

Hub Jeweller

Security system control panel.
Has two independent
communication channels:
Ethernet and a 2G SIM card.



Find the detailed information on the device at the link:



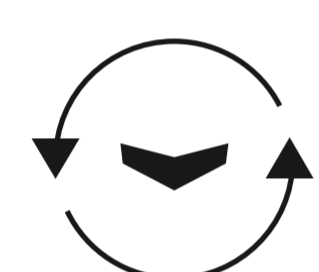
ajax.systems/support/devices/hub/



2
GRADE
EN 50131

PD 6662
2017

Key features



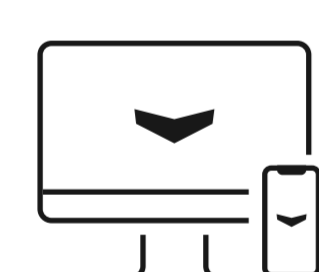
Free software updates



Connection to security company CMS



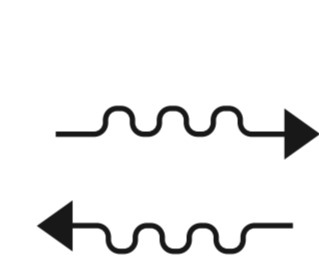
Tampering alarm



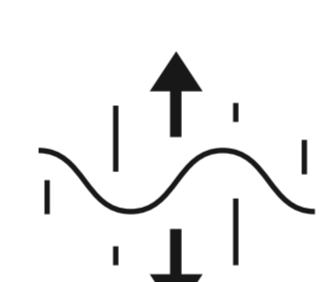
Remote control and setup via the app



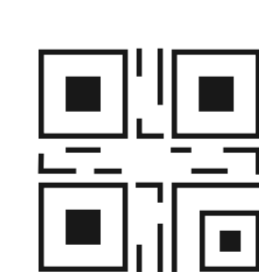
Informing users with push
notifications, calls, and SMS



Communication with wireless Ajax
devices at a distance of up to 2,000 m



Frequency hopping



Connecting to Ajax apps via QR code

Always online

To guarantee prompt alarm transmission to the monitoring station and users, Hub can be connected to two Internet providers at a time via **Ethernet** and **SIM card (2G)**. Channels work in parallel, and automatic switching between them takes seconds.

Hub is connected to the apps, security companies and users through the Ajax Cloud server with an availability of 99.995% in 2021. For more excellent reliability, the servers are located in several data centres. We use the proprietary binary protocol and automatic load balancing for the uninterrupted processing of millions of data packets and the stable operation of security systems.

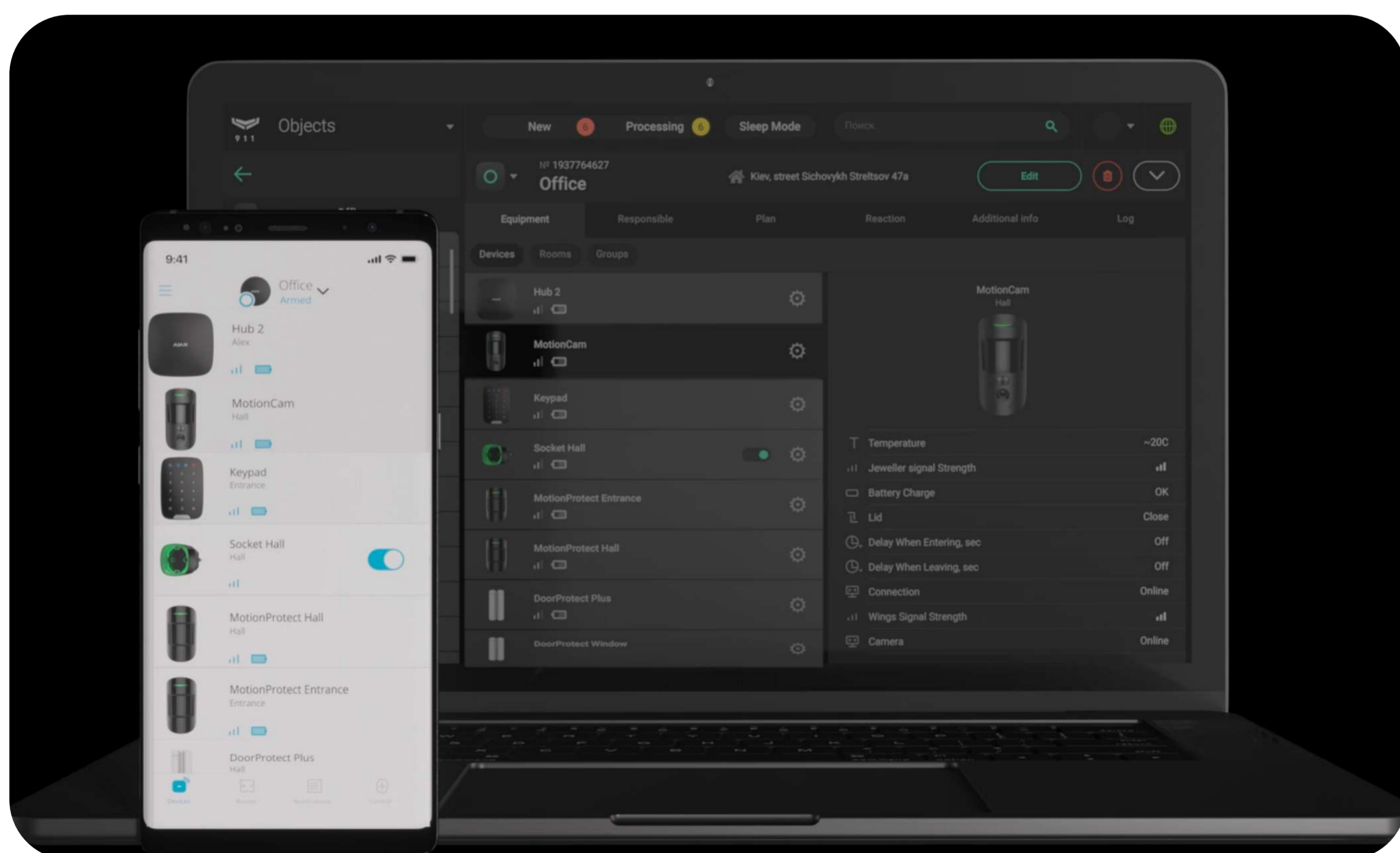
Hub reduces the security system dependence on the conditions at the facility. The control panel is equipped with a backup battery, providing **up to 16 hours of autonomous operation** in case of a blackout. The system will report a power-down and a power restoration to the CMS and all users.



Jeweller radio protocol provides two-way communication between a hub and devices at a distance of **up to 2,000 m**. Jeweller uses time frames to synchronize communication with connected devices, authentication to eliminate forgery, and encryption to protect against data theft.

To expand the radio coverage area, a **range extender** can be connected to Hub, increasing the range to **1,800 m** more.

Controlled with apps



We've developed two types of applications: for users and PRO. Users' apps are designed for monitoring alarms and managing security via smartphone. Apps for PRO are designed to manage system settings via PC or smartphone.


All types of Ajax apps connect to a hub using a secure channel with Ajax Cloud — our server solution located at several AWS data centres. All security system settings are always available in the app.

The keyboard also allows you to create passcodes for those who are not added to the hub users or use the system from time to time. In this case, the users and the monitoring company operator also know exactly who and when changed the security mode. It is convenient, for example, to create a passcode for a cleaning company.

Fast connection and installation

Hub is ready to work right out of the box. It comes with pre-installed communication modules, a power supply unit, and a backup battery. To begin the system setup, an installer needs to plug the device into a power socket, connect it to the Internet, insert a SIM card, and scan the app's QR code. Thanks to SmartBracket, installers don't need to disassemble the enclosure to mount the hub.

Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Connection to CMS	SurGard (Contact ID) SIA (DC-09) ADEMCO 685 Other proprietary protocols
Connected devices	up to 100 wireless devices Including 1 range extender and up to 10 sirens.	Features	50 users 10 cameras or DVRs 5 automation scenarios 9 security groups
Communication channels with Ajax devices	 Jeweller communication technology Frequency bands 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 sales region. Maximum effective radiated power (ERP) ≤25 mW Communication range up to 2,000 m In an open space.	External communication channels	Ethernet 8P8C slot Up to 100 Mb/s. Cellular network 1 slot for micro-SIM 2G (GSM900/DCS1800 (B3/B8))
Power supply	Main power supply 100–240 V~, 50/60 Hz Backup power supply Li-Ion battery with 2 A·h capacity Up to 16 hours of autonomous operation.	Installation	Operating temperature range from -10°C to +40°C Operating humidity up to 75% Protection class IP20

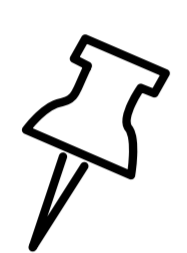
Enclosure	Colour white black Dimensions 163 × 163 × 36 mm Weight 350 g Tampering alarm	Complete set	Hub Jeweller Power cable Ethernet cable SIM card Depends on the region of sale. Installation kit Quick Start Guide
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MotionProtect Jeweller

Wireless indoor IR motion detector.



An Ajax hub is required for operation. Find the detailed information on the device by the link:



<http://ajax.systems/support/devices/motionprotect/>



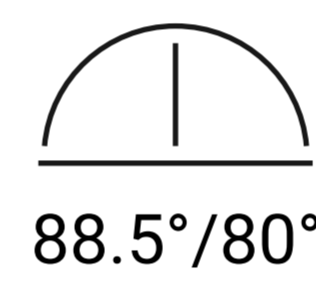
2
GRADE
EN 50131

PD 6662
2017

Key features



Up to 12 m detection distance



88.5°/80° viewing angles



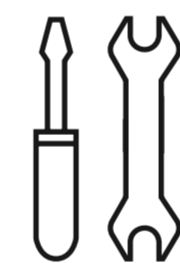
Pet immunity



Temperature compensation



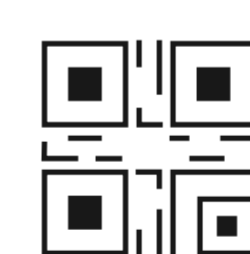
False alarms prevention algorithm



Effortless installation and replacement

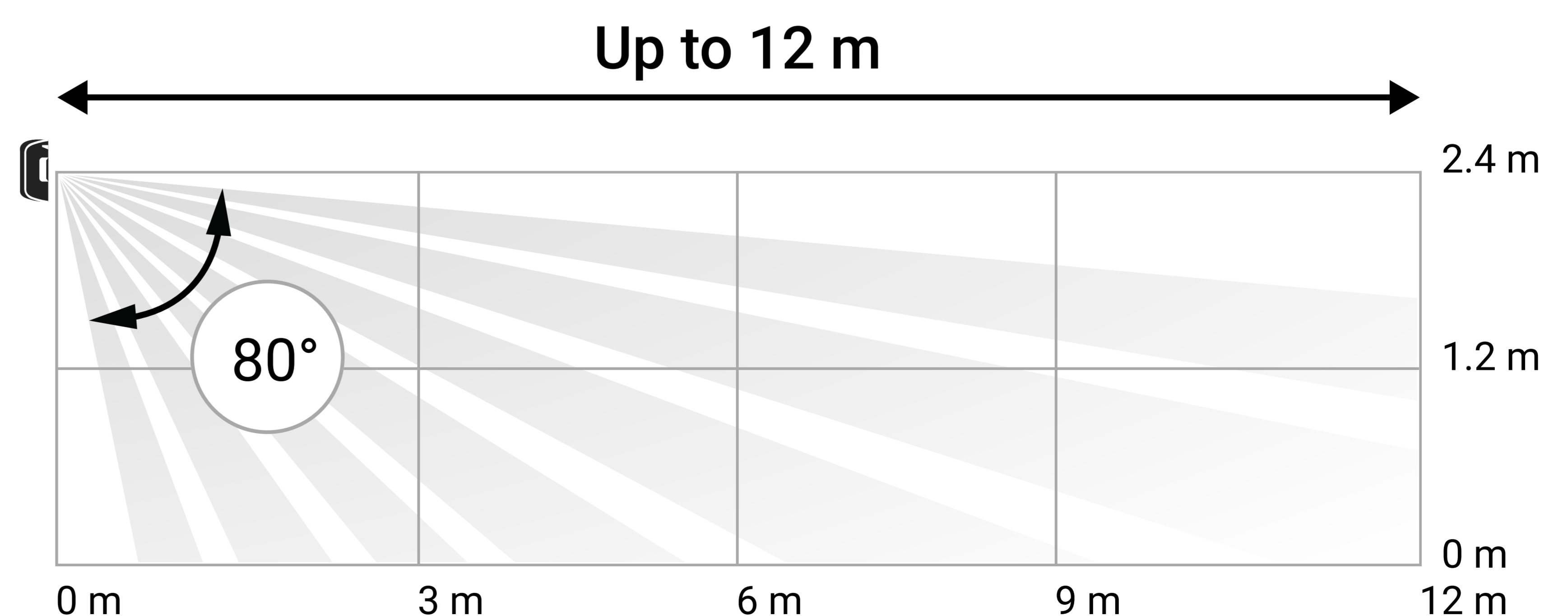
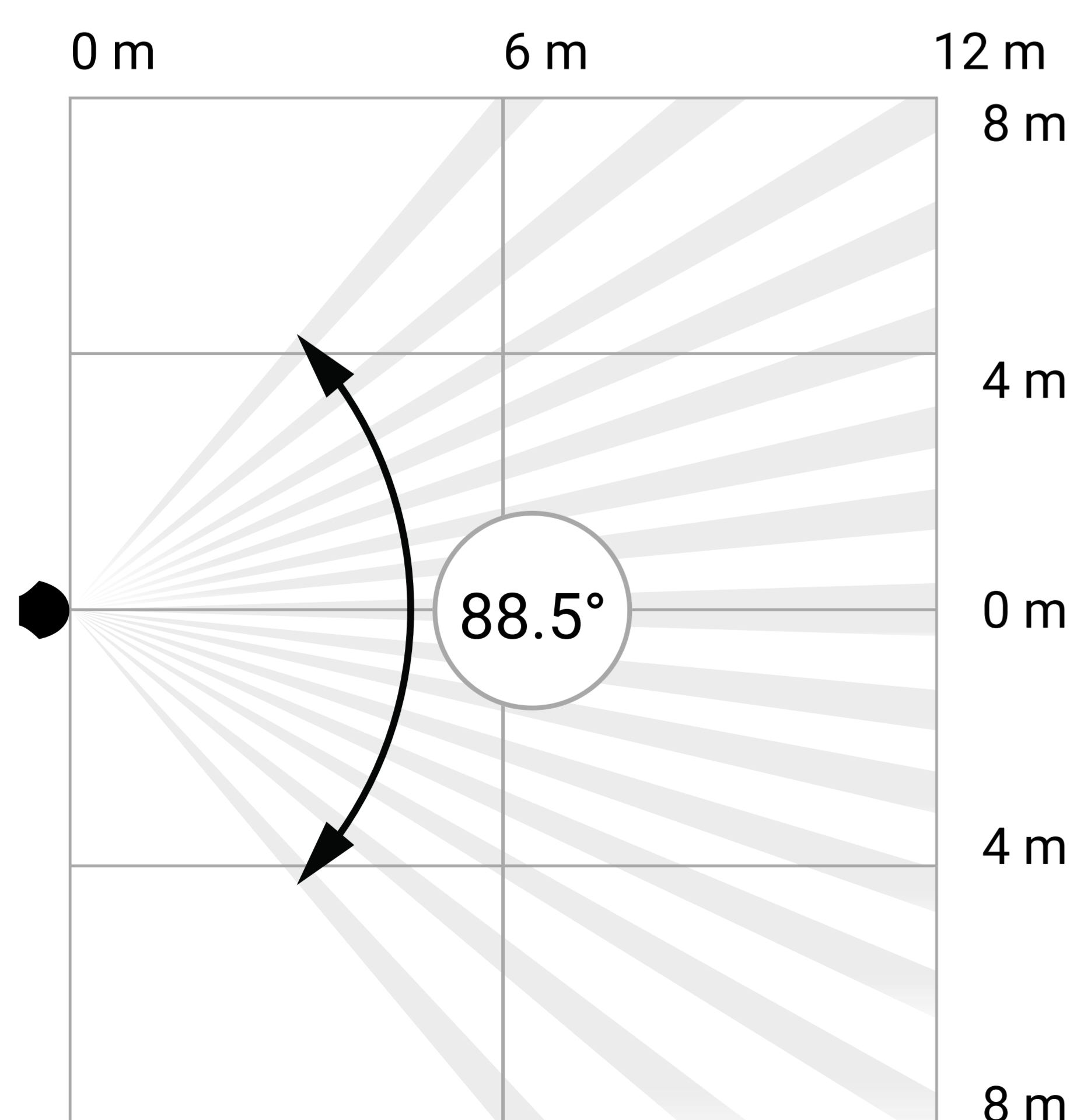


Remote control and setup via the app



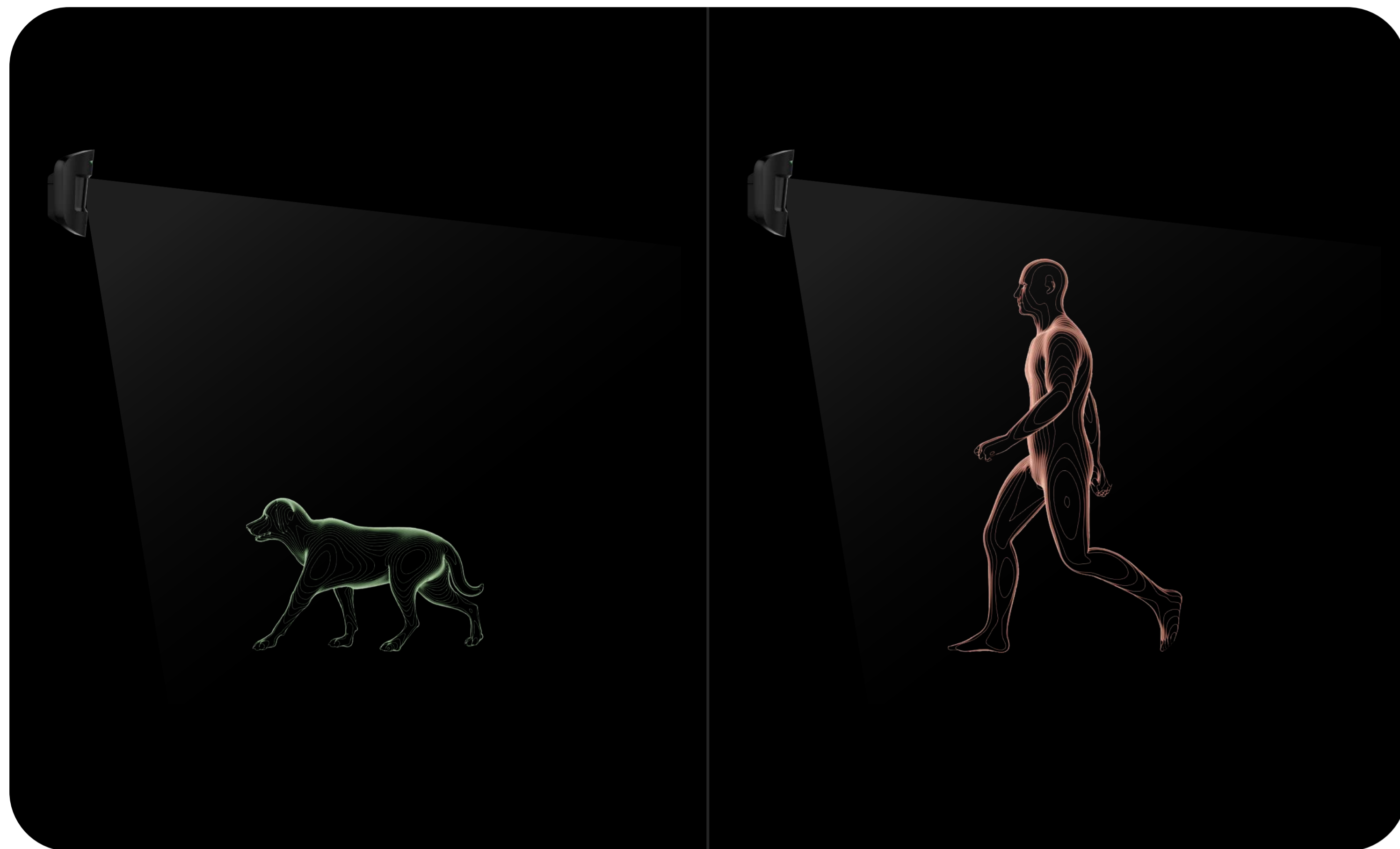
Connecting via QR code

Angles and range



False alarm prevention

MotionProtect Jeweller combines special optics and software to filter false alarms. When professionally installed, the detector ignores pets and doesn't react to the most common sources of false alarms.

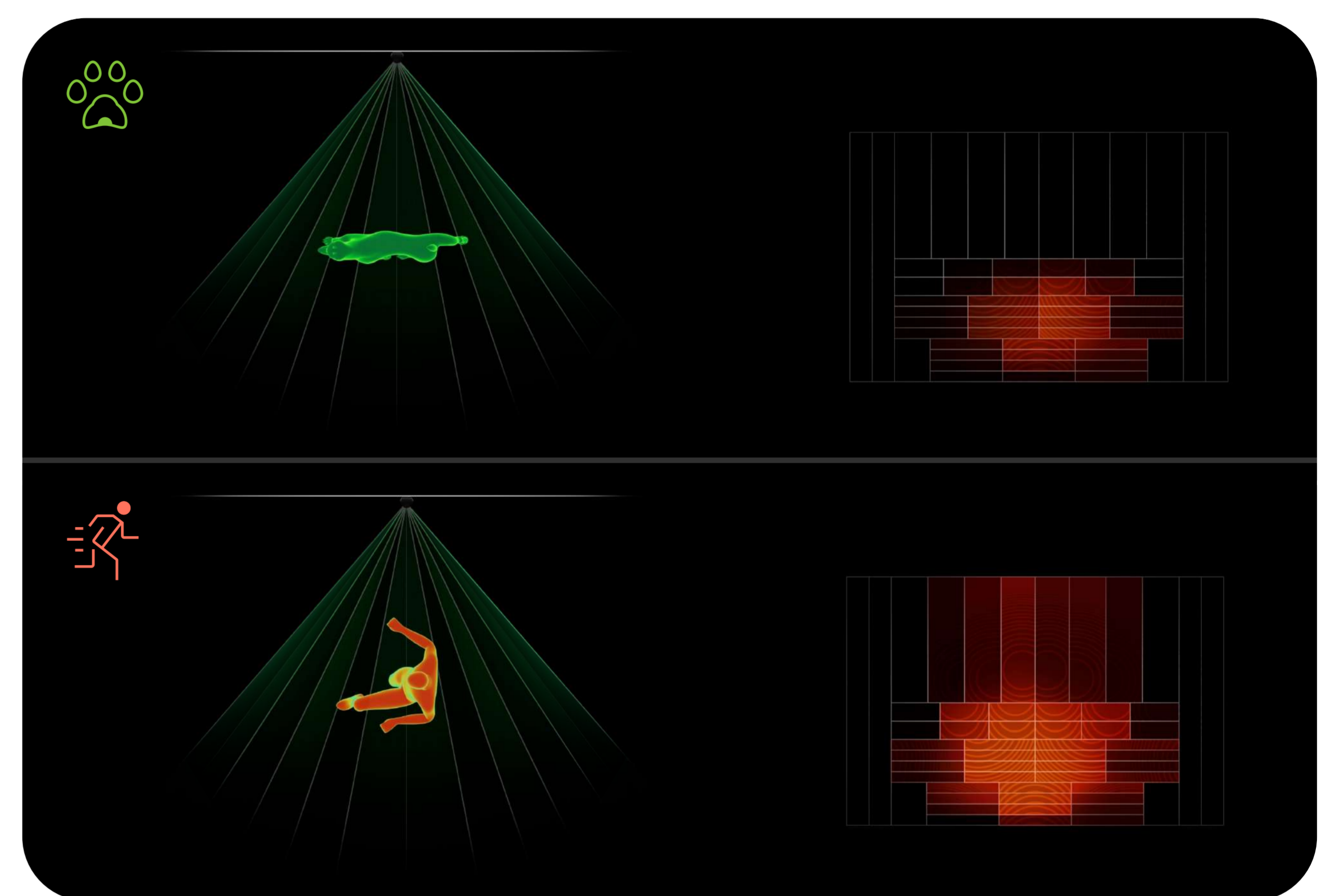


Optics

The detector lens increases sensitivity to human motion, cutting off false alarms to other sources of IR radiation. It is designed so that potential IR radiation from pets and other interferences affect only the small lens sections. Large sections, on the contrary, are aimed at the most likely places of burglar motion.

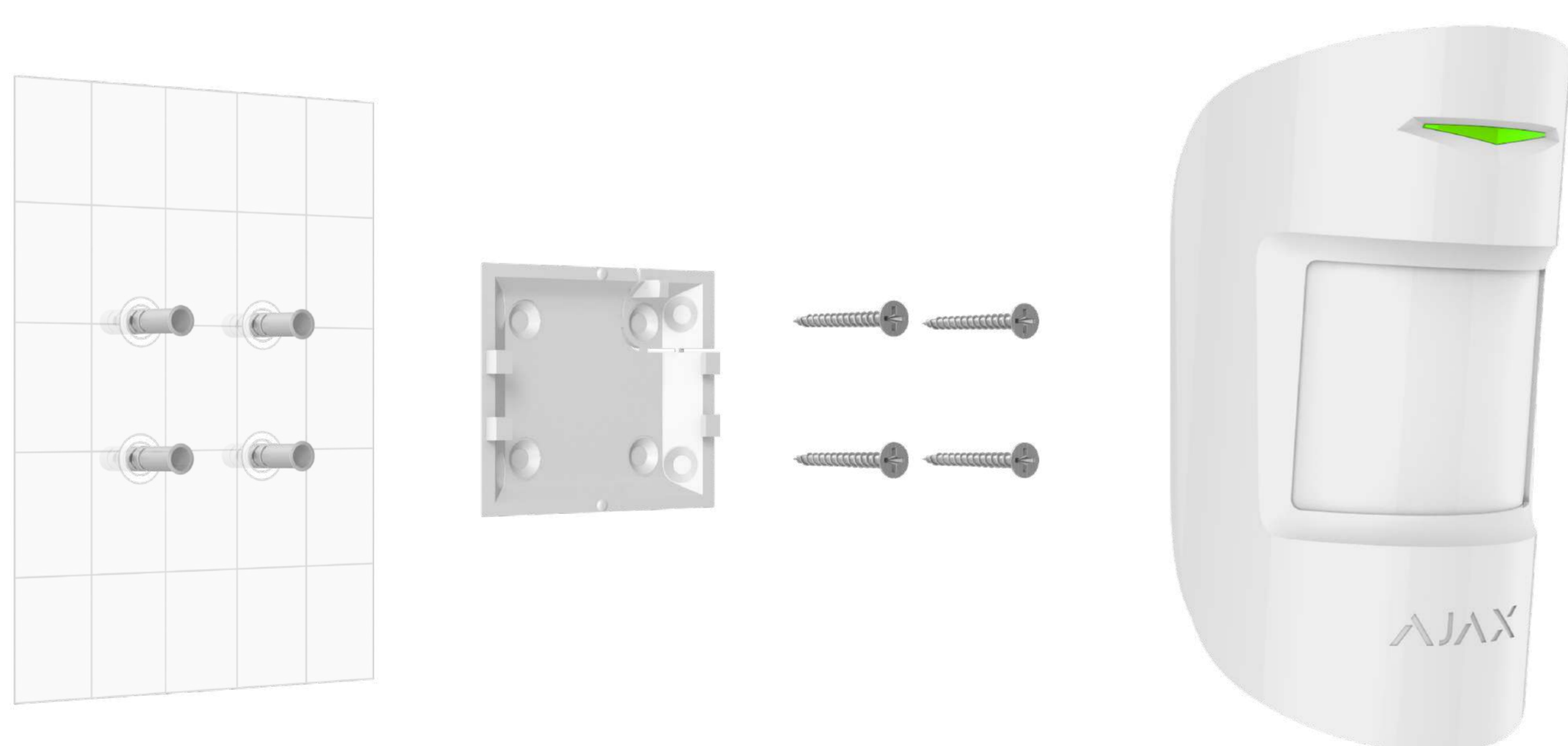
Software

For additional protection against false alarms, the detector uses the SmartDetect algorithm. The armed detector constantly analyses the thermal diagram from the PIR sensor: the intensity of IR radiation, the size of the thermal spots, the speed of movement and other parameters.



Installation

When properly installed and configured, the detector does not react to common sources of false alarms and pets under 50 cm tall and 20 kg in weight. For seamless installation, it has pre-installed batteries and the SmartBracket mounting panel. So, installers don't need to disassemble the detector and won't damage the electronics during installation.





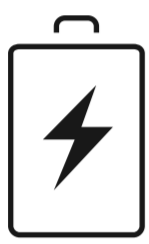
Jeweller

communication technology

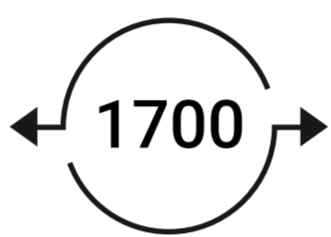


Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know which device was triggered, when and where it happened.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real time. Supporting **up to 1,700 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both end users and installers.




Up to 5 years of operation on pre-installed battery



Up to 1,700 m of two-way encrypted wireless communication between hub and detector

Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs Range extenders all Ajax radio signal range extenders
Communication with control panel	 Jeweller communication technology Frequency bands 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 sales	Motion detection	Sensitive element 1 × PIR sensor Detection distance up to 12 m When installed at a height of 2.4 m Detection angles horizontal – 88.5° vertical – 80°

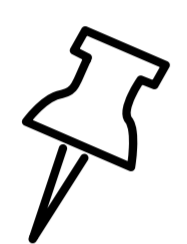
Communication with control panel	<p>Maximum effective radiated power (ERP) ≤ 20 mW</p> <p>Communication range up to 1,700 m In an open space</p> <p>Polling interval 12–300 s Adjusted by PRO or user with admin rights in the Ajax app</p> <p>Protection against forgery Device authentication</p>	Motion detection	<p>Motion detection speed from 0.3 to 2.0 m/s The direction of the detector lens should be perpendicular to an alleged intrusion path into the facility.</p> <p>Temperature compensation</p> <p>Sensitivity 3 levels Adjusted by PRO or user with admin rights in the Ajax app</p> <p>Pet immunity weight: up to 20 kg height: up to 50 cm</p>
Power supply	<p>Battery 1 x CR123A Pre-installed</p> <p>Battery life up to 5 years</p>	Installation	<p>Recommended installation height 2.4 m</p> <p>Operating temperature range from –10°C to +40°C</p> <p>Operating humidity up to 75%</p> <p>Protection class IP50</p>
Enclosure	<p>Colour white, black</p> <p>Dimensions 110 × 65 × 50 mm</p> <p>Weight 86 g</p> <p>Tampering alarm</p>	Complete set	<p>MotionProtect Jeweller 1 x CR123A Pre-installed SmartBracket Installation kit Quick Start Guide</p>

DoorProtect Jeweller

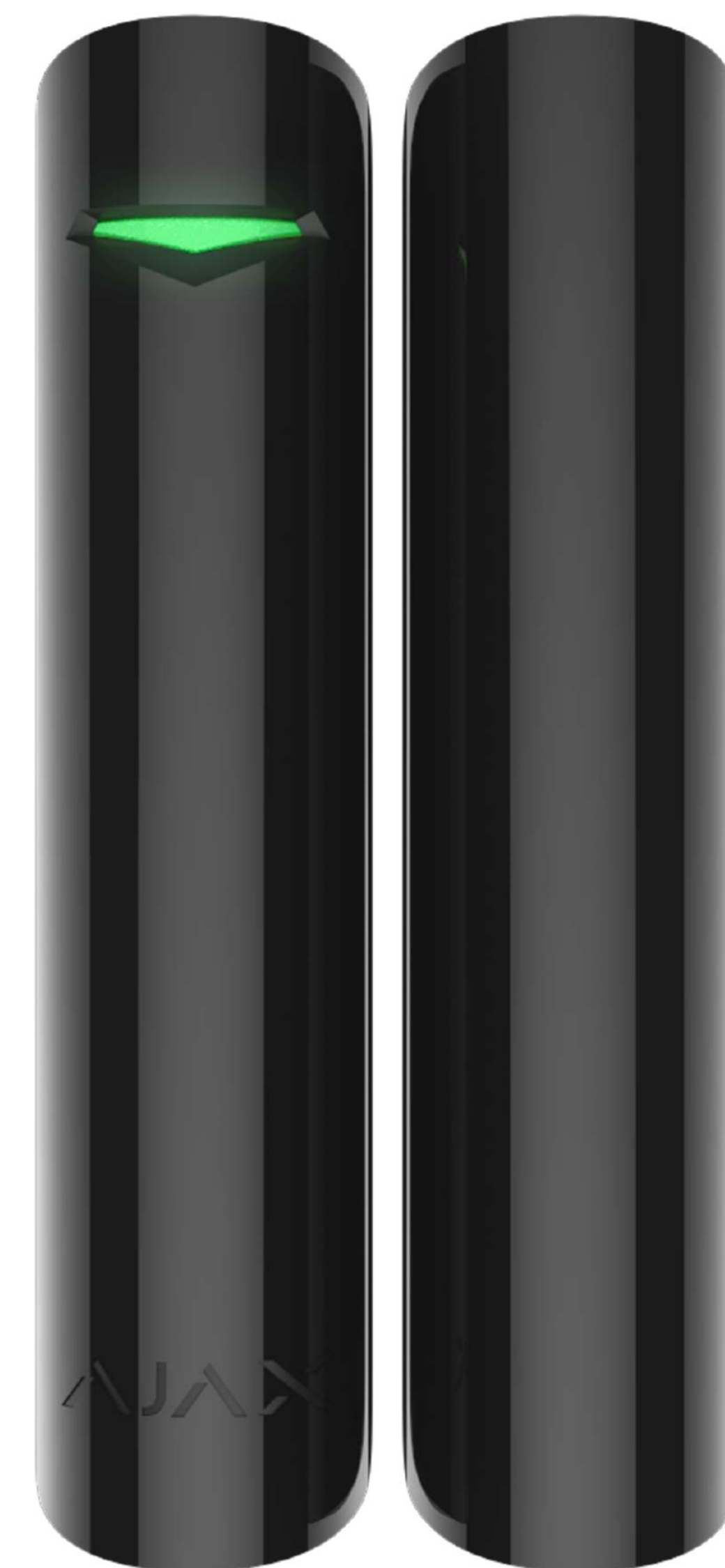
Wireless indoor opening detector



An Ajax hub is required for operation.
Find the detailed information on the
device at the link:



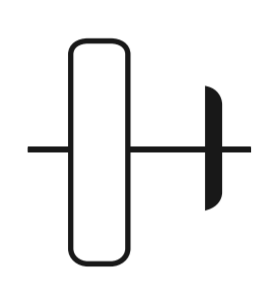
<https://ajax.systems/support/devices/doorprotect/>



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GRADE
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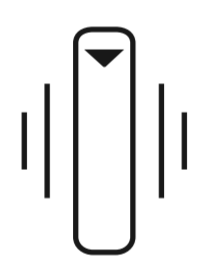
Key features



More installation options with two
magnets of different size



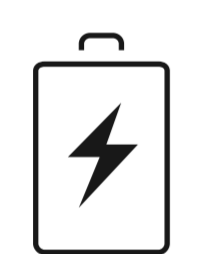
The reed switch with a resource
of 2,000,000 openings



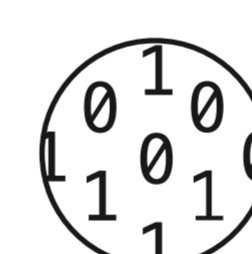
Protected against reed switch
chattering



Additional NC input for connecting a
third-party detector



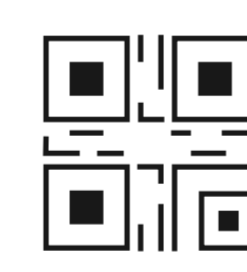
Up to 7 years of operation on pre-
installed battery



Up to 1,200 m of two-way encrypted
wireless communication



Remote control and setup via the app




Pairing via QR code

Jeweller communication technology

Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know which device was triggered, when and where it happened.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real time. Supporting **up to 1,200 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both end users and installers.

Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs Range extenders all Ajax radio signal range extenders
Communication with control panel and range extenders	 Jeweller communication technology Frequency bands 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 sales Maximum effective radiated power (ERP) ≤ 20 mW Communication range up to 1,200 m In an open space Polling interval 12–300 sec Adjusted by PRO or user with admin rights in the Ajax app Protection against forgery Device authentication	Detection	Sensing element 1 × reed switch Opening sensors resource 2,000,000 openings Third-party detector connection wired detector with the normally closed (NC) contact type

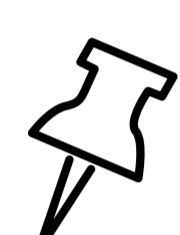
Power supply	<div>1 × CR123A, 3 V</div> <div>Pre-installed</div> <div>up to 7 years of battery life</div>	Installation	<div>Operating temperature range</div> <div>from −10°C to +40°C</div> <div>Operating humidity</div> <div>up to 75%</div> <div>Ingress protection</div> <div>IP50</div>
Enclosure	<div>Colours</div> <div>white, black</div> <div>Dimensions</div> <div>Ø 20 × 90 mm</div> <div>Weight</div> <div>29 g</div> <div>Tampering alarm</div>	Complete set	<div>DoorProtect Jeweller</div> <div>2 magnets</div> <div>(small and large)</div> <div>1 × CR123A (pre-installed)</div> <div>SmartBracket</div> <div>Installation kit</div> <div>External contact for NC detector</div> <div>Quick Start Guide</div>

KeyPad Jeweller

Wireless touch keypad.

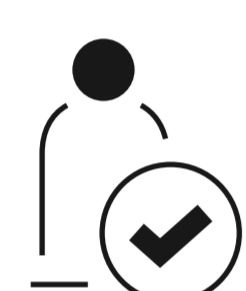


An Ajax hub is required for operation.
Find the detailed information on the device at the link:



ajax.systems/support/devices/keypad/

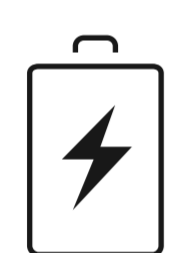
Key features



Up to 200 personal passcodes



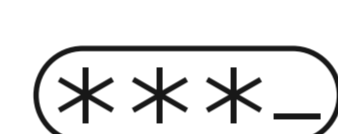
Duress code



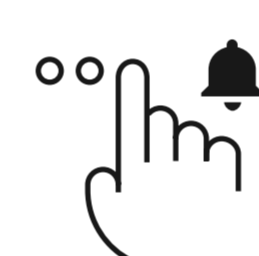
Up to 2 years of the pre-installed batteries life



Remote control and setup via the app



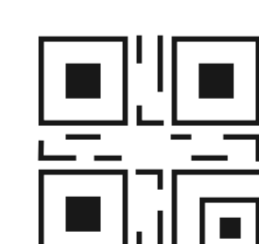
Protection against the passcode guessing



Panic button



SmartBracket mounting panel for the ease of installation



Pairing with the system via QR code

Security system management

KeyPad supports the general passcode, the personal passcodes, and the security activation without entering a passcode. The personal passcodes provide detailed information: the app log and notifications show the security mode changing event and the name of the user who did it.

The keyboard also allows you to create passcodes for those who are not added to the hub users or use the system from time to time. In this case, the users and the monitoring company operator also know exactly who and when changed the security mode. It is convenient, for example, to create a passcode for a cleaning company.

Duress code

Duress code allows users to simulate disarming via Keypad. The sirens, the app, and the keypad indication will not give away the user, but the alarm signal is instantly transmitted to a central monitoring station. The security system users also receive notifications on this event.



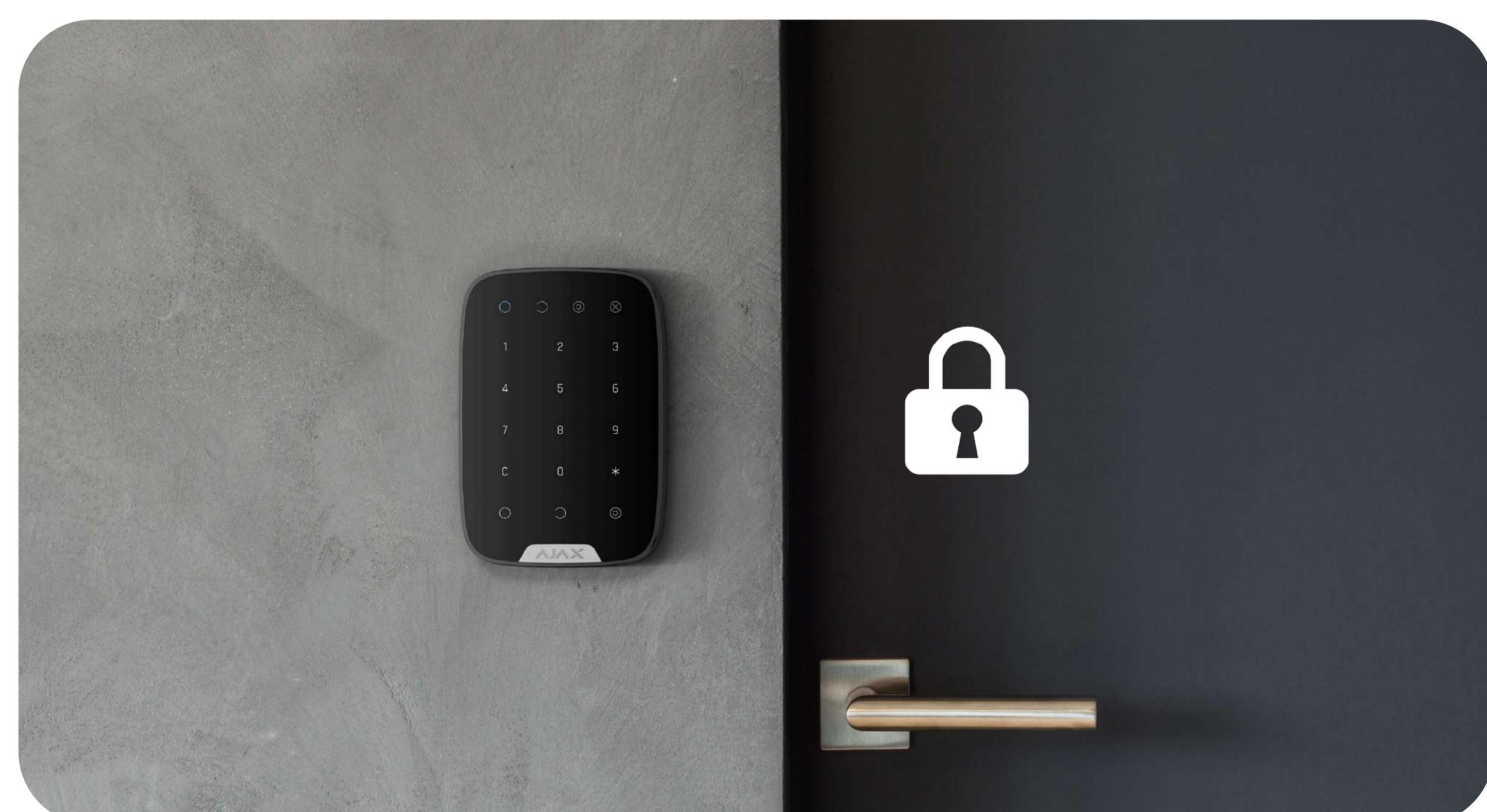
Function button

Keypad featured the **Function button**, which can be used as a panic button. Or, you can set it to mute the **Interconnected Fire Detectors Alarms**: press the keyboard button to mute the sirens of the Ajax fire detectors.



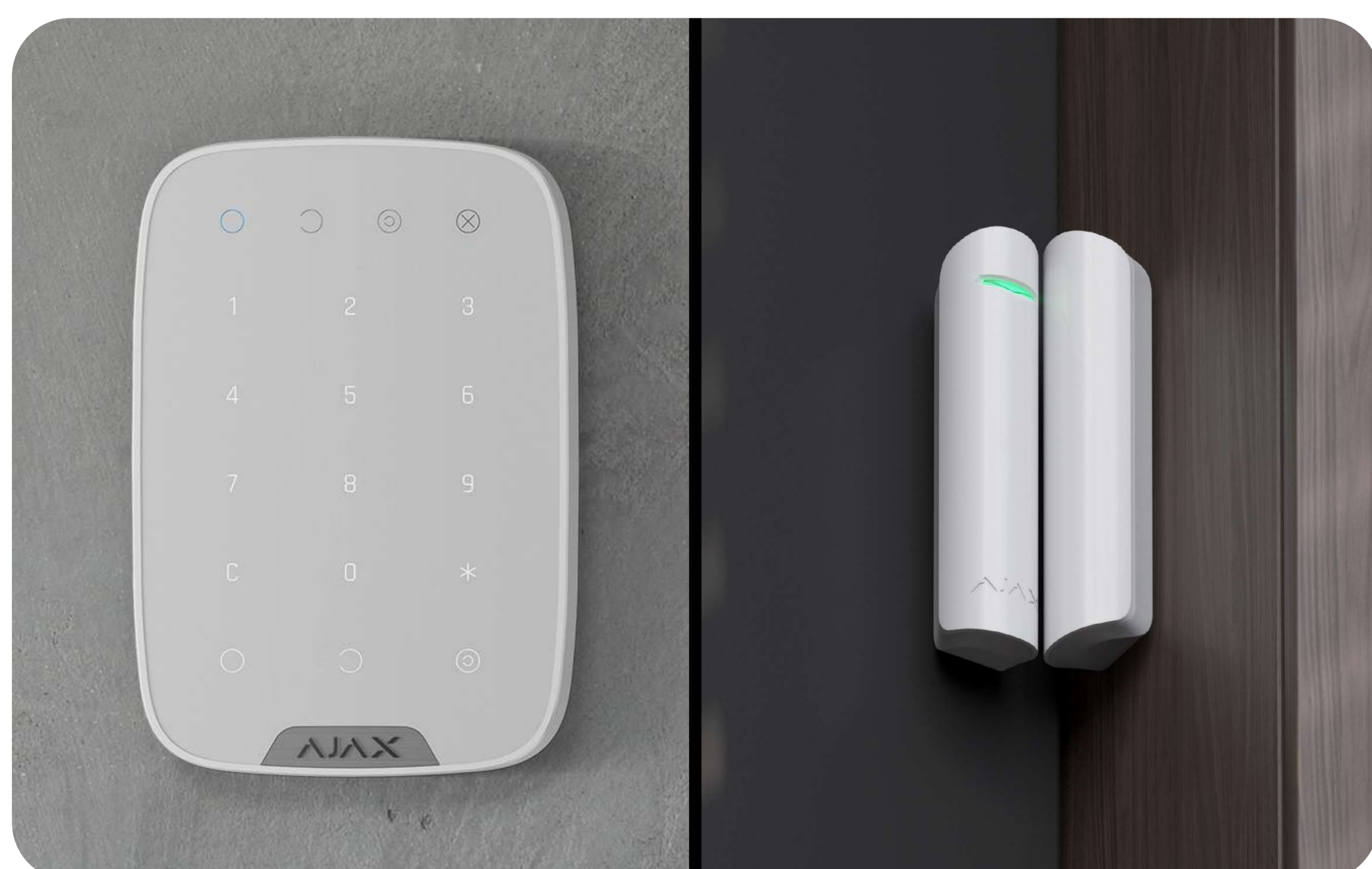
Unauthorized access auto-lock

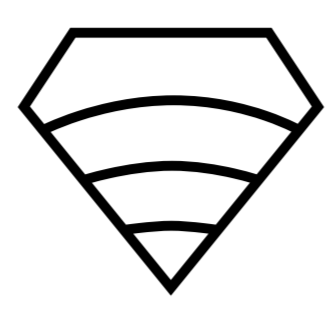
Three wrong passcodes entered a row blocks the keypad for the time adjusted in the settings. The hub will inform the users and the security company about the incident, and all the passcodes will be ignored during the auto-lock time.



Two-stage arming

The feature splits the arming process into two stages: initiation and finishing. Users can initiate arming via Keypad. In this case, the system will be armed when a Second-Stage Device is triggered. For instance, when closing the door on which the DoorProtect detector is installed.





Jeweller


communication technology



The **Jeweller** radio protocol provides **fast and reliable two-way communication** between the hub and the system devices. The protocol delivers instant data-rich alarms and events: the security companies and the users know who and when has changed a security mode or press a panic button.

Jeweller features **encryption** and **authentication** to prevent spoofing, and **polling** to display the devices' statuses. Supporting **up to 1,700 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both system owners and installers.

Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs All Ajax hubs Range extenders all Ajax radio signal range extenders
Communication with the hub or range extender	 Jeweller communication technology Frequency bands 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 sales region Maximum effective radiated power (ERP) ≤ 20 mW	Features	Security mode indication The device is activated and the touch buttons light up once the user touches the keyboard, so it's easy to enter the passcode even in the dark. Pressing the buttons is accompanied by an audible signal. Passcodes up to 200 personal passcodes One per user. The number of users depends on the hub model 1 general passcode One per the keyboard

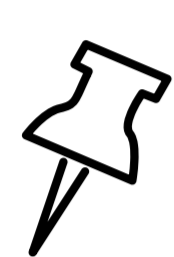
Communication with the hub or range extender	<p>Communication range up to 1,700 m In an open space</p> <p>Polling interval 12 – 300 s Adjusted by PRO or user with admin rights in the Ajax app</p> <p>Protection against spoofing Device authentication</p>	Features	<p>Duress code up to 200 personal passcodes One per user. The number of users depends on the hub model</p> <p>One general passcode for the keyboard</p> <p>Function button Panic button To activate an alarm</p> <p>Mute fire alarms Button mutes the Interconnected Fire Detectors Alarms</p> <p>Code guessing protection Keyboard locks for 3-180 minutes if an incorrect code is entered 3 times in a row within 1 minute. The auto-lock time is adjusted by PRO or user with admin rights in the Ajax app.</p>
Power supply	<p>Battery 4 × AAA battery Pre-installed</p> <p>Battery life up to 2 years</p>	Installation	<p>Operating temperature range from -10°C to +40°C</p> <p>Operating humidity up to 75%</p>
Enclosure	<p>Colours white, black</p> <p>Dimensions 150 × 103 × 14 mm</p> <p>Weight 197 g</p> <p>Tampering alarm</p>	Complete set	<p>KeyPad Jeweller 4 × AAA battery Pre-installed SmartBracket mounting panel Installation kit Quick Start Guide</p>

StreetSiren Jeweller

Wireless siren with LED frame.



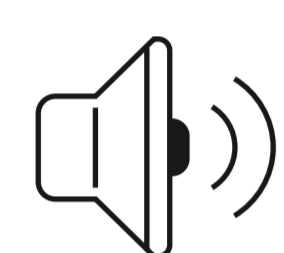
An Ajax hub is required for operation.
Find the detailed information on the device at the link:



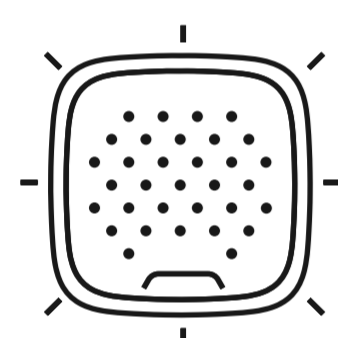
ajax.systems/support/devices/streetsiren/



Key features



Adjustable volume: from 85 dB to 113 dB



Delay and security mode
changing indication



IP54 protection class



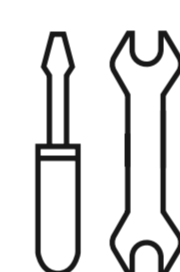
Remote control and setup via the app



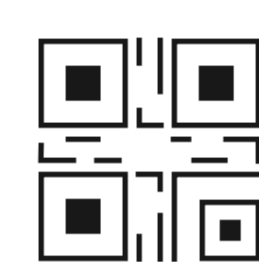
Adjustable alarm duration:
from 3 s to 3 min



Door opening notifications

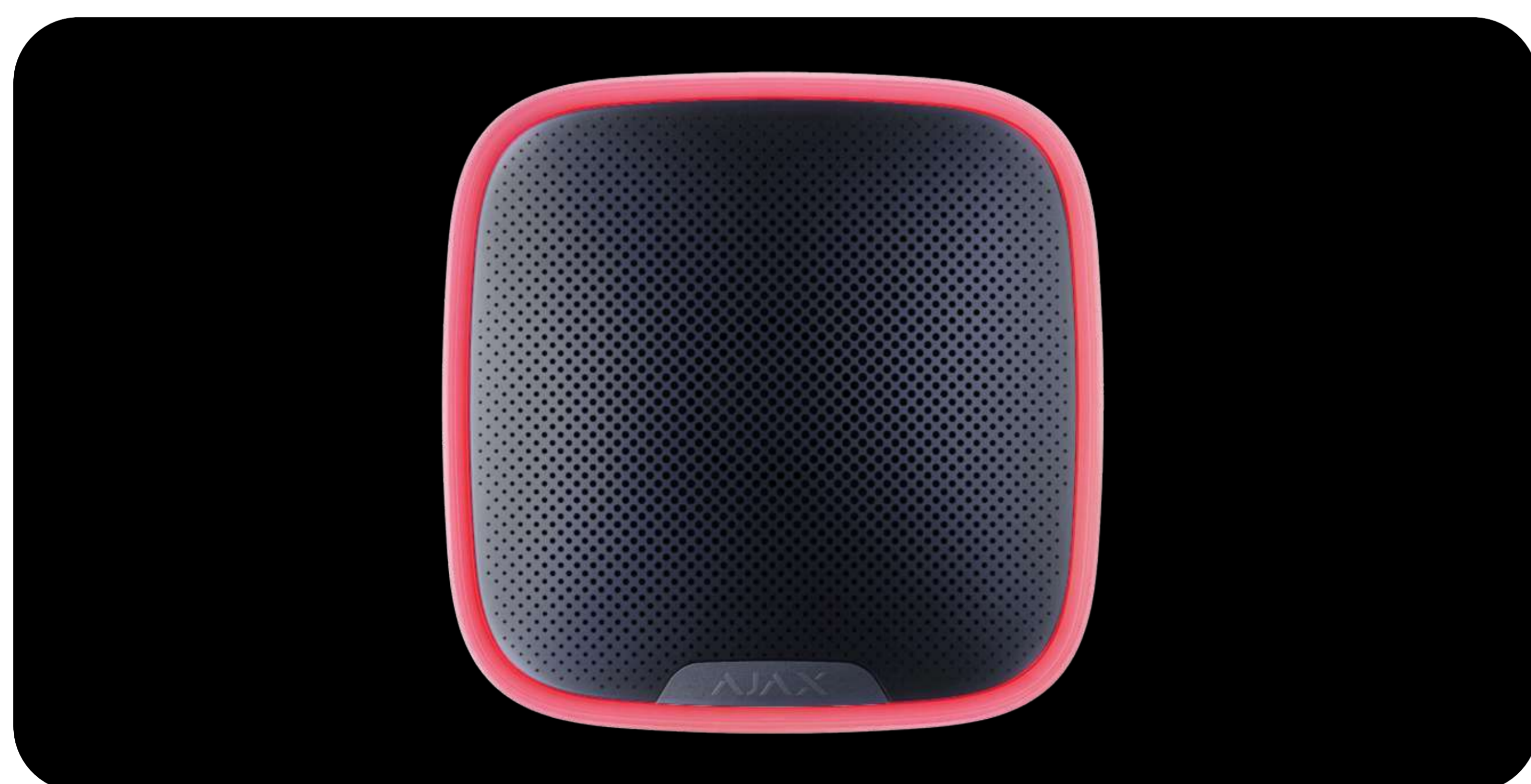


Effortless installation and replacement



Connecting via QR code

Operating principle



Informs about alarms

The siren responds to tamper and security system alarms in less than a second. It is loud enough to scare away intruders and attract the attention of neighbours.

Serves as a security status indicator

The siren LED notifies that the facility is armed, and a sound signal indicates **Delay When Entering / Leaving**. These are helpful features for the users who control the security system with a keypad or key fob.



Informs about alarms

The siren responds to tamper and security system alarms in less than a second. It is loud enough to scare away intruders and attract the attention of neighbours.




Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know who and when has armed or disarmed the facility.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real-time. Supporting **up to 1,500 m** of wireless connectivity between StreetSiren and hub (or range extender), Jeweller is ready to protect facilities and deliver **the best user experience** for both end-users and installers.

Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs Range extenders all Ajax radio signal range extenders
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Communication with control panel and range extenders	<div> Jeweller</div> <div>communication technology</div> <div>Frequency bands 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 sales.</div> <div>Maximum effective radiated power (ERP) ≤ 20 mW</div> <div>Communication range up to 1,500 m In an open space.</div> <div>Polling interval 12 – 300 s Adjusted by PRO or user with admin rights in the Ajax app.</div> <div>Protection against forgery Device authentication</div>	Features	<div>Alarm type acoustic and light</div> <div>Alarm volume from 85 to 113 dB at a distance of 1 m Adjusted by PRO or user with admin rights in the Ajax app.</div> <div>Alarm duration from 3 s to 3 min Adjusted by PRO or user with admin rights in the Ajax app.</div> <div>Siren sound frequency 3.5 ± 0.5 kHz</div> <div>Chime The siren makes a special sound to notify that the opening detectors are triggered when the system is disarmed.</div>
Power supply	<div>Main power supply 4 × CR123A battery Pre-installed</div> <div>Optional power supply 12 V$\overline{=}$, 1.5 A</div> <div>Battery life up to 5 years</div>	Installation	<div>Operating temperature range from -25°C to +60°C</div> <div>Operating humidity up to 95%</div> <div>Protection class IP54</div>

Enclosure	<p>Colours white, black</p> <p>Dimensions 75 × 76 × 27 mm</p> <p>Weight 97 g</p> <p>Anti-sabotage tampering alarm Triggered when the device body is opened.</p> <p>accelerometer Activated when someone's try to move or dismount the device.</p>	Complete set	<p>StreetSiren Jeweller</p> <p>4 × CR123A battery</p> <p>Pre-installed</p> <p>SmartBracket</p> <p>Installation kit</p> <p>Quick Start Guide</p>
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HomeSiren Jeweller

Wireless siren with external LED connector.

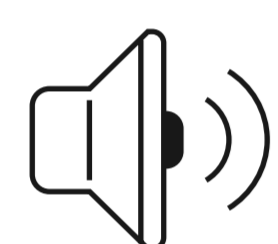


An Ajax hub is required for operation.
Find the detailed information on the device at the link:

 <https://ajax.systems/support/devices/homesiren/>



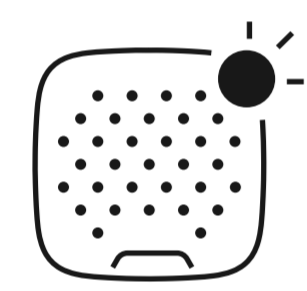
Key features



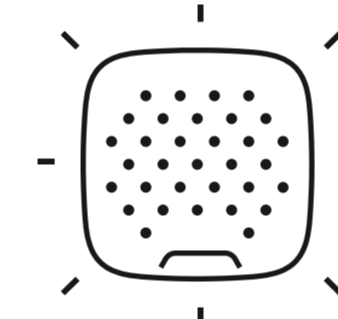
Adjustable volume: from 80 dB to 98 dB



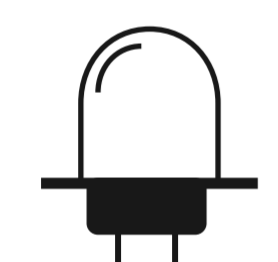
Adjustable alarm duration:
from 3 to 180 s



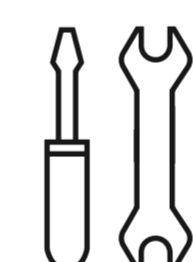
Delay and security mode
changing indication



Door opening notifications



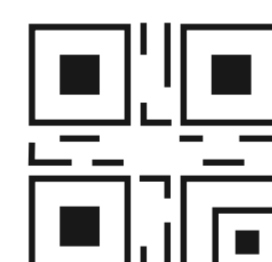
External LED connector



Effortless installation and replacement

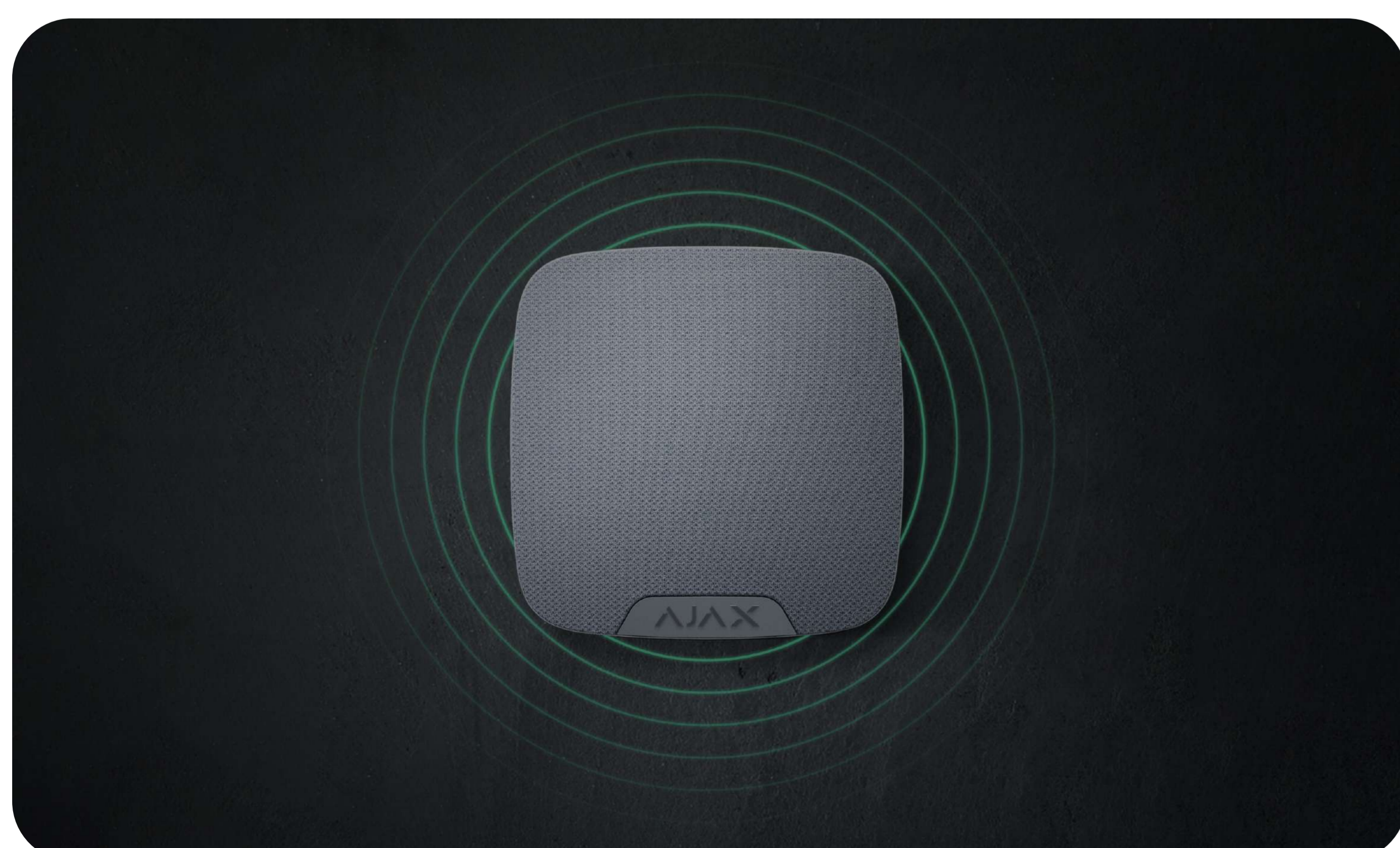


Remote control and setup via the app



Connecting via QR code

Operating principle

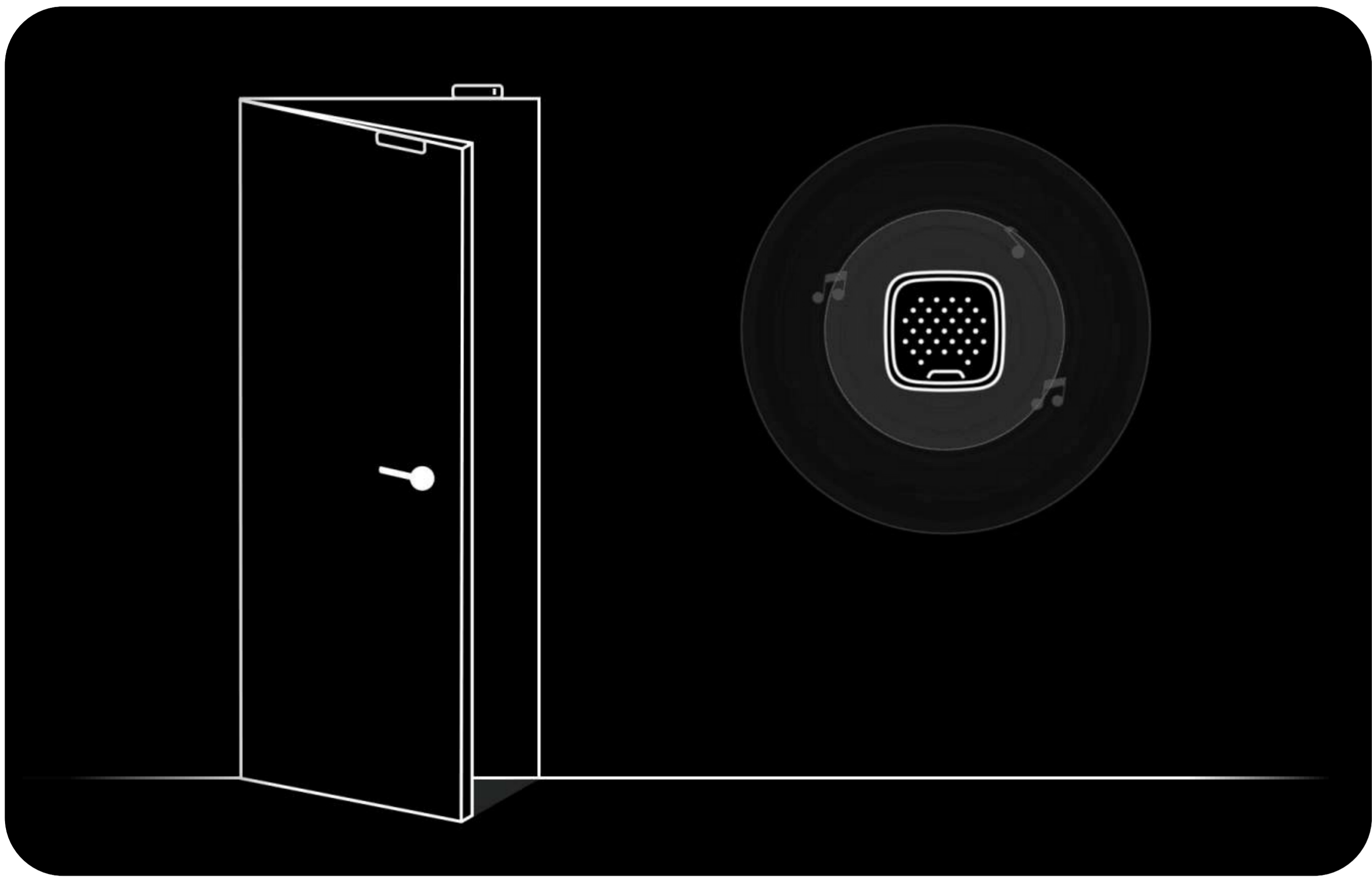


Informs about alarms

The siren responds to tamper and security system alarms in less than a second. It is loud enough to scare away intruders and attract the attention of neighbours.

Serves as a security status indicator

The siren LED notifies that the facility is armed, and a sound signal indicates **Delay When Entering / Leaving**. These are helpful features for the users who control the security system with a keypad or key fob.



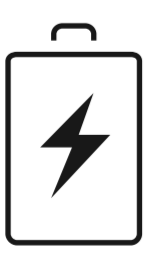
Notifies on door opening

When the **Chime** feature is enabled, the siren makes a special sound to indicate that the opening detectors are triggered when the system is disarmed. The feature is used, for example, in stores to notify employees that someone has entered the building.

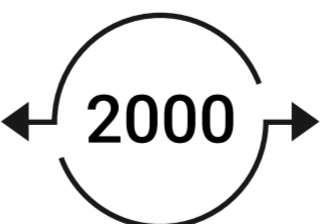


Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know who and when has armed or disarmed the facility.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real-time. Supporting up **to 2,000 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both end-users and installers.




Up to 5 years of operation on pre-installed battery



Up to 2,000 m of two-way encrypted wireless communication between hub and siren

Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs Range extenders all Ajax radio signal range extenders
Communication with control panel and range extenders	 Jeweller communication technology Frequency bands 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 sales Maximum effective radiated power (ERP) ≤ 20 mW Communication range up to 2,000 m In an open space Polling interval 12 – 300 s Adjusted by PRO or user with admin rights in the Ajax app Protection against forgery Device authentication	Features	Types of notifications Acoustic LED Alarm volume from 80 to 98 dB at a distance of 1 m Adjusted by PRO or user with admin rights in the Ajax app Alarm duration from 3 to 180 s Adjusted by PRO or user with admin rights in the Ajax app Siren sound frequency 3.4 ± 0.5 kHz Additional LED connection 3 V An external LED works in parallel with the siren built-in LED and fully replicates its indication Chime The siren makes a special sound to notify that the opening detectors are triggered when the system is disarmed

Power supply	Battery 2 × CR123A Pre-installed Battery life up to 5 years	Installation	Operating temperature range from -10°C to +40°C Operating humidity up to 75%
Enclosure	Colours white, black Dimensions 75 × 76 × 27 mm Weight 97 g Tampering alarm	Complete set	HomeSiren Jeweller 2 × CR123A battery Pre-installed SmartBracket Connector for LED indicator Installation kit Quick Start Guide