Wireless Door Detector

User's Manual

V1.1.0

Foreword

General

This manual introduces the installation, functions and operations of the Wireless Door Detector (hereinafter referred to as the "door detector"). Read carefully before using the device, and keep the manual safe for future reference.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
⚠ **DANGER**	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
⚠ **WARNING**	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
⚠ **CAUTION**	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
⊙⌐ **TIPS**	Provides methods to help you solve a problem or save time.
📖 **NOTE**	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.1.0	● Added technical specifications, detection performance, and battery replacing procedures. ● Updated descriptions of parameters. ● Updated images.	January 2022
V1.0.0	First release.	January 2021

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

● The manual is for reference only. Slight differences might be found between the manual and the product.
● We are not liable for losses incurred due to operating the product in ways that are not in

compliance with the manual.

- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the door detector, hazard prevention, and prevention of property damage. Read carefully before using the door detector, and comply with the guidelines when using it.

Operation Requirements

⚠️

- Make sure that the power supply of the device works properly before use.
- Do not pull out the power cable of the device while it is powered on.
- Only use the device within the rated power range.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Prevent liquids from splashing or dripping on the device. Make sure that there are no objects filled with liquid on top of the device to avoid liquids flowing into it.
- Do not disassemble the device.

Installation Requirements

⚠️ WARNING

- Connect the device to the adapter before power on.
- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Do not connect the device to more than one power supply. Otherwise, the device might become damaged.

⚠️

- Observe all safety procedures and wear required protective equipment provided for your use while working at heights.
- Do not expose the device to direct sunlight or heat sources.
- Do not install the device in humid, dusty or smoky places.
- Install the device in a well-ventilated place, and do not block the ventilator of the device.
- Use the power adapter or case power supply provided by the device manufacturer.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Note that the power supply requirements are subject to the device label.
- Connect class I electrical appliances to a power socket with protective earthing.

Table of Contents

1 Introduction

1.1 Overview

Door detector is a wireless detector consisting of a sensor and a magnet that can send a signal to the hub and trigger an alarm when an armed door is opened. It can be set up via the DMSS app for iOS and Android phones.

1.2 Technical Specifications

This section contains technical specifications of the door detector. Please refer to the ones that correspond with your model.

Table 1-1 Technical specifications

Type	Parameter	Description	
Port	Indicator Light	1 × green alarm indicator	
	Button	1 × power button	
Function	Tamper Alarm	Yes	
	Remote Update	Cloud update	
	Search	Signal strength detection	
	Low Battery Alarm	Yes	
Wireless Parameters	Carrier Frequency	DHI-ARD323-W2 (868): 868.0 MHz–868.6 MHz	DHI-ARD323-W2: 433.1 MHz–434.6 MHz
	Communication Distance	DHI-ARD323-W2 (868): Up to 1,200 m (3,937.01 ft) in an open space	DHI-ARD323-W2: Up to 1,000 m (3,280.84 ft) in an open space
	Communication Mechanism	Two-way	
	Encryption Mode	AES128	
	Frequency Hopping	Yes	
Peripheral	External Zone	1-channel external digital input 📖 1-channel external digital input does not have any certification standards.	
Temperature	Measuring Range	Indoor: −15 °C to +65 °C (+18.8 °F to +149 °F)	
	Measuring Precision	± 1 °C (± 33.8 °F)	
	Resolution	1 °C (33.8 °F)	
Technical	Sensor	Reed switch	

Type	Parameter	Description	
Parameter	Test Mode	Yes	
	Scenario	Non-metal doors	
	Movement Distance	< 40 mm (1.57")	
General	Power Supply	CR123A battery	
	Battery Voltage	3 VDC	
	Min. Voltage	1.8 VDC	
	Battery Low Threshold	2.7 VDC	
	Battery Restore Threshold	2.75 VDC	
	Typical Voltage	3 VDC	
	Low Voltage Value	2.7 VDC	
	Consumption	Quiescent current 5 uA Max current 60 mA	
	PS Type	Type C	
	Battery Life	5 years	
	Power Consumption	DHI-ARD323-W2 (868): Max. 125 mW	DHI-ARD323-W2: Max. 70 mW
	Operating Environment	Indoor: −10 ℃ to +55 ℃ (+14 ℉ to +131 ℉) Certified temperature: −10℃ to +40℃ (+14℉ to 104 ℉)	
	Operating Humidity	10%–90% (RH)	
	Product Dimensions	100.2 mm × 20.8 mm × 20.3 mm (3.94" × 0.82" × 0.80")	
	Packaging Dimensions	135.0 mm × 98.5 mm × 27.8 mm (5.31" × 3.88" × 1.09")	
	Installation	Bracket mount	
	Net Weight	70 g (0.15 lb)	
	Gross Weight	115 g (0.25 lb)	
	Casing	PC + ABS	
Certifications	DHI-ARD323-W2 (868): EN 50131-1: 2006+A2:2017 + A3:2020 EN50131-2-6:2008 EN50131-6:2017 EN50131-5-3:2017 Security Grade 2 Environmental Class II CE		DHI-ARD323-W2: FCC CE

1.3 Detection Performance

An alarm will be triggered when the gap between the door detector and the magnetic stick is wider than the distances shown in the table below.
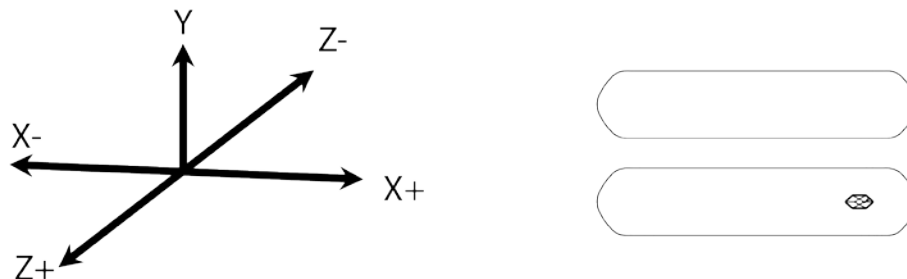
Figure 1-1 Detection performance

Table 1-2 Detection performance description

Axes of Operation	Event	Gap between the Door Detector and Magnetic Stick (mm)	Signal Message
Y	Far	33	I
	Close	28	S
X+	Far	20	I
	Close	18	S
X-	Far	20	I
	Close	18	S
Z+	Far	38	I
	Close	26	S
Z-	Far	28	I
	Close	26	S

- **I** here means intrusion signal; **S** here means stand by signal.
- **Far** means that the door detector is not close to the magnetic stick; **Close** means that the door detector is very close to the magnetic stick.

2 Checklist

Check the package according to the following checklist. If you find device damage or any loss, contact the after-sales service.
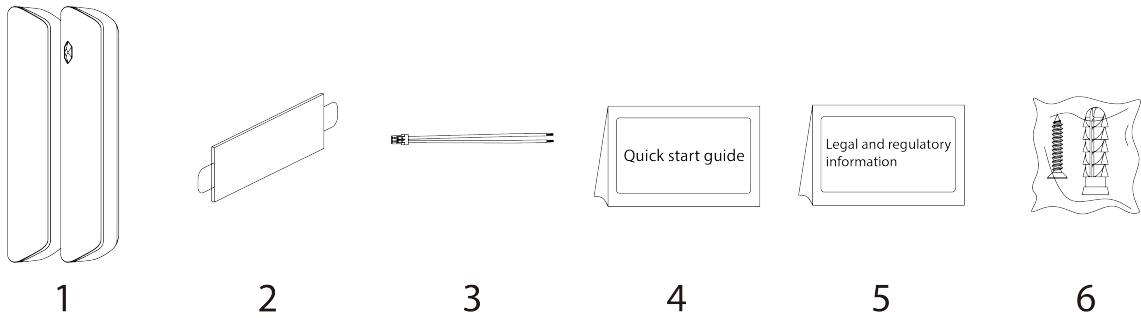
Figure 2-1 Checklist

Table 2-1 Checklist

No.	Item Name	Quantity	No.	Item Name	Quantity
1	Door detector	1	4	Quick start guide	1
2	Double-sided adhesive tape	2	5	Legal and regulatory information	1
3	Cable	1	6	Screw package	2

3 Design

3.1 Appearance

Figure 3-1 Appearance
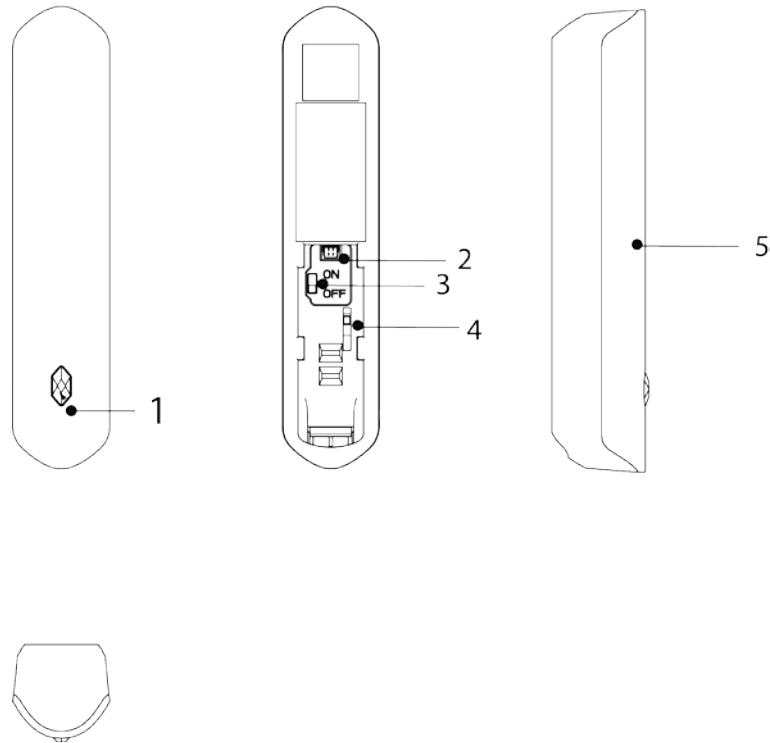
Table 3-1 Structure

No.	Name	Description
1	Indicator	● Flashes green quickly: Pairing mode or reduced sensitivity mode. ● Solid green: Alarm event was triggered. ● Solid green for 2 seconds: Pairing successful. ● Slowly flashes green for 3 seconds: Pairing failed.
2	Peripheral port	Connect the peripheral with the alarm cable.
3	On/Off switch	Turn on or turn off the door detector.
4	Tamper switch	When the tamper switch is released, the tamper alarm will be triggered.
5	Back cover	If the back cover is opened, the tamper alarm will be triggered.

3.2 Dimensions

Figure 3-2 Dimensions (mm [inch])
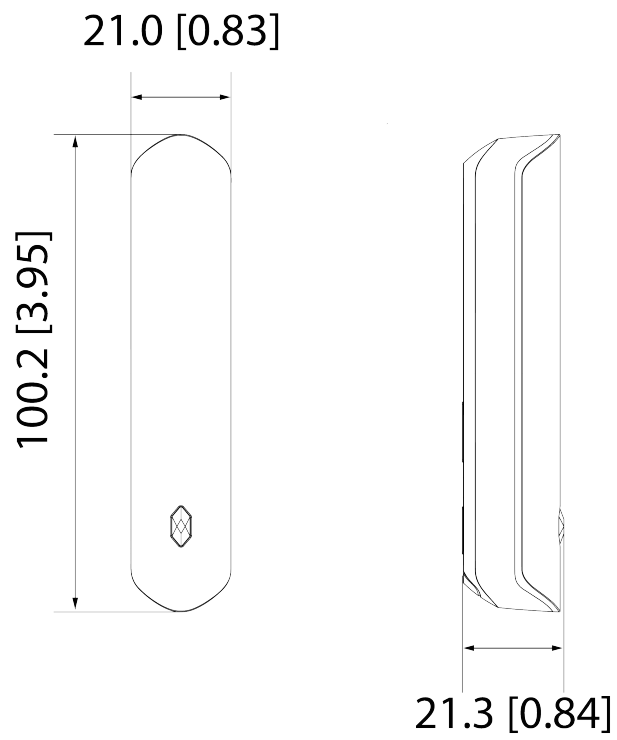
4 Adding the Door Detector to the Hub

Prerequisites

Device configurations are performed on the DMSS app. Make sure that you have installed the DMSS app, created an account, and added the hub to the app. For details on adding the hub, see the user's manual of the corresponding hub.

- Make sure that the hub has a stable internet connection.
- Make sure that the hub is disarmed.

Background Information

You can add the door detector to the hub. This user's manual uses the operations on iOS as an example.

Procedure

Step 1　Go to the hub screen, and then tap **Accessory** to add the door detector.

Step 2　Tap ⊕ to scan the QR code at the bottom of the door detector, and then tap **Next**.

Step 3　Tap **Next** after the door detector has been found.

Step 4　Follow the on-screen instructions and switch the door detector to on, and then tap **Next**.

Step 5　Wait for the pairing.

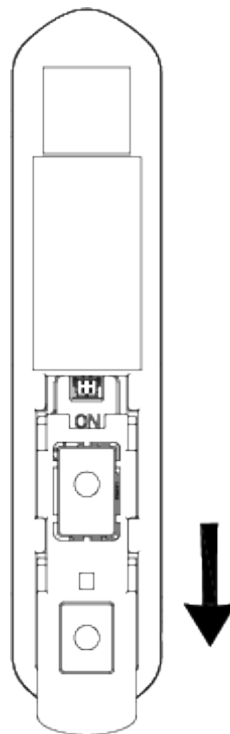Step 6　Customize the name of the door detector, and select the area, and then tap **Completed**.

5 Installation

5.1 Replacing the Battery

The battery has been installed when leaving the factory, and the door detector can be used directly. If the battery is dead, you need to replace the battery.

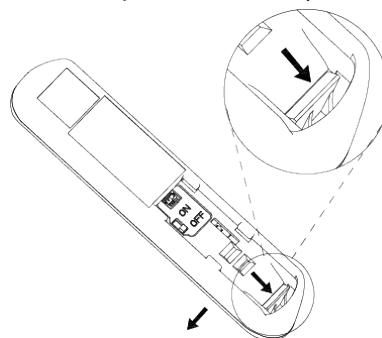Step 1   Open the back cover of the door detector.

Figure 5-1 Open the back cover
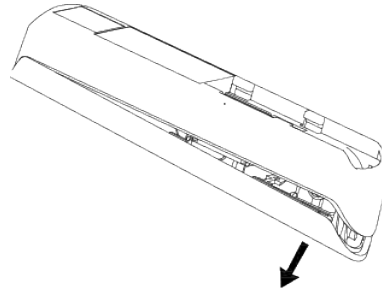

Step 2   Replace the battery.

When replacing the battery, make sure that the side marked with "＋" faces the back cover of the devices.

Figure 5-2 Replace the battery

Step 3   Close the back cover of the door detector.

Figure 5-3 Close the back cover

5.2 Installing the Door Detector

Prior to installation, add the door detector to the hub and check the signal strength of the installation location. We recommend installing the door detector in a place with a signal strength of at least 2 bars.
We recommend using expansion screws when installing the door detector.
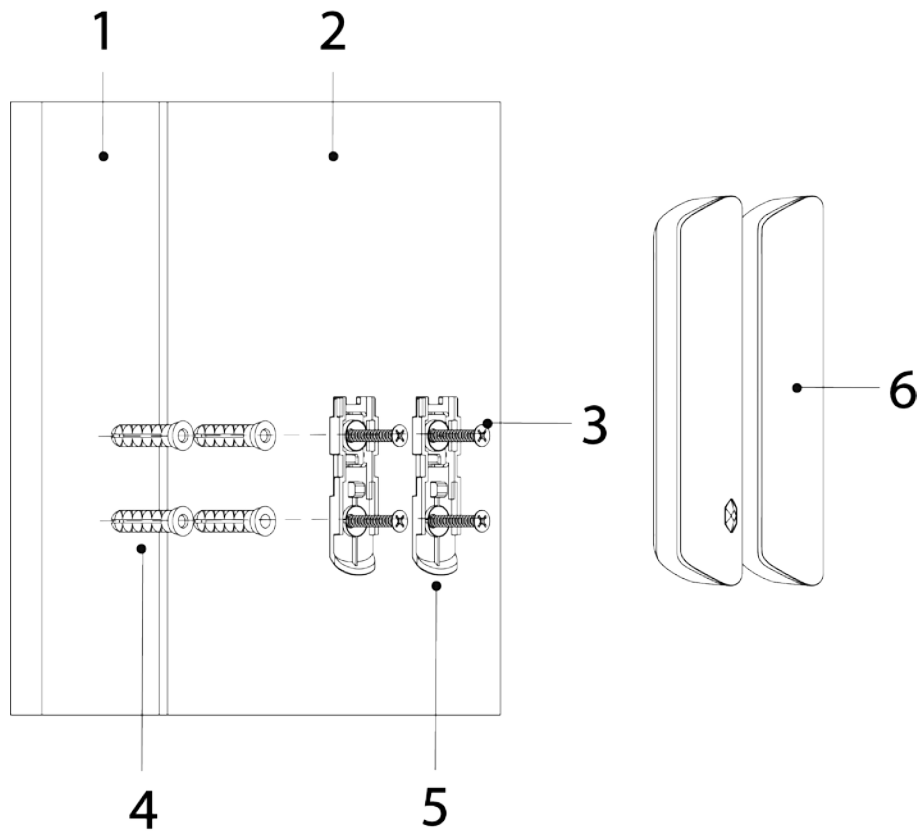
Figure 5-4 Installation

Table 5-1 Installation items

No.	Item name	No.	Item name
1	Door 1	4	Expansion bolt
2	Door 2	5	Attachment panel
3	ST3 × 18 mm self-tapping screw	6	Door detector

<u>Step 1</u>   Drill 4 holes in door 1 and door 2 according to the hole positions of the attachment panel.

Step 2   Put the expansion bolts into the holes.

Step 3   Align the screw holes on the plate with the expansion bolts.

Step 4   Secure the attachment panels with ST3 $\times$ 18 mm self-tapping screws.

Step 5   Put the door detector into the attachment panel.

6 Wireless Door Detector Configuration

You can view and edit general information of the door detector.

6.1 Viewing Status

On the hub screen, select a door detector from the accessory list, and then you can view the status of the door detector.

Table 6-1 Status

Parameter	Value
Temporary Deactivate	The status for whether the functions of the repeater are enabled or disabled. ● ⓘ : Enable. ● ⓘ : Only disable tamper alarm. ● ⊘ : Disable. 📖 The function is only available when the version of the DMSS app is 1.96 or later, the hub is V1.001.0000000.6.R.211215 or later, and the door detector is V1.000.0000001.0.R.20211203 or later.
Temperature	The temperature of the environment.
Signal Strength	The signal strength between the hub and the door detector. ● ▂ : Low. ● ▂▃ : Weak. ● ▂▃▅ : Good. ● ▂▃▅▇ : Excellent. ● ▂▃✕ : No.
Battery Level	The battery level of the detector. ● ▭: Fully charged. ● ▭: Sufficient. ● ▭: Moderate. ● ▭: Insufficient. ● ▭: Low.
Anti-tampering Status	Anti-tampering status of the door detector.
Online Status	Online and offline status of the door detector. ● ⊖: Online. ● ⊖: Offline.
Entrance Delay Time	Entrance and exit delay time.
Exit Delay Time	

Parameter	Value
Door Status	Open or close status of the door. ● : Open. ● : Closed.
24 H Protection Zone Status	Active status of the 24 h protection zone. ● : Enabled. ● : Disabled.
Relay Status	The status of whether the door detector forwards accessory messages to the hub through the repeater. The function is only available when the version of the DMSS app is 1.96 or later, the hub is V1.001.0000000.6.R.211215 or later, and the door detector is V1.000.0000001.0.R.20211203 or later.
Program Version	The program version of the door detector.

6.2 Configuring the Door Detector

On the hub screen, select a door detector from the accessory list, and then tap ✏ to configure the parameters of the door detector.

Table 6-2 Door detector parameter description

Parameter	Description
Device Configuration	● View device name, type, SN and device model. ● Edit device name, and then tap **Save** to save configuration.
Area	Select the area to which the door detector is assigned.
Temporary Deactivate	● Tap **Enable**, and then the function of the door detector will be enabled. **Enable** is set by default. ● Tap **Only Disable Tamper Alarm**, and then the system will only ignore tamper alarm messages. ● Tap **Disable**, and then the function of the door detector will be disabled.
LED Indicator	**LED Indicator** is enabled by default. For details on indicator behavior, see "3.1 Appearance". ● If **LED Indicator** is disabled, the LED indicator will remain off regardless of whether the door detector is functioning normally or not. ● The function is only available when the version of the DMSS app is 1.96 or later, the hub is V1.001.0000000.4.R.211014 or later, and the door detector is V1.000.0000001.0.R.20210818 or later.

Parameter	Description
24 H Protection Zone	The accessory located in the 24 h protection zone is always active whether the security system is configured in the armed mode or not.
Home Mode	Enable the home mode, and then the selected accessories under the hub will be armed.
Delay Mode under Home Mode	Enable the **Delay Mode under Home Mode**, the selected accessory under the hub will be armed and the alarm will not be triggered until the end of customized delay time. 📖 Only enable **Home Mode** first can **Delay Mode under Home Mode** take effect.

Delay Time	• The system provides you with time to leave or enter the armed zone without alarm.
	  ◇ **Delay Time for Entering Arming Mode**: When you enter the zone, if you do not disarm the system before the delay ends, an alarm will be triggered.
	
	  📖
	
	  Make sure that the delay time for entering arming mode is no longer than 45 seconds in order to comply with EN50131-1.
	  ◇ **Delay Time for Exiting Arming Mode**: When you are in the zone and arm the system, if you do not leave the zone before the delay ends, an alarm will be triggered.
	• Select from 0 s to 120 s.
	
	📖
	
	The arming mode will be effective after the delay time.

External Detector Access	Connect the wired peripheral with the cable.
Siren Linkage	When an alarm is triggered, the accessories will report the alarm events to the hub and alert with siren.
Alarm-video Linkage	When an alarm is triggered, the accessories will report the alarm events to the hub and then will link events.
Video Channel	Select the video channel as needed.
Signal Strength Detection	Test the current signal strength.
Detector Test	Detect whether the accessory works.

Parameter	Description
Transmit Power	- Select from high, low, and automatic. - The higher the transmission power, the farther the signal can travel, but the greater the power consumption. 📖 - If you select **Low**, and then the door detector will enter reduced sensitivity mode until you select another option. - The reduced sensitivity mode is only available when the version of the DMSS app is 1.97 or later, the hub is V1.001.0000000.6.R.211228 or later, and the door detector is V1.000.0000001.0.R.20211203 or later.
Cloud Update	Update online.
Delete	Delete the online accessory. 📖 Go to the hub screen, select the accessory from the list, and then swipe left to delete it.

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