DoorProtect User Manual

Updated October 18, 2019

DoorProtect is a wireless door and window opening detector designed for use inside premises. It can operate up to 7 years from a pre-installed battery and is furnished with a sealed contact reed relay processing more than one million openings. It has a socket for connecting an external detector.

Sealed contact reed relay is a device which forms a continuous circuit under the effect of a constant magnet. It consists of ferromagnetic contacts placed in a bulb.

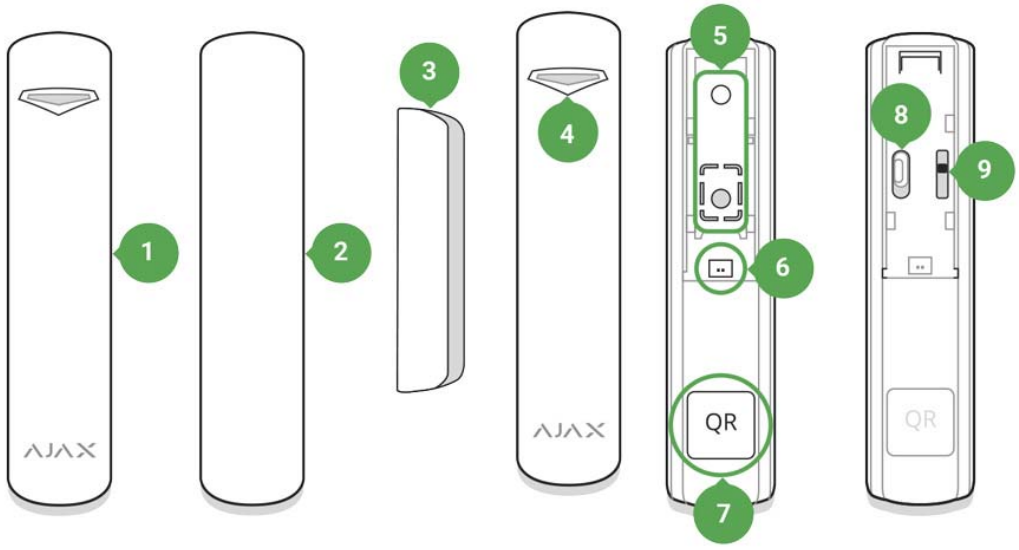
DoorProtect operates within the Ajax security system, by connecting via the protected Jeweller protocol to the hub. Communication range – up to 1,200 m, absent any obstacles. In addition, the detector can be used as part of third-party security central units due to the uartBridge or ocBridge Plus integration module.

The detector is set up via a mobile application for iOS and Android-based smartphones. The user is notified of all events through push notifications, SMS messages 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. Light indicator
5. SmartBracket attachment panel (perforated part is required for actuating the tamper in case of any attempt to tear off the detector from the surface. Don’t break it out!)
6. External detector connection socket
7. QR code
8. Device switch
9. Tamper button

DoorProtect Operating Principle

DoorProtect consists of two parts: the detector with a sealed contact reed relay, and a constant magnet. The detector is attached to a frame and the

magnet – to a moving wing or sliding part. If the sealed contact reed relay is within the coverage area of the magnetic field, it closes the circuit – the detector is closed. The opening of the wing distances the magnet from the sealed contact reed relay, resulting in the circuit opening, and the detector records opening.

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

After actuation, the DoorProtect detector set in the intrusion detection mode immediately transmits an alarm signal to the Ajax hub, activating the sirens connected to the hub and notifying the user and private security company.

Connecting the Detector to the Ajax Security System

Detector Connection to hub

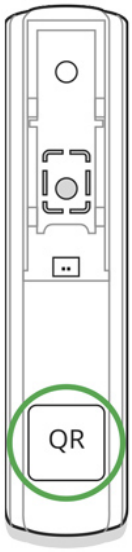
Before starting connection:

1. Following the hub instruction recommendations, install the Ajax application on your smartphone. Create an account, add the hub to the application, and create at least one room.
2. Go to the Ajax application.
3. Switch on the hub and check the internet connection (via Ethernet cable and/or GSM network).
4. Ensure that the hub is disarmed and does not start updates by checking its status in the mobile application.

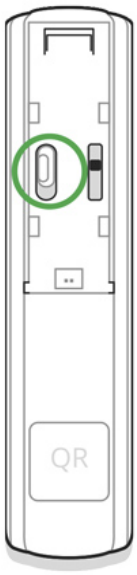
Only users with administrative privileges can add the device to the hub

How to connect the detector to the hub:

1. Select the **Add Device** option in the Ajax application.
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 the detection and interfacing to occur, the detector should be located within the coverage area of the wireless network of the hub (at a single protected object).

Request for connection to the hub is transmitted for a short time at the time of switching on the device.

If the connection to the Ajax hub failed, switch off the detector for 5 seconds and repeat the attempt.

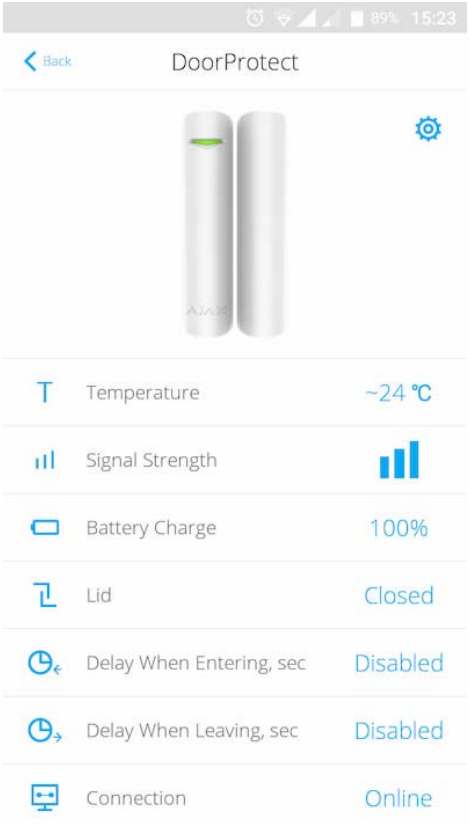
The detector connected to the hub will appear in the list of devices of the hub in the application. Update of the detector statuses in the list depends on the device inquiry time set in the hub settings, with the default value – 36 seconds.

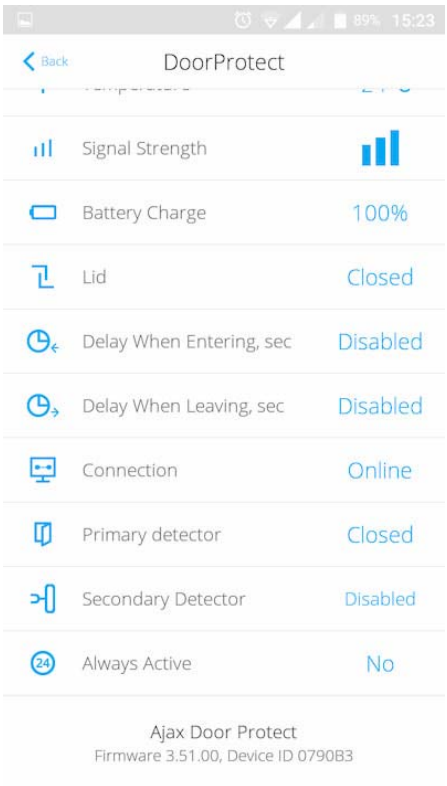
Connecting the Detector to Third Party Security Systems

To connect the detector to a third party security central unit using the uartBridge or ocBridge Plus integration module, follow the recommendations in the manual of the respective device.

States

1. Devices
2. DoorProtect

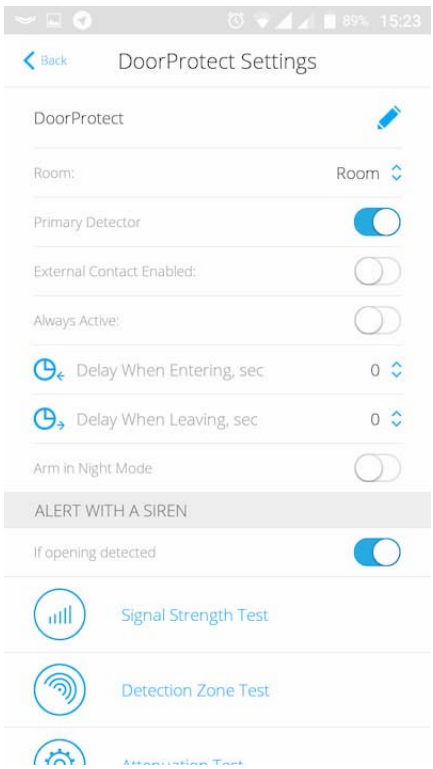


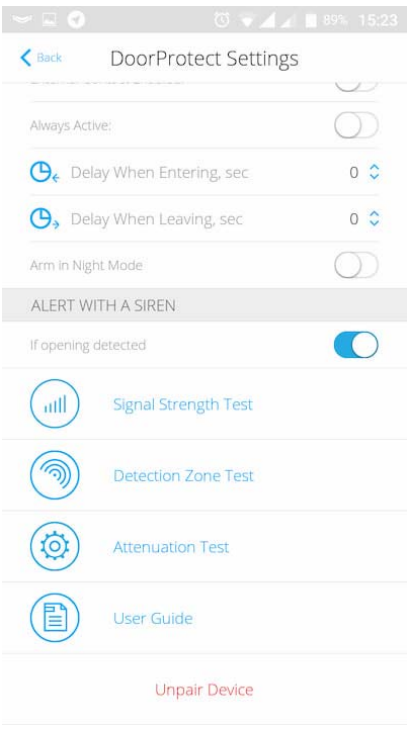


Parameter	Value
Temperature	Temperature of the Detector. This is measured on the processor and changes gradually
Signal Strength	Signal strength between the hub and the detector
Battery Charge	Battery level of the detector, displayed in increments of 25%
Lid	The tamper mode of the detector, which reacts to the detachment of or damage to the body
Delay when entering, sec	Delay time when entering
Delay when leaving, sec	Delay time when exiting
Connection	Connection status between the hub and the detector
Primary Detector	Primary detector status
Secondary detector	Status of the external detector connected to DoorProtect
Always active	If active, the detector is always in the armed mode
Firmware	Detector firmware version
Device ID	Device identifier

Setting Up the Detector

1. Devices
2. DoorProtect
3. Settings





Setting	Value
First field	Detector name, can be edited
Room	Selecting the virtual room to which the device is assigned
Primary Detector	If active, the DoorProtect primary detector 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
Delay when entering, sec	Selecting delay time when entering
Delay when leaving, sec	Selecting 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 armed mode when using night mode
Alert with a siren if opening detected	If active, HomeSiren and StreetSiren are activated when the opening detected
Activate the siren if an additional contact is open	If active, HomeSiren and StreetSiren are activated during an external detector alarm
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 fade test mode (available in 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
Turning on the detector	Lights up green for about one second	
Detector connection to the hub, ocBridge and uartBridge	Lights up continuously 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** paragraph

Performance testing

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

The tests do not start straight away but within a period of 36 seconds when using the standard settings. The test time start depends on the settings of the detector scanning period (the paragraph on “**Jeweller**” settings in hub settings).

Signal Strength Test

Detection Zone Test

Attenuation Test

Installing the device

Selecting an installation location

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

Check the signal level at the installation location

If the signal level is one division, we cannot guarantee stable operation of the security system. Take 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 reception.

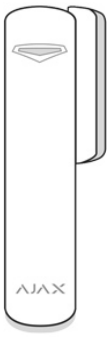
If, after moving, the device still has a low or unstable signal strength, use a radio signal range extender ReX.

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

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

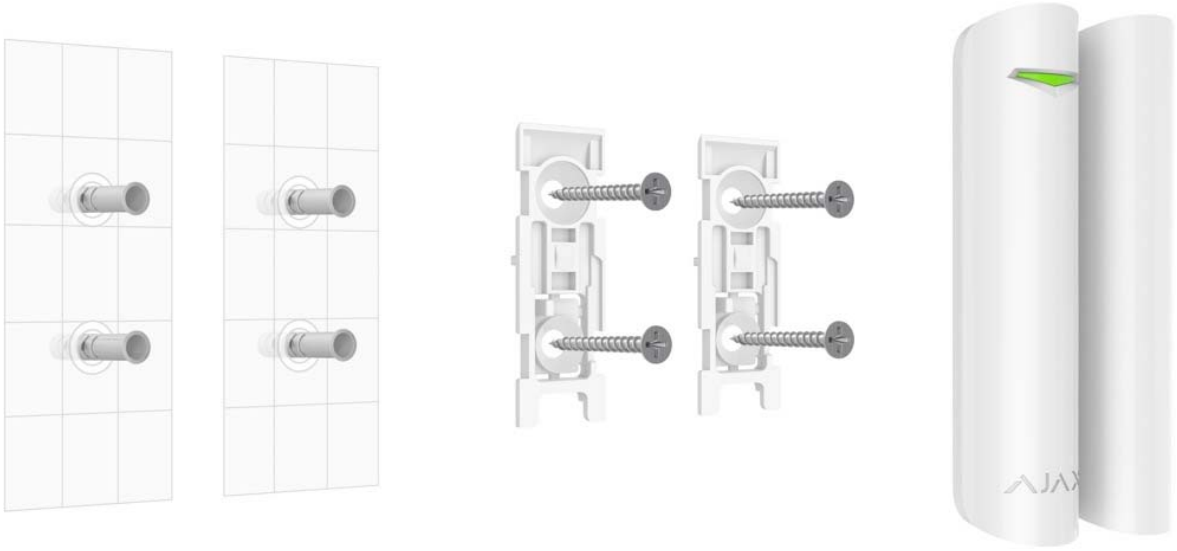
When positioning the parts of DoorProtect in the same plane, use the big magnet. Its actuation threshold – 2 cm.

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



The installing the sensor

Before installing the detector, make sure that you have selected the optimal location and it is in compliance with the guidelines contained in this manual!



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

   The double-sided adhesive tape may be only used for temporary attachment of the detector and magnet. The tape will run dry in 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 – this will be a signal that the tamper on the detector is closed.

If the light indicator of the detector is not actuated after installation in SmartBracket, check the status of the tamper in the Ajax Security System application 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 the notification.

3. Put the magnet on the attachment panel.

Do not install the detector:

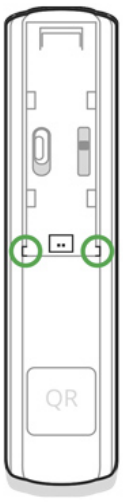
1. outside the premises (outdoors)
2. nearby any metal objects or mirrors causing attenuation and screening of the signal
3. within any premises with the temperature and humidity beyond the range of permissible limits
4. closer than 1 m from the hub.

Connecting a Wire Detector

A wire detector with an NC type contact may be connected to the DoorProtect using an outside-mounted terminal clamp.

We recommend to install the wire 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 the 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 for cleaning the detector any substances containing alcohol, acetone, gasoline and other active solvents.

The service life of the detector from the battery depends on battery quality, the actuation frequency of the detector and inquiry interval of the detectors by the hub.

If the door opens 10 times a day and the detector inquiry interval is set at 60 seconds, then DoorProtect will operate 7 years from the pre-installed battery. You will reduce the service life of the device to 2 years by setting the inquiry interval at 12 seconds.

If the detector battery is discharged, the user will receive a notice, 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
Operating temperature range	From -10°C to +40°C
Operating humidity	Up to 75%
Dimensions	Ø 20 x 90 mm
Weight	29 g
Certification	Security Grade 2, Environmental Class I in conformity with the requirements of EN 50131

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

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