FireProtect / FireProtect Plus User Manual

Updated October 18, 2019

FireProtect — is a wireless indoor inflammation detector furnished with a buzzer. It can detect smoke generation and temperature increase and function up to 4 years from a battery and can operate autonomously.

FireProtect Plus is wireless fire detector with temperature and carbon monoxide sensor, that guarantee round-the-clock security of the premises and immediately notifies about dangerous CO level or sharp jumps in temperature.

FireProtect (**FireProtect Plus**) operates within the Ajax security system, by connecting via the protected Jeweller protocol to the hub. The communication range is up to 1,300 meters if there are no obstacles. In addition, the detector can be used as part of third-party security central units due to the uartBridge or ocBridge Plus integration module.

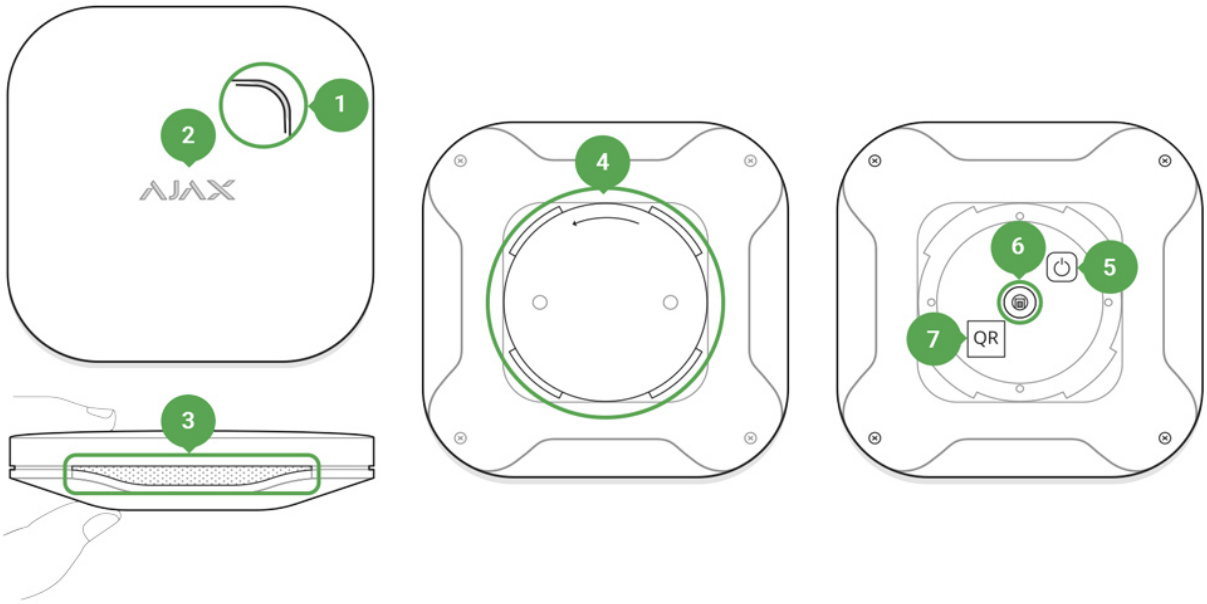
Buy fire detector with carbon monoxide sensor FireProtect Plus

The detector is set up via a mobile application for iOS and Android-based smartphones. The user is notified of all events through push notifications, SMS messages and calls (if activated).

The Ajax security system is self-sustaining, but the user can connect it to the central monitoring station of a private security company.

Buy fire detector FireProtect

Functional Elements



1. Siren hole
2. Light indicator combined with the touch button “Test”
3. Smoke chamber window, temperature detector behind the net
4. SmartBracket attachment panel
5. On/off button
6. Tamper button
7. QR code

FireProtect Operating Principle

FireProtect operates even without connecting to a security system, determining the smoke contamination level of the room and temperature increase (In addition, **FireProtect Plus** registers a dangerous CO level), including a sharp one – in the autonomous mode and supplied from batteries.

If any fire (smoke) is detected, the detector will switch on a buzzer – the fire siren can be heard from far, and the logo will light red. When connected to a security system, the detector will also send an alarm signal to the hub – the user and private security company will receive the respective notifications.

The detector detects smoke using an optical coupler consisting of an infrared emitter and photoelectric receiver located in a smoke chamber. If smoke penetrates into the chamber, the photoelectric receiver detects it based on the distortion of the infrared ray.

As some materials burn without smoke emission, the detector also records temperature variation. When the function is enabled, the alarm will be actuated, if the room temperature rises up to 60°C and if the temperature rises by 30° during 30 minutes (even if it is below 60°C).

Additionally, the **FireProtect Plus** detector model has a function to detect a dangerous CO level in the room. If a certain concentration of CO in the air is exceeded, the detector generates an alarm.

The detector activates:

- within 60–90 min at carbon oxide concentration 50 ppm / 0.005%
- within 10–40 min at CO concentration 100 ppm / 0.01%
- within 3 min at carbon oxide concentration 300 ppm / 0.03%.

You can deactivate the siren in case of smoke/inflammation detection by pressing the touch-sensitive button in the center of the detector’s logo and via the Ajax Security System application. If the smoke level and temperature do not return to normal, then FireProtect will activate the siren again after 10 minutes.

Connecting the Detector to the Ajax Security System

Connecting to the hub

Before starting connection:

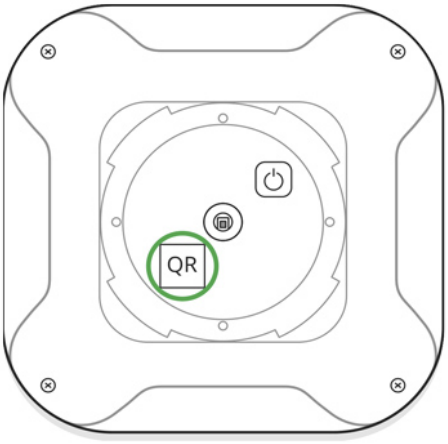
1. Following the hub instruction recommendations, install the Ajax application on your smartphone. Create an account, add the hub to the application, and create at least one room.
2. Go to the Ajax application.
3. Switch on the hub and check the internet connection (via Ethernet cable and/or GSM network).
4. Ensure that the hub is disarmed and does not start updates by checking its status in the mobile application.

Only users with administrative privileges can add the device to the hub

How to connect the detector to the hub:

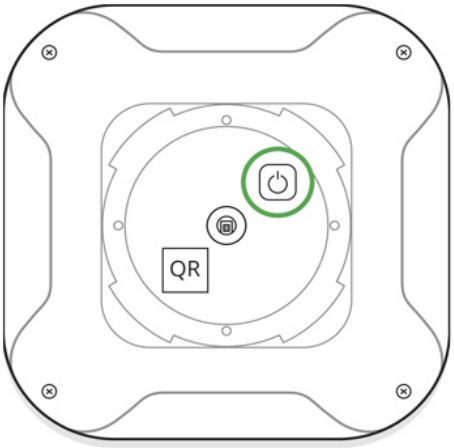
1. Select the **Add Device** option in the Ajax application.

2. Name the device, scan/write manually the **QR Code** (located on the body and packaging), and select the location room.



3. Select **Add** — the countdown will begin.

4. Switch on the device.



To make sure that the detector is on, press the on/off button – the logo will light up red for a second.

For the detection and interfacing to occur, the detector should be located within the coverage area of the wireless network of the hub (at a single protected object). Request for connection to the hub is transmitted for a short time at the time of switching on the device.

If the connection to the Ajax hub failed, sensor will work autonomously; switch off the detector for 5 seconds and repeat the attempt.

The detector FireProtect (**FireProtect Plus**) connected to the hub will appear in the list of devices of the hub in the application. Update of the

detector statuses in the list depends on the device inquiry time set in the hub settings, with the default value – 36 seconds.

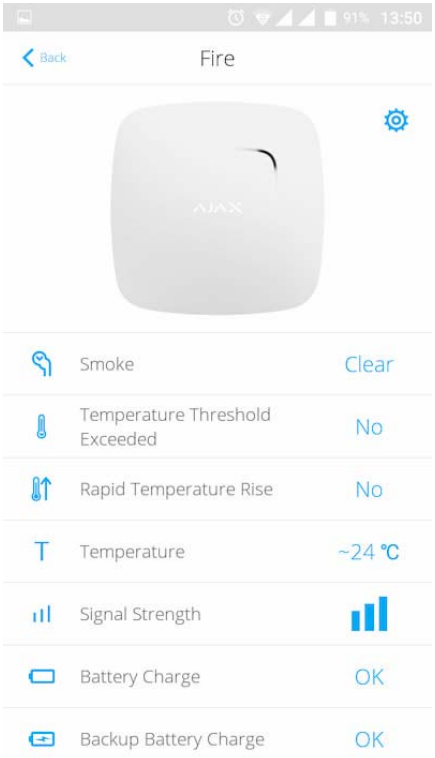
Connecting the Detector to Third Party Security Systems

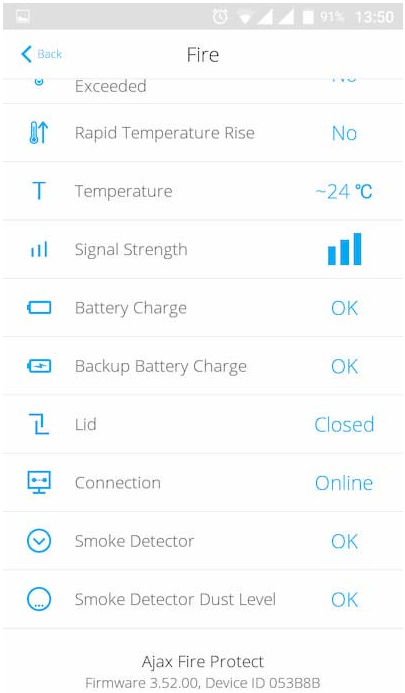
To connect the detector to a third party security central unit using the uartBridge or ocBridge Plus integration module, follow the recommendations in the manual of the respective device.

The smoke detector always operates in the active mode. When connecting FireProtect to third-party security systems, it is appropriate to place it in a permanently active protection zone.

States

1. Devices
2. FireProtect | **FireProtect Plus**

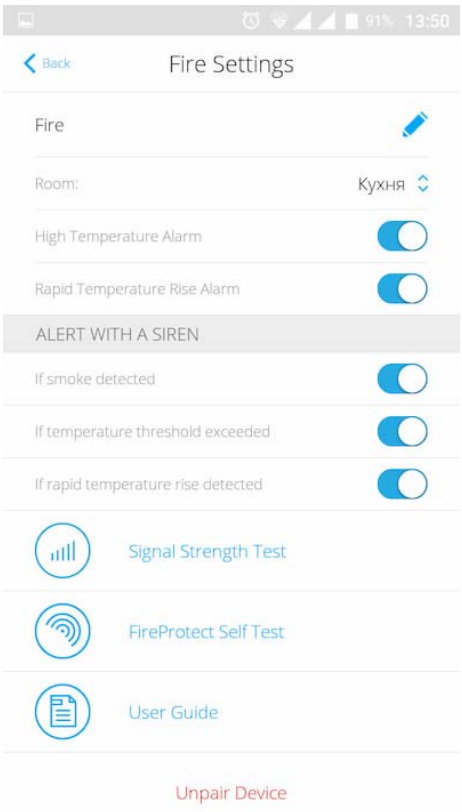




Parameter	State
Smoke detected	Smoke alarm state
Temperature threshold exceeded	The alarm state for exceeding the threshold temperature
Rapid temperature rise	The alarm state for rapid temperature rising
Temperature	Temperature of the device. Measured on the processor and changes gradually
Signal Strength	Signal strength between the hub and the detector
Battery Charge	Battery level of the device
Backup Battery Charge	Backup battery level of the device
Lid	The tamper mode of the device, which reacts to the detachment
Connection	Connection status between the hub and the device
Smoke detector	State of the smoke detector
Smoke detector dust level	Dust level of smoke chamber
Firmware	Detector firmware version
Device ID	Device identifier

Setting Up the Detector

1. Devices
2. FireProtect | **FireProtect Plus**
3. Settings



Setting	Value
First field	Device name, can be edited
Room	Selecting the virtual room to which the device is assigned
High temperature alarm	If active, detector will react if temperature is 60°C and higher
Rapid temperature rise alarm	If active, detector will react on rapid temperature rising (30°C for 30 minutes or less)
Alert with a siren if smoke detected	If active, HomeSiren and StreetSiren are activated in case of smoke alarm
Alert with a siren if temperature threshold exceeded	If active, HomeSiren and StreetSiren are activated in case if temperature threshold exceeded

Alert with a siren if rapid temperature rise detected	If active, HomeSiren and StreetSiren are activated in case if rapid temperature rise detected
Signal Strength Test	Switches the device to the signal strength test mode
FireProtect self-test	Starts FireProtect self-test
User Guide	Opens the detector User Guide
Unpair Device	Disconnects the sensor from the hub and deletes its settings

Indication

Event	Indication
Detector switch on	LED lights up green for 1 second
Detector switch off	The logo blinks red three times and the device switches off
Registration failed	The logo blinks greed for a minute, then the device switches over to the autonomous mode
Detector detected smoke contamination and temperature increase	The siren switches on, the logo lights red until the end of the fire/smoke detection
Battery low	One short sound signal per 90 sec – main batteries low (CR2) Two short sound signals per 90 sec – backup battery low (CR2032) Three short sound signals per 90 sec – all the batteries low

Performance testing

The Ajax security system allows conducting tests for checking the functionality of connected devices.

The tests do not start straight away but within a period of 36 seconds when using the standard settings. The test time start depends on the settings of the detector scanning period (the paragraph on “**Jeweller**” settings in hub settings).

Signal Strength Test

FireProtect Self Test

Attenuation Test

Pursuant to the requirements of the standard EN50131, the level of the radio signal sent by wireless devices is decreased during the test mode.

Detector Testing

Prior to installing FireProtect, check the smoke detector. To test, switch on the device and press the touch-sensitive button in the logo center for 10 seconds – the detector will test the smoke chamber with the electronic simulation of smoke generation and then will switch on the siren for 8 seconds.

You will receive the corresponding notification in the application regarding the test result and detector status.

Installing of the device

Selection of the Detector Location

The performance efficiency of the detector FireProtect (**FireProtect Plus**) depends on its location.

Location of FireProtect (**FireProtect Plus**) as a security system element determines its remoteness from the hub and presence of any obstacles between the devices, hindering the radio signal and sound transmission: walls, inserted floors, large-size objects located within the room.

Check the signal level at the installation location!

If the signal level is one division, we cannot guarantee stable operation of the security system. Take possible measures to improve the quality of the signal! As a minimum, move the device – even 20 cm shift can significantly improve the quality of reception.

If, after moving, the device still has a low or unstable signal strength, use a radio signal range extender ReX.

The detector should be installed at the ceiling in the highest point where hot air and smoke are concentrated.

If there are any beams at the ceiling, protruding by 30 or more centimeters from the ceiling level, then the detector should be installed between every two beams.

Detector installation process

Before installing the detector, make sure that you have selected the optimal location and it is in compliance with the guidelines contained in this manual!

1. Fix the SmartBracket panel on the ceiling using bundled screws. After selecting other attachment hardware, make sure that they do not damage or deform the panel.

   The double-sided adhesive tape may be only used for temporary attachment of the detector. The tape will run dry in course of time, which may result in the falling and damage of the detector.

2. Put the detector on the panel – the detector will blink with the logo, confirming the tamper switching. Turn the detector clockwise to fix it on SmartBracket.

   If the LED in the detector logo is not actuated after installation, check the status of the tamper in the Ajax Security System application and then the fixing tightness of the device on the panel.

   In case of opening the SmartBracket panel (removing the detector from the ceiling), you will receive the notification.

   Do not install the detector:

1. outside the premises (outdoors)
2. in places with fast air circulation (near a ceiling fan, air conditioner, air exhaust, open doors and windows)
3. nearer than a meter from the vertical projection of the cooking surface
4. nearby any metal objects or mirrors causing attenuation and screening of the signal

5. in a room with the humidity exceeding
6. closer than 1 m from the hub.

Autonomous Use of the Detector

The FireProtect detector can be used autonomously, without connecting to a security system.

1. Switch on the detector by pressing the on/off button for 3 seconds (the logo will light up green for 1 second) and conduct testing.
2. Determine the optimal location of the detector following the recommendations in the second part of the section Selection of the Detector Location of this manual.
3. Install the FireProtect detector as described in the section Installation of the Detector.

   In case of the autonomous use, the detector will notify of the detected fire/smoke with a sound signal and light of the logo. To switch off the siren sound, press on the logo (there is a touch-sensitive button under it) or eliminate the cause of the actuated alarm.

Detector Maintenance and Battery Replacement

Check the operational capability of the FireProtect detector on a regular basis.

Clean the detector body from dust, spider web and other contaminations as they appear with a soft dry napkin suitable for equipment maintenance.

Do not use for cleaning any substances containing alcohol, acetone, gasoline and other active solvents.

Any dust that penetrated into the smoke chamber is perceived by the detector as smoke. The dust content of the chamber is compensated up to some level, and then cleaning will be required – the detector will send the respective notification. The detector also signals about the contaminated smoke chamber or a failure using a long sound signal once every minute and a half.

How to clean up the smoke chamber

Batteries installed in the detector ensure up to 4 years of autonomous operation. If the batteries are discharged, the security system will send the respective notifications and the detector will activate a sound signal once every 90 seconds.

- if the main batteries are low – a single short signal;
- if the backup battery is low – two short signals;
- if all the batteries are low – three short signals.

Battery Replacement

Tech Specs

Smoke-sensitive element	Photoelectric sensor
Temperature sensitive element	Thermocouple
Sound notification volume	85 dB at a distance of 3 m
Alarm threshold at the temperature	+59°C ±2°C
Tamper protection	Yes
Frequency band	868.0 – 868.6 MHz or 868.7 – 869.2 MHz depending on the region of sale
Compatibility	Operates independently or with Hub, Hub Plus, Hub 2, ReX, ocBridge Plus, uartBridge
Maximum RF output power	Up to 20 mW
Radio signal modulation	GFSK
Radio signal range	Up to 1,300 m (any obstacles absent)
Power supply	2 x CR2 (main batteries), CR2032 (backup battery), 3 V
Battery life	Up to 4 years
Operating temperature range	From 0°C to +65°C
Operating humidity	Up to 80%
Overall dimensions	132 x 132 x 31 mm
Weight	220 g

Complete Set

1. FireProtect (**FireProtect Plus**)
2. SmartBracket mounting panel
3. Batteries CR2 (pre-installed) – 2 pcs
4. Battery CR2032 (pre-installed) – 1 pcs
5. Installation kit
6. Quick Start Guide

Warranty

Warranty for the “AJAX SYSTEMS MANUFACTURING” LIMITED LIABILITY COMPANY products is valid for 2 years after the purchase and does not apply to the pre-installed battery.

If the device does not work correctly, you should first contact the support service — in half of the cases, technical issues can be solved remotely!

The full text of the warranty

User Agreement

Technical support: support@ajax.systems

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