



AJAX 856963007941 Wireless Multifunction Door Window Sensor DoorProtect Plus User Manual

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AJAX 856963007941 Wireless Multifunction Door Window Sensor DoorProtect Plus



DoorProtect Plus User Manual

Updated December 30, 2021

Product Information

The DoorProtect Plus is an opening detector with shock and tilt sensors that can be connected to a central monitoring station of an Ajax security system. The functional elements of the DoorProtect Plus include:

1. DoorProtect Plus
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 triggers the tamper button in case of any attempt to tear off the detector from the surface)
6. External detector connection socket
7. QR code
8. Device switch
9. Tamper button

The DoorProtect Plus operates by using two parts: the detector and the constant magnet. The magnet should be attached to the right of the detector. The device does not support connecting via the Ajax uartBridge or Ajax ocBridge Plus integration modules.

Product Usage Instructions

Connecting:

Before starting connection:

1. Following the hub user guide, install the Ajax app. Create the account, add the hub, 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 Ajax app.
4. Only users with administrator rights can add the device to the hub.

How to connect the detector to the hub:

1. Select Add Device in the Ajax app.
2. Name the device, scan or type the QR code (located on the detector body and packaging), and select the location room.
3. Tap Add — the countdown will start.
4. Switch on the device.

States:

The states screen contains information about the device and its current parameters. Find the DoorProtect Plus states in the Ajax app:

- Temperature
- Jeweller Signal Strength Connection
- ReX range extender name
- Battery Charge
- Lid Delay When Entering, sec
- Signal strength between the hub/range extender and the opening detector.
- Connection status between the hub/range extender and the detector:
 - hub/range extender
 - with the hub/range extender
- Displayed when the detector works via radio signal range extender
- Battery level of the device. Displayed as a percentage
- The tamper mode of the detector, which reacts to the detachment of or damage of the body.
- Entry delay (alarm activation delay) is the time you have to disarm the security system after entering the room.
- Night Mode Delay When Entering, sec
- Night Mode Delay When Leaving, sec
- Primary Detector
- External Contact
- Shock Sensor
- Tilt Sensor
- Always Active Chime
- The time of Delay When Entering in the Night mode. Delay when entering (alarm activation delay) is the time you have to disarm the security system after entering the premises.
- The time of Delay When Leaving in the Night mode. Delay when leaving (alarm activation delay) is the time you have to exit the premises after the security system is armed.
- Indicates whether the opening sensor is active.
- Status of the external detector connected to DoorProtect Plus.
- Indicates whether the shock sensor is active.

- Indicates whether the tilt sensor is active.
- If the option is active, the detector is always in armed mode and notifies about alarms.

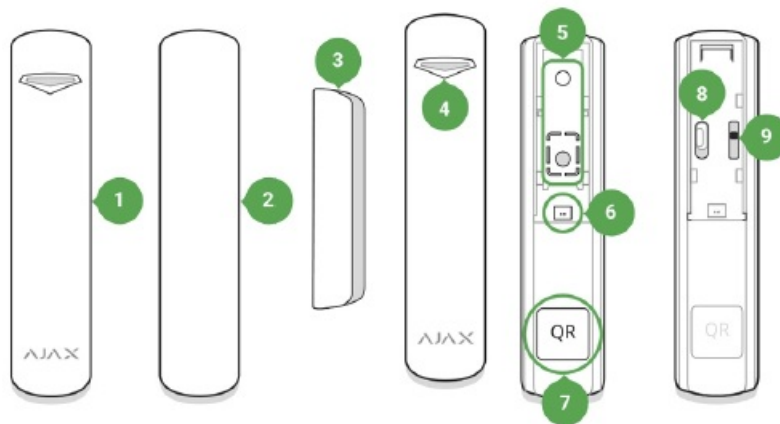


DoorProtect Plus is a wireless opening, shock, and tilt detector, that operates within the Ajax security system, connecting via the protected Jeweller radio protocol. Is used inside premises. The communication range is up to 1,200 m line of sight. DoorProtect Plus can operate up to 5 years from a pre-installed battery and capable to detect more than 2 millions openings.

The user can configure the detector via the Ajax app for iOS, macOS, Windows, or Android. The app notifies the user of all events through push notifications, SMS, and calls (if activated).

DoorProtect Plus does not support connecting via the or integration modules.

Functional Elements



1. DoorProtect Plus
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 triggers the tamper button in case of any attempt to tear off the detector from the surface)
6. External detector connection socket
7. QR code
8. Device switch
9. Tamper button

Operating Principle

DoorProtect Plus consists of two parts: the detector and the constant magnet. The socket for a third-party wired detector.

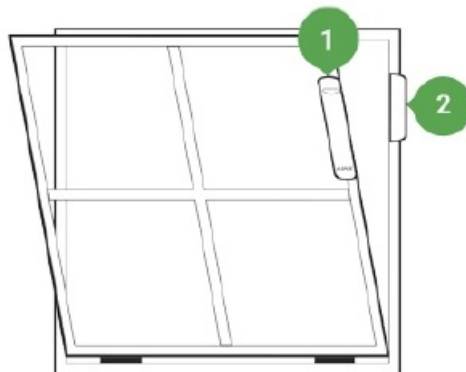
Attach the magnet to the door frame, while the detector should be attached to the door's moving wing or sliding part. If the sealed contact reed relay is within the coverage area of the magnetic field, it closes the circuit, which means that the detector is closed. The door's opening pushes out the magnet from the sealed contact reed relay and opens the circuit. In such a way, the detector recognizes the opening.

The DoorProtect Plus set includes two constant magnets. The small one works at a distance of 1 cm, and the big one — up to 2 cm.

The detector can be positioned horizontally. If there is no need to detect opening, use only the detector part (without magnets) and disable the primary detector in the settings.

The accelerometer detects shocks and vertical deviation relative to the initial position of more than 5°. DoorProtect Plus can be installed on windows, including dormer windows, and the system can be armed when they are slightly open

(disable the primary detector in the settings previously).



Attach the magnet to the RIGHT of the detector.

Connecting

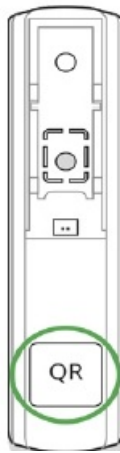
Before starting connection

1. Following the hub user guide, install the . Create the account, add the hub, 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 Ajax app.

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

How to connect the detector to the hub

1. Select Add Device in the Ajax app.
2. Name the device, scan or type the QR code (located on the detector body and packaging), and select the location room.



3. Tap Add — the countdown will start.
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 connection request is transmitted for a short time: at the moment of switching on the device.

If the device failed to pair (LED blinks once per second), switch it off for 5 seconds and retry. The detector connected to the hub appears in the list of devices in the app. The update of the detector statuses in the list depends on the device ping interval set in the hub settings (the default value is 36 seconds).

States

The states screen contains information about the device and its current parameters. Find the DoorProtect Plus states in the Ajax app:

1. Go to the Devices  tab.

Temperature

Device temperature. It is measured on the processor and changes gradually. Displayed in 1°C increment. Acceptable error between the value in the app and temperature at the installation site: 2–4°C

Jeweller Signal Strength

Signal strength between the hub/range extender and the opening detector.

We recommend installing the detector in places where the signal strength is 2–3 bars

Connection

Connection status between the hub/range extender and the detector:

- Online — the detector is connected with the hub/range extender
- Online — the detector has lost connection with the hub/range extender

ReX range extender name

Displayed when the detector works via signal range extender

Battery Charge

Battery level of the device. Displayed as a percentage

How battery charge is displayed in Ajax apps

Lid

The tamper mode of the detector, which reacts to the detachment of or damage of the body

Delay When Entering, sec

Entry delay (alarm activation delay) is the time you have to disarm the security system after entering the room

What is delay when entering

Night Mode Delay When Entering, sec

The time of Delay When Entering in the Night mode. Delay when entering (alarm activation delay) is the time you have to disarm the security system after entering the premises.

What is delay when entering

Night Mode Delay When Leaving, sec

The time of Delay When Leaving in the Night mode. Delay when leaving (alarm activation delay) is the time you have to exit the premises after the security system is armed.

What is delay when leaving

Primary Detector

Indicates whether the opening sensor is active

External Contact

Status of the external detector connected to DoorProtect Plus

Shock Sensor

Indicates whether the shock sensor is active

Tilt Sensor

Indicates whether the tilt sensor is active

Always Active

If the option is active, the detector is always in armed mode and notifies about alarms

[Learn more](#)

Chime

When enabled, a siren notifies about opening detectors triggering in the Disarmed system mode

What is chime and how it works

Shows the status of the device temporary deactivation function:

- No — the device operates normally and from the system operation by the hub administrator. The device does not follow system commands and does not report alarms or other events.

Temporary Deactivation

- 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



Device identifier

Device No.

Number of the device loop (zone)

Settings

To change the detector settings in the Ajax app:

1. Select the hub if you have several of them or if you are using the PRO app.
2. Go to the Devices  tab.
3. Select DoorProtect Plus from the list.
4. Go to Settings by clicking on the .
5. Set the required parameters.
6. Click Back to save the new settings.

Room

Selecting the virtual room to which DoorProtect is assigned. The name of the room is displayed in the text of SMS and notifications in the event feed

Delay When Entering, sec

Selecting delay time when entering. Delay when entering (alarm activation delay) is the time you have to disarm the security system after entering the room

What is delay when entering

Delay When Leaving, sec

Selecting the delay time when exiting. Delay when exiting (alarm activation delay) is the time you have to exit the room after arming the security system

What is delay when leaving

Arm in Night Mode

If the option is active, the detector will switch to the Armed mode when using a Night mode.

Note that in , all active sensors of the detector are armed. The activation of certain sensors cannot be configured in the Night mode (for example, the tilt sensor)

Night Mode Delay When Entering, sec

The time of Delay When Entering in the Night mode. Delay when entering (alarm activation delay) is the time you

have to disarm the security system after entering the premises.

What is delay when entering

The time of Delay When Leaving in the Night mode. Delay when leaving (alarm activation

Alarm LED indication

How to find the firmware version or the ID of the detector or device?

Primary Detector

If setting is active, the DoorProtect Plus primary detector reacts to opening/closing

External Contact

If setting is active, DoorProtect Plus registers external detector alarms

Shock Sensor

If active, shock-sensor will detect alarm after more than one impact

Sensitivity

Sensitivity level of the shock sensor. Three options are available:

- Low
- Normal
- High

Ignore Simple Impact

If active, the detector ignores single hit

Tilt Sensor

If active, sensor will detect tilt

Tilt

Selecting the normal angle of the sensor. Above this limit, the sensor detects an alarm

Tilt Alarm Delay

The number of seconds from the moment the sensor is tilted to the alarm. The value can be set from 1 second to 1 minute

Always Active

If the option is active, the detector is always in armed mode and notices about alarms

[Learn more](#)

Temporary Deactivation

- No — the device operates normally and transmits all alarms and events
- Entirely — the device will not execute system commands or participate in 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

Impulses before alarm

(available for roller shutter motion detector only) Number of detector impulses required to raise an alarm

Alert with a siren if opening detected

If active, added to the system are activated when opening detected

Alert with a siren if an external contact is opened

If active, added to the system are activated during an external detector alarm

Alert with a siren if shock detected

If active, added to the system are activated during a shock alarm

Alert with a siren if tilt detected

If active, added to the system are activated during a tilt alarm

Chime settings

Opens the settings of Chime.

How to set Chime What is Chime

Jeweller Signal Strength Test

Switches the detector to the Jeweller signal strength test mode. The test allows you to check the signal strength between the hub and DoorProtect Plus and determine the optimal installation site

What is Jeweller Signal Strength Test

Detection Zone Test

Switches the detector to the detection area test

What is Detection Zone Test

Switches the detector to the signal fade test mode (available in detectors with firmware

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

Unpair Device

Disconnects the detector from the hub and deletes its settings

How to set Chime

Chime is a sound signal that indicates the triggering of the opening detectors when the system is disarmed. The feature is used, for example, in stores, to notify employees that someone has entered the building.

1. Go to its settings by clicking the gear icon  in the upper right corner.
2. Go to the Chime Settings menu.
3. Select the events to be notified by the siren:
 - If a door or a window is open.
 - If an external contact is open (available if the External Contact option is enabled).
4. Select the chime sound (siren tone): 1 to 4 short beeps. Once selected, the Ajax app will play the sound.
5. Click Back to save the settings.
6. Set up the required siren.

How to set up a siren for Chime

Indication

| Event | Indication | Note |
|--|--|------|
| Switching on the detector | Lights up green for about one second | |
| Detector connection to the hub | Lights up continuously for a few seconds <ul style="list-style-type: none">Detection Area Test | |
| | Lights up green for about one | |
| | | |

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 Area Test
- Attenuation Test

Installing the Detector

The location of DoorProtect Plus depends on its remoteness from the hub, and obstacles hindering the radio signal transmission: walls, doors, large objects inside the room.

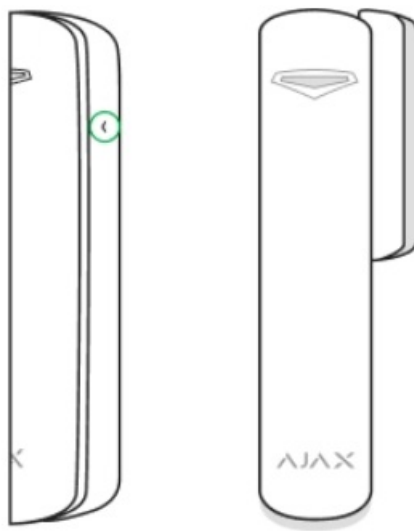
- The device developed only for indoor use.
- Check the Jeweller signal level at the installation location

If the signal level is low (one bar), we cannot guarantee the stable operation of the signal;

- at any places with fast air circulation (air fans, open windows or doors);
- inside premises with the temperature and humidity beyond the range of permissible limits;
- closer than 1 m to the hub.

Attach the magnet 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. 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.

Connecting a Third-Party Wired Detector

A wired detector with an NC (normally closed) contact type can be connected to DoorProtect Plus using the in-built terminal clamp.



We recommend installing the wired detector at a distance no longer than 1 meter to DoorProtect Plus. Longer wire length increases the risk of its damage and reduces the quality of communication between the detectors.

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

If the connected wired detector is triggered, you receive the notification.

To make sure the alarm is raised when the roller shutter is opened, connect the wired roller shutter motion detector with the NC (normally closed) contact to DoorProtect Plus. The function is available for the devices with Firmware version 5.53.1.0 and higher.

How to Find the Firmware version or the ID of the sensor or device?

How to connect the roller shutter motion detector to DoorProtect Plus

Installation

Before installing the detector, make sure that you have selected the optimal location that follows the guidelines of this manual!

1. Fix the SmartBracket attachment panel using bundled screws. If you use any other attachment tools, make sure that they do not damage or deform the attachment panel.

Use double-side adhesive tape only for temporary attachment of the detector. The tape runs dry with time, which can cause falling, false triggering, and detector malfunction.

Maintenance

Check the operational capability of the detector regularly. Clean the detector body from dust, spider web, and other contaminants as they appear. Use soft dry napkin suitable for tech equipment.

Do not use any substances containing alcohol, acetone, gasoline, and other active solvents to clean the detector. The battery life depends on its quality, detector triggering frequency, and ping interval by the hub.

If the door opens 10 times a day and the detector ping interval is 60 seconds, then DoorProtect Plus operates 7 years from the pre-installed battery. For instance, a 12-seconds ping interval reduces the battery life to 2 years.

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

If the detector battery is low, the system notiFles the user, and the LED indicator smoothly lights up and goes off if a glass break is detected or the tamper is triggered.

Battery Replacement

| | |
|--------------------------------------|---|
| Radio communication protocol | Learn more |
| Radio frequency band | 866.0 – 866.5 MHz 868.0 – 868.6 MHz 868.7 – 869.2 MHz 905.0 – 926.5 MHz 915.85 – 926.5 MHz 921.0 – 922.0 MHz Depends on the region of sale. |
| Compatibility | Operates only with all Ajax hubs , and radio signal range extenders |
| Maximum RF output power | Up to 20 mW |
| Modulation of the radio signal | GFSK |
| Radio signal range | Up to 1,200 m (any obstacles absent) |
| Socket for connecting wire detectors | Yes, NC |
| Power supply | 1 battery CR123A, 3 V |
| Battery life | Up to 5 years |
| Installation method | Indoors |
| Protection class | IP50 |
| Operating temperature range | From -10°C to +40°C |
| | |
| | |
| | |
| | |
| | |

1. SmartBracket mounting panel
2. Battery CR123A (pre-installed)
3. Big magnet
4. Small magnet
5. Outside-mounted terminal clamp
6. Installation kit
7. 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

AJAX 856963007941 Wireless Multifunction Door Window Sensor DoorProtect Plus [pdf]
User Manual
856963007941 Wireless Multifunction Door Window Sensor DoorProtect Plus, 856963007941,
Wireless Multifunction Door Window Sensor DoorProtect Plus, Window Sensor DoorProtect Plu
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- [!\[\]\(12a69f26d569f6ce4b22653109cd2bca_img.jpg\) What is Attenuation Test | Ajax Systems Support](#)
- [!\[\]\(ef10f0e1ef11c5d0a18594a14fdf0d04_img.jpg\) What is Delay When Entering/Leaving | Ajax Systems Support](#)
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