VEMMIO

innovation in automation

open/close mini sensor

MODEL: OC-100
V1.0

INTRODUCTION

Thank you for choosing Vemmio! We welcome you in our customer society.

The Open/Close Mini Sensor is a battery powered Z-Wave Plus precise magnetic reed switch that can monitor the status open or closed e.g. doors/windows and anything else that opens and closes. Due to the fact that it offers single function, Open/Close Mini Sensor is highly responsive and reliable. This sensor does more than just monitor if a door or window is opened. With a Z-Wave controller, the system can respond to real-time events by sending alerts to your smart-phone when e.g. the back door is left open. The sensor works with any Z-Wave-certified controller.

PACKAGE CONTENTS:
- user manual
- sensor
- magnet
- sensor adhesive tape, magnet adhesive tape, 6x raw plugs.

KEY FEATURES

Highly precise and responsive open/close detection
Ultra smart and simple design
Responds to real-time events.

SPECIFICATION

Wireless standard	Z-Wave Plus
Frequency	868.40 MHz
Network range	up to 50 m line of sight
Operating temperature	0°C ~ 60°C
Magnetic gap	Max. 20 mm
Battery	1 CR 2
Battery: run time	>3 years, low power indication

BATTERY INSTALLATION

When the device reports the low battery message, the user should replace the battery to new one. The battery type is CR 2, 3 V. To open the front cover please press the button (1) indicated in the picture below.

button 1

=

orientation marks

INSTALLATION

The Z-Wave button, located behind the cover, can add, remove, reset or associate the sensor to Z-Wave network.

ADDING THE DEVICE INTO THE Z-WAVE NETWORK

FIRST INCLUSION

Bring the Open/Close Mini Sensor within direct range of your controller. Carefully remove the cover from your Open/Close Mini sensor (press the button (1) indicated in the picture above).

Follow the instructions for your Z-Wave certified controller to enter inclusion mode. When prompted by the controller, power on the device (just remove the plastic pull-tab located next to the battery). Please press quickly the Z-Wave button 3 times. The sensor should be included in 5 seconds. You will see the LED light fast flash indicating Motion Mini Sensor is included to Z-Wave network and it should appear on controller's device list.

INCLUSION*

Bring the Open/Close Mini Sensor within direct range of your controller. Carefully remove the cover from your Open/Close Mini Sensor - please press the button (1) indicated in the picture above. Put your Z-Wave controller into inclusion mode. Press the Z-Wave button quickly 3 times. The LED indicator will flash quickly indicating your Open/Close Mini Sensor is powered on and included to Z-Wave network. The sensor should appear on your controller's device list.

* Please note: Always exclude a Z-wave product before trying to add it to a Z-Wave network.

EXCLUSION

Bring the Open/Close Mini Sensor within direct range of your controller. Carefully remove the cover from your Open/Close Mini Sensor - please press the button (1) indicated in the picture above. Put your Z-Wave controller into exclusion mode. Press the Z-Wave button quickly 3 times. The LED indicator will flash quickly indicating your Open/Close Mini Sensor is excluded from Z-Wave network. The sensor should disappear from your controller's device list. If the first attempt is unsuccessful, please repeat the process following all steps carefully.

ASSOCIATION

Have Z-Wave Controller enter association mode.
Pressing Z-Wave button three times within 1.5 seconds will start association mode.

Group ID	Maximum Nodes	Description
1	5	GROUP 1 is lifeline service that assigned to Sensor (Door/Window detector) status – Open/Close. It enables the sensor to send reports and readings to Z-Wave Controller or Z-Wave Gateway whenever the sensor is triggered. This Group Supports: • NOTIFICATION_REPORT • BATTERY_REPORT • SENSOR_BINARY_REPORT • DEVICE_RESET_LOCALLY_NOTIFICATION
2	4	GROUP 2 allows for sending control commands to associated devices such as relay module, lighting, etc. This association group is configured through the advanced parameters no. 1 and 2. This Group Supports: • BASIC_SET.
3	5	GROUP 3 allows for Send Notification to associated devices in this group. This Group Supports: • NOTIFICATION_REPORT
4	5	GROUP 4 allows for Send Notification to associated devices in this group. This Group Supports: • SENSOR_BINARY_REPORT

FACTORY RESET

Make sure the Open/Close Mini Sensor is powered on, then open the cover and press and hold the Z-Wave button for at least 10 seconds until the LED indicator flashes once (it may then flash 5 times to indicate the device is no longer part of Z-Wave network). Release the button.

TROUBLESHOOTING TIPS.

If you are unable to include the sensor to your controller, please try one of the following:
- Bring the sensor closer to your Z-Wave controller.
- Once in inclusion mode, press and release the Z-Wave button quickly 6-7 times to ensure the command has gone through.
- Put your controller into exclusion mode. Press the Z-Wave button quickly 3 times, and then try adding it to your network again.

PHYSICAL INSTALLATION

Choosing a Suitable Location
a. Make sure the orientation marks are facing each other and the gap between sensor and magnet does not exceed 20 mm when the device is in the closed position.
b. Do not install the Open/Close Mini Sensor in a place with direct sun exposure, high temperature or humidity.

MOUNTING

Pay attention! Include the Open/Close Mini Sensor to your Z-Wave network before mounting it.

There are 2 ways to mount the Open/Close Mini Sensor:
- Use the supplied raw plugs to mount the sensor to e.g. door / window frame (recommended) and the magnet to the moving part of your door / window.
- Use supplied adhesive tapes to mount the sensor to door / window frame and the magnet to the moving part of your door / window.

Over the Air Firmware Update

The device supports the Z-Wave firmware update via OTA. Let the controller into the firmware update mode, and then press the Z-Wave button once to start the update. After completing the firmware download, LED will start flashing every 0.5 second. During this time, please don't remove the battery, otherwise it will cause the firmware failure, and the device will stop functioning. After LED stops flashing, it is recommended that user powers up the device. Caution: After battery removal, please wait about 30 seconds, and then re-install the battery.

Supported Command Classes:
COMMAND_CLASS_ASSOCIATION
COMMAND_CLASS_ASSOCIATION_GRP_INFO
COMMAND_CLASS_BATTERY
COMMAND_CLASS_CONFIGURATION
COMMAND_CLASS_DEVICE_RESET_LOCALLY
COMMAND_CLASS_MANUFACTURER_SPECIFIC_COMMAND_CLASS_NOTIFICATION
COMMAND_CLASS_POWERLEVEL
COMMAND_CLASS_SENSOR_BINARY
COMMAND_CLASS_VERSION
COMMAND_CLASS_WAKE_UP
COMMAND_CLASS_BASIC

LED INDICATION

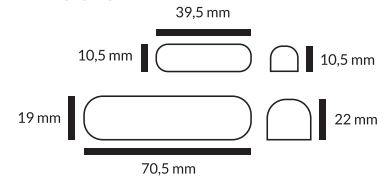| LED Color	Indication	Status
Red	Flashes 5 times in 5 seconds (slow)	The sensor has just been powered on, but is not yet included in a system.
	Flashes 5 times in 2.5 seconds (medium)	The Z-Wave button is pressed 3 times quickly (regardless of inclusion status).
	Flashes 5 times in 1.5 seconds (fast)	The sensor is powered on, and already included in the system.
	Stays on for 2+ seconds straight	The Z-Wave button is pressed and held for 10+ seconds, resetting the sensor to factory settings.
Red	Flashes once for 1 second	The sensor detects the magnet getting close or moving away (when the door opens or closes).
	Flashes once	The Z-wave button is pressed once.

WAKE-UP MODE

Once the settings and parameters for the sensor are changed, it may be necessary to wake up the sensor manually for the changes to be recorded. Press and release the Z-Wave button once to wake the device up. The LED indicator will flash once. The sensor's wake-up interval is set to 12 hours by default to save battery life. Though not recommended, you can change the wake-up interval using your controller's advanced settings if available. Minimum value: 300s (5 minutes), maximum value: 3600s. Accepted values need to match minute intervals, so 300, 360, 420, etc.

ADVANCED SETTINGS

If your controller's software allows for advanced configuration and parameter adjustment, you will be able to change and save the settings below and customize the Contact Sensor's performance to serve your needs.

NO	Name	Def	Description
1	Trigger Delay	2	**Valid Value (1 – 65536) Unit: Seconds.** Set the delay time for turning associated devices off based on status change of your Open/Close Mini Sensor. The number entered as the value corresponds to the number of seconds. So if 0 is entered by default, the Open/Close Mini Sensor will report status change and trigger an associated device to turn off instantly, without any delay. If you change this setting to 10, the sensor will only trigger the associated device after 10 seconds the status change is reported - if your door or window is closed, the light will not go off for another 10 seconds.
2	Trigger Action	255	**Valid Value (1 – 99) Unit: Percent, 0 – OFF, 255 - ON.** Choose if Open/Close Mini Sensor turns an associated device on or off when sending the basic set command. Use value 0 to turn the associated device off and value 255 to turn it on. Adjust brightness level for a Z-Wave dimmer by putting in any value between 1 and 99

DIMENSIONS

39,5 mm

10,5 mm   10,5 mm

19 mm   22 mm

70,5 mm

WARRANTY

This Limited Warranty applies to physical goods, and only for physical goods, purchased from Vemmio (the "Physical Goods"). This Limited Warranty of Vemmio, applies to products manufactured and distributed by Vemmio.

PRODUCTS COVERED AND DURATION OF WARRANTY

Warranty Period: 12 months for business customer and 24 months for individual customer from the date of purchase.
The product purchased shall be free from defects in material and workmanship from the date of purchase.
This Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period.

PRODUCTION STATUS
Each product is manufactured from new parts.

TERMS OF THE WARRANTY
Vemmio warrants that the product you have purchased from Vemmio or a Vemmio's authorized reseller is free from defects in materials and workmanship under normal use during the warranty period. The warranty period begins on the day of purchase. The warranty extends only to the original purchaser. It is not transferable to anyone who subsequently purchases the product from the original purchaser.
During the Warranty Period, Vemmio will repair or replace (at the sole discretion of Vemmio), at no charge, products or parts of a product that proves defective. Once the defected product, during the guarantee period, is returned, it will be repaired or replaced no later than within 30 days. The warranty period is extended by the amount of days it has taken to repair or replace the product. All used elements changed under the guarantee become the property of Vemmio. The warranty period for replaced elements expires on the same date as the original warranty period for the product. There is a possibility that it will not be feasible to repair or replace the product (for example when the product is no longer a part of Vemmio's offer). Should this happen, Vemmio will repair/replace the product with parts/product of similar technical characteristics. Such procedure will result in fulfilling Vemmio's warranty obligation against the customer. It is not possible to have money returned by Vemmio for the purchased product. Warranty claim rated by Vemmio as unwarranted will be charged for handling and servicing costs.

Vemmio may reject a warranty claim if:
- the product has not been operated according to its intended purpose and the user manual
- the returned product is incomplete
- the cause of insufficient operation is other than a material or production defect
- warranty date has expired or if the customer can not provide proof of purchase.

The Limited Warranty extends only to products purchased from Vemmio or a Vemmio's authorized reseller. The Limited Warranty does not extend to any product that has been damaged or rendered defective (a) as a result of accident, misuse or abuse; (b) as a result of an act of God; (c) by operation outside the usage parameters stated in the user manual; (d) by the use of parts not manufactured or sold by Vemmio (e) by modification of the product; (f) as a result of war or terrorist attack; or (g) as a result of service by anyone other than Vemmio or a Vemmio's authorized service center.

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LIMITED WARRANTY STATEMENT
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This limitation applies whether damages are sought, or a claim made, under this warranty or as a tort claim (including negligence and strict product liability), a contract claim, or any other claim. This limitation can not be waived or amended by any person. This limitation of liability will be effective even if VEMMIO or an authorized VEMMIO'S representative has been advised by you of the possibility of any such damages.

HOW TO OBTAIN WARRANTY SERVICE?
Please contact us first through support@vemmio.com for advice because we are very often able to resolve issues/problems without the need for warranty claim.
For a defect during the warranty period, you will need a proof of purchase. Contact your place of purchase or a Vemmio's author-ized service center. Return the defective item, freight and insurance prepaid, in the original packaging to your place of purchase. Vemmio is not responsible for any loss or damages incurred in shipping. A Vemmio Failure Analysis/Test Engineer or a Vemmio's authorized reseller must validate all warranty claims.

WHAT IS NOT COVERED BY THIS WARRANTY?
Product purchased from anyone other than Vemmio or a Vemmio's authorized reseller.
Routine cleaning or normal cosmetic and mechanical wear.
Damage from misuse, abuse or neglect including ingress of water, dust or damage from dropping.
Damage from use outside the product's usage or storage parameters.
Damage from use of parts not manufactured or sold by Vemmio.
Damage from modification or incorporation into other products.
Damage from repair or replacement of warranted parts by a service provider other than a Vemmio's authorized service provider.
Damage from failure to perform preventative maintenance as imposed by the application environment (such as recurrent cleaning in dusty surroundings).

DECLARATION OF CONFORMITY

C E

The manufacturer Vemmio Sp. z o.o. declares under sole responsibility that the product:
Marketing model: Open/Close Mini Sensor
Regulatory model: OC-100
Brand name: Vemmio
is in conformity with the Low Voltage Directive 2009/95/EC, EMC Directive 2004/108/EC, R&TTE Directive 1995/5/EC and carries the CE marking accordingly.

The following harmonized standards were applied:
R&TTE (1995/5/EC)
EN 300 220-1: V2.4.1
EN 300 220-2: V2.4.1
EMC (2004/108/EC)
EN 301 481-1: V1.9.2
EN 301 489-3: V1.6.1
LVD (2006/95/EC)
EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011

Changes of modification not expressly approved by Vemmio Sp. z o.o. for compliance could void the user's authority to operate the equipment.

FC

FCC INTERFERENCE STATEMENT
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 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 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.

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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IN ACCORDANCE WITH ROHS 2011/65/EU

RoHS

WARNING
Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.
When replacing old appliances with new once, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

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