

PARADOX 

# DCT2M

Miniature Door / Window Magnetic Contact



INSTALLATION MANUAL

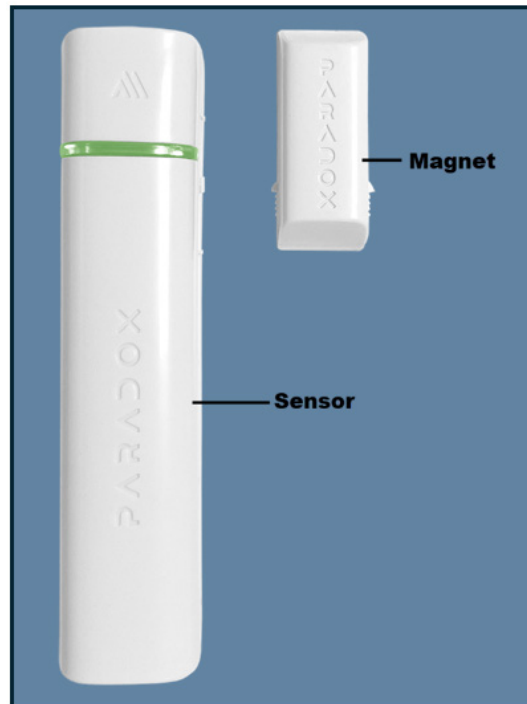
Version 1.0

## Introduction

DCT2M is a 2-way wireless mini door contact with typical use to monitor the opening of doors and windows. It communicates with the Paradox M systems using 2-way wireless communication, featuring the latest Gaussian Frequency Shift Keying (GFSK) technology with frequency and encryption hopping. This ensures superior wireless range, enhanced encryption, supervision, and reliability.

It works with all Paradox M wireless systems and is typically used to monitor the opening of doors and windows.

DCT2M includes a sensor and a magnet. DCT2M registers as **closed** when the magnet is near the sensor and **open** when the magnet is removed. DCT2M is offered at the 868 or 914 MHz range, can be upgraded over the air, and is supervised at intervals of 10 minutes (default), 20 minutes, or 3 minutes (system setting). DCT2M adjusts its transmission power based on the signal quality received at the wireless console or repeater to extend battery life.



DCT2M Sensor and Magnet

## Quick Installation - Experienced Installers

To install DCT2M:

1. Open the sensor and remove the batteries.
2. Fix the backplate and the magnet ensuring proper alignment.

3. Insert the batteries and close the sensor.

Pair DCT2M with the console (Using the BlueEye application):

- Go to: **Hardware** > Tap **+** on the top-right of the page > **Auto learn devices**.

**NOTE:** You can instantly pair DCT2M by pressing the **Learn** button, or by opening the tamper or a zone.

4. Configure DCT2M (Using the BlueEye application):

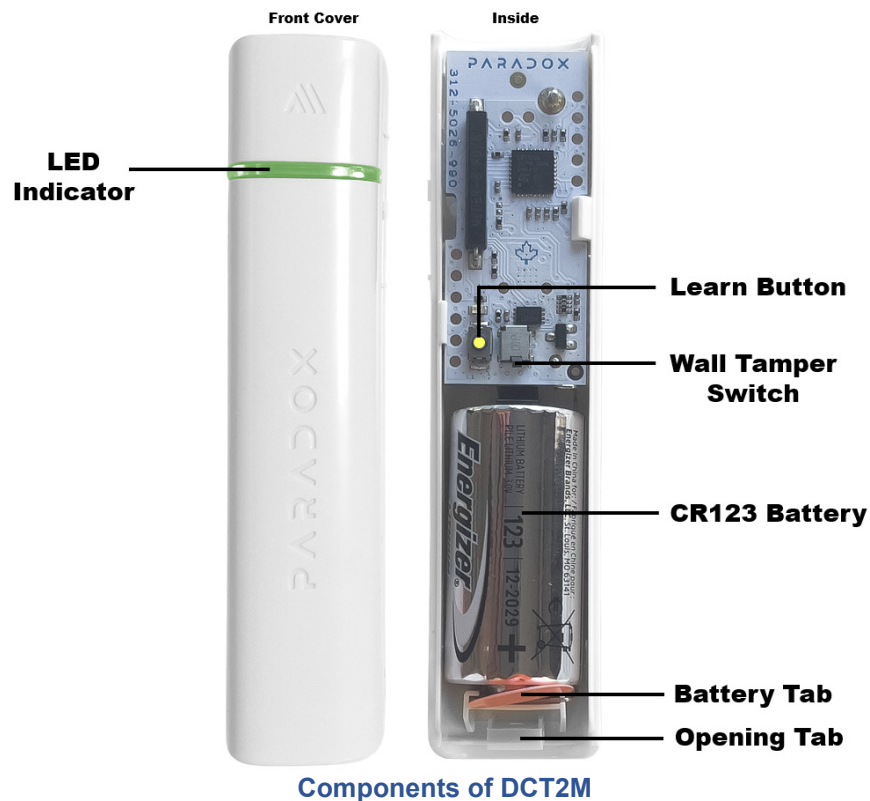
- Go to: **Hardware** > Tap **DCT2M** from the device list > Enter the necessary details > **Save**.

Built-in status indications of DCT2M:

- Red – DCT2M not connected to the wireless console
- Green – Magnet attached; zone closed
- Yellow – Magnet detached; zone open
- Red/Green – Tamper alarm activation

## Components of DCT2M

The following figure displays the components of DCT2M.



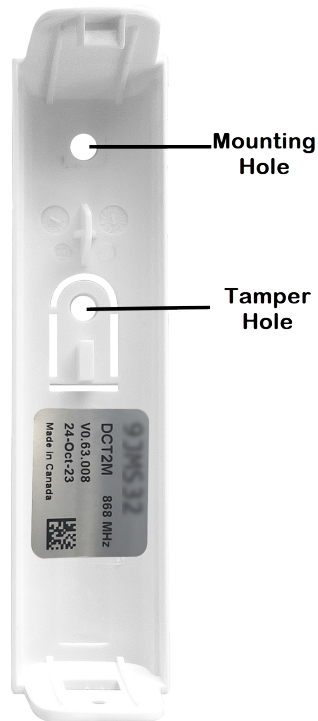
## Physical Mounting

**NOTE:** Installing the door contact on large metal surfaces may interfere with wireless signals and reduce performance.

To mount the DCT2M door contact:

1. At the bottom of the DCT2M sensor, press the **Opening tab** with a small screwdriver and remove the backplate.
2. Remove the battery tab (present only if the battery is included with the product) from the battery holder. Remove the battery and fix the backplate with two screws.

**NOTE:** As per the EN security standards, one screw must be secured in the tamper hole. The use of double-sided tape does not trigger a wall tamper alarm.



### Backplate of DCT2M

3. Insert the batteries. Ensure that the **CR123** Lithium battery is installed with the correct polarity. The DCT2M is now powered on.
4. Reattach the front part of the sensor to the backplate, securing the top first, followed by the bottom. A click sound indicates proper closing.
5. Fix the magnet in alignment with the arrows marked on the side of the sensor, positioning it as close as possible to the sensor when the door, window, or monitored object is closed.

**NOTE:** *To open the backplate of the magnet, insert a flathead screwdriver into the bottom backplate slot and gently slide it.*



### Alignment of Magnet with the Sensor

After powering up, the LED indicator on the DCT2M shows a red light, indicating that the DCT2M is not yet paired with the wireless console. Ensure that the DCT2M registers as **closed** when the magnet is within 1 cm or less from the sensor. It is recommended to keep the gap as small as possible, ideally 5 mm or less. The DCT2M registers as **open** when the magnet is 3 cm or more away from the sensor. The detection distance can vary depending on the material where it is installed and the type of movement (X, Y, or Z). Adjust the distance between the sensor and the magnet as needed, and when paired with the wireless console test to ensure proper opening and closing detection.

## Pairing DCT2M with the Wireless M Console

The pairing and configuration settings of DCT2M are managed through the BlueEye application.

### Prerequisites

Ensure that:

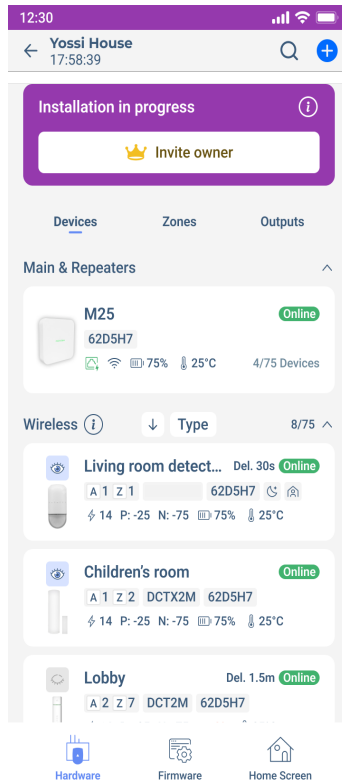
1. The DCT2M is within the range of the console.
2. The BlueEye application is installed on your mobile and connected to the site.
3. The M console is powered on (Paradox logo color - white, red, or green).

### Pairing DCT2M

To pair the DCT2M with the wireless console by an installer:

1. In BlueEye, when in the **Hardware** tab, tap **+** on the top-right of the page, and then tap **Auto learn wireless devices**.

The wireless console searches for new devices and a rotating radar icon is displayed. All unpaired devices pair within 6 minutes and appear at the top of the device list with a **new** tag and voice announcements. You can open the sensor and press the **Learn** button momentarily, or open the tamper or any zone for immediate pairing.



To identify the device, you can either open or close the zone, or trigger the device tamper, and then check the device's screen in the BlueEye application to see the corresponding display. When you open or close the zone, an eye icon displayed beside the device name shows opening and closing. When you trigger the device tamper, a **T** symbol appears on the device name in the BlueEye application.

## Pairing Previously Used Devices

You can pair previously used devices under the following conditions:

- **When the previously used device is not online with another wireless console:** Start auto-learn. Open the device or press the **Learn** button momentarily for immediate pairing, or wait up to 6 minutes for automatic pairing.
- **When the previously used device is online with another wireless console:** Press and hold the **Learn** button for 8 seconds to reset the device to its default settings. Reset is indicated by the LED flashing red three times. Once the reset is complete, initiate auto-learn.

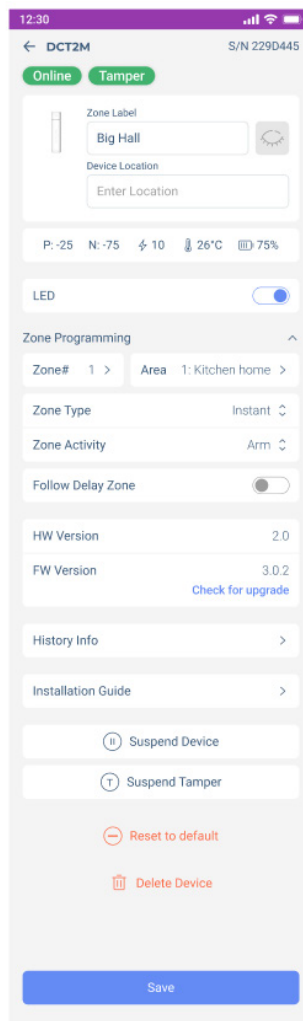
**NOTE:** *Ensure the device is not connected or paired with the previous console before resetting the device.*

## Configuring DCT2M

To configure the DCT2M settings:

1. When in the **Hardware** tab, tap **DCT2M** from the device list.
2. On the page that opens, enter the necessary details for the parameters and then tap **Save**.

For details about each parameter displayed on the page, see [Table 1](#).



The following table lists the parameters displayed for configuring the DCT2M, along with their descriptions.

**Table 1**

| Parameter               |                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Zone Label</b>       |                                    | Enter a name for the zone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>LED</b>              |                                    | Determines whether the LED indications for the device are enabled or disabled.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Zone Programming</b> | <b>Zone # and Area</b>             | Assign a zone and area number.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                         | <b>Zone Type and Zone Activity</b> | Select the type of zone – Instant, Delay, 24 hours when the device is active in the Arm, Stay, or Sleep modes.<br>The following are the different zone types: <ul style="list-style-type: none"> <li>• <b>Instant</b> – When in any armed status, an immediate alarm occurs. However, a delay period can be added to the <b>Instant</b> zone when arming in the Stay and Sleep modes.</li> <li>• <b>Delay</b> – When a zone is opened, it triggers an entry delay in any arming mode.</li> <li>• <b>24 hours</b> – Always armed. The system remains in alarm as long as this zone is open. The system can be armed even if the 24-hour zone is in alarm.</li> </ul> |
|                         | <b>Follow Delay Zone</b>           | This zone is instant and becomes a delay zone if a delay zone is opened first.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>About</b>            |                                    | This tab displays details such as the installation date, production date, last programming date, battery replacements, battery history, and upgrade history.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                         |                                                                                                                                                                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suspend Device</b>   | Disables monitoring of the device in the system.                                                                                                                                                                                                         |
| <b>Suspend Tamper</b>   | Disables tamper monitoring for the device.                                                                                                                                                                                                               |
| <b>Reset to Default</b> | This will reset the device to the factory default settings.<br><b>NOTE:</b> <i>Only an installer can reset the device.</i>                                                                                                                               |
| <b>Delete device</b>    | This option deletes the device from the system completely. After deletion, the system generates a push notification only if the owner registration is complete, not during installation.<br><b>NOTE:</b> <i>Only an installer can delete the device.</i> |

## LED Indications

After configuring DCT2M, the door contact displays various LED indications based on specific events. The following table lists the LED indications and their corresponding event.

**Table 2**

| LED Indication   | Event                                 |
|------------------|---------------------------------------|
| <b>Red</b>       | Not connected to the wireless console |
| <b>Green</b>     | Magnet attached; zone closed          |
| <b>Yellow</b>    | Magnet detached; zone open            |
| <b>Red/Green</b> | Tamper alarm activation               |

**NOTE:** *If the LED indicator shows a red light when opening or closing a zone, it indicates that DCT2M is either not paired with any head unit, or lost connection with the unit.*

## Resetting

Press and hold the **Learn** button for 8 seconds to reset the device to its default settings. Reset is indicated by LED flashing red three times.

## Upgrading Firmware

To upgrade the firmware:

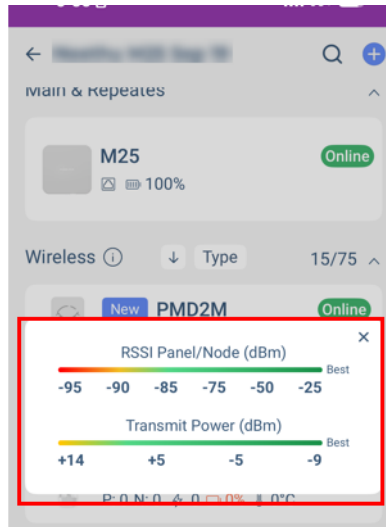
1. In the **Hardware** tab, tap on the device > **Check for Upgrade**.
2. If an upgrade is available, tap **Upgrade** when prompted.  
The process may take a few minutes. Keep track of the progress in the BlueEye application to ensure that the upgrade is completed successfully. Both the Installers and owners can perform the upgrade.

## Signal Strength and Transmit Power Monitoring

The BlueEye application provides insights into each device's received signal strength and transmission power to optimize performance.

To view the RSSI and transmit power range:

1. When in the **Hardware** tab, tap the ⓘ icon next to the **Wireless** tab.  
A pop-up window with the RSSI and transmit power range is displayed.
2. Maximum power transmitted by DCT2M:
  - 868 MHz: +14 dBm
  - 914 MHz: +22 dBm



Tap on any listed device to view signal strength and additional device metrics. The following parameters are displayed for each device:



- **P** - Received signal strength at the panel
- **N** - Received signal strength at the device
-  - Transmit power of the device.
-  - Current temperature reading of the device.
-  - Battery level of the device

A higher P and N value indicates stronger and clearer communication between the console and the device.

- If **P** is low, the console struggles to receive signals from the device.
- If **N** is low, the device struggles to receive signals from the console.

**NOTE:** *Values below -93 with maximum Tx power are not recommended values, and RPT5M can be used to extend the range.*

Power transmission impacts only **P**:

- When **power transmission** increases, the **P** value at the console generally improves, as a stronger signal is sent.
- If **P** value is good, the device can reduce its transmission power to save battery life.

## Wall Tamper Protection

The DCT2M door contact is equipped with wall tamper protection. If the system is armed, any tamper activation immediately triggers a system alarm.

## Technical Specifications

The following table lists the technical specifications of DCT2M along with their descriptions.

**NOTE:** *The specifications are subject to change without prior notice.*

**Table 3**

| Specification | Description                                        |
|---------------|----------------------------------------------------|
| Wireless Type | GFSK two-way with frequency and encryption hopping |

|                                                       |                                                                                        |
|-------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>RF Frequency</b>                                   | 868 (865.05 - 867.95) MHz or 914 (902.25 - 927.55) MHz<br>Other countries might change |
| <b>RF power</b>                                       | 868 MHz up to +14 dBm radiated, 914 MHz up to +22 dBm<br>in permitted countries.       |
| <b>Close Distance of the Magnet</b>                   | Less than 1 cm (0.4 in.)                                                               |
| <b>Open Distance of the Magnet</b>                    | Above 3 cm (1.1 in.)                                                                   |
| <b>Transmission Time</b>                              | Less than 20 ms                                                                        |
| <b>Supervision Time</b>                               | 20 minutes, 10 minutes (Default), and 3 minutes                                        |
| <b>Status Indicators</b>                              | Battery, temperature, TX/RX values                                                     |
| <b>Battery Lithium</b>                                | 1 x CR123, up to 5 years of battery life                                               |
| <b>Installation Environment</b>                       | Indoor                                                                                 |
| <b>Firmware Upgrade</b>                               | Remotely over the air, via BlueEye                                                     |
| <b>Operating Temperature</b> (with lithium batteries) | -20°C to +50°C (-4°F to 122°F)                                                         |
| <b>Auto Learn</b>                                     | Yes                                                                                    |
| <b>Colors</b>                                         | White, Brown, Grey                                                                     |
| <b>Dimensions</b>                                     | 2W x 9H x 2D cm (¾W x 3.5H x ¾D in.)                                                   |
| <b>Weight (including battery)</b>                     | Sensor 33 g/ Magnet 12g                                                                |
| <b>Certification</b>                                  | CE, EN 50131-2-6, EN 50131-6, EN 50131-5-3,<br>FCC 15.247                              |

## 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and the receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

**WARNING – RF EXPOSURE COMPLIANCE:** This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

**FCC ID:** KDYDCT2M

**IC:** 2438A-DCT2M

- This Class B digital apparatus complies with Canadian ICES-003.

## IC Statements

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

## Warranty

For complete warranty information on this product, see the [Limited Warranty Statement](#) document, or contact your local Paradox distributor.

## Patents

US, Canadian, and international patents may apply. Paradox is a trademark or registered trademark of Paradox Security Systems (Bahamas) Ltd.

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