



DEN SmartStrike™

Engineering Manual for Certification



FCC

FCC Statements

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.

Warning: Changes or modifications not expressly approved by the party responsible

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:

This equipment complies with FCC RF Exposure requirements and should be installed and operated with a minimum distance of 20cm between the radiator and any part of the human body.

Antenna Info:

This equipment uses the following Antennas and may not be used with other antenna types or with antennas of higher gain:

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. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Mfg.: DEN Smart Home

Type: Wire

Gain: +3.0 dBi

Note: Antenna info above not required for permanently attached antennas such as chip antenna or trace antenna.



ISED (Canada) Statements in English and French:

This device complies with Industry Canada licence-exempt RSS standards. 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 the undesired operation thereof.

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment and meets the RSS-102 radio frequency (RF) exposure guidelines. This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

Cet appareil est conforme aux normes RSS exemptes de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférences, et (2) cet appareil doit accepter toute interférence, y compris les interférences pouvant entraîner un fonctionnement indésirable.

Cet équipement est conforme aux limites d'exposition aux radiations RSS-102 établies pour un environnement non contrôlé et répond aux directives d'exposition aux radiofréquences (RF) RSS-102. Cet équipement doit être installé et utilisé en maintenant le radiateur à au moins 20 cm ou plus du corps de la personne.



SPECIFICATIONS

ITEM	INFORMATION
Model	ZW-BLE-1-US
Power Supply	2 AA batteries
Z-Wave® Region	US 908.42/912/916/920MHz
Range	Up to 100 feet line of sight between the Wireless Controller and the closest Z-Wave® receiver module. 400m+ in Z-Wave® Long Range mode
Operating Temperature Range	5-104° F (-10-40° C)

- Specifications subject to change without notice due to continuing products improvement
- Website : www.densmarthome.com



INTRODUCTION

This product can be operated in any Z-Wave® network with other Z-Wave Plus® 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.

This is a FLIRS Device and it will not act as a repeater in Z-Wave® Network.

DEN SMARTSTIKE 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.

GENERIC_TYPE: GENERIC_TYPE_ENTRY_CONTROL (0x40)
SPECIFIC_TYPE: SPECIFIC_TYPE_DOOR_LOCK (0x01)

KEY FEATURES

LOCK/ UNLOCK by any Certified Z-Wave® controller

Support Association and Auto Report Lock status

Support SmartStart

Support Long Range

LED indicator

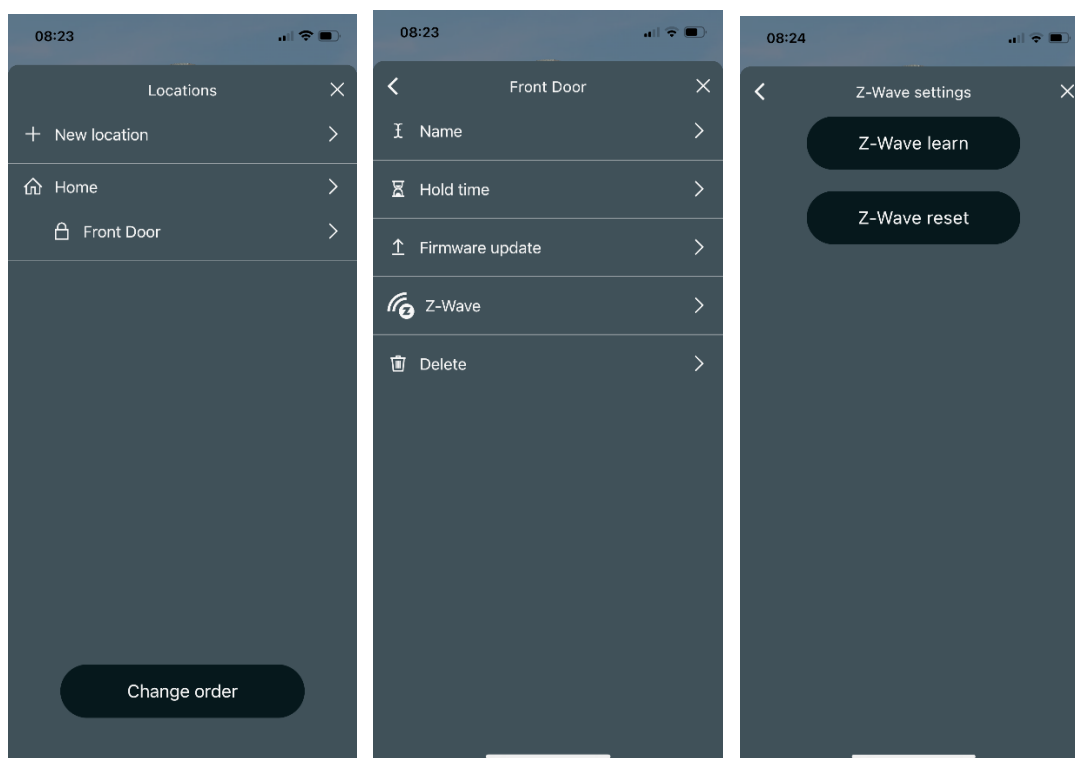




ADDING SmartStrike DEVICE TO HUB

- The device supports two methods of ADD/inclusion, When using a Z-Wave Plus® certified controller choose Network Wide Inclusion or SmartStart.
- Network Wide Inclusion To A Z-Wave® Network

Open Den SmartStrike APP and Navigate to: Settings -> Locations and Locks, and select the name of SmartStrike, and Z-Wave®.



Refer to your primary controller instructions to process the inclusion/exclusion setup procedure.

When prompted by your primary controller, click Z-Wave® Learn, and wait for controller to finish inclusion process/

- The device is compatible with SmartStart.

The DEN SmartStrike lock comes with SmartStart technology, enabling straightforward integration with a compatible controller through QR code scanning. After scanning the QR code and installing the batteries, the device equipped with SmartStart will automatically establish a connection

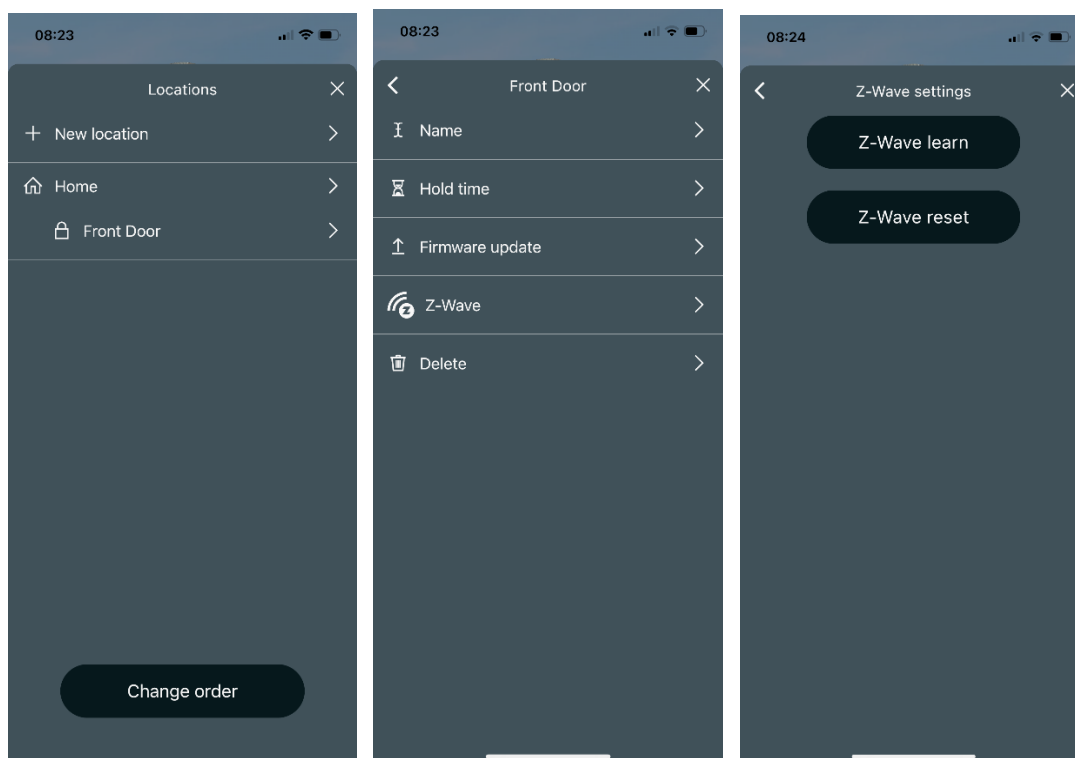


to the network within 10 minutes of activation, provided it is located within the network's coverage area.

Note: Z-Wave® Long Range devices must be integrated into the network exclusively through SmartStart. Ensure that the controller is configured to accept Long Range connections.

Removing/Excluding SmartStrike from the HUB

Open Den SmartStrike APP and Navigate to: Settings -> Locations and Locks, and select the name of SmartStrike, and Z-Wave®.



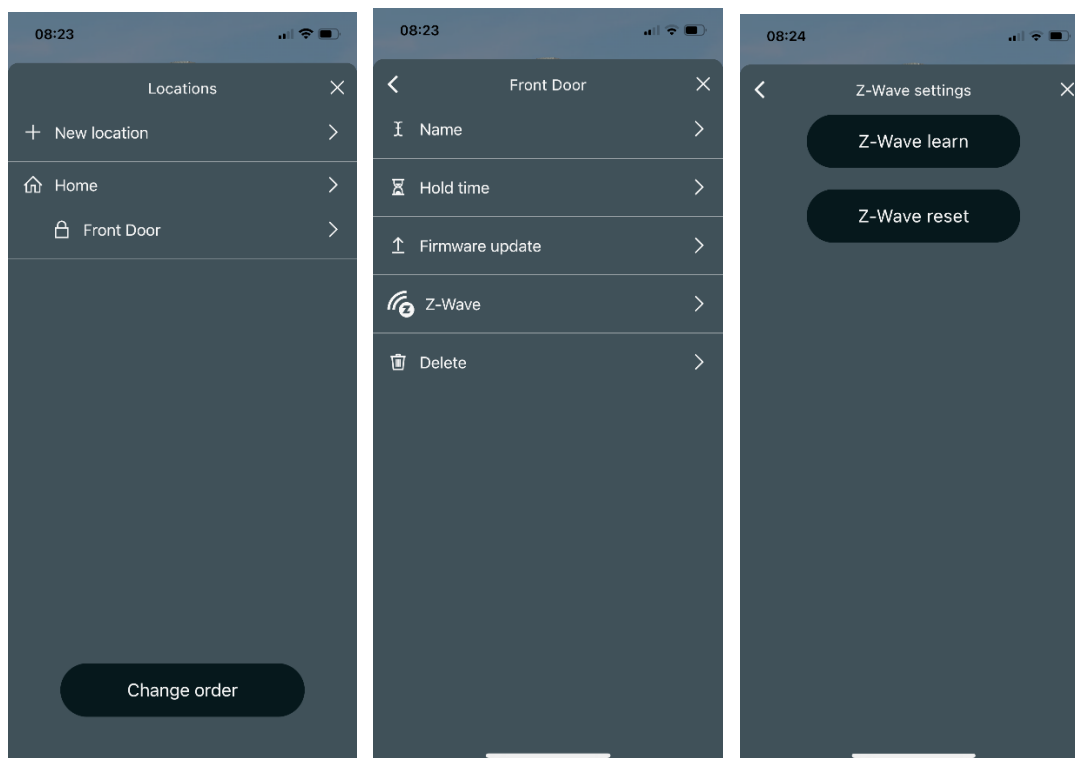
Refer to your primary controller instructions to start exclusion process.

When prompted by your primary controller, click Z-Wave® Learn, and wait for controller to finish exclusion process.



Factory Reset/ Reset to Default

Open Den SmartStrike APP and Navigate to: Settings -> Locations and Locks, and select the name of SmartStrike, and Z-Wave®.



Press Z-Wave® Reset, Select Yes and SmartStrike will reset itself to Z-Wave® Factory Default.



QR Code and DSK

The QR code sticker can be found affixed to the battery door, DSK is included in the QR code.

The DSK code can be found on the DSK label which is attached to inner packaging.

Location of QR code

PACKAGING	BATTERY DOOR



SUPPORTED COMMAND CLASSES

Command Class Name	Version	Required Security Class
Z-Wave Plus® Info	V2	none
Security	V1	none
Security 2	V1	none
Supervision	V1	none
Transport Service	V2	none
Basic	V2	highest granted
Association	V2	highest granted
Association Group Information	V3	highest granted
Multi Channel Association	V3	highest granted
Version	V3	highest granted
Manufacturer Specific	V2	highest granted
Device Reset Locally	V1	highest granted
Power Level	V1	highest granted
Indicator	V3	highest granted
Firmware Update Meta Data	V5	highest granted
Door Lock	V4	highest granted
Notification	V8	highest granted
Battery	V1	highest granted

Basic Command Class Mapping

- Basic CC is mapped to Door Lock Command Class.
- Basic Set is not mapped as required by Z-Wave® Specification.



Identify / Indicator Command Class

The indicator (blue color) will flash according to the indicator set command received from HUB/Controller.

Indicator ID	Property ID
0x50 (NODE IDENTIFY)	0x03(ON OFF PERIOD)
0x50 (NODE IDENTIFY)	0x04(ON OFF CYCLES)
0x50 (NODE IDENTIFY)	0x05(ONE TIME ON OFF PERIOD)

Association Groups

ID	Name	Node Count	Profile	Function
1	Lifeline	5	General: Lifeline	Device Reset Locally Notification: Issued when Factory Reset is performed. Indicator Report: Issued when included successfully. Door Lock Operation Report: Issued when Strike changes its Lock Status Notification Report Issued when Strike is controlled from BLE



Notification Command Class

Notification Type	Supported Events
Access Control (0x06)	0x03 - Send When Strike unlocked by BLE 0x04 - Send When Strike locked by BLE 0x0B - Motor Jam/Motor Problem