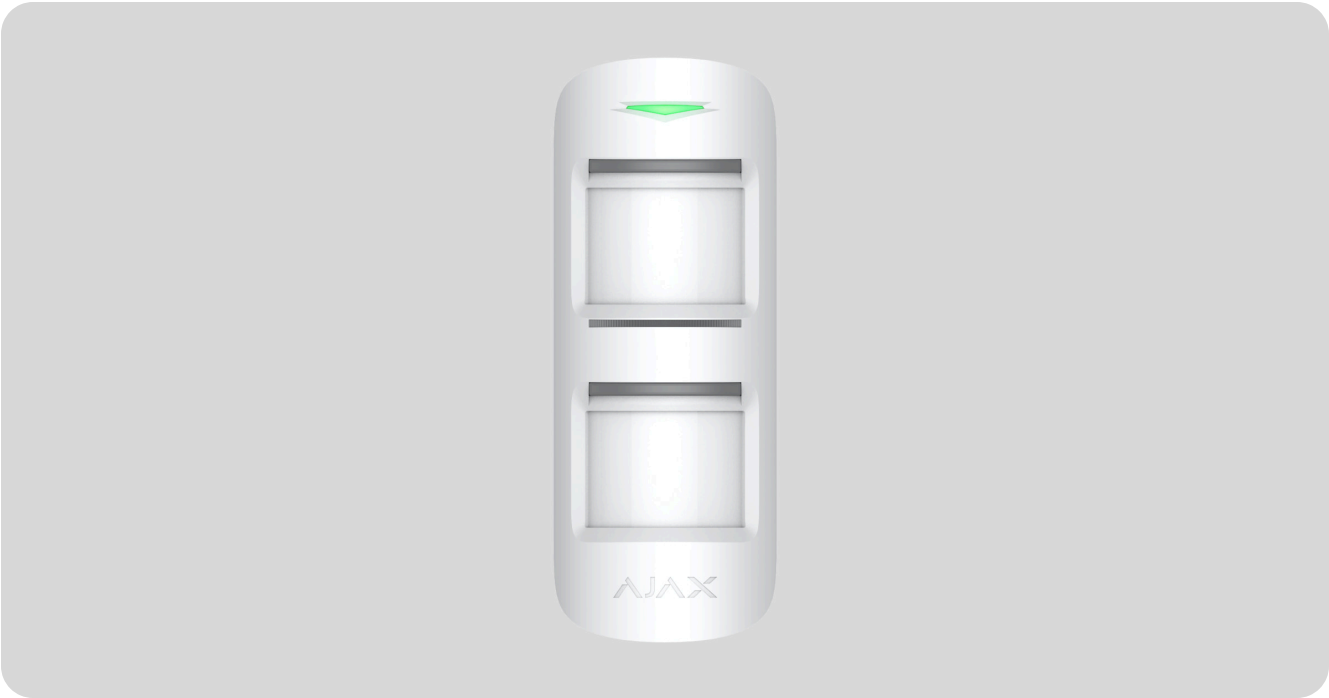
MotionProtect Outdoor Jeweller user manual

Updated July 23, 2024



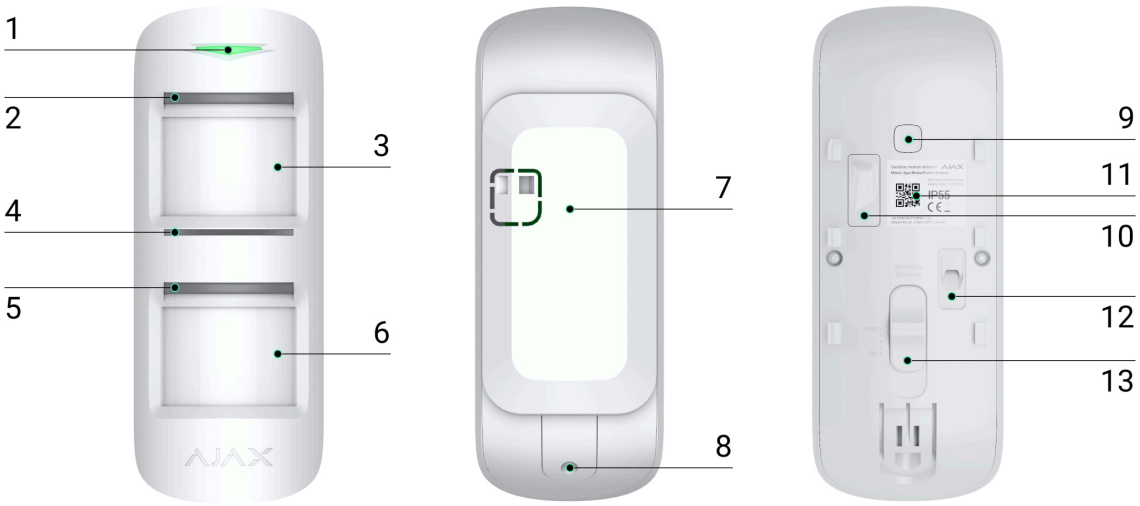
MotionProtect Outdoor Jeweller is a wireless outdoor motion detector. Its adjustable motion detection distance is up to 15 meters. It has an anti-masking system that detects attempts to block the detector view. When installed and set up correctly, the detector does not react to animals up to 80 cm tall.

The detector is compatible with all Ajax hubs and radio signal range extenders. Connection to ocBridge Plus and uartBridge integration modules is not provided.

MotionProtect Outdoor operates as part of the Ajax system by connecting to the hub via the secure Jeweller radio protocol designed to transmit alarms and events. The hub communication range is up to 1,700 meters without obstacles.

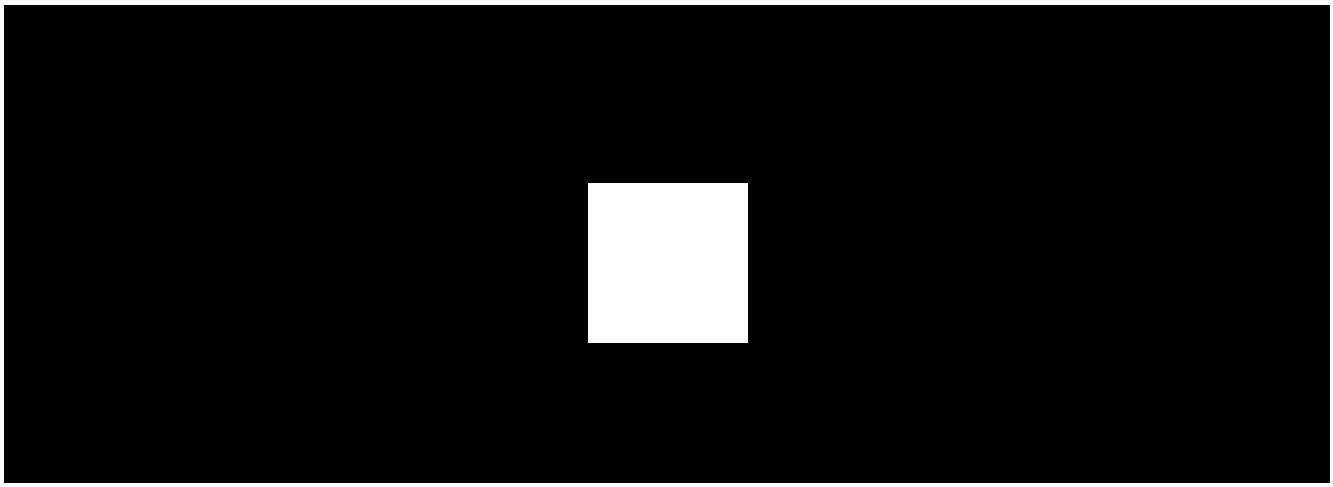
Buy MotionProtect Outdoor Jeweller

Functional elements



1. Main LED indicator.
2. LED indicator and masking sensor of the upper lens of the detector.
3. Upper detector lens.
4. Masking sensor.
5. LED indicator and masking sensor of the lower lens of the detector.
6. Lower detector lens.
7. SmartBracket mounting panel. To remove the panel, slide it down. The perforated part of the mounting panel is necessary to trigger a tamper in case of any attempt to detach the detector from the surface. Do not break it off.
8. Hole for fixing the SmartBracket mounting panel with the bundled screw.
9. Power button of the detector.
10. **Tamper button**. Triggers when an attempt is made to detach the detector from the surface or remove it from the mounting panel.
11. QR code of the detector with an identifier. It is used to pair the device with an Ajax system.
12. Connector for external power supply cable output.
13. Scrollbar for adjusting the motion detection distance.

Operating principle



00:00 00:12

MotionProtect Outdoor Jeweller detects motion using two built-in infrared (IR) sensors, capturing moving objects with temperatures close to that of the human body.

As soon as an armed detector identifies motion, it instantly sends an alarm to the hub. The hub, in turn, activates the connected sirens, activates **scenarios**, and notifies the security company and the users.

Users know exactly where motion is detected. The notifications contain the name of the hub (the name of the protected facility), the name of the device, and the **virtual room** to which the detector is assigned.

How Ajax notifies users of alarms

Learn more about Ajax motion detectors

Protection against false alarms

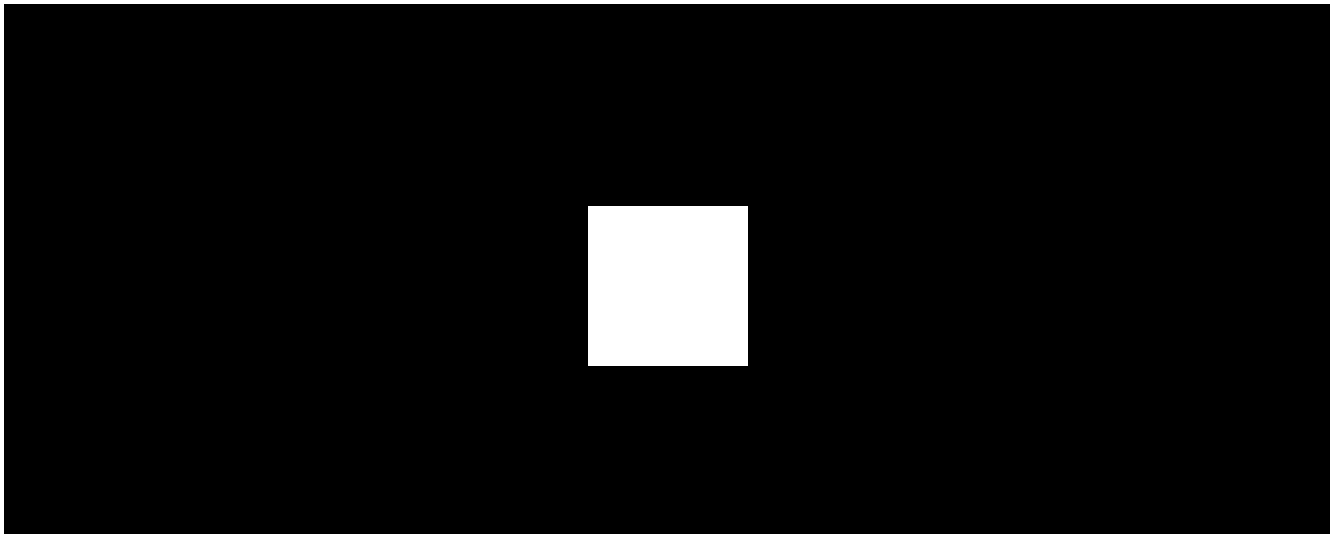
Like Ajax indoor detectors, MotionProtect Outdoor uses the SmartDetect algorithm for protection against false alarms.

Thanks to this algorithm, the detector analyzes the thermal diagram read by the sensor: the intensity of infrared radiation, size of the heat spot, speed of

movement, time spent in the detection area, and other parameters.

Normally, at this point, the detector is ready to make a decision: ignore or raise the alarm. But if the situation is not clear, the detector activates the two-step LISA algorithm. This is how it works: as soon as both IR sensors detect movement, LISA performs correlation and spectral analysis of the signals, distinguishing between real threats and interferences.

Correlation analysis



00:00 00:14

Each time a motion is detected, the LISA algorithm analyzes and compares the waveforms of two signals from the infrared sensors in real time. If they are similar, the detector raises the alarm.

Spectral analysis

00:00 00:14



When MotionProtect Outdoor is installed and configured correctly, it does not react to pets up to 80 cm tall. The weight of the pet is not taken into account.

To effectively ignore all outdoor-typical interference, the detector features two infrared sensors that read signals from two space areas. The detector raises the alarm if both sensors detect motion simultaneously.

When the detector is installed **at a height of 1 m from the ground level**, animals can enter the detection zone of only one of the detector's sensors. Therefore, MotionProtect Outdoor rejects such triggers as false and does not raise the alarm.

Why motion detectors react to animals and how to avoid this

How to install MotionProtect Outdoor

Temperature compensation

Temperature compensation is a software mechanism that maintains the thermal diagram contrast even if the ambient temperature is close to the human body temperature.

With each ambient temperature measurement, the detector introduces a correction according to the table of coefficients stored in its memory and increases or decreases the sensitivity of the IR sensors. This allows the detector to effectively identify motion over the entire operating temperature range from –25 °C to +60 °C.

Learn more

Protection against masking



Masking is an attempt to block the view of the detector by painting over it, covering it, placing an obstacle in front of the detector's lens, or otherwise.

MotionProtect Outdoor detects the following types of masking:

- Obstacle in front of the detector lens at a distance of up to 20 cm (the maximum distance depends on the type of material).

- Obstacle in front of any lens at a distance of up to 10 cm.
- Painting over any of the lenses.
- Sticking over the front part of the detector with an opaque material.

Anti-masking is always active and operates regardless of the detector or system security mode.

Masking type	Detector is armed		Detector is disarmed	
	Time to alarm, s	Time to restore, s	Time before alarm, s	Time before restore, s
An obstacle in front of both lenses	2	8	130	10
An obstacle in front of any of the lenses	130	18	130	10
Sticking or painting over any of the lenses	130	18	130	10
Sticking over the front part of the detector	130	18	130	10
Applying paint or brushing over the front part of the detector	130	18	130	10

When one or more masking types are detected, the detector generates an alarm. The detector LED lights up green for 1 s. The system informs the users and the security company about masking. You can enable the siren response to masking in the **detector settings** for additional protection and informing.

More about the anti-masking system

Jeweller radio technology

Jeweller is a radio protocol that provides fast and reliable two-way communication between the hub and connected devices. The protocol instantly sends informative alarm notifications: security companies and users know exactly which device triggered, when, and where it happened.

Jeweller uses encryption and authentication to protect against sabotage and also regularly pings the system devices, displaying their status in real time. Supporting up to 2,000 m of wireless connectivity, Jeweller is ready to protect any objects and deliver the best user experience for both system owners and installers.

Learn more

Transmitting events to the monitoring station

The Ajax system can transmit alarms to the **PRO Desktop** monitoring app as well as to the central monitoring station (CMS) using **SurGard (Contact ID), SIA DC-09 (ADM-CID), ADEMCO 685** and other proprietary protocols formats. The list of supported protocols is **available here**.

Which CMSs can the Ajax system be connected to

MotionProtect Outdoor can transmit the following events:

1. Motion alarm.
2. Masking alarm.
3. Tamper alarm/recovery.
4. Loss/recovery of connection between MotionProtect Outdoor and the hub (or radio signal range extender).
5. Permanent deactivation/activation of MotionProtect Outdoor.
6. Unsuccessful attempt to arm the security system (with **System integrity check** enabled).

In the event of an alarm, the monitoring station operator of the security company knows what happened and where the rapid response unit has to be sent. All Ajax devices are addressable, so events, device type, name, and assigned room can be transmitted to PRO Desktop and CMS. The list of transmittable parameters may differ depending on the CMS type and the selected communication protocol with the monitoring station.

Find the ID and number of the device in its states in the Ajax app.

Adding to the system

Before adding a device

1. Install the **Ajax app**.
2. Log in to your **account** or create a new one.
3. Select a space or create a new one.

What is a space

How to create a space

The **space** functionality is available for apps of such versions or later:

- Ajax Security System 3.0 for iOS;
- Ajax Security System 3.0 for Android;
- Ajax PRO: Tool for Engineers 2.0 for iOS;
- Ajax PRO: Tool for Engineers 2.0 for Android;
- Ajax PRO Desktop 4.0 for macOS;
- Ajax PRO Desktop 4.0 for Windows.

4. Add at least one **virtual room**.
5. Add a **compatible hub** to the space. Ensure the hub is switched on and has internet access via Ethernet, Wi-Fi, and/or mobile network.
6. Ensure the space is disarmed, and the hub is not starting an update by checking statuses in the Ajax app.

Only a PRO or a space admin with the rights to configure the system can add a device to the hub.

Types of accounts and their rights

How to add MotionProtect Outdoor

1. Open the **Ajax app**. If your account has access to more than one hub or if you are using the PRO app, select the hub, to which you want to add MotionProtect Outdoor**.**
2. Go to the **Devices** tab and click **Add device**.
3. Name the detector, scan or type in the QR code (placed on the detector and the package box). Select a room and a group for the detector (if **Group Mode** is enabled).



4. Press **Add**.

5. Enable the device by holding the power button for 3 seconds.



If connection fails, turn the detector off and try again in 5 seconds. If the maximum number of devices has already been added to the hub (**depending on the hub model**), you will receive an error notification when adding.

To make sure MotionProtect Outdoor is connected to the hub, the detector must be located at the same secured facility as the system (within the hub radio signal range). To operate via the radio signal range extender, connect both devices to the hub first and then connect the detector to the range extender. . It can be done in the range extender settings.

How to connect a device to the radio signal range extender

The connected detector will appear in the list of hub devices in the Ajax app. Updating the statuses of devices in the list depends on the **Jeweller** (or **Jeweller/Fibra**) settings; the default value is 36 seconds.

MotionProtect Outdoor works only with one hub. When connected to a new hub, the detector stops sending commands to the old one. When added to a new hub, the detector is not removed from the device list of the old hub. This must be done through the Ajax app.

States

The states display information about the device and its operating parameters. MotionProtect Outdoor states are available in Ajax apps. To view them:

1. Sign in to the Ajax app.
2. Select the hub if you have several of them or if you are using a PRO app.
3. Go to the **Devices** tab.
4. Select MotionProtect Outdoor from the list.

Parameter	Meaning
Malfunction	Clicking on ⓘ opens a list of MotionProtect Outdoor malfunctions. The field is displayed only if a malfunction is detected.
Temperature	Detector temperature. It is measured on the processor of the detector and changes gradually. Acceptable error between the value in the app and the room temperature — 2°C. The value is updated as soon as the detector identifies a temperature change of at least 2°C. You can configure a scenario by temperature to control automation devices.

	Learn more
Jeweller Signal Strength	Signal strength between the detector and the hub or the range extender via the Jeweller channel. Recommended value is 2–3 bars. Jeweller is a protocol for transmitting MotionProtect Outdoor events and alarms. **Learn more**
Connection via Jeweller	Connection status on the Jeweller channel between the detector and the hub or the range extender: • **Online** — the detector is connected to the hub/range extender. • **Offline** — the detector is not connected to the hub/range extender. Check the detector connection.
Battery Charge	The battery charge level of the device: • **OK** • **Battery low** When the batteries are low, the Ajax apps and the security company receive appropriate notifications. After sending a low battery notification, the detector can work for up to 2 months. **How the battery charge is displayed** **Battery life calculator**
Lid	The status of the detector tamper that responds to detachment or opening of the device enclosure:

	• **Open** — the detector was removed from the SmartBracket mounting panel, or the integrity of its enclosure was compromised. Check the mounting of the detector. • **Closed** — the detector is installed on the SmartBracket mounting panel. The integrity of the device enclosure and the mounting panel is not compromised. Normal state. Learn more
External Power	External power status: • **Connected** — the external power is connected to the detector. • **Disconnected** — the external power is disconnected or not connected.
Sensitivity	Sensitivity level of the motion detector: • **Low** • **Normal** • **High** The sensitivity is selected based on the results of the **detection zone test**.
Anti-masking	Detector masking state: • **Alarm** — masking is detected. Check the state of the detector. • **Enabled** — the anti-masking system is enabled. Masking is not detected. • **Disabled** — the anti-masking system is disabled. Masking will not be detected. Learn more

Always Active	When this option is enabled, the detector is always armed. In this mode, the detector responds to movement and raises alarms regardless of the system security mode. Learn more
Permanent Deactivation	Shows the status of the device permanent deactivation function: • **No** — the device operates in normal mode. • **Lid only** — detector's tamper triggering notifications are disabled. • **Entirely** — the device does not follow system commands and does not report alarms or other events. • **By number of alarms** — the device is disabled when the number of alarms is exceeded (the number is specified in the Devices Auto Deactivation settings). Learn more
Alarm Reaction	

Operating Mode	Shows how the detector reacts to alarms: • **Instant Alarm** — the armed detector immediately reacts to a threat and raises the alarm. • **Entry/Exit** — when a delay is set, the armed device starts the countdown and doesn't raise the alarm even if triggered until the countdown ends. • **Follower** — the detector inherits the delays from Entry/Exit detectors. However, when the Follower is triggered individually, it immediately raises the alarm.
Delay When Entering, sec	Delay time when entering: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. **Learn more**
Delay When Leaving, sec	Delay time when leaving: 5 to 120 seconds. Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. **Learn more**
Night Mode Delay When Entering, sec	Delay time when entering in Night Mode: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. **Learn more**
Night Mode Delay When Leaving, sec	Delay when leaving in Night Mode: 5 to 120 seconds.

	Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. Learn more
Firmware	Detector firmware version.
Device ID	Detector ID. Is used to connect the detector to the hub. Also available on the QR code on the detector enclosure and its package box.
Device No.	Device loop (zone) number.

Settings

The range of motion detection is set using the switch on the detector's enclosure (under the SmartBracket mounting panel).

To change the detector settings in the Ajax app:

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

Settings	Value

Name	Detector name. Displayed in the list of hub devices, SMS text, and notifications in the events feed in Ajax apps. To change the detector name, click on the text field. The name can contain up to 12 Cyrillic characters or up to 24 Latin characters.
Room	Selecting the virtual room to which MotionProtect Outdoor is assigned. The room name is displayed in the text of SMS and notifications in the events feed of the Ajax apps.
Alarm LED indication	When the option is disabled, the LED indicator of the detector doesn't notify about alarms or tamper triggering.
Sensitivity	Sensitivity level of the motion detector. The selection depends on the type of the object, the presence of probable sources of false alarms, and the specifics of the protected area: • **Low** — there are likely sources of false alarms in the protected area. For example, tall bushes. • **Medium** (default value) — recommended value, suitable for most objects. Do not change it if the detector works correctly. • **High** — there is no interference in the protected area; the maximum detection distance and the alarm detection speed are important. For example, if the detector is installed in a narrow passage. Before choosing a sensitivity level, perform the **Detection Zone Test**. If, during the test, the detector doesn't react to movement in 5 cases out of 5, the sensitivity should be increased.

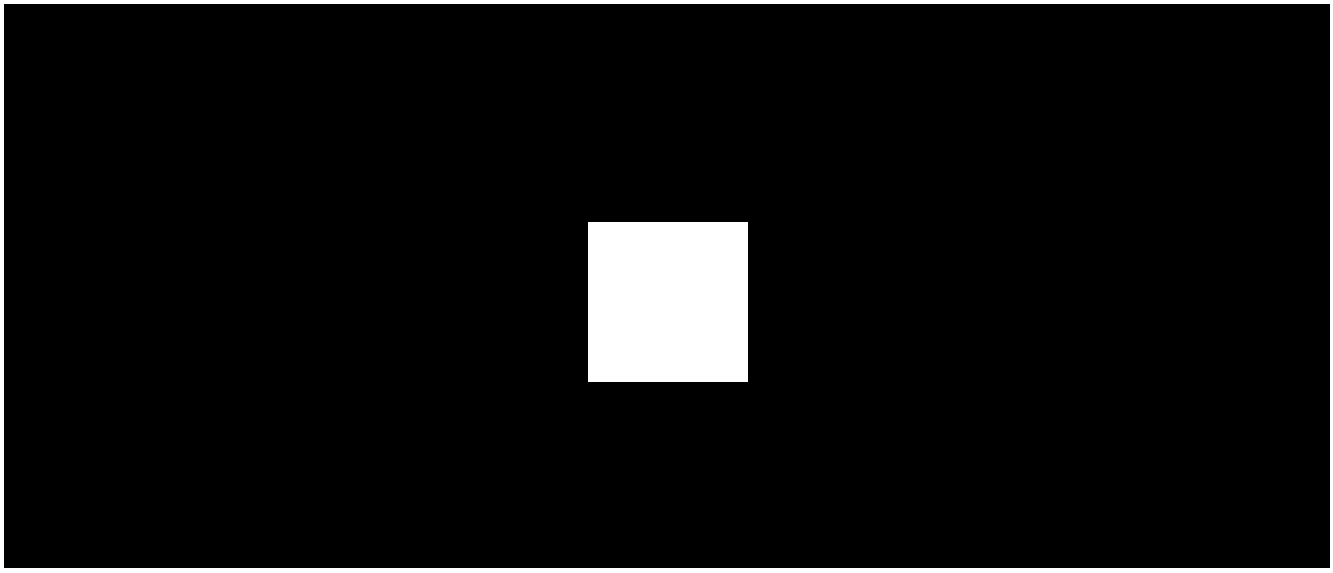
Anti-masking	When this option is enabled, MotionProtect Outdoor detects masking. MotionProtect Outdoor detects the following types of masking: • Obstacle in front of the detector lens at a distance of up to 10 cm (the maximum distance depends on the type of material). • Painting over the detector's lenses. • Taping over the detector lens. Learn more
Always Active	When this option is enabled, the detector is always armed. In this mode, the detector responds to movement and raises alarms regardless of the system security mode. Learn more
Alert with a siren if motion detected	When this option is enabled, **sirens that are added to the system** are activated when motion is detected by MotionProtect Outdoor.
Alert with a siren if masking detected	When this option is enabled, **sirens that are added to the system** are activated when MotionProtect Outdoor masking is detected. The field is displayed and active if the **Anti-masking** option is enabled.
Alarm Reaction	
Operating Mode	Specify how this device will react to alarms: • **Instant Alarm** — the armed detector immediately reacts to a threat and raises the alarm.

	• **Entry/Exit** — when a delay is set, the armed device starts the countdown and doesn't raise the alarm even if triggered until the countdown ends. • **Follower** — the detector inherits the delays from Entry/Exit detectors. However, when the Follower is triggered individually, it immediately raises the alarm.
Delay When Entering, sec	Delay time when entering: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. Learn more
Delay When Leaving, sec	Delay time when leaving: 5 to 120 seconds. Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. Learn more
Arm in Night Mode	If the option is active, the device connected to the integration module will switch to armed mode when the system is set to **Night Mode**. Learn more
Night Mode Delay When Entering, sec	Delay time when entering in **Night Mode**: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. Learn more
Night Mode Delay When Leaving, sec	Delay when leaving in **Night Mode**: 5 to 120 seconds.

	Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. **Learn more**
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 detector and the hub or the range extender over the Jeweller wireless data transfer protocol to determine the optimal installation location for the device. Recommended value is 2–3 bars. **Learn more**
Detection Zone Test	Switches the detector to the detection zone test mode. The test enables users to check how the detector responds to movement and to determine the optimal installation location. If, during the test, the detector does not respond to motion in 5 cases out of 5, increase the sensitivity or change the location of the detector. **Learn more**
Signal Attenuation Test	Switches the detector to the signal attenuation test mode. During the test, the transmitter power is decreased or increased to simulate a change in the environment to test the stability of communication between the detector and the hub or range extender. **Learn more**
User Manual	Opens MotionProtect Outdoor User Manual in the Ajax app.

Permanent Deactivation	Allows the user to disable the device without removing it from the system. Three options are available: • **No**. • **Entirely** — the device does not execute system commands and participate in automation scenarios, and the system ignores alarms and other device events. • **Lid only** — the system ignores the detector's tamper button triggering notifications. Learn more The system can also automatically deactivate devices when the set number of alarms is exceeded. More about auto deactivation
Unpair Device	Unpairs the detector, disconnects it from the hub, and deletes its settings.

Indication



00:00 00:03

The MotionProtect Outdoor LED indicator can light up red or green depending on the status. The indication can be disabled in the **detector settings**.

Indication upon pressing the power button

Indication	Event
Lights up red while the power button is pressed.	Pressing the button when the detector is on.
Lights up green.	Turning the detector on.
First lights up red, then flashes three times and goes off.	Turning the detector off.

Enabled detector indication

Indication	Event	Note
Lights up green for 1 second.	Motion alarm / tamper triggering.	The detector records motion once every 5 seconds.
Lights up green for a few seconds.	Connecting the detector to the hub.	
Lights up red and flashes after the first activation.	Hardware error.	The detector needs to be repaired; please contact our **Technical Support**.
Lights up red and flashes a few minutes after being installed on the mount.	The calibration was not successful; something was blocking the view of the detector, or it was installed incorrectly.	Recalibrate. To do this, remove the device from SmartBracket and reinstall it. Recalibration will start automatically. Make sure that nothing obstructs the detector view.
In case of an alarm, it slowly lights up green and goes out.	Detector batteries need to be replaced. The detector continues operating, detecting	The procedure for battery replacement is described in

	motion, and transmitting alarms to the hub.	this article.
Lights up green and flashes 3 times per second.	The batteries are completely discharged. The detector no longer detects motion and does not transmit alarms to the hub.	The procedure for battery replacement is described in this article.

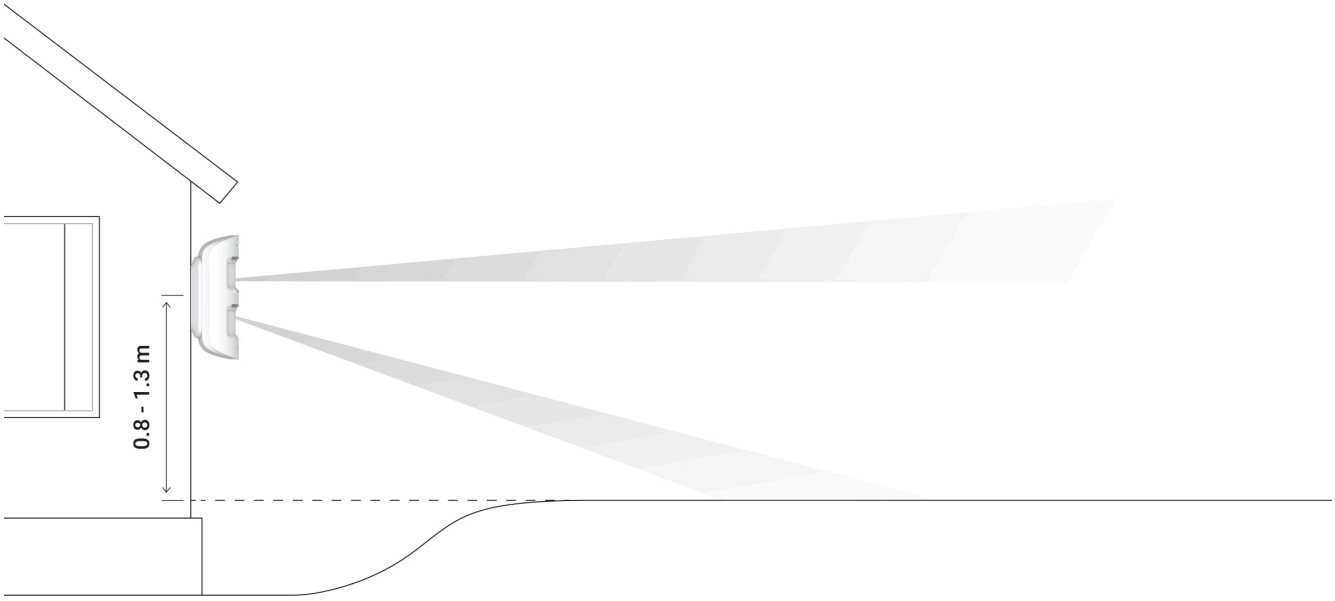
Selecting the device location

MotionProtect Outdoor is suitable for protecting the territory of the object: private houses, parking lots, unheated premises, and other objects. The detector can be installed both outdoors and indoors.

The detector is placed 0.8–1.3 meters above ground level. For effective operation of the **Pet immunity** feature, the detector is installed at a height of **1 meter from the ground level**. Installation at a different height can lead to incorrect operation of the detector; it will react to animals (false alarms) or will not detect human movement.

The detector should be installed on a flat stable surface. For example, on the wall of a house or on a solid fence. If the detector is installed on a shaky unstable surface, this will result in false alarms.

The detector’s enclosure is placed so that the lens axis is parallel to the ground, and the intruder’s expected path of entry runs perpendicular to the lens axis. If the area is not flat, the installation height is calculated from the highest point of the area monitored by the detector.



We recommend placing the detector in a corner so that it has no “blind” zones and is harder for an intruder to bypass. For example, in the corner of a fence. Furniture, plants, and ornamental and glass structures should not obstruct the view of the detector or its camera.

If the detector cannot be installed in a corner, it can be mounted on a flat vertical surface: a wall or a fence. In this case, install another detector that will overlap the blind spots of the first MotionProtect Outdoor.

When choosing the location of the detector, consider the parameters that affect its operation:

- Motion detector detection area.
- Jeweller signal strength.
- Distance of the detector from the hub or range extender.
- Presence of barriers for radio signal passage between devices: walls, interfloor ceilings, large objects located in the premises.

Consider the recommendations for placement when developing a project for the security system of the object. The security system must be designed and installed by specialists. The list of authorized Ajax partners is **available here**.

Signal strength

The Jeweller signal strength is determined by the number of undelivered or corrupted data packages exchanged between the detector and the hub or range extender within a certain period of time.

Signal strength is indicated by the icon on the **Devices** tab. The signal strength is also indicated in the detector states.

Signal strength value:

- **Three bars** — excellent signal strength.
- **Two bars** — good signal strength.
- **One bar** — low signal strength; stable operation is not guaranteed.
- **Crossed out icon** — no signal; stable operation is not guaranteed.

Check the Jeweller signal strength at the installation site. The detector should have a signal strength of two or three bars.

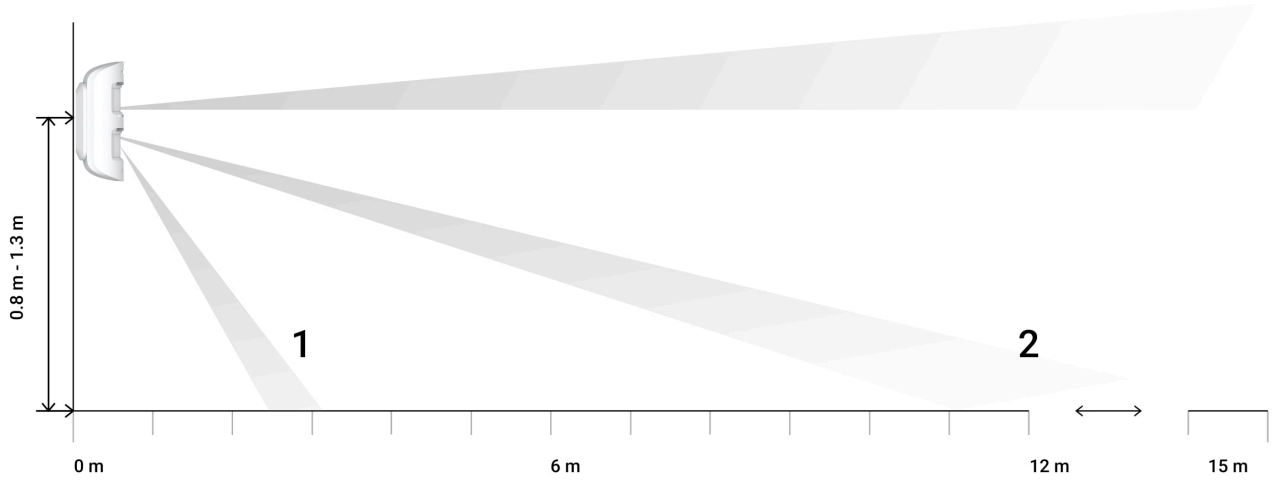
If the signal strength is as low as one or zero bars, we cannot guarantee stable operation of the security system. Relocate the device as repositioning by even 20 cm can significantly improve the signal reception.

If, after relocation, the detector still has a low or unstable signal strength, use a radio signal range extender.

Detection zone

When choosing where to place the detector, perform the Detection Zone Test to determine the sector in which the detector recognizes motion as accurately as possible.

The detection distance is adjusted using the **Detection Distance** scrollbar on the rear panel of the detector.

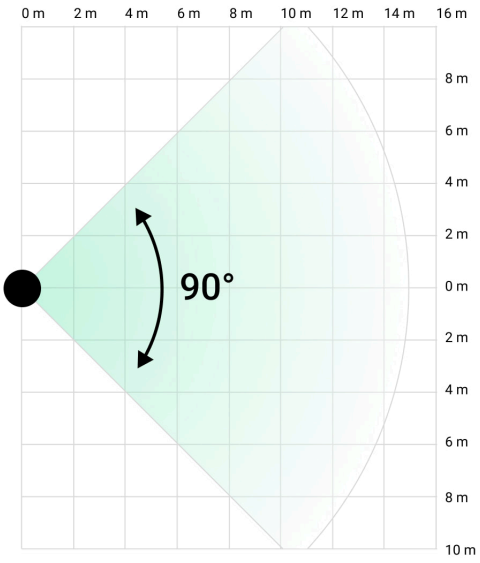


The direction of the lower beam of the detector's IR sensor with a given minimum (1) and maximum (2) detection distance

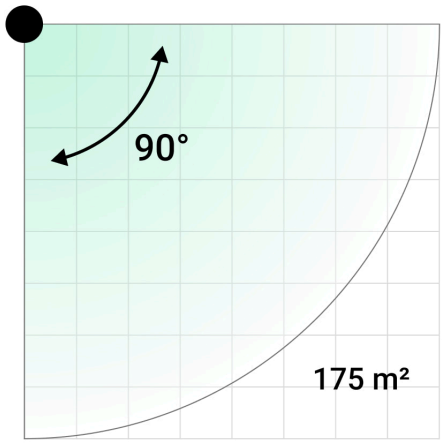
Scrollbar position	Sensitivity	Motion detection distance
First bar (corresponds to the **near** inscription on the detector enclosure)	Low Normal High	Up to 3 meters
Third bar	Low	Up to 7 meters
	Normal High	Up to 8 meters
Fifth bar (corresponds to the **far** inscription on the detector enclosure)	Low Normal High	Up to 15 meters

The detection range when installed at a height of 0.8–1.3 meters was tested at a medium level of sensitivity with +23°C ambient temperature and clear weather. Motion type — walking. Other conditions may produce different results. Therefore, when installing the detector, be sure to perform a Detection Zone Test.

When selecting an installation location, consider the horizontal viewing angle of the detector and the width and size of the detection area. Incorrect detector placement can lead to false alarms.



Horizontal viewing angle of the detector



Maximum detector coverage area

Where not to install the detector

1. Near the metal objects and mirrors. They can shield and attenuate the radio signal.
2. Opposite trees with leaves in the detection zone of both IR sensors of the detector. This can lead to false alarms in warm weather.
3. In places where the detection zone of the detector might include bushes 80 cm high or above. This can lead to false alarms in warm weather.
4. In places where objects and structures may obstruct the detector's view. For example, behind a flower or a column. This way, the detector's view will be limited, and it will be more difficult for it to detect motion.
5. In places where glass structures may obstruct the detector's view. The detector doesn't detect movement behind glass.

6. In places with low or unstable signal strength.

7. Closer than 1 meter from the hub.

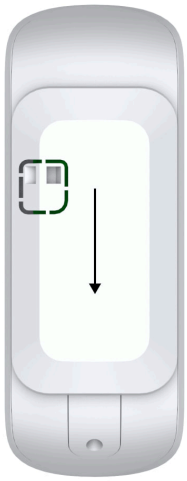
Detector installation



Before installing the detector, make sure that you have selected the optimal location and that it complies with the requirements of this manual. Don't forget to set the necessary detection distance (**Detection Distance** scrollbar).

To install MotionProtect Outdoor:

1. Remove the SmartBracket mounting panel by sliding it down.



2. **Connect external power** if you plan to use it.

3. Secure the SmartBracket mounting panel with temporary fasteners. **Installation height is 0.8–1.3 m from ground level**. For correct operation of the pet immunity feature, the detector is installed at a height of **1 m from the ground level**.

4. Mount the detector on the SmartBracket mounting panel. Automatic calibration of the masking sensors will start.

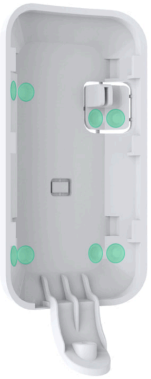
5. Leave the detector's detection zone, and make sure there is no movement within the detector's field of view. This is necessary for correct calibration of the masking sensors. During calibration, the detector's light will turn green and flash once per second. Calibration takes up to 2 minutes.

6. Run the **Jeweller** signal strength test. The recommended value is two or three bars. If the signal strength is as low as one or zero bars, we cannot guarantee stable operation of the security system. Relocate the device as repositioning by even 20 cm can significantly improve the signal reception. If, after relocation, the detector still has a low or unstable signal strength, use a **radio signal range extender**.

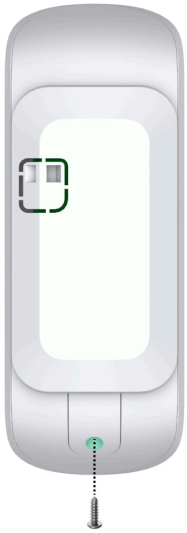
7. Run the **Detection Zone Test**. To check the motion detector, walk within sight of the detector, watching the response of the LED indicator, and determine the detection area.
   Test the lower sensor first and then the upper one. This will help determine and set the required maximum detection distance of the detector (determined by the lower sensor).

   Then, run the detection zone test for both sensors simultaneously as well as the masking sensors test. If there is no response to movement, select another sensitivity level using **Detection Distance** scrollbar, and check the tilt angle of the detector.

8. Attach the SmartBracket mounting panel with the bundled screws using all fixation points (one of them is in the perforated part of the mounting panel above the tamper). When using other fasteners, make sure they do not damage or deform the mounting panel.
   The mounting panel allows mounting MotionProtect Outdoor detector on a vertical surface or in the corner of a room. SmartBracket has special holes to be drilled to fix the panel with the bundled screws.



9. Slide the MotionProtect Outdoor onto the mounting panel, and wait for the calibration to complete.
10. Fasten the eclosure to the mounting panel using the bundled screw at the bottom of the detector. This is necessary for more reliable fastening and protection against quick dismantling.



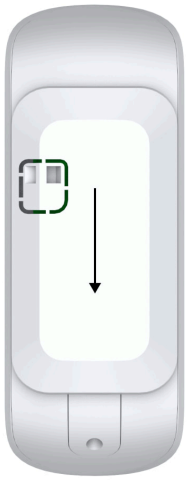
11. Check the tamper status in the Ajax app and **test the detector**.

Connecting external power supply

You can connect an external power supply 5–28 V⎓, 200 mA to the detector. After connecting the external power, do not remove the pre-installed batteries, as they provide backup power.

To connect external power supply:

1. Remove the SmartBracket mounting panel by pulling it down.

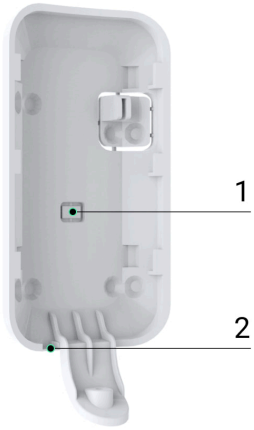


2. Unscrew the screws and carefully remove the rear of the detector enclosure.

> Do not remove the silicone gasket installed at the junction between the two parts of the enclosure — it protects the detector from moisture ingress into the enclosure.



3. Prepare a hole for the cable output at the indicated points on the SmartBracket mounting panel.



1 — For power cable output at the rear of the SmartBracket mounting panel.
2 — For power cable output from the bottom of the SmartBracket mounting panel.

4. Route the cable for connecting the external power supply through the hole made in the mounting panel.

5. Route the cable through the special hole on the rear of the detector enclosure. Do not remove the silicone plug — it protects the detector from moisture entering inside the enclosure.

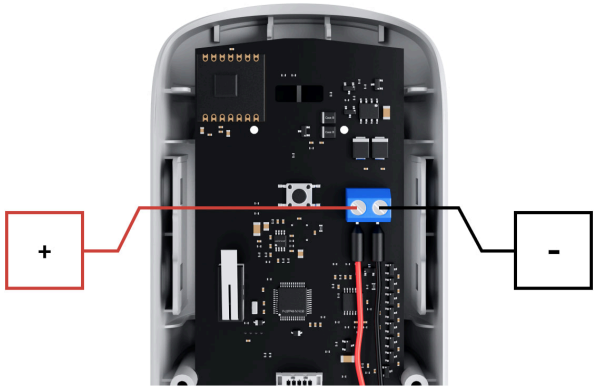


6. Route the wires in special ducts and secure them with a bundled mount — a plastic holder with a screw.



7. Prepare wires for connection. The ends of the wires that will be inserted into the terminals should be tinned or crimped with special tips. This will ensure a reliable connection.

8. Connect the wires to the detector terminals following the polarity.



9. Connect the other end of the cable to the power source following the polarity. The power supply must be de-energized at the time of connection.

> Use only a grounded power source.

10. Supply power to the detector. The connection status can be checked in Ajax apps: in detector States the **External Power** field will change its status to **Connected**.

11. Assemble the detector enclosure and tighten the screws. Check the silicone gasket before assembling: it should fit tightly to the back of the enclosure.

Installing the Hood



Hood is a top cover for MotionProtect Outdoor that protects the masking sensors from rain and snow. It is used when the detector cannot be installed under an awning or canopy.

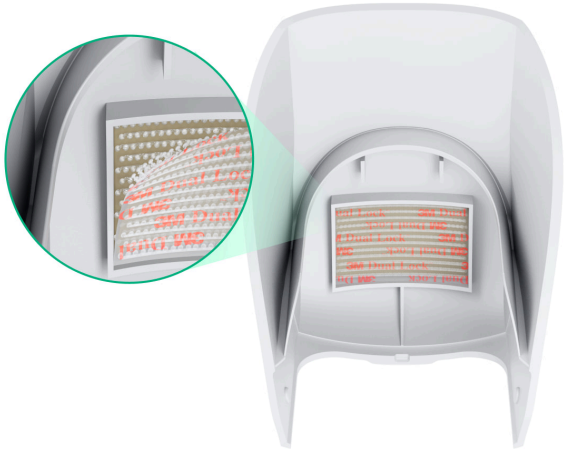
> Hood is not included in the MotionProtect Outdoor set.
>
> Buy Hood for MotionProtect Outdoor

Hood can be mounted on an already installed detector, so there is no need to remove MotionProtect Outdoor from the mounting panel.

Hood attaches to the detector with a reusable Dual Lock™ fastener, which allows installing and removing the hood at any time.

To install Hood:

1. Remove the protective film from the Dual Lock™ tape, which is glued to the inner surface of the hood.



2. Put Hood on the MotionProtect Outdoor — part of the tape will stick to the detector's enclosure.



3. Detach Hood from MotionProtect Outdoor and smooth out the part of the tape that got glued to the enclosure by pressing it down a little.



4. Put Hood back on the detector. When both parts of the tape stick together, you will hear a click — this means the hood is securely fastened.

Functionality testing

Ajax system offers several tests to help you correctly select the device installation place. Tests do not start immediately but no more than after a single hub–device ping interval (specified in the **Jeweller** or **Jeweller/Fibra** settings).

Available tests for MotionProtect Outdoor:

- **Jeweller Signal Strength Test** — helps to determine the strength and stability of the signal at the installation site of the device.
- **Detection Zone Test** — helps to determine at what distance the detector will detect an alarm in the current installation place.
- **Attenuation Test** — simulates a change in the environment in the room to check the stability of the connection between the device and the hub by artificially reducing or increasing the power of the radio transmitter.

How to run a test

1. Select the hub if you have several of them or if you use the **Ajax PRO app**.
2. Go to the **Devices** menu.
3. Select **MotionProtect Outdoor**.
4. Go to the MotionProtect Outdoor settings by clicking the icon.
5. Select the required test.
6. Run the test following in-app tips.

Maintenance

Clean the detector enclosure of dust, cobwebs, and other contaminants as they emerge. Use a soft dry cloth suitable for equipment care.

Do not use substances that contain alcohol, acetone, gasoline, and other active solvents to clean the device. Carefully wipe the lens — scratches on the plastic can reduce the detector sensitivity.

The calculated autonomous operation of the device from a pre-installed battery is up to 5 years (with the 3 minutes ping interval by the hub). If the detector battery is low, the security system sends an appropriate notification, and the LED lights up and goes out gradually if motion is detected or the tamper is triggered.

How long Ajax devices operate on batteries and what affects this

Battery replacement

Technical specifications

All technical specifications of MotionProtect Outdoor Jeweller

Compliance with standards

Complete set

1. MotionProtect Outdoor Jeweller.
2. SmartBracket mounting panel.
3. Two CR123A batteries (pre-installed).
4. Installation kit.
5. Quick start guide.

Warranty

Warranty for the Limited Liability Company “Ajax Systems Manufacturing” products is valid for 2 years after the purchase.

If the device does not operate properly, we recommend you contact support service first, as in most cases, technical issues can be resolved remotely.

Warranty obligations

User Agreement

Contact Technical Support:

- email
- Telegram

Subscribe to the newsletter about safe life. No spam

Email

Subscribe