DoorProtect User Manual

Updated January 12, 2021

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.

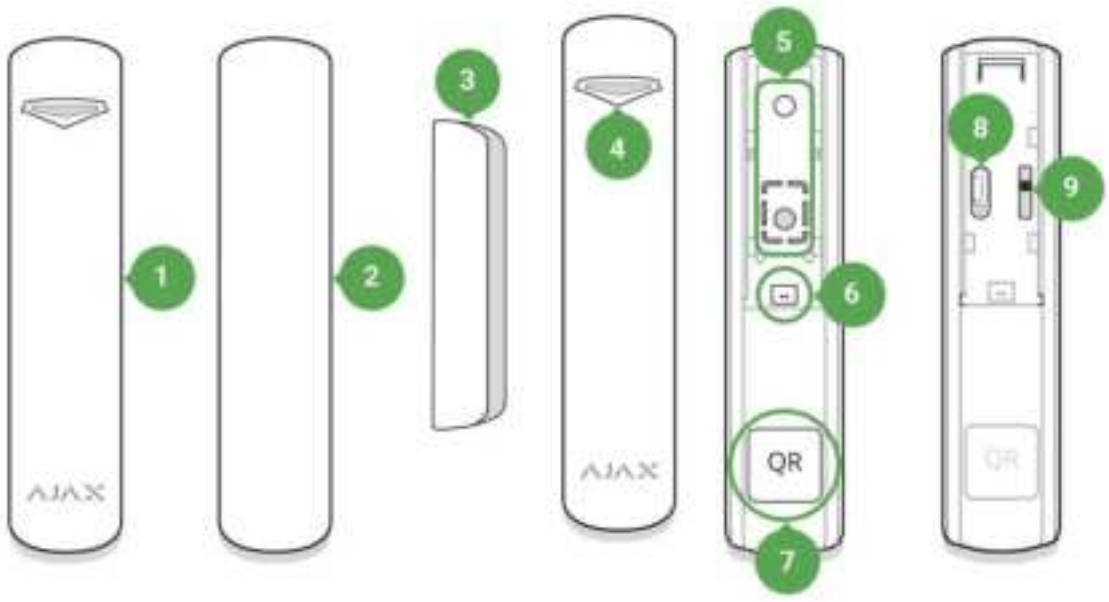
DoorProtect operates within the Ajax security system, connecting via the protected **Jeweller** radio protocol. Communication range is up to 1,200 m in the line of sight. Using the **uartBridge** or **ocBridge Plus** integration modules, DoorProtect can be used as part of third party security systems.

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 (should be placed to the right of the detector)
3. Small magnet (should be placed to the right of the detector)
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
9. Tamper button

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.

Attach the magnet to the **RIGHT** of the detector.

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:

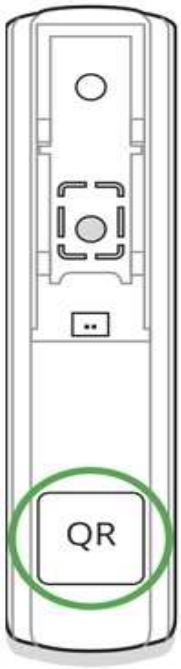
1. Following the hub instruction recommendations, install the **Ajax app** on your smartphone. Create an account, add the hub to the app, and create at least one room.
2. Switch on the hub and check the internet connection (via Ethernet cable and/or GSM network).
3. Make sure that the hub is disarmed 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 the same facility).

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

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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
Battery Charge	Battery level of the device. Displayed as a percentage **How battery charge is displayed in Ajax apps**
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
Rex	Indicates if the detector is routed through a radio signal range extender
Connection	The connection status between the hub and the detector

Primary Detector	The primary detector status
External Contact	The status of the external detector connected to DoorProtect
Always Active	If active, the detector is always in the armed mode
Temporary Deactivation	Shows the status of the device temporary deactivation function: • **No** — the device operates normally and transmits all events. • **Lid only** — the hub administrator has disabled notifications about triggering on the device body. • **Entirely** — the device is completely excluded from the system operation by the hub administrator. The device does not follow system commands and does not report alarms or other events. • **By number of alarms** — the device is automatically disabled by the system when the number of alarms is exceeded (specified in the settings for Devices Auto Deactivation). The feature is configured in the Ajax PRO app. • **By timer** — the device is automatically disabled by the system when the recovery timer expires (specified in the settings for Devices Auto Deactivation). The feature is configured in the Ajax PRO app.
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
Alarm LED indication	Allows you to disable the flashing of the LED indicator during an alarm. Available for devices with firmware version 5.55.0.0 or higher **How to find the firmware version or the ID of the detector or device?**
Primary Detector	If active, DoorProtect primarily reacts to opening/closing
External contact	If active, the detector registers external detector alarms
Always active	If active, the detector always registers opening/closing
Alert with a siren if opening detected	If active, **sirens added to the system** are activated when the opening detected
Activate the siren if an external contact opened	If active, **sirens added to the system** 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**)
Temporary Deactivation	Allows the user to disconnect the device without removing it from the system. Two options are available: • **Entirely** — the device will not execute system commands or participate in automation scenarios, and the system will

	automation scenarios, and the system will ignore device alarms and other notifications • **Lid only** — the system will ignore only notifications about the triggering of the device tamper button **Learn more about temporary deactivation of devices** The system can also automatically deactivate devices when the set number of alarms is exceeded or when the recovery timer expires. **Learn more about auto deactivation of devices**
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 **Battery Replacement** manual

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

The tests do not start immediately but within 30 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. The side to which the magnet should be attached is marked with an arrow on the detector's body. If necessary, the detector may be 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.

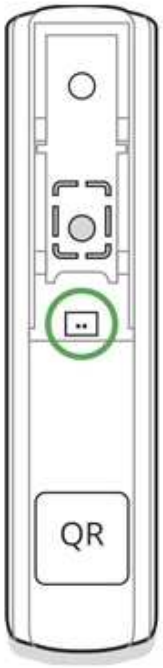
3. Put the magnet on the attachment panel.

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.

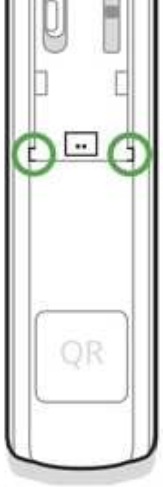
Connecting a Third-Party Wired Detector

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.

How long Ajax devices operate on batteries, and what affects this

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 all Ajax **hubs**, **range extenders**, **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
Protection class	IP50
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

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**

Model name:

Ajax DoorProtect

Quick Start Guide
Before using the device, we strongly recommend reviewing the User Manual on the website.

ajax.systems/support/devices/doorprotect

Product name: Magnetic opening detector
DoorProtect is a wireless magnetic opening detector that features a connector for an external detector.

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 range	902-928 MHz FHSS (complies with part 15 of the FCC rules)
Maximum RF output power	6.19 mW (limit 20 mW)
Radio signal range	Up to 1,200 m (in a line of sight)
Power supply	1 battery CR123A, 3 V
Battery life	Up to 7 years
Operating temperature range	From -10°C to +40°C
Operating humidity	Up to 75%
Dimensions	Ø 20 x 90 mm
Weight	29 g

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.QuickStartGuide.

FCC WARNING STATEMENT NOTE:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.
This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

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:
-- 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.
To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Warranty: Warranty for Ajax devices is valid for two years after the purchase date and does not apply to the supplied accumulator. If the device does not work correctly, you should irst contact the support service—in half of the cases, technical issues can be solved remotely!

The full text of the warranty is available on the website:
ajax.systems/warranty

User Agreement: **ajax.systems/end-user-agreement**

Technical support: **support@ajax.systems**

Manufacturer: "AS Manufacturing" LLC.

Address: 5 Sklyarenka Str., Kyiv, 04073, Ukraine.

www.ajax.systems

EN
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.
FR
L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
1.L'appareil ne doit pas produire de brouillage;
2.L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.