

## DCH-Z112 mydlink™ Door/Window Sensor



The DCH-Z112 mydlink™ has door/window sensor function, based on Z-Wave™ technology.

It is the Z-Wave™ plus product, it support the security... Those newest features of the Z-Wave™ technology. Z-Wave™ is a wireless communication protocol designed for home automation, specifically to remotely control applications in residential and light commercial environments. The technology uses a low-power RF radio embedded or retrofitted into home electronics devices and systems, such as lighting, home access control, entertainment systems and household appliances.

This product can be included and operated in any Z-Wave™ network with other Z-Wave™ certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

The device adopt the Z-Wave™ 500 series chip, when your Z-Wave™ network system is all made by Z-Wave™ 500 series devices. The network system will have the advantages as below.

- Concurrent multi-channel support reduces external interference.

- Better RF range, improve about 10 meters in indoor.
- Support 100 Kbps transmit speed, speed up communication.

### Add to/Remove from Z-Wave™ Network

There are one button and two tamper keys in the device. The button Button can add, remove, reset or do association from Z-Wave™ network.

At the first time, add the device into the Z-Wave™ network. Make sure the primary controller is in inclusion mode. And then remove the insulation Mylar on the back side of the device to power on the device. The device will automatically enter the NWI (Network Wide Inclusion) mode for 2 minutes and LED will flash. Once it's added, the LED will become off.

**Notice:** Including a node ID allocated by Z-Wave™ Controller means "Add" or "Inclusion". Excluding a node ID allocated by Z-Wave™ Controller means "Remove" or "Exclusion".

Function	Description
Add	<ol style="list-style-type: none"><li>1. Have Z-Wave™ Controller entered inclusion mode.</li><li>2. Pressing button once to enter the inclusion mode.</li><li>3. After add successful, the device will wake to receive the setting command from Z-Wave™ Controller about 20 seconds.</li></ol>
Remove	<ol style="list-style-type: none"><li>1. Have Z-Wave™ Controller entered exclusion mode.</li><li>2. Pressing button once to enter the exclusion mode. Node ID has been excluded.</li></ol>

Reset	<p><b>Notice: Use this procedure only in the event that the primary controller is lost or otherwise inoperable.</b></p> <ol style="list-style-type: none"> <li>1. Pressing button for about 5 seconds.</li> <li>2. IDs are excluded and all settings will reset to factory default.</li> </ol>
Association	<ol style="list-style-type: none"> <li>1. Have Z-Wave™ Controller entered association mode.</li> <li>2. Pressing button once to enter the association mode.</li> </ol> <p>Note: The device support 1 groups. The group 1 is life line for receiving the report message, like triggered. This group support 1 node maximum.</p>
<ul style="list-style-type: none"> <li>Failed or success in add/remove the node ID can be viewed from Z-Wave™ Controller.</li> </ul>	

**Notice 1:** Always RESET a Z-Wave™ device before trying to add it to a Z-Wave™ network

**Notice 2:** When the device into NWI mode, the sensor functionality will useless. The NWI mode will timeout after 120 seconds. You can press the button once to abort the NWI mode.

## Z-Wave™ Notification

After the device adding to the network, it will wake-up once per day in default. When it wake-up it will broadcast the "Wake Up Notification" message to the network, and wake-up 10 seconds for receive the setting commands.

The wake-up interval minimum setting is 30 minutes, and maximum setting is 12 hours. And the interval step is 30 minutes.

If the user want to wake-up the device immediately, please press the button once. The device will wake-up 10 seconds.

## Z-Wave™ Message Report

When the door/windows triggered, the device will report the trigger event.

### \* Door/Window Report:

When the door/window state changed, the device will automatically send a report to the nodes in the group 1.

Notification Report (V4)
Notification Type: Access Control (0x06) Event: Door/Window is open (0x16) Door/Window is closed (0x17)

### \* Tamper Report:

Both the 2 tamper keys are pressed over 2 seconds. The device will into the alarm state. In that state, if any one of the tamper keys be released, the device will automatically send a report to the nodes in the group 1.

Notification Report (V4)
Notification Type: Home Security (0x07) Event: Tampering. Product covering removed (0x03)

## Power Up Procedure

### \* Battery Power Check

When the device power up, the device will detect the power level of the battery immediately. If the power level is too low, the LED will continue flash about 5 seconds. Please change another new battery.

### \* NWI

When the device power on, the device will check is it already adding to the network? If doesn't, it will auto start the NWI mode. The LED will

flash in every second and continue 120 seconds. Until timeout or the device successful to inclusion by controller. The user can press the button once to abort the NWI mode.

#### \* **Wake**

When the device powers on, the device will wake about 20 seconds. In this duration, the controller can communicate with the device. Normally the device is always sleeping to save the battery energy.

### **Security Network**

The device supports the security function. When the device is included with a security controller, the device will auto switch to the security mode. In the security mode, the following commands need using Security CC wrapped to communicate, otherwise it will not respond.

**Note:** A "Security Enabled Z-Wave Controller" must be used in order to fully utilize this function.

```
COMMAND_CLASS_BATTERY
COMMAND_CLASS_NOTIFICATION_V4
COMMAND_CLASS_ASSOCIATION_V2
COMMAND_CLASS_WAKE_UP_V2
```

### **Operation Mode**

There are two modes "Test" and "Normal". "Test Mode" is for the user to test the sensor function when installation. "Normal Mode" is for the normal operation.

Operation Mode can be switched by pressing the tamper key three times. The LED can indicate which mode it is. Lighting on for one second means entering test mode, flashing once means entering normal mode.

When the event is triggered, normally the LED won't be indicated, unless the battery is in the low level, the LED will flash once. But in the "Test Mode" the LED also will light ON for one second.

When the event is triggered, the device will report the messages to the nodes in the group 1.

### **Choosing a Suitable Location**

1. The recommended mounting height is 160cm

### **Z-Wave Supported Command Class**

```
COMMAND_CLASS_ZWAVEPLUS_INFO_V2
COMMAND_CLASS_BATTERY
COMMAND_CLASS_NOTIFICATION_V4
COMMAND_CLASS_ASSOCIATION_V2
COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2
COMMAND_CLASS_VERSION_V2
COMMAND_CLASS_WAKE_UP_V2
COMMAND_CLASS_ASSOCIATION_GRP_INFO
COMMAND_CLASS_POWERLEVEL
COMMAND_CLASS_DEVICE_RESET_LOCALLY
COMMAND_CLASS_SECURITY
```

### **Specifications**

Power by CR123A lithium battery.

Signal (Frequency):

868.40 MHz, 869.85 MHz(EU),  
908.40 MHz, 916.00 MHz(US),  
922~927 MHz(JP/TW),  
921.40 MHz, 919.80 MHz(ANZ),  
869.00 MHz(RU),  
865.20 MHz(IN),  
916.00 MHz(IL),

Range:

Minimum 40 meters indoor,  
100 meters outdoor line of sight.

Operating Temperature: -10°C ~ 40°C  
For indoor use only.

Specifications subject to change without notice due to continuing product improvement.



## 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.

## 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.