
# Nice FGDW-002 Wireless Contact Sensor with Temperature Measurement Instruction Manual



**Nice FGDW-002 Wireless Contact Sensor with Temperature**

**Measurement Instruction Manual**

# Nice

## Door/Window-Control

**Wireless contact sensor with a temperature measurement**

**EN -** Instructions and warnings for installation and use

Contents



## WARNINGS AND GENERAL PRECAUTIONS

- **CAUTION! – This manual contains important instructions and warnings for personal safety. Carefully read all parts of this manual. If in doubt, suspend installation immediately and contact Nice Technical Assistance.**
- **CAUTION! – Important instructions: keep this manual in a safe place to enable future product maintenance and disposal procedures.**
- **CAUTION! – Any use other than that specified herein or in environmental conditions other than those stated in this manual is to be considered improper and is strictly forbidden!**
- The product's packaging materials must be disposed of in full compliance with local regulations.
- Never apply modifications to any part of the device. Operations other than those specified may only cause malfunctions. The manufacturer declines all liability for damage caused by makeshift modifications to the product.
- Do not expose this product to moisture, water or other liquids.
- This product is designed for indoor use only. Do not use outside!
- This product is not a toy. Keep away from children and animals!
- If the battery is leaking and the contained material is ingested, rinse mouth and surrounding area with clear water. Seek medical attention right away

## PRODUCT DESCRIPTION

Door/Window-Control is a wireless, battery powered Hall effect contact sensor, compatible with the Z-Wave Plus™ standard. Changing the device's status will automatically send signal to the Z-Wave controller and associated devices.
Sensor can be used to trigger scenes and wherever there is a need for information about opening or closing of doors, windows, garage doors, etc. Opening is detected by separating the sensor's body and the magnet. In addition, Door/Window-Control is equipped with a built-in temperature sensor.

### Main features

- Compatible with any Z-Wave™ or Z-Wave Plus™ Controller

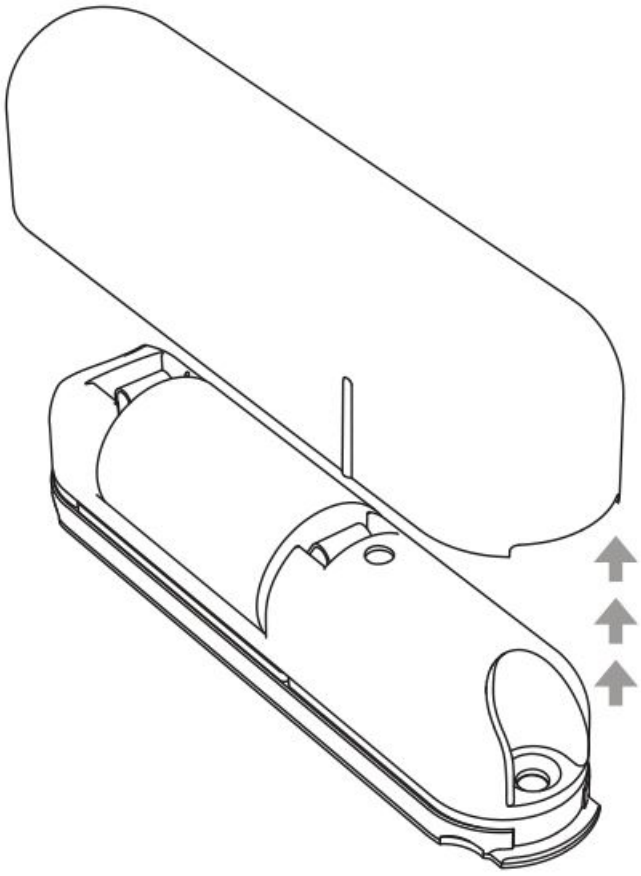
- Supports protected mode (Z-Wave network Security Mode) with AES-128 encryption
- Door/window opening detected through separation of Sensor’s body and a magnet
- Built-in temperature sensor
- Detects tampering, when detached or opened
- Easily mounted on doors, windows, garage gates, and roller blinds
- Battery-powered
- Visual LED indicator signalling status of the device
- 3 color variants

**Door/Window-Control is a fully compatible Z-Wave Plus™ device.**

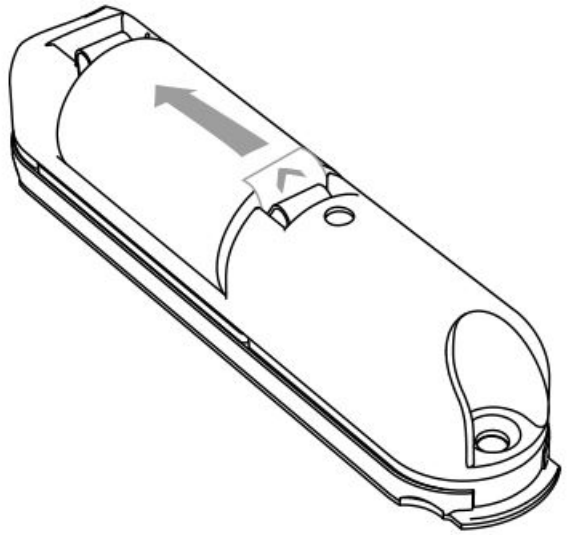
This device may be used with all devices certified with the Z-Wave Plus certificate and should be compatible with such devices produced by other manufacturers. All non-battery operated devices within the network will act as repeaters to increase reliability of the network. The device is a Security Enabled Z-Wave Plus product and a Security Enabled Z-Wave Controller must be used in order to fully utilize the product.

## BASIC ACTIVATION

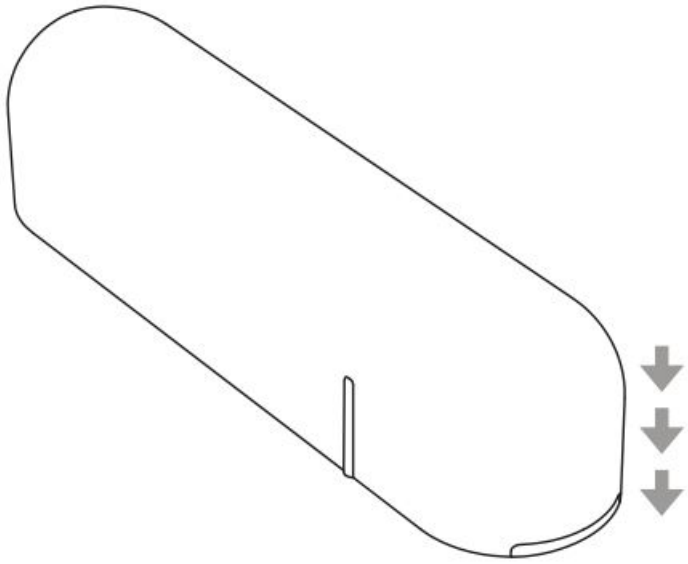
1. Take off the cover.



2. Remove the battery blocker



3. Close the cover.



4. Add the device (see “4. Adding the device”).
5. Install the device (see “6. Physical installation”).

## ADDING THE DEVICE

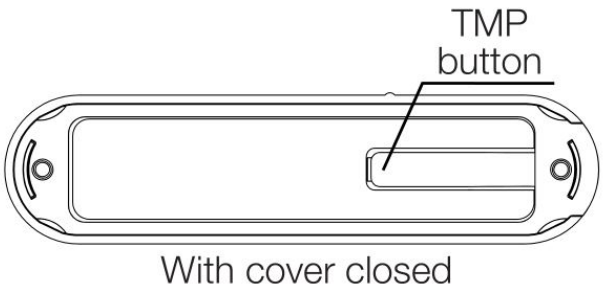
- Adding in security mode must be performed up to 2 meters from the controller.
- In case of problems with adding the device, please reset the device and repeat the adding procedure.

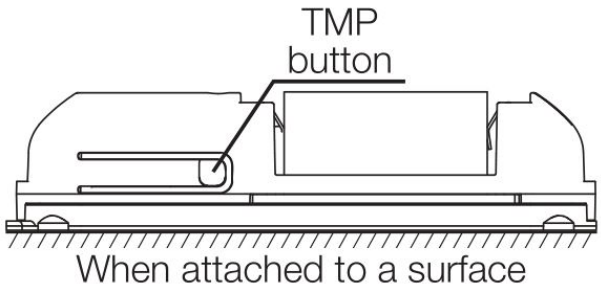
**Adding (Inclusion)** – Z-Wave device learning mode, allowing to add the device to existing Z-Wave network.

To add the device to the Z-Wave network **manually**:

1. Place Door/Window-Control within the direct range of your Z-Wave controller.
2. Set the main controller in (Security/non-Security Mode) add mode (see the controller’s manual).

3. Quickly, three times press one of the TMP buttons (while the other button is pressed).



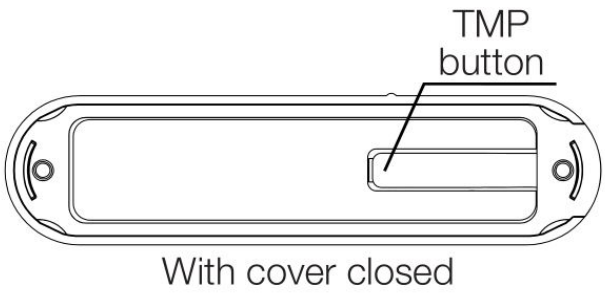

4. Wait for the adding process to end.
5. Successful adding will be confirmed by the Z-Wave controller's message.

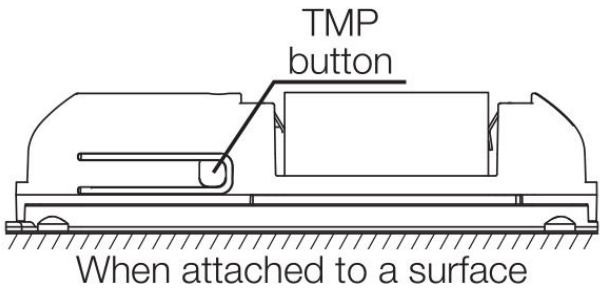
## REMOVING THE DEVICE

**Removing (Exclusion)** – Z-Wave device learning mode, allowing to remove the device from existing Z-Wave network.

**To remove the device from the Z-Wave network:**

1. Place Door/Window-Control within the direct range of your Z-Wave controller.
2. Set the main controller into remove mode (see the controller's manual).
3. Quickly, three times press one of the TMP buttons (while the other button is pressed).




4. Wait for the removing process to end.
5. Successful removing will be confirmed by the Z-Wave controller's message.

**Note**. Removing the device from the Z-Wave network restores all the default parameters of the device.

## PHYSICAL INSTALLATION

- We do not recommend mounting the device on metal surfaces for the best radio performance.
- It is possible to install the device with screws (not included). We recommend using 2.5mm x 16mm countersunk head screws with 5mm head diameter. The magnet still has to be stuck on.

### 6.1 – Installing Door/Window-Control

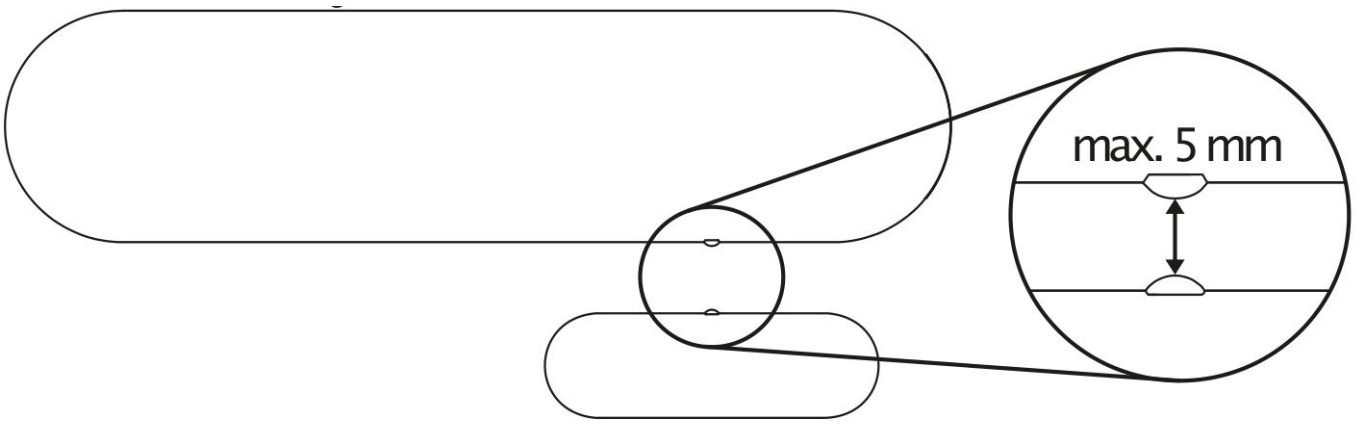
1. Peel off the protective layer from the sticker on the device.
2. Stick the device onto the door/window frame.

3. Peel off the protective layer from the sticker on the magnet.
4. Stick the magnet onto the moving part of the door/window, no further than 5mm from the sensor

### 6.2 – Positioning of the Sensor and the magnet

### 6.3 – Correct positioning of the magnet in relation to the Sensor

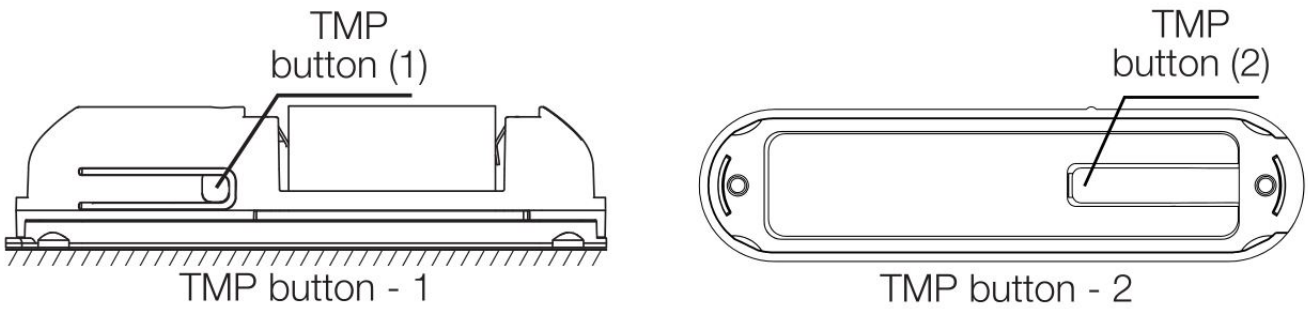
Vertical line marks should align.




## OPERATING THE DEVICE

### 7.1 – Tamper (TMP) button

Door/Window-Control is equipped with a tamper switch with two buttons:




- First TMP button is located inside the device, pressed by the closed cover and is used to detect openning it.

- Second TMP button is located at bottom of the device, pressed by the surface on which the device is mounted and is used to detect detaching the device.

For the tamper switch to work one of the buttons must always be pressed!
When one of the buttons is released, the tamper alarm will be send to the controller and associated devices. Additionally, tamper button allows to control the device directly.

**7.2 – Waking up Door/Window-Control**

Door/Window-Control needs to be woken up to receive information about the new configuration from the controller, like parameters and associations.

To wake up the sensor manually, click one of the TMP buttons (while the other button is pressed).

**7.3 – Resetting the Door/Window-Control**

Reset procedure allows to restore the device back to its factory settings, which means all information about the Z-Wave controller and user
configuration will be deleted.

In order to reset the device:

1. Open the cover (Opening the casing may result in triggering an alarm. To avoid it, remove the associations for the 3rd group).
2. Remove the battery.
3. Install the battery while holding both TMP buttons.
4. Visual LED indicator will be flashing slowly for 5 seconds – keep holding the buttons.
5. Release one button when the LED indicator starts flashing quickly.
6. Click released button once to confirm launching of reset procedure.
7. Wait a few seconds until a long blink of the LED indicator. Do not remove the battery.
8. Visual LED indicator will blink 5 times quickly to confirm the reset.

**Note**. Resetting the device is not the recommended way of removing the device from the Z-Wave network. Use reset procedure only if the
primary controller is missing or inoperable. Certain device removal can be achieved by the procedure of removing described in “Adding/removing the device”

**7.4 – Replacing the battery**

The current battery level is shown in the interface of the Z-Wave controller. If the device is added to Yubii Home and a battery icon turns red, it means the battery needs replacement.

**Note**. Other Z-Wave controllers may present it differently

**7.5 – Notification report**

The device uses Notification Command Class to report different events

| Table A1 - Notification reports of the events | |
|---|---|
| **Notification Type** | **Event** |
| Home Security | Tampering, product covering removed |
| Access Control | Door/window opened |
| Access Control | Door/window closed |
| Power Management | Replace battery now |
| Heat Alarm | Overheat detected, unknown location |
| Heat Alarm | Underheat detected, unknown location |

**Note**. Command Class Basic value is related to the status of contact sensor (0x00 – closed, 0xFF – opened, on default setting of parameter 1. “Door/window state “).

**Association (linking devices)** – direct control of other devices within the Z-Wave system network e.g. Dimmer, Relay Switch, Roller Shutter or scene (may be controlled only through a Z-Wave controller).

Association allows direct transfer of control commands between devices, is performed without participation of the main controller and requires associated device to be in direct range.

**Door/Window-Control provides the association of three groups:**

1st Association Group – “Lifeline” reports the device status and allows for assigning single device only (main controller by default).
2nd Association Group – “On/Off” is assigned to the device status – contact sensor (sends Basic Set command frames).
3rd Association Group – “Tamper” is assigned to the TMP switch (sends alarm command frames).

Door/Window-Control in 2nd and 3rd group allows to control 5 devices (regular or multichannel) per an association group.
“Lifeline” group is reserved solely for the controller and hence only 1 node can be assigned.
“Lifeline“ supported Z-Wave Command Classes: Notification, Battery, Sensor Multilevel, Device Reset Locally.

## ADVANCED PARAMETERS

The device allows to customize its operation to user’s needs using configurable parameters.
The settings can be adjusted via Z-Wave controller to which the device is added. The way of adjusting them might differ depending on the
controller.

**Note**. Entering invalid value of parameter will result in response with Application Rejected frame and not setting the value.

**Wake up interval**

Door/Window-Control will wake up after each defined time interval and always try to connect with the main

controller. After a successful communication attempt, the sensor will update configuration parameters, associations and settings and will go into standby mode. After failed communication attempt (e.g. lack of Z-Wave range) the device will go into standby mode and retry to establish connection with the main controller after the next time interval.
Setting wake up interval to 0 disables sending Wake Up Notification frame automatically. Wake up may be still performed manually by a clicking one of the TMP buttons (while the other button is pressed).
Available settings: 0 or 3600-64800 (in seconds (1-18h), 3600s (1h) step)
Default setting: 21600 (6h)
Longer time interval means less frequent communication and thus a longer battery life.

| **Table A2 - Door/Window-Control - Available parameters** | | | |
|---|---|---|---|
| Parameter: | 1. Door/window state | | |
| Description: | This parameter allows to set in what state is door/window when the magnet is close to the sensor. | | |
| Available settings: | 0 - closed when magnet near<br>1 - opened when magnet near | | |
| Default setting: | 0 | Parameter size: | 1 [byte] |
| Parameter: | 2. Visual LED indications | | |
| Description: | This parameter defines events indicated by the visual LED indicator. Disabling events might extend battery life. | | |
| Available settings: | 1 - indication of opening/closing status change<br>2 - indication of wake up (1 x click or periodical)<br>4 - indication of device tampering | | |
| Default setting: | 6 | Parameter size: | 1 [byte] |
| Parameter: | 3. Associations in Z-Wave network Security Mode | | |
| Description: | This parameter defines how commands are sent in specified association groups: as secure or non-secure. Parameter is active only in Z-Wave network Security Mode. It does not apply to 1st group “Lifeline”. | | |
| Available settings: | 0 - none of the groups sent as secure<br>1 - 2nd group ”On/Off” sent as secure<br>2 - 3rd group ”Tamper” sent as secure<br>3 - 2nd and 3rd group sent as secure | | |
| Default setting: | 3 (all) | Parameter size: | 1 [byte] |

| | | | |
|---|---|---|---|
| Parameter: | 11. 2nd association group triggers | | |
| Description: | Parameter defines events which result in sending on/off commands to devices added to the 2nd association group. These commands are sent alternately to switch the devices on and off. | | |
| Available settings: | 0 - switch after opening and closing<br>1 - switch after opening (parameter 12)<br>2 - switch after closing (parameter 13) | | |
| Default setting: | 0 | Parameter size: | 1 [byte] |
| Parameter: | 12. Association for opening - value sent | | |
| Description: | Value sent to devices in 2nd association group when opening is<br>detected<br>The value of 0 turns OFF the device, 255 turns it ON.<br>In case of associating devices allowing smooth control, values 1-99 allow to set an associated device to a specified level. | | |
| Available settings: | 0-99 or 255 | | |
| Default setting: | 255 | Parameter size: | 2 [bytes] |
| Parameter: | 13. Association for closing - value sent | | |
| Description: | Value sent to devices in 2nd association group when closing is<br>detected<br>The value of 0 turns OFF the device, 255 turns it ON.<br>In case of associating devices allowing smooth control, values 1-99 allow to set an associated device to a specified level. | | |
| Available settings: | 0-99 or 255 | | |
| Default setting: | 0 | Parameter size: | 2 [bytes] |
| Parameter: | 14. Association for opening - time delay | | |
| Description: | Time that must elapse from opening to send the command frame to to devices in 2nd association group. | | |
| Available settings: | 0-32400 - time in seconds | | |
| Default setting: | 0 | Parameter size: | 2 [bytes] |
| Parameter: | 15. Association for closing - time delay | | |
| Description: | Time that must elapse from closing to send the command frame to devices in 2nd association group. | | |
| Available settings: | 0-32400 - time in seconds | | |
| Default setting: | 0 | Parameter size: | 2 [bytes] |
| Parameter: | 30. Tamper - alarm cancellation delay | | |
| Description: | Time period after which a tamper alarm will be cancelled. | | |
| Available settings: | 0-32400 - time in seconds | | |
| Default setting: | 5 | Parameter size: | 2 [bytes] |
| Parameter: | 31. Tamper - reporting alarm cancellation | | |
| Description: | Reporting cancellation of tamper alarm to the controller and 3rd association group. | | |
| Available settings: | 0 - do not send tamper cancellation report<br>1 - send tamper cancellation report | | |
| Default setting: | 1 | Parameter size: | 1 [byte] |
| Parameter: | 50. Interval of temperature measurements | | |
| Description: | This parameter defines how often the temperature will be measured. The shorter the time, the more frequently the temperature will be measured, but the battery life will shorten. | | |
| Available settings: | 0 - temperature measurements disabled<br>5-32400 - time in seconds | | |
| Default setting: | 300 (5min) | Parameter size: | 2 [bytes] |
| Parameter: | 51. Temperature reports threshold | | |
| Description: | This parameter defines the change of temperature in comparison with last reported, resulting in temperature report being sent to the main controller. | | |
| Available settings: | 0 - temperature reports based on threshold disabled<br>1-300 - temperature threshold (0.1-30°C, 0.1°C step) | | |
| Default setting: | 10 (1°C ) | Parameter size: | 2 [bytes] |

| | | | |
|---|---|---|---|
| Parameter: | 52. Interval of temperature reports | | |
| Description: | This parameter determines how often the temperature reports will be sent to the main controller (regardless of parameters 50 and 51). | | |
| Available settings: | 0 - periodic temperature reports disabled<br>300-32400 - time in seconds | | |
| Default setting: | 0 | Parameter size: | 2 [bytes] |
| Parameter: | 53. Temperature offset | | |
| Description: | The value to be added to the actual temperature, measured by the sensor (temperature compensation). | | |
| Available settings: | -1000–1000 (-100–100°C, 0.1°C step) | | |
| Default setting: | 0 (0°C ) | Parameter size: | 2 [bytes] |
| Parameter: | 54. Temperature alarm reports | | |
| Description: | Temperature alarms reported to the Z-Wave controller. Thresholds are set in parameters 55 and 56. | | |
| Available settings: | 0 - temperature alarms disabled<br>1 - high temperature alarm<br>2 - low temperature alarm<br>3 - high and low temperature alarms enabled | | |
| Default setting: | 0 | Parameter size: | 1 [byte] |
| Parameter: | 55. High temperature alarm threshold | | |
| Description: | If temperature is higher than set value, overheat notification will be sent and high temperature alarm will be triggered (if activated).<br>Value set in parameter 55 must be higher than value set in parameter 56. | | |
| Available settings: | 1-600 (0.1-60°C, 0.1°C step) | | |
| Default setting: | 350 (35°) | Parameter size: | 2 [bytes] |
| Parameter: | 56. Low temperature alarm threshold | | |
| Description: | If temperature is lower than the set value, underheat notification will be sent and low temperature alarm will be triggered (if activated). | | |
| Available settings: | 0-599 (0-59.9°C, 0.1°C step) | | |
| Default setting: | 100 (10°) | Parameter size: | 2 [bytes] |

**Notes:**

- Parameter 2 values may be combined, e.g. 1+2=3 means that indications for opening/closing and waking up are enabled.
- Device operating in Security Mode does not send frames in broadcast mode. In this case leave the default values of parameters 28 and
  29.
- Parameter 51 is active only if parameter 50 is not set to 0.
- Temperature measurement is performed before sending any report (regardless of parameter no. 50). Excessive reporting can affect battery lifetime. Reporting on the basis of temperature change (parameter no. 51) is recommended.
- Value set in parameter 55 must be higher than value set in parameter 56.

## TECHNICAL SPECIFICATIONS

The product Door/Window-Control is produced by Nice S.p.A. (TV). Warnings: – All technical specifications stated in this section refer to an ambient temperature of 20 °C (± 5 °C) – Nice S.p.A. reserves the right to apply modifications to the product at any time when deemed necessary, while maintaining the same functionalities and intended use.

| Door/Window-Control | |
|---|---|
| Power supply | 3.6V DC battery |
| Battery type | ER14250 ½ AA |
| Battery life | est. 2 years (default settings) |
| Destined environment | Indoor use only |
| Operating temperature | 0-40°C (32-104°F) |
| Temperature measuring range | 0-60°C (32-140°F) |
| Temperature measuring accuracy | ±0.5°C (±0.9°F) |
| Dimensions (L x W x H) | 71 x 18 x 18 mm (2.8 x 0.7 x 0.7 inch) |

- Radio frequency of individual device must be same as your Z-Wave controller. Check information on the box or consult your dealer if you are not sure.
- Using batteries other than specified may result in explosion. Dispose of properly, observing environmental protection rules.

| Radio transceiver | |
|---|---|
| Radio protocol | Z-Wave (500 series chip) |
| Frequency band | 868.4 or 869.8 MHz EU<br>921.4 or 919.8 MHz ANZ |
| Transceiver range | up to 50m outdoors<br>up to 40m indoors<br>(depending on terrain and building structure) |
| Max. transmit power | 6dBm |

(*) The transceiver range is strongly influenced by other devices operating at the same frequency with continuous transmission, such as alarms and radio headphones which interfere with the control unit transceiver.

## PRODUCT DISPOSAL

This product is an integral part of the automation and therefore must be disposed together with the latter.
As in installation, also at the end of product lifetime, the disassembly and scrapping operations must be performed by qualified personnel. This product is made of various types of material, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal systems envisaged by the local regulations in your area for this product category.

**Caution!** – some parts of the product may contain pollutant or hazardous substances which, if disposed of into the environment, may cause serious damage to the environment or physical health.
As indicated by the symbol alongside, disposal of this product in domestic waste is strictly prohibited. Separate the waste into categories for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing a new version.

**Caution!** – local legislation may envisage serious fines in the event of abusive disposal of this product.

## DECLARATION OF CONFORMITY

Hereby, Nice S.p.A., declares that the radio equipment type Door/Window-Control is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:
http://www.niceforyou.com/en/support

**Nice SpA**
Oderzo TV Italia
info@niceforyou.com

www.niceforyou.com

## Documents / Resources

| | |
|---|---|
|  | Nice FGDW-002 Wireless Contact Sensor with Temperature Measurement [pdf] Instruction Manual<br>FGDW-002 Wireless Contact Sensor with Temperature Measurement, FGDW-002, Wireless Contact Sensor with Temperature Measurement |

## References

- Nice North America - Home Automation Systems
- Support | Nice