



Contact Sensor Z-Wave Technical Manual



Ring Contact Sensor

Adding Sensor to a Z-Wave Network

Ring Contact Sensor can be added via smart start or via classic inclusion mode –

Smart Start Inclusion Steps:

1. Initiate add sensor flow in the Ring Alarm mobile application – Follow the guided add flow instructions provided in the application
2. Scan the QR code found on the package of the sensor or the QR code found on the back of the sensor
3. Pull the battery tab on the sensor
4. When the inclusion process is complete, the LED on the sensor will be solid blue, then go out.
5. Test the sensor. Place the magnet next to the sensor to represent a closed position (see Installation video to see where to position the magnet). If the LED flashes ONE TIME, it is successfully communicating on your Zwave network. If the LED on the sensor flashes slow and steady for 5 seconds, you need to repeat the inclusion process.

Classic Inclusion Steps:

1. Initiate add sensor flow in the Ring Alarm mobile application – Follow the guided add flow instructions provided in the application
2. Select add manually and enter the 5 digit DSK pin found on the package of the sensor or the QR code found on the back of the sensor
3. Pull the battery tab on the sensor
4. When the inclusion process is complete, the LED on the sensor will be solid blue, then go out.
5. Test the sensor. Place the magnet next to the sensor to represent a closed position (see Installation video to see where to position the magnet). If the LED flashes ONE TIME, it is successfully communicating on your Zwave network. If the LED on the sensor flashes slow and steady for 5 seconds, you need to repeat the inclusion process.

This is a SmartStart enabled product which can 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.

This product can also be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers.

Removing a Sensor to a Z-Wave Network

Exclusion Instructions:

1. Initiate remove sensor flow in the Ring Alarm mobile application – Select the setting icon from device details page and choose “Remove Device”
2. Open contact sensor’s cover
3. Remove and replace battery quickly

Association

This sensor has one Association group of with only one node. Group one is a lifeline group who will receive unsolicited messages relating to door/window open/close notifications, case tampering notifications, and low-battery notifications.

Network Wide Inclusion

This sensor also supports Network Wide Inclusion such that the Sensor can be included into the Z-Wave network over the mesh network and not directly near the main controller. This mode is automatically activated after regular inclusion was not successful

Sensor Condition	Command Class & Value	Association Group	Configurable?
Door/Window Open	Notification Report, Type: Home Security (0x07) Event: Intrusion Unknow Location (0x01)	1	Yes, via Notification Set of Notification Type 0x07, and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
	Basic Report of 0xFF	X	No
Door/Window Close	Notification Report, Type: Home Security (0x07) Event: Previous Events Cleared (0x00)	1	Yes, via Notification Set of Notification Type 0x07, and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
	Basic Report of 0x00	X	No
Sensor Case Removed	Notification Report, Type: Home Security (0x07) Event: Tampering Product Covering Removed (0x03)	1	Yes, via Notification Set of Notification Type 0x07, and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
Sensor Case Fastened	Wake-Up Notification	1	Yes, via Wake-Up Notification Command Class
	Notification Report, Type: Home Security (0x07) Event: Previous Events Cleared (0x00)	1	Yes, via Notification Set of Notification Type 0x07, and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
Battery Level	Battery Report of 0x01 to 0x64 is a rough estimated battery level. A level of 0x00 indicates that battery should be changed "soon." A battery level of 0xFF indicates that the battery should be changed immediately.	1	No

Wake-Up Notification

The sensor will wake up every so often to send a Wake-Up Notification to allow the life line master node controller that the sensor is now available for any queued messages that the controller may have for the sensor. The time between Wake-Up Notifications can be configured with the Wake-Up Notification command class to be between 1 and 24 hours with interval steps of 1 minute.

Configuration

The sensor has seven supported configuration parameters.

Parameter No.	Description	Number of Bytes	Default	Min	Max
1	Number of seconds between periodic battery reports. (Heartbeats)	2	4200 (0x1068)	255 (0xFF)	4200 (0x1068)
2	One-Time Wakeup Notification. (In addition to normal Wakeup Notification)	2	0 (Not in use).	1 (must be divisible by sleep step time of configuration parameter 7)	3600 (0x0E10)
3	Number of Application Level Retries after a failed transmission defined as either not ACKed or Supervision Report not returned when encapsulated.	1	5	0	5
4	The minimum number of seconds to sleep between application level retries.	1	6	1	60 (0x3C)
5	The number of milliseconds to wait for a Supervisory Report in response to a Supervisory encapsulated Get.	2	1500 (0x5DC)	500 (0x1F4)	5000 (0x1388)
6	The number of seconds the device will sleep between waking up to increment its Wakeup and Heartbeat counter. Also the sleep step time.	1	255 (0xFF)	10 (0x0A)	255 (0xFF)

Ring Contact Sensor – Reset

Factory Reset Instructions

1. If not already done, remove the device from its mounting bracket.
2. On the back of the device, using a paperclip (or similar) press and hold the pin hole button.
3. Continue holding the button for ~10s watching the LED blink rapidly blue.
4. When the blue LED stops blinking, release the button.
5. Watch for the solid red LED indication to tell you the device was reset and removed from the network.

Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

To review your warranty coverage, please visit www.ring.com/warranty.

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