

Version 1.0

Introduction

Door contacts are essential for home and business security systems, as they provide real-time monitoring of entry points, ensuring that any unauthorized access is immediately detected. DCT10M is an indoor, 2-way wireless 2-zone door contact. 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 is typically used to monitor the opening of doors and windows. DCT10M can support a magnet-activated wireless zone and an additional cabled zone input simultaneously. The additional zone input can be used to provide wireless transmission of the device's status.

DCT10M includes both a sensor and a magnet, providing detection on either side of the sensor. It registers as *closed* when the magnet is near the sensor and as *open* when the magnet is removed. DCT10M 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). DCT10M adjusts its transmission power based on the signal quality received at the wireless console or repeater to extend battery life.



DCT10M Sensor and Magnet

Quick Installation - Experienced Installers

To install DCT10M:

- 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.
- 4. Pair DCT10M 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 DCT10M by pressing the Learn button, or by opening the tamper or a zone.
- 5. Configure DCT10M (Using the BlueEye application):
 - Go to: Hardware > Tap DCT10M from the device list > Enter the necessary details > Save.

Built-in status indications of DCT10M:

- Red DCT10M not connected to the wireless console
- Green Magnet attached; zone closed
- Yellow Magnet detached; zone open
- Red/Green Tamper alarm activation

Components of DCT10M

The following figure displays the components of DCT10M.



Components of DCT10M



Physical Mounting

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

To mount the DCT10M door contact:

- 1. At the bottom of the DCT10M sensor, press the **Opening tab** with a small screwdriver and lift the front cover to remove it.
- Remove the battery tab (present only if the battery is included with the product) from the battery holder. Remove the batteries 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 doublesided tape does not trigger a wall tamper alarm.
- 3. Insert the batteries. Ensure that the two **AA** Alkaline batteries are installed with the correct polarity. The DCT10M is now powered on.
- 4. Reattach the front cover 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 left or right side of the sensor, positioning it as close as possible to the sensor when the door, window, or monitored object is closed. NOTE: The detector does not support two wireless magnets on both sides at once. However, an additional wired magnet can be connected through the External Contact Connector located on the back of the detector. This serves as a second zone.



Alignment of Magnet with the Sensor (Left/Right)

After powering up, the LED indicator on the DCT10M shows a red light, indicating that the DCT10M is not yet paired with the wireless console. Ensure that the DCT10M 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 DCT10M 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 DCT10M with the Wireless M Console

The pairing and configuration settings of DCT10M are managed through the BlueEye application.

Prerequisites

Ensure that:

- 1. The DCT10M 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 DCT10M

To pair the DCT10M 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 front cover of the sensor and press the **Learn** button momentarily, or open the tamper or a zone for immediate pairing.

Auto Learn / 2		
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← Yossi	House	Q 🕀
4:59	2 devices added Searching for devices.	End
Devic	es Zones	
Main & Re	epeaters	^
	M25 ☑ 奈 Ⅲ:75% 🌡 25°C	Online) 6/75 Devices
Wireless	і 🗸 Туре	6/75 🗸
*	New NV37MRM-1 A - Z - NV37MRM 62 P: -25 N: -75 ∳ 14	Online 2D5H7 % § 25°C
*	New DCT10M-1 A - Z - DCT10M 62D P:-25 N:-75 ∲14 Ⅲ 759	Online 15H7 % § 25°C
*	Living room detect A 1 Z 1 PMD76M 62I P: -25 N: -75 ∳ 14 Ⅲ 759	Del. 30s Online 05H7 ଓ இ % 🌡 25°C
	Hardware	Firmware

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 the DCT10M

You can configure the DCT10M settings in the BlueEye application.

To configure the DCT10M settings:

- 1. When in the Hardware tab, tap the DCT10M device.
- 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 <u>Table 1</u>.

12:30				all 🕆 🖃
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Online	Tamp	per		
	Zone Ma	gnet Label		
	Zone	14		have the second se
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	Enter	Locatio	n	
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LED				
Zone Magr	net			^
Zone#	14 >	Area	1: Kitche	n home >
Zone Typ	e			Instant 0
Zone Act	ivity			Arm 0
Follow D	elay Zon	e		
Zone Input			Not p	rogrammed 🗸
HW Vers	ion			2.0
FW Versi	on		Check	3.0.2 for upgrade
History In	nfo			>
Installati	on Guide			>
	(1)	Suspen	d Device	
	T Suspend Tamper			
	Reset to default			
	Ū	Delete	Device	
_		_		
		Save		

The following table lists the parameters displayed for configuring the DCT10M, along with their descriptions.

Table 1				
Parameter		Description		
Zone Magnet Label		Enter a name for a zone.		
LED		Determines whether the LED indications for the device are		
		enabled or disabled.		
Zone Magnet	Zone # and Area	Assign a zone and area number.		
	Zone Type and Zone Activity	 Select the type of zone – Instant, Delay, 24 hours when the device is active in the Arm, Stay, or Sleep modes. The following are the different zone types: Instant – When in any armed status, an immediate alarm occurs. However, a delay period can be added to the Instant zone when arming in the Stay and Sleep modes. Delay – When a zone is opened, it triggers an entry delay in any arming mode. 24 hours – 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. 		
	Follow Delay Zone	This zone is instant and becomes a delay zone if a delay zone		
7		is opened first.		
Zone Input Follow the same configuration as the Zone Magn		Follow the same configuration as the Zone Magnet .		

About	This tab displays details such as the installation date, production date, last programming date, battery replacements, battery history, and upgrade history.	
Suspend Device	Disables monitoring of the device in the system.	
Suspend Tamper	Disables tamper monitoring for the device.	
Reset to Default	This will reset the device to the factory default settings.	
	NOTE : Only an installer can reset the device.	
Delete Device	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.	
	NOTE: Only an installer can delete the device.	

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.

LED Indications

After configuring DCT10M, the door contact displays various LED indications based on specific events. The following table lists the LED indications and their corresponding event.

Та	b	le	2	

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

NOTE: If the LED indicator shows a red light when opening or closing a zone, it indicates that DCT10M is either not paired with any head unit, or lost connection with the unit.

Upgrading Firmware

To upgrade the firmware:

- 1. In the Hardware tab, tap on the device > Check for Upgrade.
- 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 ⁽ⁱ⁾ icon next to the **Wireless** tab. A pop-up window with the RSSI and transmit power range is displayed.
- 2. Maximum power transmitted by DCT10M:
 - 868 MHz: +14 dBm
 - 914 MHz: +22 dBm

	Q 🕀
main & Repeates	^
M25 ⊠ ₪ 100%	Online
Wireless (i) ↓ Type	15/75 🧄
New PMD2M	Online
RSSI Panel/Node (dBm	n) ×
-95 -90 -85 -75 -50	-25
Transmit Power (dBm))
+14 +5 -5	-9
P:0 N:0 & 0 □ 0% # 0	°C

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
- \checkmark 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.

Dual Tamper Protection

The DCT10M door contact is equipped with dual tamper protection (wall and cover). If the system is armed, any tamper activation immediately triggers a system alarm. When the system is disarmed, a tamper activation generates a report to the CMS, sends a push notification, and displays a tamper trouble alert in the BlueEye application.



Technical Specifications

The following table lists the technical specifications of DCT10M 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
RF Frequency	868 (865.05 - 867.95) MHz or 914 (902.25 - 927.55) MHz Other countries might change
RF power	868 MHz up to +14 dBm radiated, 914 MHz up to +22 dBm in permitted countries.
Close Distance of the Magnet (Left/Right)	Less than 1 cm (0.4 in.)
Open Distance of the Magnet (Left/Right)	Above 2 cm (1.1 in.)
Transmission Time	Less than 20 ms
Supervision Time	20 minutes, 10 minutes (Default), and 3 minutes
Status Indicators	Battery, temperature, TX/RX values
Battery Lithium	2x AA, up to 8 years of battery life
Installation Environment	Indoor
External Contact Cable maximum resistance	Up to 50-ohm resistance
Firmware Upgrade	Remotely over the air, via BlueEye
Operating Temperature (with lithium batteries)	-20°C to +50°C (-4°F to 122°F)
Auto Learn	Yes
Colors	White, Grey, Brown
Dimensions	3.5W x 11.7H x 2.5D cm / 1.4Wx 4.6H x 1D in.
Weight	Sensor 0.8 kg/Magnet 10 g
Certification	CE, EN 50131-2-6, EN 50131-6, EN 50131-5-3, 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: KDYDCT10M

IC: 2438A-DCT10M

• 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 <u>Limited Warranty Statement</u> document, or contact your local Paradox distributor.

Patents

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