parameter (Hex/ASCII)	Description	Default Value	Valid Values	Size (bytes)
0x05 / **5**	Battery Scheduled Report Interval The battery level scheduled report interval time is based on every 30 minutes per kick. The value N related to the time in minutes is Nx 30minutes. Range: 0~120. Default: 12 (12x30 = 360minutes). Value= 0 Disable Battery level scheduled report.	12	0 ~ 120	1
0x06 / **6**	Luminance Change threshold This parameter determines the change in Lux of light intensity level resulting in sending luminance report. Range: 0~60 (Lux). Default: 50. Value= 0 Disable luminance value scanning, no report. Note: The luminance value is scanned every 5 seconds. A luminance report will be sent if a change over the set threshold value is detected.	50	0 ~ 60 (Lux)	1
0x07 / **7**	Temperature Change threshold This parameter determines the change in temperature value resulting in sending temperature value report. Range: 0~80 (10=1.0° C or° F; 20=2.0°C). Value > 0 and <10 set as 10. Default: 10. Value= 0 Disable temperature value scanning, no report. Note: The temperature value is scanned every 5 minutes. A temperature report will be sent if a change over the set threshold value is detected.	10	0 ~ 80	1
0x08 / **8**	Temperature Scheduled report interval The temperature value report interval time is based on 30 minutes per kick. The value N related to the time in minutes is N x 30 minutes. Range: 0~120. Default: 6 (6 x 30 =180 minutes). Value= 0 Disable Battery level scheduled report.	6	0 ~ 120	1
0x09 / **9**	Temperature Scale Setting Option to select the temperature scale type reported in Celsius or Fahrenheit. Range: 0 ~ 1. Value= 0 Celsius(C): Value= 1 Fahrenheit (F).	0	0 ~ 1	1
0x0A / **10**	Night Light ON Duration: Range: 0~1. Value=0 Night Light ON for 10 seconds. Value= 1 Night Light ON for 30 seconds.	0	0 ~ 1	1

Continued next page

CONFIGURATION PARAMETERS TABLE				
Parameter (Hex/ASCII)	**Description**	**Default Value**	**Valid Values**	**Size (bytes)**
0x0B / **11**	Night Light ON based on ambient light level measured Range: 0~1. Value= 0 Night Light ON only when sensor detects total darkness. Value=1 Night Light ON only when a small amount of light is detected	0	0 ~ 1	1
0x0C / **12**	Enable Tamper Alarm Report This parameter setting is used to enable/disable the device cover removed Tamper Alarm report. Range: 0~1. Value=0 - disable the Tamper Alarm report. Value= 1 - enable the Tamper Alarm report. (default)	1	0 ~ 1	1
0x0D / **13**	Walk Test Mode Duration This parameter setting is used to set the time out for Walk Test-Mode. Range: 0~3. • Value=0 - disable Walk Test Mode. • Value=1 - 10 minutes • Value=2 - 30 minutes.(default) • Value=3 - 60 minutes	2	0 ~ 3	1

PRODUCT DETAILS

Product Name	Ness Z-Wave LUX PIR Sensor
Part Number	ZA-117001 (921.4 MHz for ANZ Region) ZU-117001 (908.42 MHz for US Region)
Version	V1.12.1

SPECIFICATIONS

Dimensions	112(h) x 72(w) x 48(d) mm
Mounting height	2.1m – 2.4m
Coverage	Up to 15m x 15m @ 90°
Motion Sensor zones	20 dual element zones
Pulse count	Selectable 1–2 or 3–4
Range	Selectable High/Low. 15m max./12m max.
Sensors	Dual Element Pyroelectric Motion Sensor Ambient Temperature Sensor Ambient Light Sensor Tamper Switch
Temperature Sensor, Operating Range	-10°C to 50°C Accuracy: ±0.3°C
Z-Wave Functions	Supports Firmware Over The Air (OTA) updates Supports SmartStart network inclusion Supports Z-Wave Security • Security 0 • Security 2 Unauthenticated • Security 2 Authenticate
Z-Wave Compatibility	Z-Wave Plus certified controllers
Z-Wave Frequency	921.4 MHz (ANZ model ZA-117001) 908.42 MHz (US model ZU-117001)
Alarm indication	RGB LED
Night-Light	White LED with adjustable threshold
Operating voltage	3V DC
Battery	2 x CR123A Lithium
Quiescent current	< 20μA

NOTES


CORPORATION