

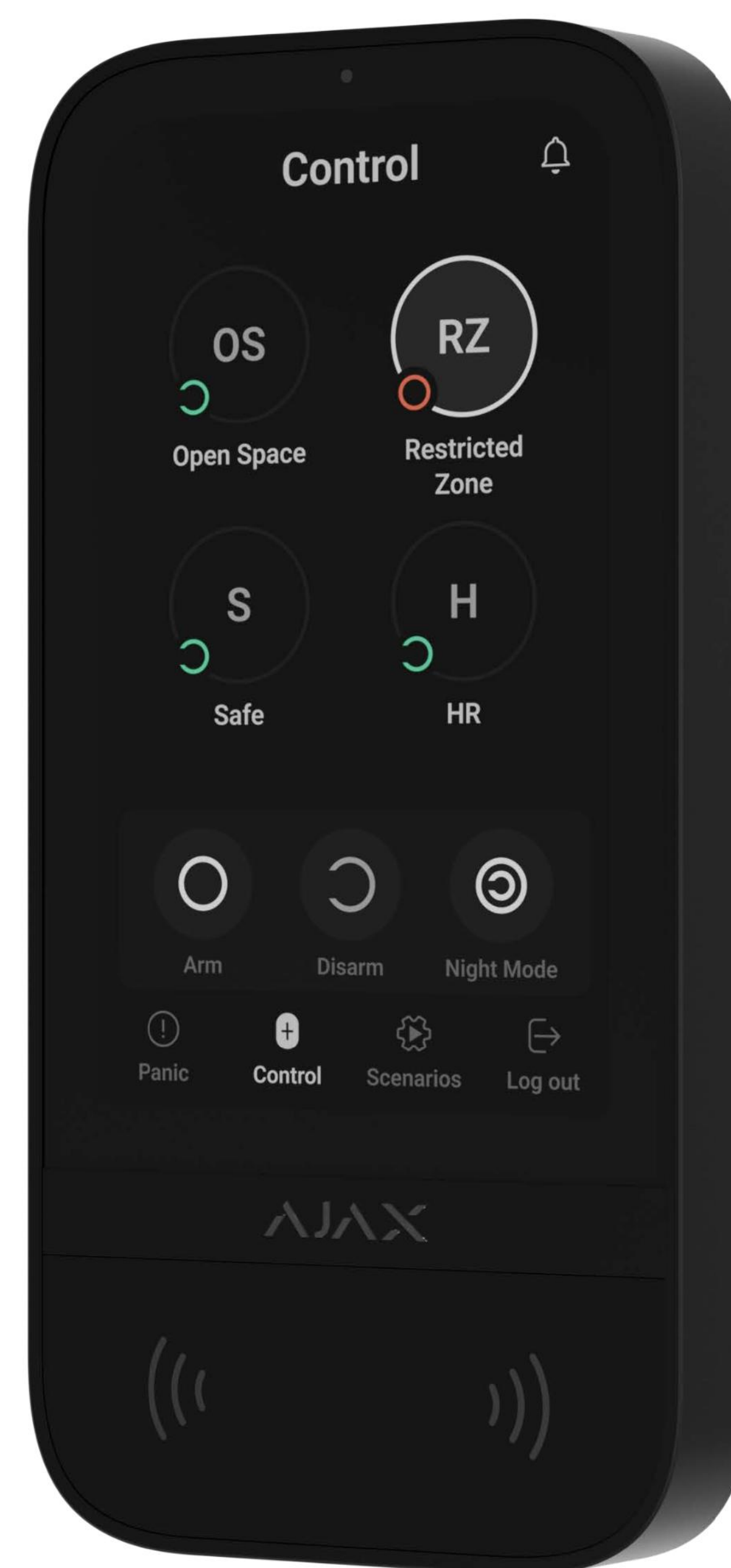
# KeyPad TouchScreen Jeweller

Wireless keypad with touch screen and contactless authorization.



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

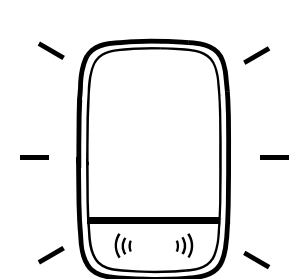
[ajax.systems/support/devices/keypad-touchscreen/](https://ajax.systems/support/devices/keypad-touchscreen/)



## Intelligent security management

KeyPad TouchScreen inherits the interface of Ajax smartphone apps to provide easy and familiar system control. A 5-inch touchscreen allows you to access any group's current security mode quickly. It activates by raising a hand nearby and has an automatic brightness control.

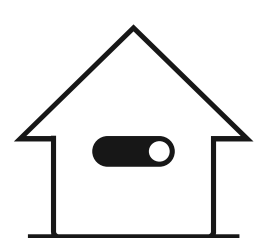
A keypad has a sound indication and can notify about alarms, delays when entering/leaving, and door opening when the system is disarmed. The volume is adjusted in Ajax apps. The keypad also displays the system integrity check result and informs about malfunctions when arming.



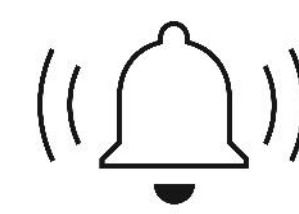
Auto screen wakeup and brightness adjustment



Malfunction reports when arming the system



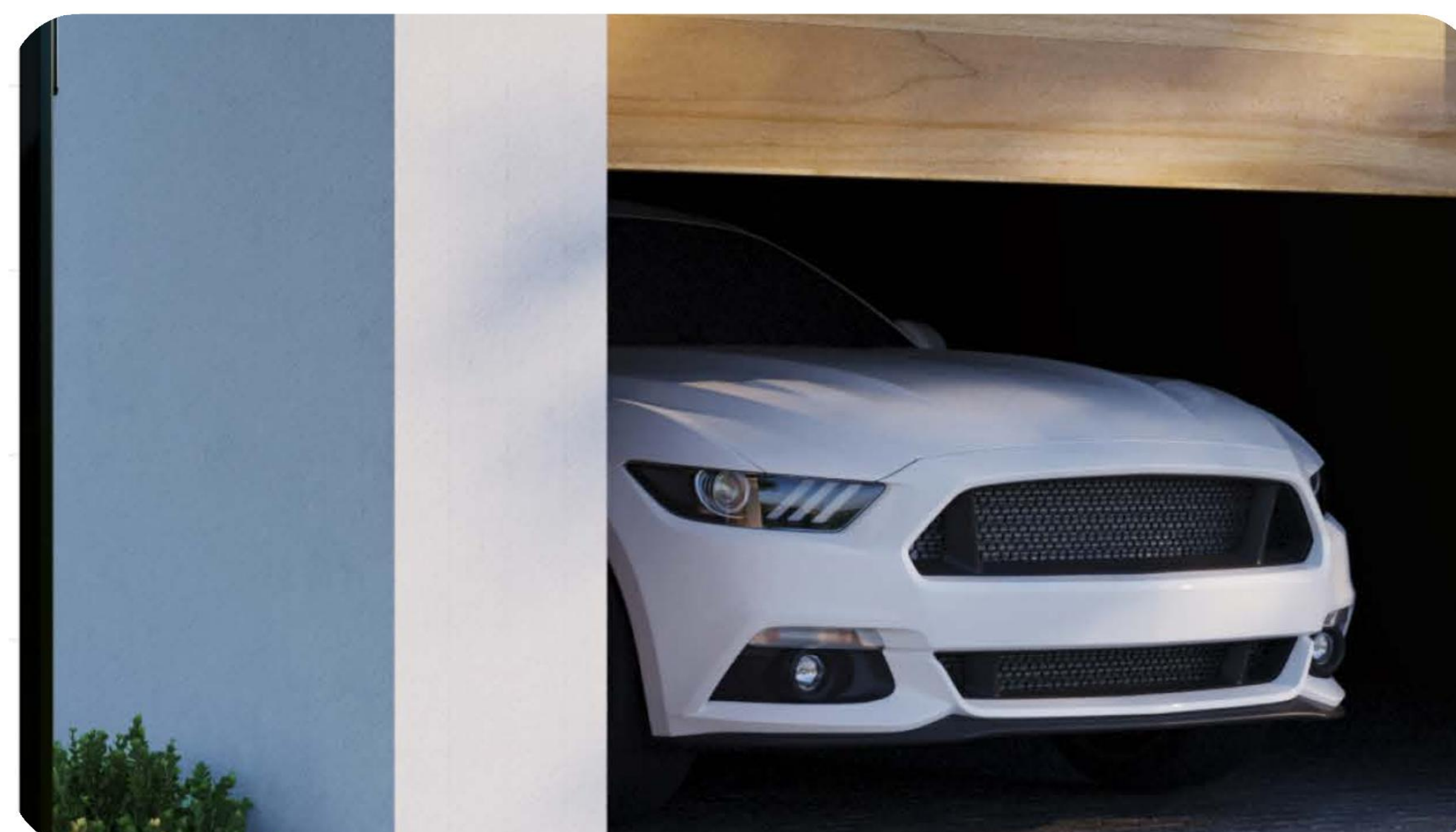
Easy group management



Alarms and events with sound indication

## Automation control

The keypad has a separate control screen for automation devices. It holds up to 6 seats, and each can place one automation device or a group of devices for more convenient control of several switches, relays, or sockets simultaneously.



# Quick and secure authorization

## Pass and Tag access devices



When someone uses the Pass card or the Tag key fob, it's recorded in the event feed of the Ajax apps. The system admin can revoke or restrict the access rights of the contactless access device at any time.

## Code



KeyPad TouchScreen supports code types as follows:  
keypad code (one per keypad)  
personal code (individual for each user)  
code for an unregistered person

## Smartphone



Control the keypad via smartphone with an Ajax app. Only those approved by the admin have access rights.

## User pre-authorization

When the feature is enabled, viewing the current system status and control screen is unavailable. For access, the user must pre-authorize: enter a code or present a personal access device to the keypad.

## Security mode changing confirmation

To confirm the system's security mode change, the user must enter a code or present a personal access device to the keypad.

## Pass and Tag

Contactless access devices

The Pass card and the Tag key fob are equipped with original DESFire® chips, and feature the same functionality but different enclosures. You can choose the form that is convenient for you.

### One Tag or Pass can control 13 security systems.

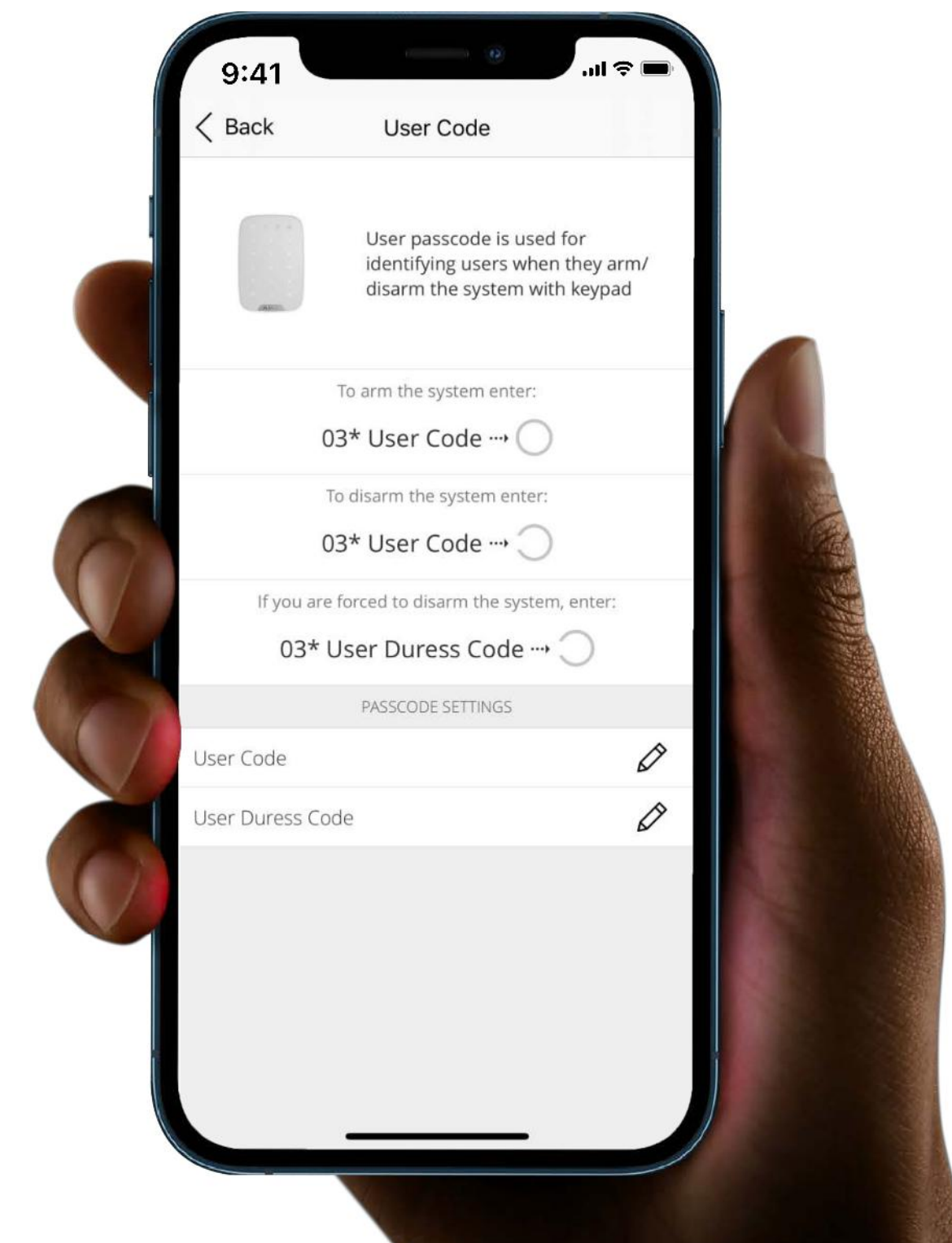
Access devices are sold separately in batches of 3/10/100 pieces.



# Remote control of access permissions

Access permissions and codes can be configured in real-time in the Ajax apps. If code is compromised, the user can change it remotely within a minute. Installer doesn't need to visit an object.

If Pass, Tag, or a smartphone is lost, the admin or a PRO with system configuration rights can instantly block this personal access device in the app. Meanwhile, use a personal code to control the system.



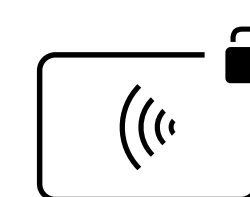
# Comprehensive anti-sabotage protection

KeyPad TouchScreen is protected against code guessing: the screen will be locked after three unsuccessful attempts. The keypad only responds to cards, key fobs, and smartphones authorized in the Ajax app, so controlling the system through a third-party access device is impossible. The enclosure is equipped with a tamper against detaching the keypad from the surface or removing it from the mounting panel. In the event of sabotage, the security company and users receive notifications about it.

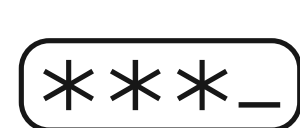
For emergencies, the keypad provides a panel with panic buttons that can notify about three event types: panic, fire, or medical assistance. If the user is forced to disarm the system, they can use a duress code. It simulates disarming and simultaneously sends an alarm to the security company without disclosing the user to the intruder.



Automatic screen locking against code guessing



Protection against authorization via third-party access devices



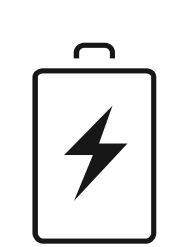
Duress code



Panel with three panic buttons: alarm, fire, and medical assistance

# Autonomy

With daily use<sup>1</sup> KeyPad TouchScreen works for up to 1.5 years with pre-installed batteries. The battery status is displayed in the app. Users also receive advance notifications when it's time to change the batteries. The keypad can also be connected to a 12 V $\equiv$  power supply. In this case, the batteries become a backup power source, so the keypad continues to work even when the main power supply is lost.



Up to 1.5 years of operation with replaceable batteries

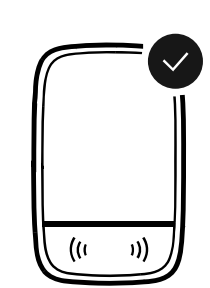


Option to connect an external 12 V $\equiv$  power supply

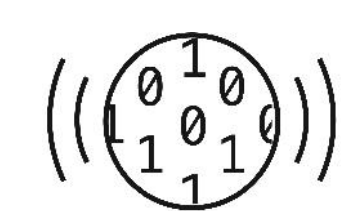
# Encrypted two-way radio communication



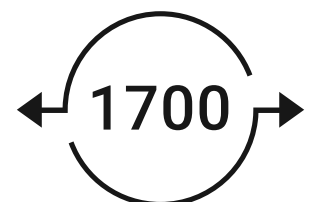
KeyPad TouchScreen supports **Jeweller** and **Wings** radio protocols for reliable wireless communication. Jeweller helps to transfer commands, events, and alarms. Wings provides large data packages transmission due to built-in algorithms for checking and reloading packages. With low power consumption, information is delivered instantly, even in conditions of unstable signal level or communication interruptions.



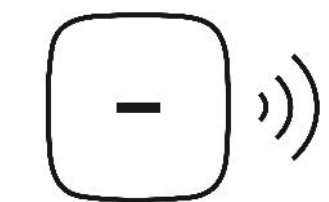
Authentication to eliminate spoofing



Encryption to protect against data theft



Up to 1,700 m of communication range between the keypad and hub or range extender

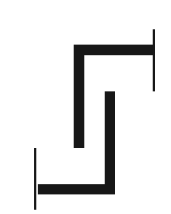


12–300 s device polling interval

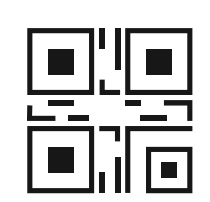
## Hassle-free installation and connecting

KeyPad TouchScreen requires no tools and minimum effort to be installed. It's ready to operate straight out of the box. The device is paired with an Ajax security system in less than a minute.

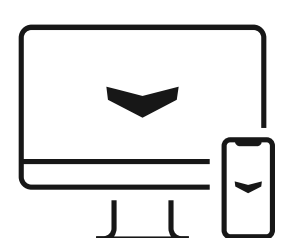
With the SmartBracket mounting panel, the keypad can be installed on any flat surface with the possibility of external power connecting. If necessary, the KeyPad TouchScreen can be reconfigured remotely without site visits.



Installation without enclosure disassembling




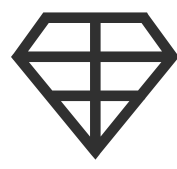
Pairing with a system via QR code



Remote configuration and testing



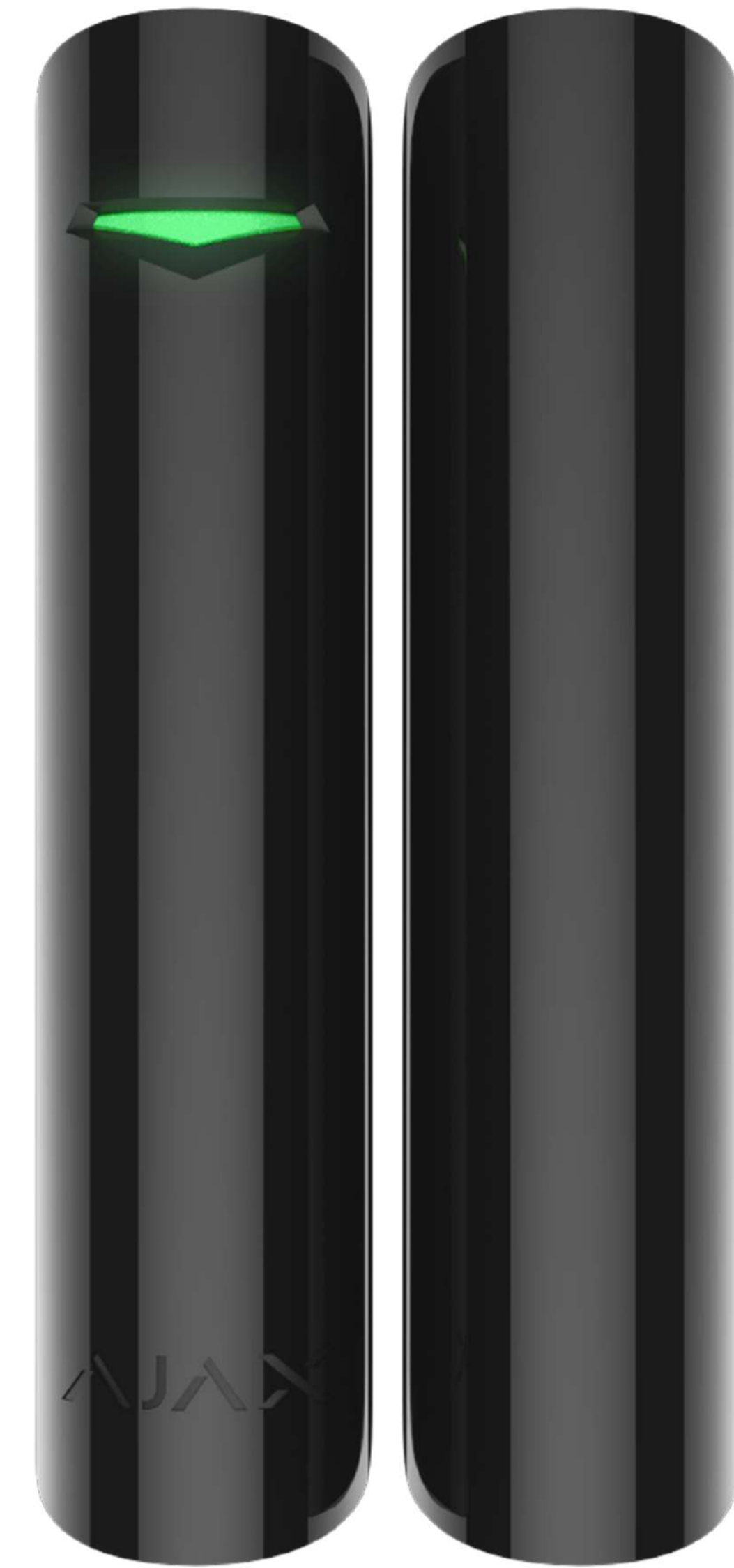
# Technical specifications

<p>Compliance with standards</p> <p><b>EN 50131 (Grade 2)</b> <b>PD 6662:2017</b></p>	<p>Compatibility</p> <p><b>Hubs</b> Hub 2 (2G) Hub 2 (4G) Hub 2 Plus Hub Hybrid (2G) Hub Hybrid (4G)</p> <p><b>Range extenders</b> ReX 2</p>
<p>Communication with the hub or range extender</p> <p> <b>Jeweller communication technology</b></p> <p> <b>Wings communication technology</b></p> <p><b>Frequency bands</b> 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.</p> <p><b>Maximum effective radiated power (ERP)</b> up to 20 mW</p> <p><b>Communication range</b> up to 1,700 m In an open space.</p> <p><b>Polling interval</b> 12-300 s Adjusted by PRO or user with admin rights in the Ajax app.</p>	<p>Features</p> <p><b>Contactless access</b> up to 200 cards and key fobs</p> <p>Bluetooth low energy (BLE) support</p> <p><b>Access codes</b> up to 200 personal codes One code per user registered in the system. The number of users depends on the hub model.</p> <p>up to 99 codes For users who are not registered in the system. The number of codes depends on the hub model.</p> <p>1 keypad code One code per KeyPad TouchScreen Jeweller.</p> <p><b>Duress code</b> up to 200 personal duress codes One duress code per user registered in the system. The number of users depends on the hub model.</p>

<p>Communication with the hub or range extender</p>	<p><b>Protection against spoofing</b> Device authentication</p>	<p>Features</p>	<p><b>1 common duress code</b> One duress code per KeyPad TouchScreen Jeweller.</p> <p><b>Panic buttons</b> Alarm, fire, medical assistance Activates the alarm.</p> <p><b>Fire alarm muting</b> Turns off the fire detectors alarm, including the interconnected alarm.</p> <p><b>Protection against code guessing</b> KeyPad TouchScreen Jeweller locks for 3-180 minutes if an incorrect code is entered 3 times in a row within 1 minute. The lock time is adjusted by PRO or user with admin rights in the Ajax app. The device can also be unlocked remotely via the app.</p>
<p>Display</p>	<p><b>Type</b> IPS, capacitive touch screen</p> <p><b>Diagonal</b> 5"</p> <p><b>Resolution</b> 480 × 854 px</p>	<p>Power supply</p>	<p><b>Power supply</b> Six AA batteries Pre-installed</p> <p><b>Battery life</b> up to 1.5 years</p> <p><b>Optional external power supply</b> 10.5–14 V<math>\overline{=}</math>, up to 0.5 A When external power is connected, the batteries operate as a backup power supply.</p>

# DoorProtect Jeweller

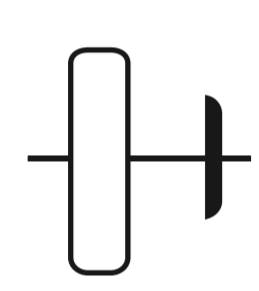
Wireless indoor opening detector



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

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

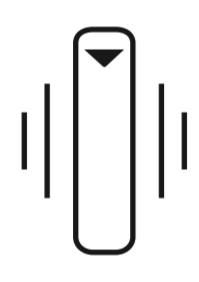
## Key features



More installation options with two magnets of different size



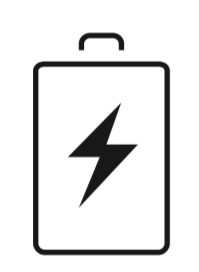
The reed switch with a resource of 2,000,000 openings



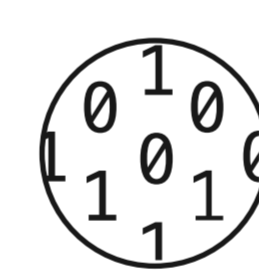
Protected against reed switch chattering



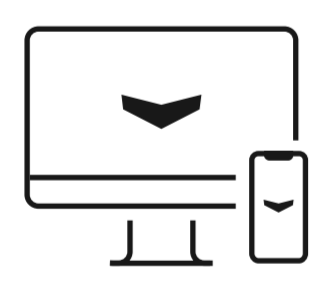
Additional NC input for connecting a third-party detector



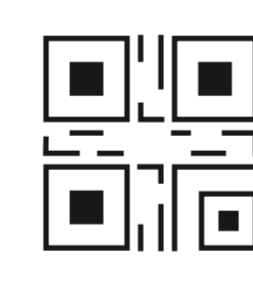
Up to 7 years of operation on pre-installed battery



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

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

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

# MotionProtect Jeweller

Wireless indoor IR motion detector.



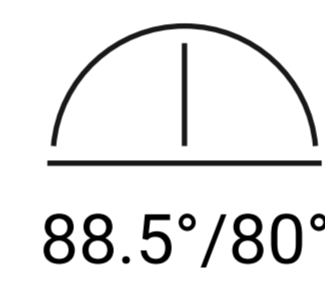
An Ajax hub is required for operation. Find the detailed information on the device by the link:

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

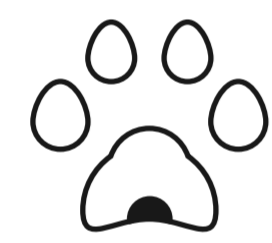
## Key features



Up to 12 m detection distance



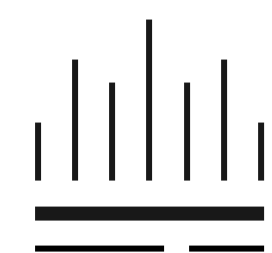
88.5°/80° viewing angles



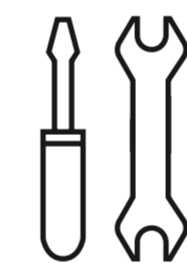
Pet immunity



Temperature compensation



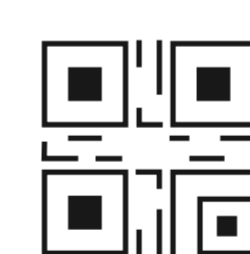
False alarms prevention algorithm



Effortless installation and replacement

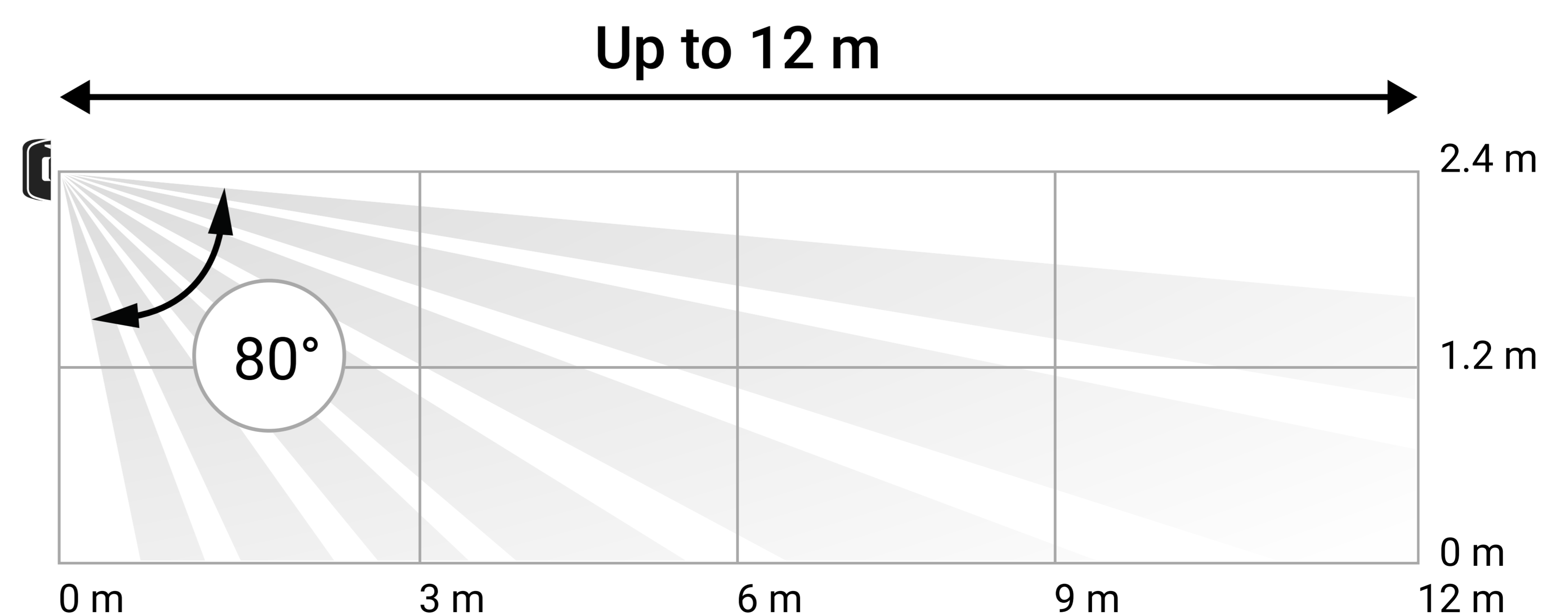
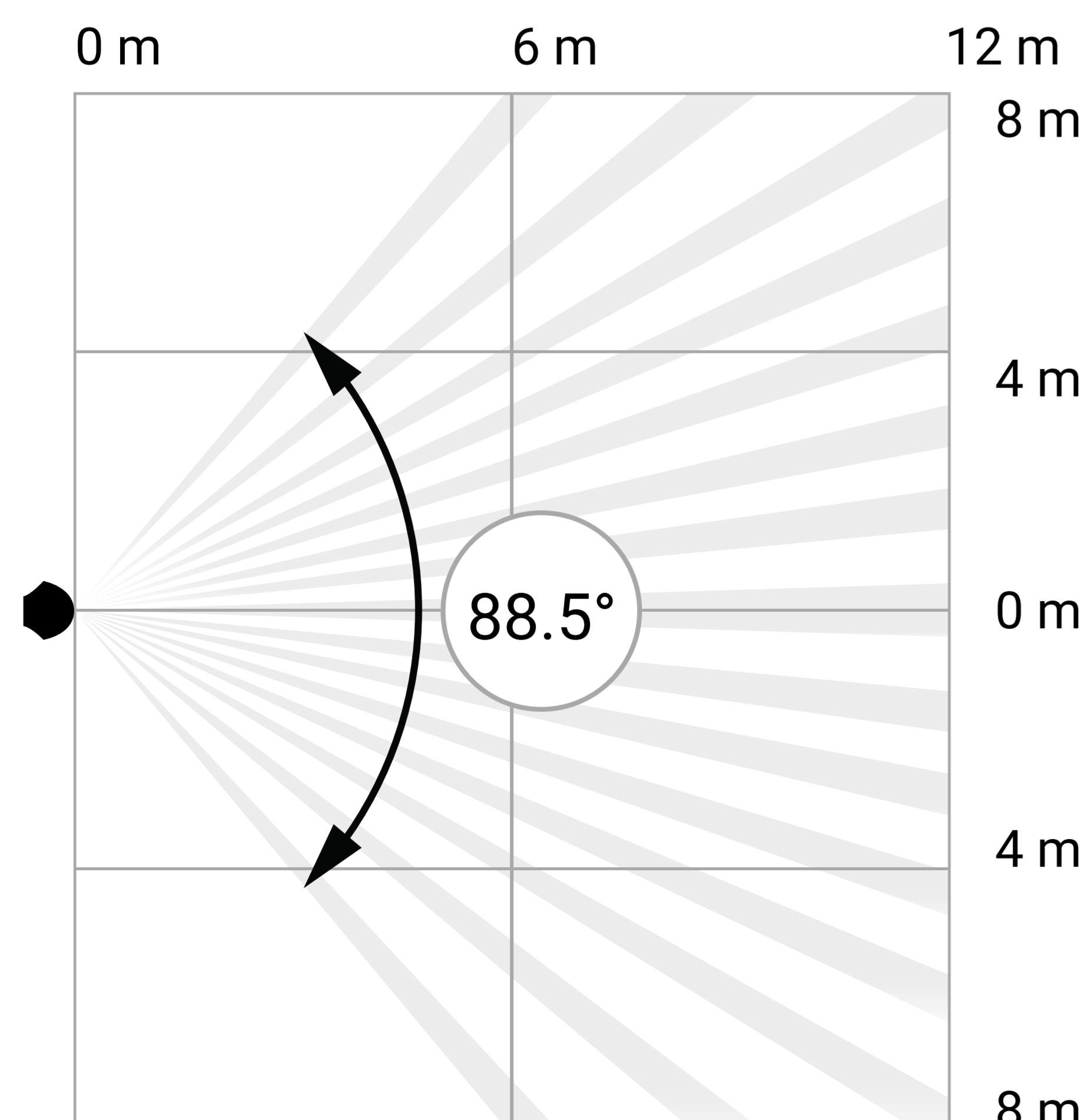


Remote control and setup via the app



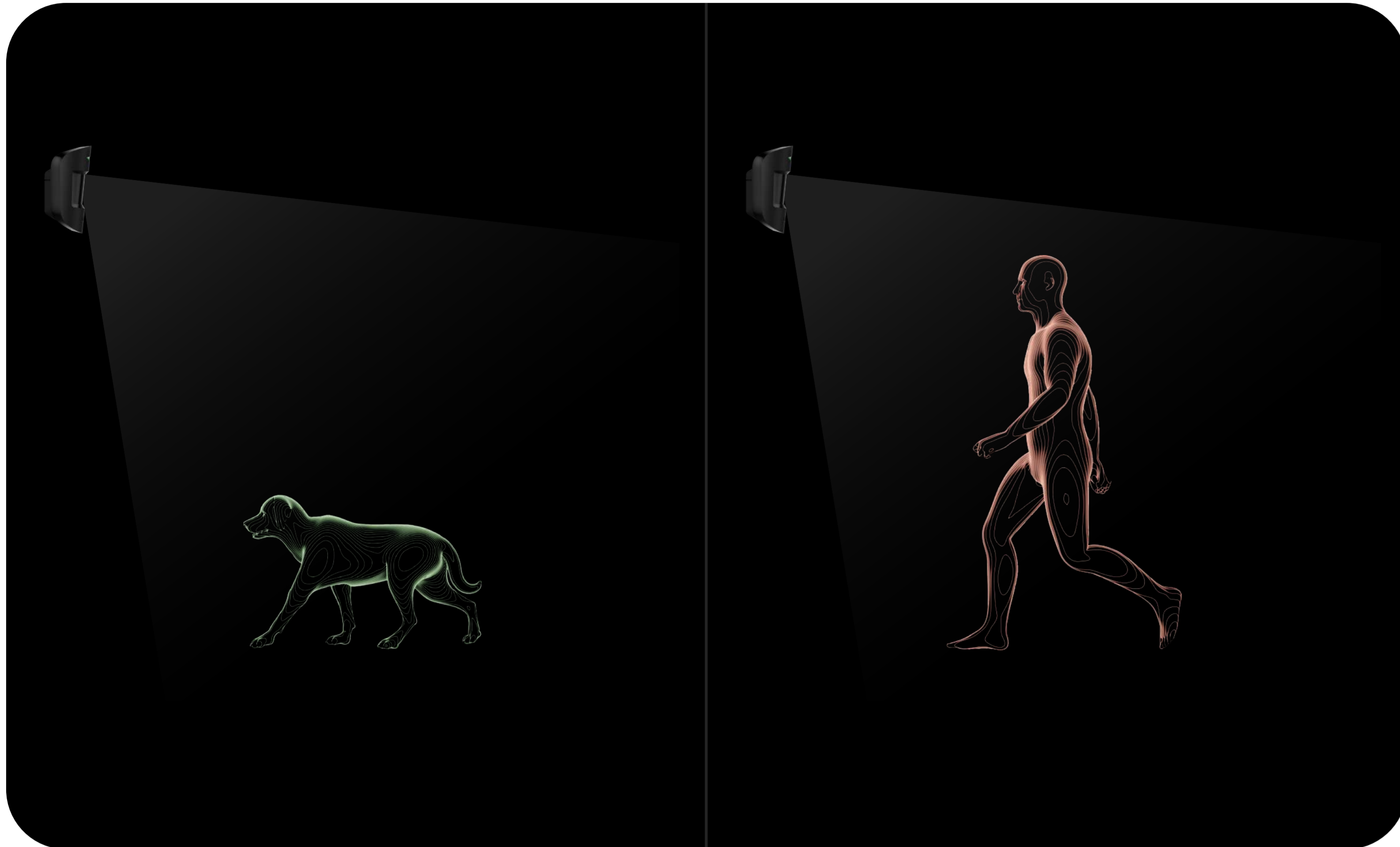
Connecting via QR code

## 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.

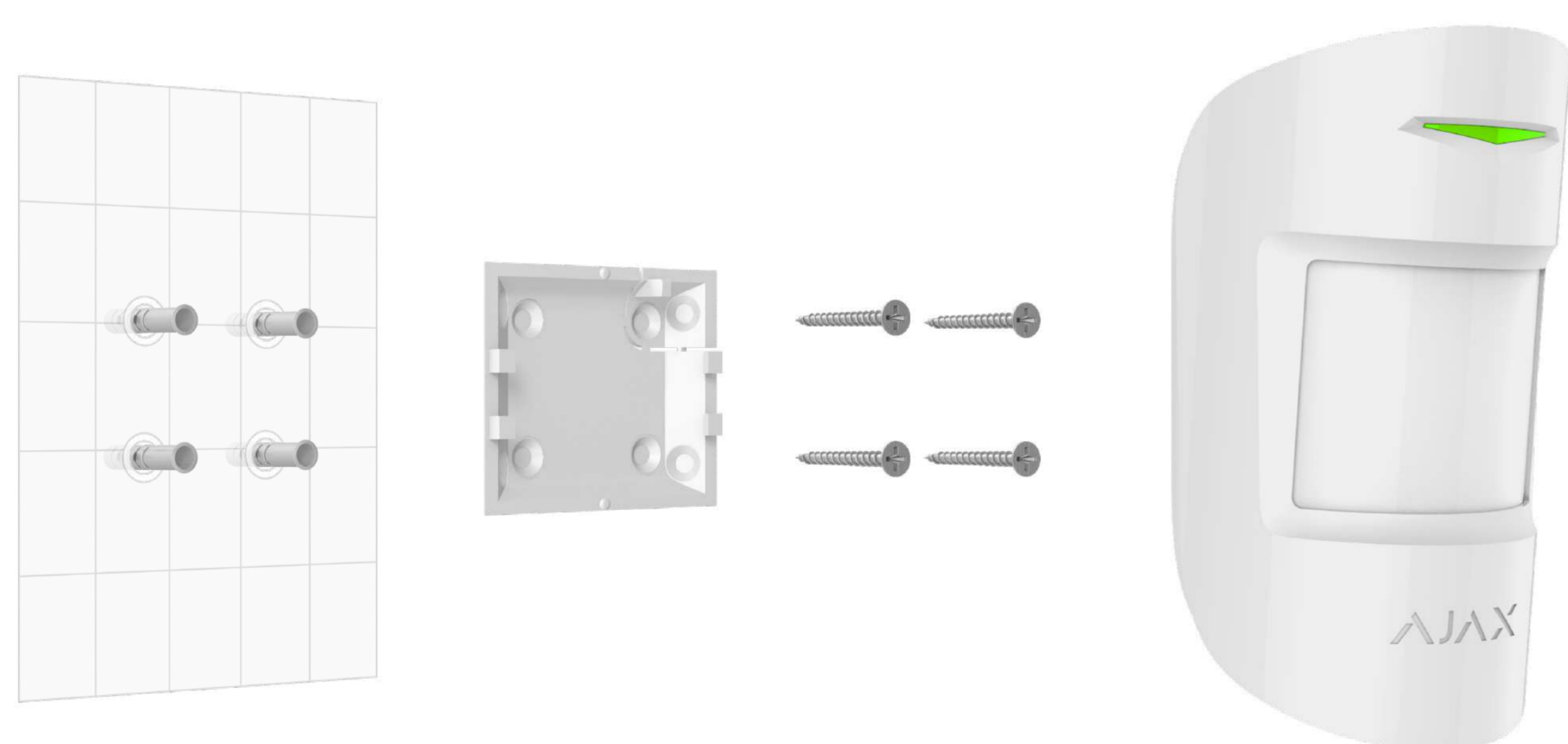
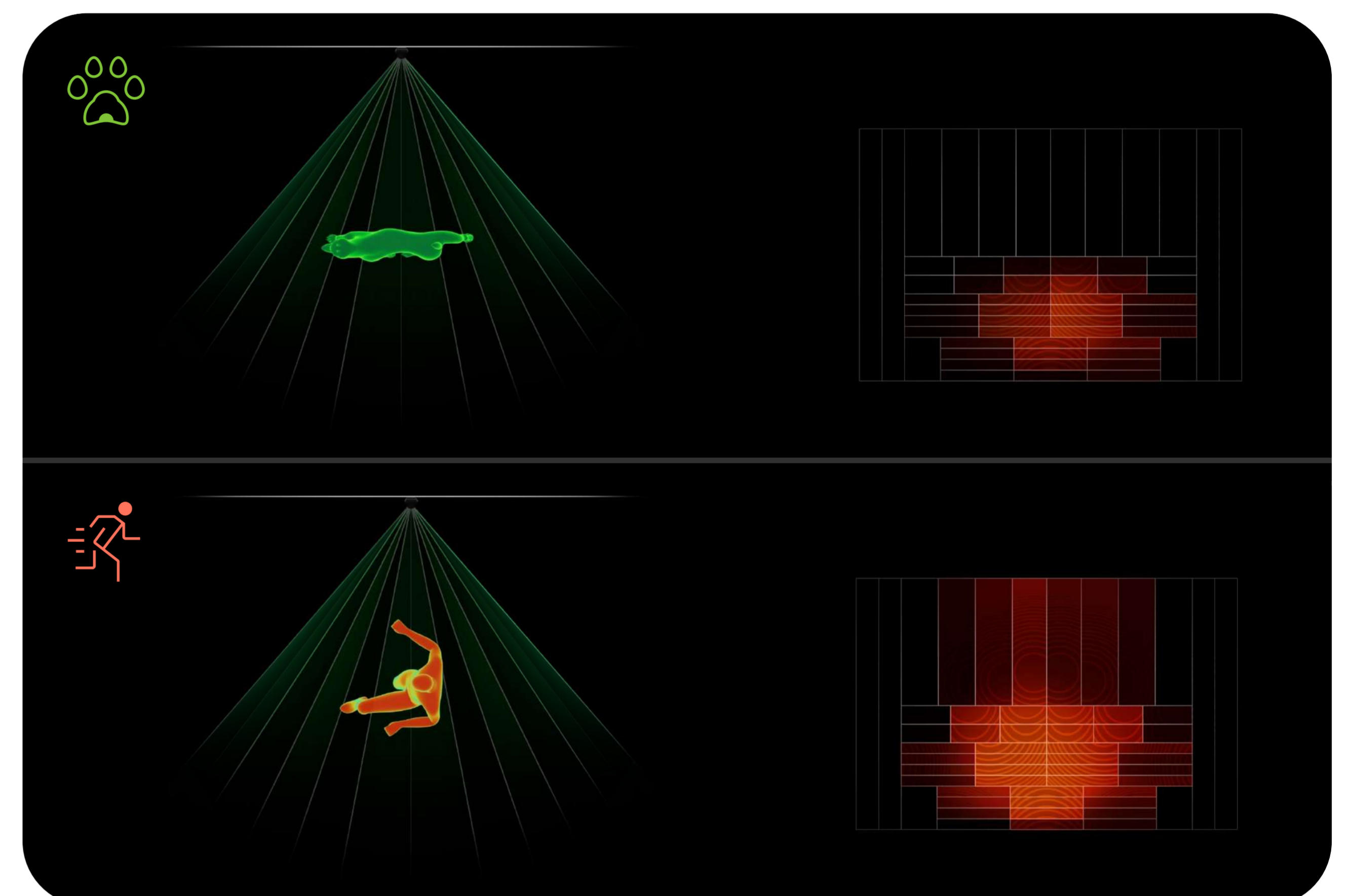


## Optics

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.



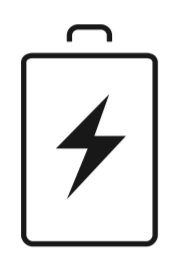
# Jeweller

## communication technology

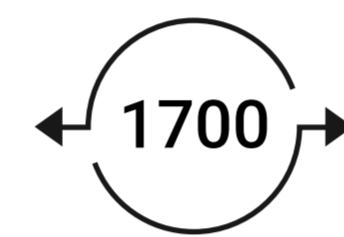


**Jeweller** is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know which device was triggered, when and where it happened.

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

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

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



Baseline product line

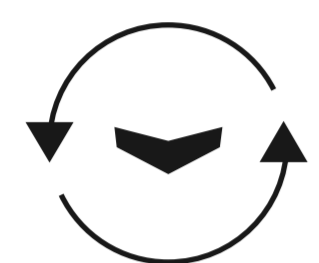
## Hub 2 (2G) Jeweller

Security system control panel with 3 communication channels: Ethernet and 2 SIM cards (2G). Supports **photo verification** provided by detectors of the MotionCam series.

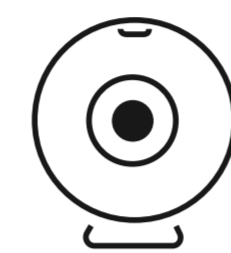


PD 6662  
2017

2  
GRADE  
EN 50131



Free over-the-air software updates



Integration with third-party CCTV cameras or DVRs



Connection to CMS



Informing users with push notifications, calls, and SMS

## Always online

To guarantee timely alarm transmission to the security company and users, Hub 2 supports connection to three Internet providers simultaneously: via **Ethernet** and **two SIM cards with a 2G cellular network**. Communication channels operate in parallel, and automatic switching between them takes seconds.

The Ajax product portfolio includes Hub 2 with a 4G cellular modem. This version supports 2G, 3G, and LTE cellular networks. Please note that 2G/3G networks have been shut down in some regions or are planned to be disabled soon.



### In-app control and configuration

Hub is connected to Ajax apps, security companies, and users via a secure channel through the Ajax Cloud server located in several AWS data centres. Server availability is 99.995%.

Intuitive Ajax apps provide remote configuration and all information about system devices from anywhere the Internet is available, on a smartphone or PC. An installer can remotely change the settings and provide services in time – no need to visit the object.

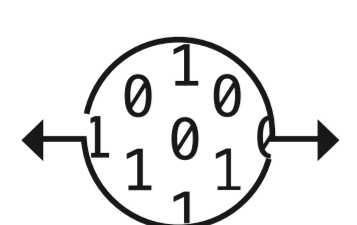


### Sabotage-resistant

- Built-in backup battery giving up to 16 hours of autonomous operation
- Detecting loss of connection with Ajax Cloud in 1 minute
- Detecting loss of connection with devices in 36 seconds
- Tamper alarm

## Guaranteed delivery of alarms and photos

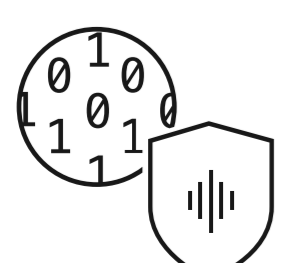
An Ajax system uses two-way secure radio communication based on **Jeweller** and **Wings** proprietary protocols. Radio protocols work in parallel and focus on their function, guaranteeing instant data delivery despite weak signal and communication interruptions.



Encrypted two-way radio communication



Automatic power adjustment of radio transmitters



Frequency hopping against radio interference and signal interception

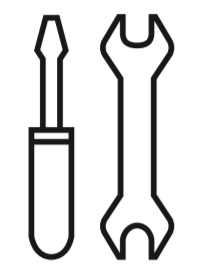


Notifications about jamming and connection loss

## Jeweller

transmits alarms, events, and all readings

- Up to 2,000 m of radio communication in an open space
- Encryption and device authentication to prevent spoofing
- Regular polling to display current devices' statuses



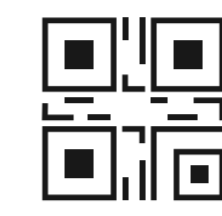
### Hassle-free installation

The hub is ready to operate straight out of the box. There is no need to disassemble the enclosure during installation. With a SmartBracket panel, an installer can effortlessly mount the hub on the wall or ceilings. The installation kit with all the necessary fasteners is included in a complete set.

## Wings



transmits photos and large data packages

- Up to 1,700 m of radio communication in an open space
- Unique uploading algorithm and data delivery confirmation
- Data backup and resend in case of transmission interruptions






### Quick connection and setup

Firstly, an installer needs to plug the hub into a power socket, and connect it to the Internet via Ethernet and SIM cards. The next step is pairing with Ajax apps by scanning the hub's QR code or entering its ID manually. And lastly, an installer only needs to name the hub and add other Ajax devices.

<p><b>Compliance with standards</b></p> <p>EN 50131 (Grade 2) PD 6662:2017</p>	<p><b>Connected devices</b></p> <p>up to 100 wireless Ajax devices Including up to 5 range extenders and up to 10 sirens or keypads with a built-in siren.</p>	<p><b>Connection to CMS</b></p> <p>SurGard (Contact ID) SIA (DC-09) ADEMCO 685 And other proprietary protocols.</p>	<p><b>Features</b></p> <p>50 users 25 cameras or DVRs 32 automation scenarios 9 security groups photo verification support</p>
<p><b>Communication with Ajax devices</b></p> <p> Jeweller communication technology</p> <p> Wings communication technology</p> <p><b>Frequency bands</b> 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.</p> <p><b>Jeweller communication range</b> up to 2,000 m In an open space.</p> <p><b>Wings communication range</b> up to 1,700 m In an open space.</p>	<p><b>External communication channels</b></p> <p><b>Ethernet</b> 8P8C slot Up to 100 Mb/s.</p> <p><b>Cellular network</b> 2 slots for micro-SIM 2G (GSM900/DCS1800 (B3/B8)).</p> <p><b>Enclosure</b></p> <p><b>Dimensions</b> 163 × 163 × 36 mm</p> <p><b>Weight</b> 362 g</p> <p><b>Colours</b> white black</p>	<p><b>Power supply</b></p> <p><b>Main power supply</b> 100–240 V~, 50/60 Hz</p> <p><b>Backup power supply</b> built-in Li-Ion battery, 2 A·h Up to 16 hours of autonomous operation.</p> <p><b>Complete set</b></p> <p>Hub 2 (2G) Jeweller Power cable Ethernet cable SIM card Depends on the sales region Installation kit Quick start guide</p>	<p><b>Installation</b></p> <p><b>Operating temperature range</b> from -10°C to +40°C</p> <p><b>Operating humidity</b> up to 75%</p> <p><b>Protection class</b> IP20</p>



Find detailed information by the link:  
[ajax.systems/support/devices/hub-2/](https://ajax.systems/support/devices/hub-2/)

-  support@ajax.systems
-  @AjaxSystemsSupport\_Bot
-  ajax.systems