

DoorProtect U Jeweller user manual

Updated July 1, 2025



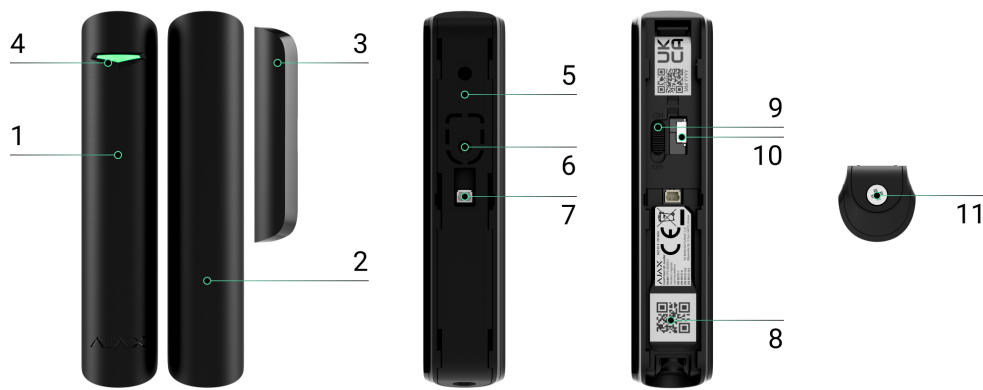
DoorProtect U Jeweller is a wireless door and window opening detector designed for indoor use. It can operate for up to 7 years from a pre-installed battery. DoorProtect U Jeweller has a socket to connect a third-party wired detector.



The functional element of DoorProtect U Jeweller is a sealed contact reed relay. It consists of ferromagnetic contacts placed in a bulb that form a continuous circuit under the effect of a constant magnet.

DoorProtect U Jeweller communicates with a hub via the Jeweller secure radio protocol to transmit alarms and events. The communication range in an open space is up to 1,200 meters.

Functional elements



1. DoorProtect U Jeweller opening detector.
2. Big magnet. Operates at a distance of up to 2 cm from the detector.
3. Small magnet. Operates at a distance of up to 1 cm from the detector.
4. LED indicator.
5. SmartBracket mounting panel. To remove the panel, slide it down.
6. Perforated part of the mounting panel. Do not break it off. It is needed for a tamper triggering in case of any attempt to detach the detector from the surface.
7. Connector for a third-party wired detector with a normally closed (NC) contact type.
8. QR code with the device ID. It is used to add the detector to the Ajax system.
9. Device switch.
10. **Tamper button**. Triggers in case of an attempt to detach the detector from the surface or remove it from the mounting panel.
11. Holding screw.

Compatible hubs and range extenders

An Ajax hub with an up-to-date OS Malevich version is required for the device to operate.

[Check devices compatibility](#)

Operating principle

0:00 / 0:12

DoorProtect U Jeweller consists of two parts: the detector with two sealed contact reed relays and the constant magnet. Attach the detector to the door frame, while the magnet can be attached to the moving wing or sliding part of the door. If the sealed contact reed relay is within the coverage area of the magnetic field, it closes the circuit, which means that the detector is closed. The opening of the door pushes out the magnet from the sealed contact reed relay and opens the circuit. In such a way, the detector recognizes the opening.



The magnet can be attached to both sides of the detector. DoorProtect U Jeweller works with one magnet on one side only. If magnets are attached on both sides, the detector cannot detect the opening correctly.

A small magnet works at a distance of 1 cm, and the big one — up to 2 cm.

After actuation, DoorProtect U Jeweller immediately transmits the alarm signal to the hub, activating the sirens and notifying the user and security company.

Jeweller data transfer protocol

Jeweller is a two-way wireless data transfer protocol that provides fast and reliable communication between hub and devices. The detector uses Jeweller to transmit alarms and events.

[Learn more](#)

Sending events to the monitoring station

An Ajax system can transmit alarms to the [PRO Desktop](#) monitoring app as well as the central monitoring station (CMS) in the formats of **SurGard (Contact ID)**, **SIA (DC-09)**, **ADEMCO 685**, and [other protocols](#).

DoorProtect U Jeweller can transmit the following events:

1. Tamper alarm. Tamper recovery.
2. Detector alarm.
3. Alarm/recovery of a third-party wired detector connected to DoorProtect U Jeweller .
4. Loss of connection with the hub (or radio signal range extender).
Restoration of connection.
5. Permanent deactivation / activation of the detector.
6. One-time deactivation / activation of the detector.

When an alarm is received, the operator of the security company monitoring station knows what happened and precisely where to send a rapid response team. The addressability of Ajax devices allows sending events to [PRO Desktop](#) or the CMS the type of the device, its name, security group, and virtual room. Note that the list of transmitted parameters may differ depending on the kind of CMS and the protocol selected for communication with the monitoring station.



The device ID and the loop (zone) number can be found in [device states in the Ajax app](#).

Adding to the system



DoorProtect U Jeweller is incompatible with third-party security control panels, and ocBridge Plus and uartBridge integration modules.

To connect DoorProtect U Jeweller to the hub, the detector must be located at the same secured facility as the system (within the range of the hub radio network). For the detector to work via the [ReX](#) or the [ReX 2](#) radio signal range extender, you must first add the detector to the hub, then connect it to **ReX** or **ReX 2** in the settings of the range extender.



The hub and the device operating at different radio frequencies are incompatible. The radio-frequency range of the device may vary by region. We recommend purchasing and using Ajax devices in the same region. You can check the range of operating radio frequencies with the [technical support service](#).

Before adding a device

1. Install an [Ajax PRO app](#).
2. Log in to a [PRO account](#) or create a new one.
3. Select a space or create a new one.

[What is a space](#)

[How to create a space](#)

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.

Connecting to the hub

1. Open the Ajax app. Select the hub where you want to add the device.
2. Go to the **Devices**  tab and click **Add device**.
3. Name the device, scan, or type in the QR code (placed on the device and the package box), and select a room and a group (if Group mode is enabled).



4. Press **Add**.
5. Switch on the device.



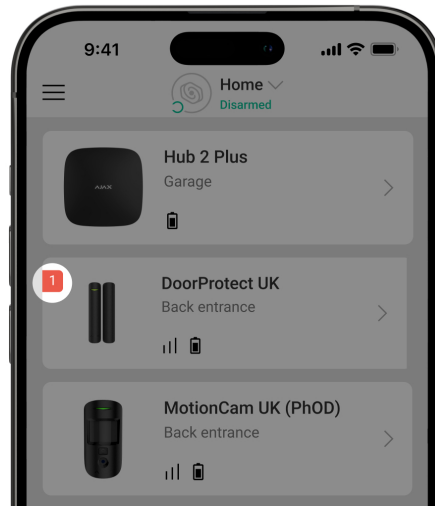
If the connection fails, turn the detector off and try again in 5 seconds.
Note that if the maximum number of devices has already been added to the hub (depending on the hub model), you will be notified when you try to add a new one.

The detector connected to the hub 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.



DoorProtect U Jeweller works with one hub. When connected to a new hub, the detector stops sending events 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.

Malfunctions

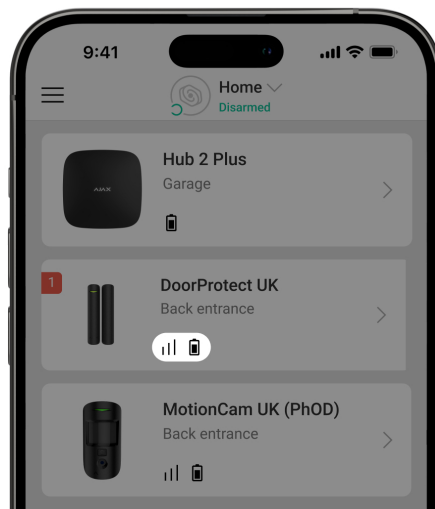


When a malfunction is detected, the Ajax app displays a malfunction counter on the device icon. All malfunctions are shown in the detector states. Fields with malfunctions will be highlighted in red.

A malfunction is displayed if:

- The detector temperature is outside acceptable limits.
- The detector enclosure is open (tamper is triggered).
- No connection with the hub or radio signal range extender via Jeweller.
- The device battery is low.

Icons



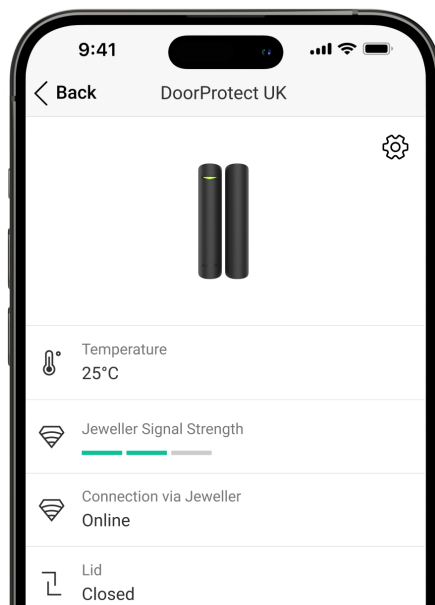
The icons display some detector states. To access them:

1. Sign in to the [Ajax app](#).
2. Select the hub.
3. Go to the **Devices**  tab.

Icon	Meaning
	Jeweller signal strength. Displays the signal strength between the hub and the detector. The recommended value is 2–3 bars. Learn more
	The detector battery charge level. Learn more
	The detector has a malfunction. The list of malfunctions is available in the detector states. Learn more
	Displayed when the detector is operating via a radio signal range extender.
	The detector operates in the Always Active mode.

	Learn more
	Delay When Entering and/or Delay When Leaving enabled. Learn more
	The device is in the signal attenuation test mode. Learn more
	Detector is permanently deactivated. Learn more
	Detector has tamper alarms permanently deactivated. Learn more
	Detector is deactivated until the first event of disarming the system. Learn more
	Detector has tamper alarms deactivated until the first event of disarming the system. Learn more
Offline	The device has lost connection with the hub or the hub has lost connection with the Ajax Cloud server.
Not transferred	The device has not been transferred to the new hub. Learn more

States



The states include information about the device and its operating parameters. The states of **DoorProtect U Jeweller** can be found in the Ajax app:

1. Go to the **Devices**  tab.
2. Select **DoorProtect U Jeweller** from the list.

Parameter	Value
Data import	Displays the error when transferring data to the new hub: Failed — the device has not been transferred to the new hub. Learn more
Malfunction	Clicking on  opens the list of the detector's malfunctions. The field is displayed only if a malfunction is detected.
Temperature	Detector temperature. The acceptable error between the value in the app and the temperature at the installation site: 2 °C.

	The value is updated as soon as the module detects a temperature change of at least 1 °C. You can create 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. The recommended value is 2–3 bars. Jeweller is a protocol for transmitting DoorProtect U Jeweller events and alarms.
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 or the range extender. • Offline — the detector is not connected to the hub or the range extender. Check the detector connection.
Transmitter power	Displays the selected power of the transmitter. The parameter appears when the Max or Attenuation option is selected in the Signal attenuation test menu. Learn more
ReX range extender name	Radio signal range extender connection status. Displayed when the detector works via radio signal range extender

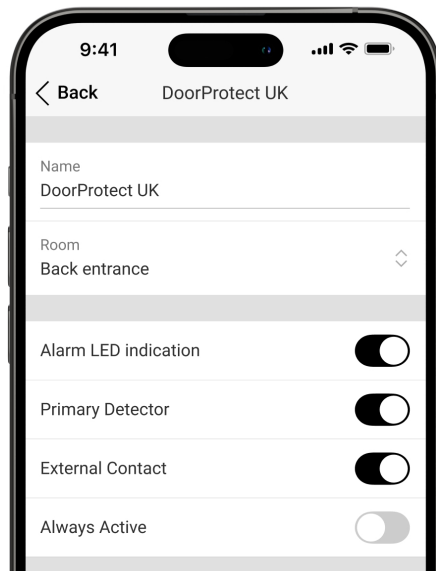
Battery Charge	Battery level of the device. Displayed as a percentage. How battery charge is displayed in Ajax apps
Lid	The status of the detector tamper that responds to detachment or opening of the device enclosure: • Open — the detector was removed from the SmartBracket, or its integrity was compromised. Check the device. • 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
Opening sensor	Status of the detector's opening sensor: • Disabled — the opening sensor is disconnected. • Open — The opening sensor is open. • Closed — the opening sensor is closed.
External Contact	The status of the external detector connected to DoorProtect U Jeweller : • Disabled — the external contact is disabled (the option is disabled in the app). • Open — the external contact is connected and in the open state. • Closed — the external contact is connected and in the closed state.

Always Active	If the option is active, the detector is always in armed mode and notifies about alarms. Learn more
Permanent Deactivation	Shows the status of the device permanent deactivation function: • No — the device operates normally and transmits all events. • Lid only — detector's tamper triggering notifications are disabled. • Entirely — the device is completely excluded from the system operation by the hub administrator. The device does not follow system commands and does not report alarms or other events. • By number of alarms — the device is automatically disabled by the system when the number of alarms is exceeded (specified in the settings for Devices Auto Deactivation). The feature is configured in the Ajax PRO app. • By timer — the device is automatically disabled by the system when the recovery timer expires (specified in the hub settings for Devices Auto Deactivation). The feature is configured in the Ajax PRO app. Learn more
One-Time Deactivation	Shows the status of the device one-time deactivation setting: • No — the device operates in the normal mode. • Lid only — notifications on the tamper triggering are disabled until the first event of disarming the system.

	• Entirely – the detector is entirely excluded from the operation of the system until the first event of disarming the system. The device does not execute system commands and does not report alarms or other events. 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 when entering (alarm activation delay) is the time the user has to disarm the security system after entering the premises. Learn more
Delay When Leaving, sec	Delay when leaving (arming delay) is the time the user has to leave the premises after arming. Learn more
Arm in Night Mode	When this option is enabled, the detector will enter the armed mode when the system is set to Night Mode.

Night Mode Delay When Entering, sec	Entry delay time in Night Mode. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the premises. Learn more
Night Mode Delay When Leaving, sec	Exit delay time in Night Mode. Delay when leaving (arming delay) is the time the user has to leave the premises after arming. Learn more
Firmware	Detector firmware version.
ID	Detector ID. Also available on the QR code on the detector enclosure and its package box.
Device No.	Number of the device loop (zone).

Settings



To change the detector settings in the Ajax apps:

1. Go to the **Devices**  tab.

2. Select **DoorProtect U Jeweller** from the list.
3. Go to **Settings** by clicking on the gear icon .
4. Set the required parameters.
5. Click **Back** to save the new settings.

Setting	Value
Name	Name of the detector. Displayed in the list of hub devices, text of SMS and notifications in the events feed. To change the name of the module, 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 DoorProtect U Jeweller is assigned. The room name is displayed in the text of SMS and notifications in the events feed.
Alarm LED indication	When the option is disabled, the LED indicator of the detector doesn't inform about alarms and tamper triggerings.
Opening sensor	If active, DoorProtect U Jeweller responds to opening and closing.
External contact	If active, DoorProtect U Jeweller registers alarms of a third-party wired detector connected to it.
Always active	If the option is active, the detector is always in armed mode and notifies about alarms. Learn more
Alert with a siren if opening detected	If active, sirens added to the system are activated when the opening detected.

Activate the siren if an external contact opened	If active, sirens added to the system are activated during an external detector alarm.
Chime settings	Opens the settings of Chime. How to set Chime What is Chime
Alarm Reaction	
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	Learn more
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Night Mode Delay When Leaving, sec	Exit delay time in Night Mode. Delay when leaving (arming delay) is the time the user has to leave the premises after arming. Learn more
Jeweller Signal Strength Test	Switches the detector to the Jeweller signal strength test mode. Learn more
Detection Zone Test	Switches the detector to the detection zone test mode. Learn more
Signal Attenuation Test	Switches the device to the signal attenuation test mode. Learn more
User Guide	Opens DoorProtect U Jeweller 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 — the device operates in normal mode and transmits all events. • Entirely — the device does not execute system commands and does not

	participate in automation scenarios, and the system ignores alarms and other device notifications. • Lid only — the system ignores the detector tamper triggering notifications. Learn more The system can also automatically deactivate devices when the preset number of alarms is exceeded or when the recovery timer expires. Learn more
One-Time Deactivation	Allows the user to disable events of the device until the first event of disarming the system. Three options are available: • No — the device operates in the normal mode. • Lid only — notifications on the tamper triggering are disabled until the first event of disarming the system. • Entirely — the detector is entirely excluded from the operation of the system until the first event of disarming the system. The device does not execute system commands and does not report alarms or other events. Learn more
Unpair Device	Unpairs the detector, disconnects it from the hub, and deletes its settings.

How to set Chime

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

Chime is set in two stages: setting up opening detectors and setting up sirens.

[Learn more about Chime](#)

[How to set up a siren for Chime](#)

Indication

DoorProtect U Jeweller LED indicator lights up when the detector is triggered, and it can notify about its other states.

LED indication	Event	Note
Lights up green for about one second	Turning on the detector	
Lights up for a few seconds	Pairing the detector with the <u>hub</u>	
Lights up green for 1 second	An alarm in case of opening or tamper triggering	Alarm is sent once in 5 seconds
During the alarm, it slowly lights up green and slowly goes out	Detector batteries need to be replaced	Replacement of the detector battery is described in the <u>Battery Replacement</u> manual

Functionality testing

The Ajax system offers several tests to help select the device installation place. Tests do not start immediately. However, the waiting time does not exceed the duration of one “hub—device” polling interval. The polling

interval can be checked and configured at hub settings (**Hub** → **Settings**  → **Jeweller** or **Jeweller/Fibra**).

To run a test, in the Ajax app:

1. Select the required hub.
2. Go to the **Devices**  tab.
3. Select **DoorProtect U Jeweller** from the list.
4. Go to **Settings** .
5. Select a test:
 1. Jeweller Signal Strength Test
 2. Detection Zone Test
 3. Signal Attenuation Test
6. Run the test.

Detector placement



The device is designed for indoor use only.

When choosing where to place **DoorProtect U Jeweller**, consider the parameters that affect its operation:

- Detection zone.
- Jeweller signal strength.
- Distance between the detector and the hub or range extender.
- Presence of obstacles for radio signal passage: walls, interfloor ceilings, large objects located in the room.

Consider the recommendations for placement when developing a project for the security system of the facility. The security system must be designed and installed by specialists. A list of recommended partners is [available here](#).

The detector is located either inside or outside of the door case. When installing the detector in the perpendicular planes (e.g. inside a door frame), use the small magnet. The distance between the magnet and detector should not exceed 1 cm.

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

Attach the magnet to the moving part of the door (window). If necessary, the detector may be positioned horizontally.



The magnet can be attached to the right or to the left side of the detector.

DoorProtect U Jeweller works with one magnet on one side only. If magnets are attached on both sides, the detector cannot detect the opening correctly.

Signal strength

The Jeweller signal strength is determined by the number of undelivered or corrupted data packages over a certain period of time. The icon  on the **Devices**  tab indicates the signal strength:

- **Three bars** – excellent signal strength.
- **Two bars** – good signal strength.
- **One bar** – low signal strength, stable operation is not guaranteed.
- **Crossed out icon** – signal is missing.



Check the Jeweller signal strength before final installation. With a signal strength of one or zero bars, we do not guarantee stable operation of the device. Consider to relocate the device as repositioning even by 20 cm can significantly improve

the signal strength. If there is still poor or unstable signal after the relocation, use a [radio signal range extender](#).

Detection zone

Consider the operating area of the magnet when choosing the installation location. Smaller magnets act at distances up to 1 cm from the reed switch, while larger ones act at distances up to 2 cm.

When installing the detector, perform the [Detection Zone Test](#). This allows you to check the operation of the device and accurately determine the sector in which the detector reacts to movement.

Do not install the detector

1. Outdoors. This can lead to false alarms and detector failure.
2. Inside metal structures. This may result in the loss of the radio signal.
3. Near mirrors. This may result in the shielding or attenuation of the radio signal.
4. Inside premises with temperature and humidity outside the permissible limits. This could damage the detector.
5. Closer than 1 meter from the hub or radio signal range extender. This can lead to a loss of communication with the detector.
6. In a place with a low signal level. This may result in the loss of the connection with the hub.

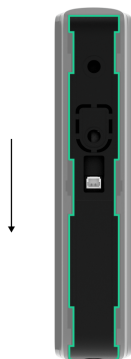
Installation



Before installing DoorProtect U Jeweller , ensure that you have selected the optimal location that complies with the requirements of this manual.

To mount a detector:

1. Remove the SmartBracket mounting panel from the detector by sliding it down. Unscrew the holding screw first.



2. Fix the SmartBracket panel using double-sided tape to the selected installation spot.



Double-sided tape can only be used for temporary installation. The device secured with the tape may come unstuck from the surface at any time. As long as the device is taped, the tamper will not trigger when the device is detached from the surface.

3. Place the detector on SmartBracket. The device LED indicator will flash. It is a signal indicating that the tamper on the detector is closed.

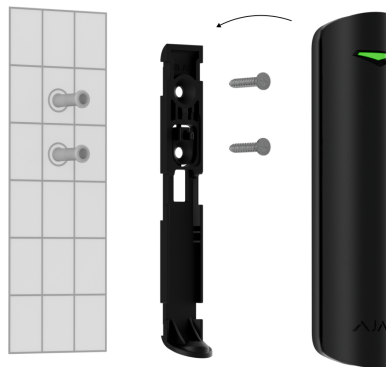


If the LED indicator doesn't light up during placing the detector on SmartBracket, check the tamper status in the Ajax app, the integrity of the fastening, and the tightness of the detector fixation on the panel.

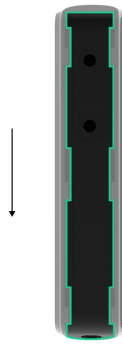
4. Fix the magnet on the surface with double-sided tape.
5. Run the Jeweller signal strength test. The recommended signal strength is two or three bars. If the signal strength is low (a single bar), we do not guarantee stable operation of the device. Consider relocating the device as repositioning even by 20 cm can significantly

improve the signal strength. If there is still poor or unstable signal after the relocation, use a [radio signal range extender](#).

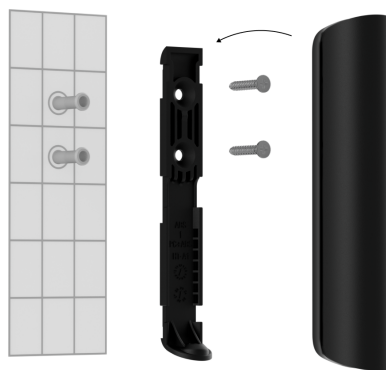
6. Run the [Detection Zone Test](#). To check the detector operation, open and close the window or door where the device is installed several times. Monitor the reaction of the LED: it should flash every time the door/window is opened or closed. If the detector doesn't respond in 5 out of 5 cases during the test, try to change the installation spot or method. The magnet may be too far from the detector.
 7. Run [Signal Attenuation Test](#). During the test, the signal strength is artificially reduced and increased to simulate different conditions at the installation location. If the installation spot is chosen correctly, the detector will have a stable signal strength of 2–3 bars.
 8. If the tests are passed successfully, secure the detector and magnet with bundled screws. Use all fixing points.
1. **To mount the detector:** remove it from the SmartBracket mounting panel. Then fix the SmartBracket panel with bundled screws. Install the detector on the panel.



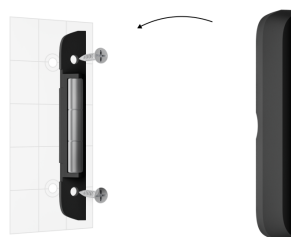
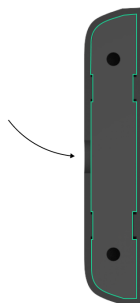
2. **To mount a big magnet:** remove it from the SmartBracket mounting panel.



Then fix the SmartBracket panel with bundled screws. Install the magnet on the panel.



3. To mount a small magnet: disassemble its enclosure by prying up the back with a flat object. Use a slotted screwdriver for this. Fix the part with magnets on the surface; use the bundled screws for this. Then install the front panel in its place.



9. Tighten the holding screw on the bottom of the detector's and magnet's enclosure. The screw is needed for more reliable fastening and protection of the detector and the magnet from quick dismantling.



If using screwdrivers, set the speed to the minimum so as not to damage the SmartBracket mounting panel during installation. When using other fasteners, ensure they do not damage or deform the panel. To make mounting the detector or magnet easier, you can pre-drill the screw holes while the mount is still secured with double-sided tape.

Connecting a third-party wired detector

A wired detector with an NC (normally closed) contact type can be connected to DoorProtect U Jeweller using the outside-mounted terminal clamp.

DoorProtect U Jeweller will not power the third-party detector. The detector should be connected separately. To learn the type and input voltage of the third-party detector, refer to the device documentation or contact the manufacturer's technical support.

Install the third-party detector no more than 1 meter away from DoorProtect U Jeweller. Increasing the length of the wire degrades the quality of communication between devices.

To connect the third-party wired detector:

1. Remove the detector from the mounting panel if already installed.
2. Carefully break out the plugs in the detector enclosure for the output of wires.



3. Route the cable of the third-party wired detector into the DoorProtect U Jeweller enclosure.
4. Connect the wired detector to DoorProtect U Jeweller terminals.



5. In DoorProtect U Jeweller settings, enable the External Contact option.
6. Check operation of the connected wired detector. If the external detector is actuated, you will receive a notification.

Maintenance

Check the functioning of the detector regularly. The optimal frequency of checks is once every three months. Clean the device enclosure of dust, cobwebs, and other contaminants as they emerge. Use soft dry wipes suitable for equipment care.

Do not use substances that contain alcohol, acetone, petrol, and other active solvents to clean the detector.

DoorProtect U Jeweller runs for up to 7 years with bundled batteries at 10 openings/closings per day with the 60 seconds polling interval (**Jeweller** or **Jeweller/Fibra** settings). Setting the polling interval of 12 seconds will reduce the battery life to 2 years.

The security system will send an early warning about replacing the batteries. In case of an alarm, the LED will slowly light up green and go out.

How to replace batteries

Technical specifications

All technical specifications of DoorProtect U Jeweller

Compliance with standards

Setup in compliance with EN requirements

Warranty

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

If the device does not function correctly, please contact the Ajax Technical Support first. In most cases, technical difficulties can be resolved remotely.

Warranty Obligations

User Agreement

Contact Technical Support:

- e-mail

- Telegram