

DoorProtect User Manual

Updated July 30, 2020



DoorProtect is a wireless door and window opening detector designed for indoor use. It can operate up to 7 years from a pre-installed battery and capable to detect more than one million openings. DoorProtect has a socket for connecting an external detector.



The functional element of DoorProtect is a sealed contact reed relay. It consists of ferromagnetic contacts placed in a bulb that form a continuous circuit under the effect of a constant magnet.

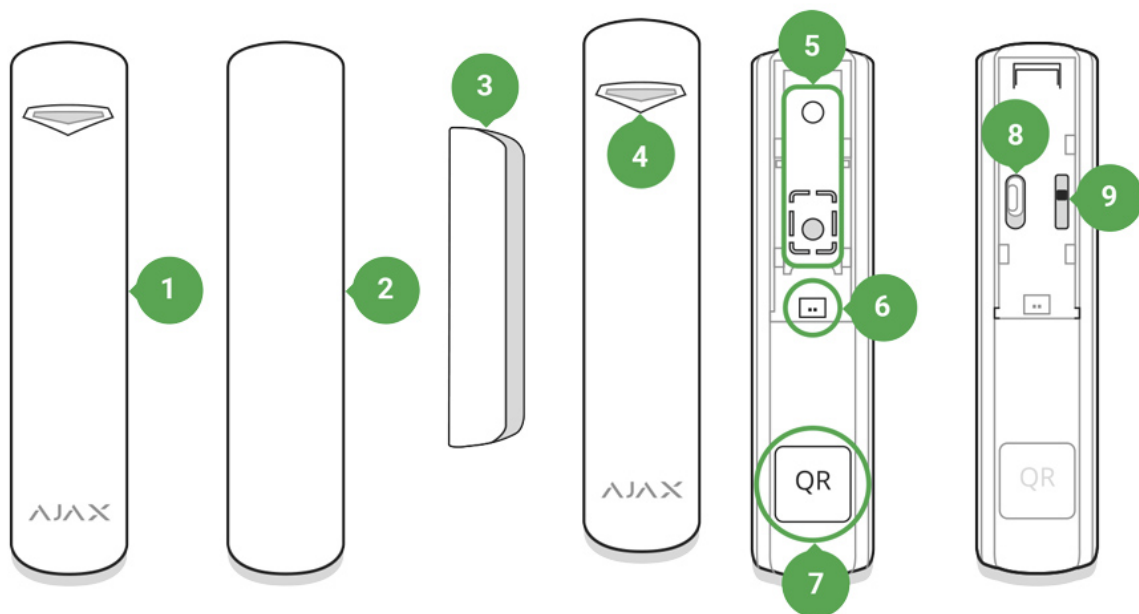
DoorProtect operates within the Ajax security system, connecting via the protected **Jeweller** radio protocol. Communication range is up to 1,200 m in the line of sight. Using the **uartBridge** or **ocBridge Plus** integration modules, DoorProtect can be used as part of third party security systems.

The detector is set up via [Ajax apps](#) for iOS, Android, macOS and Windows. The app notifies user of all events through push notifications, SMS and calls (if activated).

The Ajax security system is self-sustaining, but the user can connect it to the central monitoring station of a private security company.

[Buy opening detector DoorProtect](#)

Functional Elements



1. DoorProtect
2. Big magnet
3. Small magnet
4. LED indicator
5. SmartBracket attachment panel (perforated part is required for actuating the tamper in case of any attempt to dismantle the detector. Don't break it out!)
6. External detector connection socket
7. QR code
8. Device switch

Operating Principle

DoorProtect consists of two parts: the detector with a sealed contact reed relay, and the constant magnet. Attach the detector to the door frame, while the magnet can be attached to the moving wing or sliding part of the door. If the sealed contact reed relay is within the coverage area of the magnetic field, it closes the circuit, which means that the detector is closed. The opening of the door pushes out the magnet from the sealed contact reed relay and opening the circuit. In such a way, the detector recognizes the opening.



A small magnet works at a distance of 1 cm, and the big one – up to 2 cm.

After actuation, DoorProtect immediately transmits the alarm signal to the hub, activating the sirens and notifying the user and security company.

Pairing the Detector

Before starting pairing:

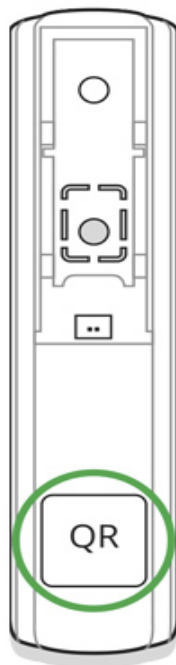
1. Following the hub instruction recommendations, install the [Ajax app](#) on your smartphone. Create an account, add the hub to the app, and create at least one room.
2. Switch on the hub and check the internet connection (via Ethernet cable and/or GSM network).
3. Make sure that the hub is disarmed and does not update by checking its status in the app.



Only users with administrator rights can add the device to the hub.

How to pair the detector with the hub:

1. Select the **Add Device** option in the Ajax app.
2. Name the device, scan/write manually the **QR Code** (located on the body and packaging), and select the location room.



3. Select **Add** – the countdown will begin.
4. Switch on the device.



For detection and pairing to occur, the detector should be located within the coverage area of the wireless network of the hub (at a single protected object).

The request for connection to the hub is transmitted for a short period of time at the moment of switching on the device.

If pairing with the hub failed, switch off the detector for 5 seconds and retry it.

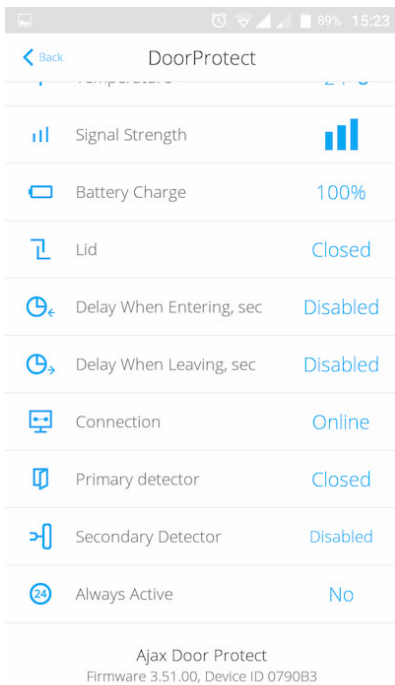
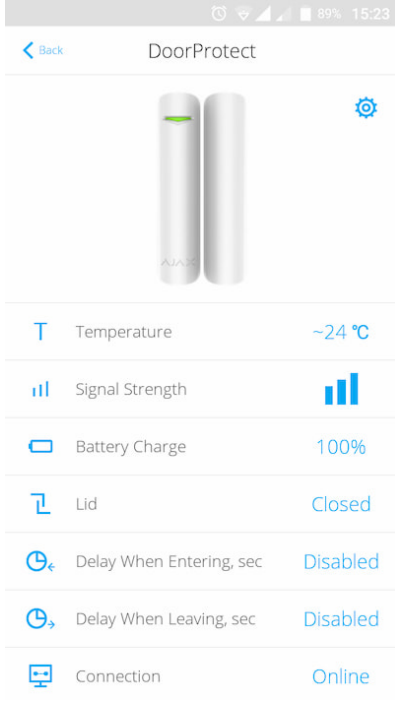
If the detector has paired with the hub, it will appear in the list of devices in the Ajax app. The update of the detectors statuses in the list depends on the detector ping interval set in the hub settings. The default value is 36 seconds.

Connecting to Third-Party Systems

To connect the detector to a third-party security central unit using the [uartBridge](#) or [ocBridge Plus](#) integration modules, follow the recommendations in the user manual of the respective device.

States


1. Devices
2. DoorProtect

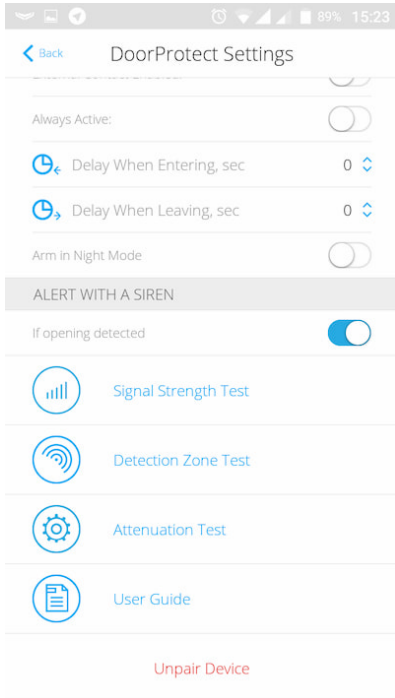
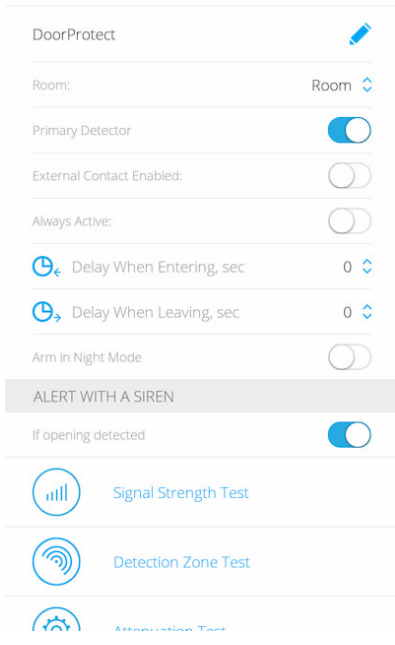


| Parameter | Value |
|--------------------------|---|
| Temperature | The temperature of the detector. The temperature is measured on the processor and changes gradually |
| Jeweller Signal Strength | The signal strength between the hub and the detector |
| Connection | The connection status between the hub and the detector |
| Battery Charge | The battery level of the detector, displayed in increments of 25% |

| | |
|--------------------------|---|
| Lid | The tamper state, which reacts to detachment or damaging of the detector body |
| Delay When Entering, sec | The delay time when entering |
| Delay When Leaving, sec | The delay time when exiting |
| Routed Through Rex | Indicates if the detector is routed through a radio signal range extender |
| Primary Detector | The primary detector status |
| Secondary Detector | The status of the external detector connected to DoorProtect |
| Always Active | If active, the detector is always in the armed mode |
| Firmware | The detector firmware version |
| Device ID | The device identifier |

Setting Up

1. Devices
2. DoorProtect
3. Settings 



| Setting | Value |
|--------------------------|--|
| First field | The detector name, can be edited |
| Room | Selecting the virtual room to which the device is assigned |
| Delay When Entering, sec | Setting the delay time when entering |
| Delay When Leaving, sec | Setting the delay time on exit |
| Delays in night mode | Delay turned on when using night mode |
| Arm in Night Mode | If active, the detector will switch to the armed |

| | |
|--|--|
| | mode when using the night mode |
| Primary Detector | If active, DoorProtect primarily reacts to opening/closing |
| External Contact Enabled | If active, the detector registers external detector alarms |
| Always active | If active, the detector always registers opening/closing |
| Activate the siren if the door or window is open | If active, HomeSiren and StreetSiren are activated when the opening detected |
| Activate the siren if an external contact opened | If active, HomeSiren and StreetSiren are activated during an external detector alarm |
| Jeweller Signal Strength Test | Switches the detector to the signal strength test mode |
| Detection Zone Test | Switches the detector to the detection area test |
| Attenuation Test | Switches the detector to the signal attenuation test mode (available for detectors with firmware version 3.50 and later) |
| User Guide | Opens the detector User Guide |
| Unpair Device | Disconnects the detector from the hub and deletes its settings |

Indication

| Event | Indication | Note |
|---|---|---|
| Switching on the detector | Lights up green for about one second | |
| Detector connecting to the hub , ocBridge Plus and uartBridge | Lights up for a few seconds | |
| Alarm / tamper activation | Lights up green for about one second | Alarm is sent once in 5 seconds |
| Battery needs replacing | During the alarm, it slowly lights up green and slowly goes out | Replacement of the detector battery is described in the |

Functionality Testing

The Ajax security system allows conducting tests for checking the functionality of connected devices.

The tests do not start immediately but within 36 seconds by default. The starting time depends on the ping interval (the paragraph on “**Jeweller**” settings in hub settings).

Jeweller Signal Strength Test

Detection Zone Test

Attenuation Test

Installing the Detector

Selecting the location

Location of DoorProtect is determined by its remoteness from the hub and presence of any obstacles between the devices hindering the radio signal transmission: walls, inserted floors, large objects located within the room.



The device developed only for indoor use.



Check the signal level at the installation location

If the signal level is low (one bar), we cannot guarantee stable operation of the security system. Take all possible measures to improve the quality of the signal! As a minimum, move the device – even 20 cm shift can significantly improve the quality of the reception.

If, after moving, the device still has a low or unstable signal strength, use the [ReX radio signal range extender](#).

The detector is located either inside or outside of the door case (window frame):

When installing the detector in the perpendicular planes (inside the case/frame), use the small magnet. The distance between the magnet and detector should not exceed 1 cm.

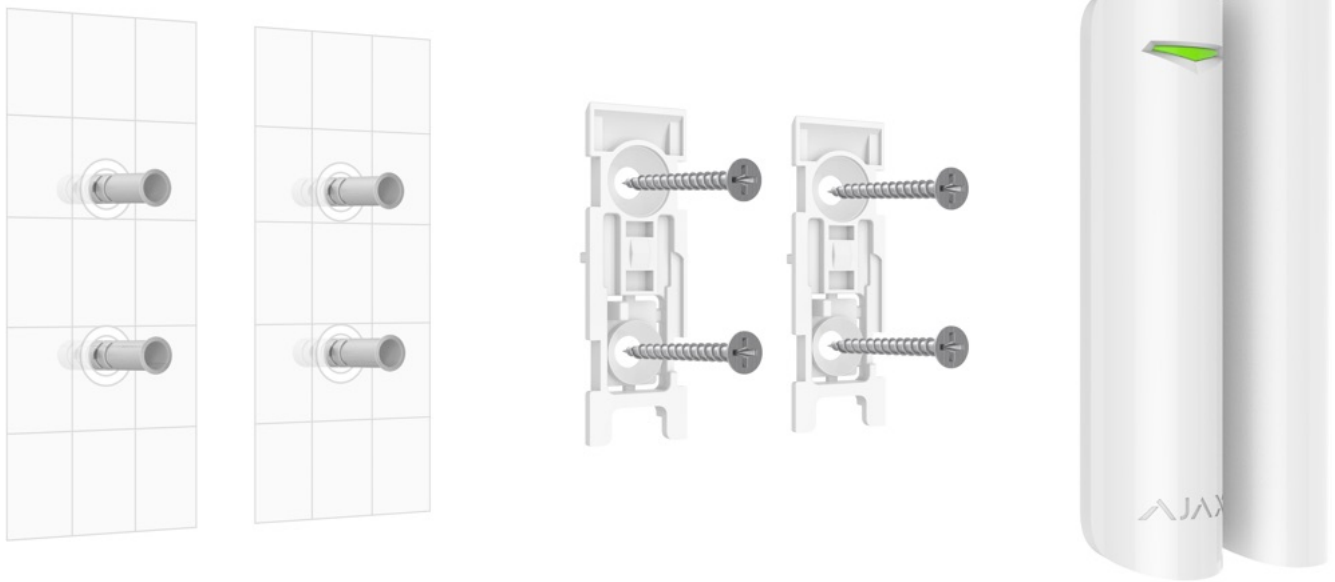
When positioning the parts of DoorProtect in the same plane, use the big magnet. Its actuation threshold – 2 cm.

Attach the magnet to the moving part of the door (window) to the right of the detector. If necessary, the detector may be overturned or positioned horizontally.



Installing the detector

Before installing the detector, make sure that you have selected the optimal location and it complies with the guidelines of this manual!



1. Fix the SmartBracket attachment panels and the magnet using the bundled screws. If using any other attachment hardware, make sure that they do not damage or deform the panel.



Double-sided adhesive tape may be only used for temporary attachment. The tape will run dry in the course of time, which may result in falling of DoorProtect and actuation of the security system. Furthermore, the device may fail from a hit.

2. Put the detector on the attachment panel. As soon as the detector is fixed in SmartBracket, it will blink with a LED signaling that the tamper is closed.



If the light indicator do not blink after installing in SmartBracket, check the status of the tamper in the Ajax app and then the fixing tightness of the panel.

If the detector is torn off from the surface or removed from the attachment panel, you will receive a notification.

3. Put the magnet on the attachment panel.

Do not install the detector:

1. outside the premises (outdoors);

2. nearby any metal objects or mirrors causing attenuation or interference of the signal;
3. inside any premises with the temperature and humidity beyond the permissible limits;
4. closer than 1 m to the hub.

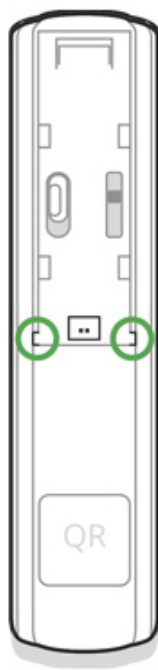
Connecting a Third-Party Wired Detector

A wired detector with the NC contact type can be connected to DoorProtect using the outside-mounted terminal clamp.



We recommend to install a wired detector at a distance not exceeding 1 meter – increasing the wire length will increase the risk of its damage and reduce the quality of communication between the detectors.

To lead out the wire from the detector body, break out the plug:



If the external detector is actuated, you will receive a notification.

Detector Maintenance and Battery Replacement

Check the operational capability of the DoorProtect detector on a regular basis.

Clean the detector body from dust, spider web and other contaminations as they appear. Use soft dry napkin suitable for equipment maintenance.

Do not use any substances containing alcohol, acetone, gasoline and other active solvents for cleaning the detector.

The battery lifetime depends on battery quality, actuation frequency of the detector and ping interval of the detectors by the hub.

If the door opens 10 times a day and the ping interval is 60 seconds, then DoorProtect will operate up to 7 years from the pre-installed battery. Setting the ping interval of 12 seconds, you will reduce the battery life to 2 years.

If the detector battery is discharged, you will receive a notification, and the LED will smoothly light up and go out, if the detector or tamper is actuated.

Battery Replacement

Tech specs

| | |
|--------------------------------------|---|
| Sensor | Sealed contact reed relay |
| Detector actuation threshold | 1 cm (small magnet) 2 cm (big magnet) |
| Tamper protection | Yes |
| Socket for connecting wire detectors | Yes, NC |
| Frequency band | 868.0 – 868.6 MHz or 868.7 – 869.2 MHz depending on the region of sale |
| Compatibility | Operates with Hub , Hub Plus , Hub 2 , ReX , ocBridge Plus , uartBridge |
| Maximum RF output power | Up to 20 mW |
| Modulation | GFSK |
| Radio signal range | Up to 1,200 m (any obstacles absent) |
| Power supply | 1 battery CR123A, 3 V |
| Battery life | Up to 7 years |
| Installation method | Indoors |
| Operating temperature range | From -10°C to +40°C |
| Operating humidity | Up to 75% |
| Dimensions | Ø 20 × 90 mm |
| Weight | 29 g |
| Certification | Security Grade 2, Environmental Class II in conformity with the requirements of EN 50131-1, EN 50131-2-6, EN 50131-5-3 |

Complete Set

1. DoorProtect
2. SmartBracket mounting panel

3. Battery CR123A (pre-installed)
4. Big magnet
5. Small magnet
6. Outside-mounted terminal clamp
7. Installation kit
8. Quick Start Guide

Warranty

Warranty for the “AJAX SYSTEMS MANUFACTURING” LIMITED LIABILITY COMPANY products is valid for 2 years after the purchase and does not apply to the pre-installed battery.

If the device does not work correctly, you should first contact the support service – in half of the cases, technical issues can be solved remotely!

[The full text of the warranty](#)

[User Agreement](#)

Technical support: support@ajax.systems



Need help?

In this section you'll find detailed manuals and educational videos about all features of Ajax.
And in case you need help of a technical specialist, we're available 24/7.

[Send request](#)