FireProtect 2 AC (Heat/Smoke) Jeweller

Wireless mains-powered fire detector with heat and smoke sensors

Accuracy through steam, dust, and time

FireProtect 2 AC is a mains-powered detector designed for residential fire safety. The unique smoke chamber does not require regular cleaning, and sophisticated software minimizes false alarms. The dual-spectrum sensor instantly distinguishes smoke from steam, and two thermistors quickly react to the synthetic materials' burning. Everything meets the latest fire safety standards. Thought-out design, improved mounting panel with WAGO 221 connectors, and in-app settings make the installation process nice and easy, giving an ultimate experience for PRO.

Two types of interconnected fire alarm Primary: via an Ajax hub, an alarm in 20 s Fallback: detector- to- detector, an alarm within 60 s	Main power supply 110–240 V~ Backup battery	SmartBracket with an adjustable rotation angle	85 dB built-in siren
Sensors | Heat | Smoke |	Dustproof smoke chamber impenetrable for insects	Easy wiring with WAGO 221	Dual-spectrum optical smoke sensor with the HazeFlow 2 software algorithm to filter false alarms
Jeweller radio communication	Informative in-app notifications Home: Rapid temperature rise detected, FireProtect 2 in Kitchen Home: Photo by scenario taken, MotionCam (PhOD) in Kitchen	Remote control and configuration ——— Operates as part of the Ajax system or without pairing with an Ajax hub	Up to 1,700 m range of communication with an Ajax hub ——— Two colours

Compatible hubs and range extenders

Hub Plus Hub 2 (2G) Hub 2 (4G) Hub 2 Plus Hub Hybrid (2G) Hub Hybrid (4G)	ReX ReX 2

Discover future-proof hardware

- Test/Mute mechanical button
- LED indication of detector states
- Smoke chamber with a dual-spectrum optical sensor
- Two thermistors
- 85 dB siren
- The lock to secure the device on the SmartBracket mounting panel
- SmartBracket with the protective lid to isolate the wiring
- WAGO 221, the removable lever-actuated connectors

Patented smoke chamber technology

Encouraged by world standards and best practices, Ajax reaches an entirely new level of technology in residential fire safety with FireProtect 2 AC. A unique smoke chamber that is dustproof and impenetrable for insects, a dual-spectrum optical sensor, and a proprietary HazeFlow 2 software algorithm guarantee the speed and accuracy of fire detection — ultimate safety with no stress about false alarms.

Impenetrable for dust and insects

The smoke chamber is designed with zero possibility of contamination that can affect detection. A unique circulation mechanism provides the optical sensor with an unobstructed field to quickly identify products of combustion in the air.

> ☝ The FireProtect 2 smoke chamber does not require regular cleaning.

Ignores cooking fumes and water steam

The smoke chamber is hardwired with a dual-spectrum optical sensor that has blue and infrared LEDs with different wavelengths. It uses the most reliable real-time detection method, directly measuring the microparticle concentration in the air. This technology allows FireProtect 2 AC to determine the size of the volatile particles inside the chamber and respond only to smoke, ignoring vapour and water steam.

Only real threats considered

In-depth research on materials combustion resulted in HazeFlow 2 — a smoke detection algorithm developed by Ajax. The algorithm contemporaneously analyses and compares data from the dual-spectrum optical sensor to a specified pattern to define smoke from vapour or steam. The detector instantly raises the alarm when pattern dynamics indicate a real case of fire.

Even when it's fire without smoke

FireProtect 2 is equipped with two class A1R thermistors to detect smokeless fire threats. They give a significant advantage in detecting a rapid temperature rise when synthetic materials burn, or a fire starts from smoldering. Thermistors are located outside the enclosure to eliminate life-saving detection delays. So, FireProtect 2 AC is ready to detect a fire as fast as possible, even if it starts imperceptibly.

Heat alarm

- 10°C increase in temperature within a minute
- Exceeding +64°C

Stable performance for a decade

The detector is powered by 110–240 V~ mains and has a sealed battery to serve as a backup. Even in a power outage, the detector keeps operating smoothly. Designed for the quick and reliable fire detection over its 10-year lifespan.

Always informed, everywhere

For residential fire alarm systems, informing people about fire danger is the priority. FireProtect 2 is equipped with a powerful 85 dB siren to eliminate the risk of missing an alarm. The detector uses impossible-to-ignore tones with different patterns to indicate an alarm or event, so it's easy to recognize the type of threat and react accordingly.

Different sound and LED indications

- Heat or smoke alarms
- Malfunction
- Low battery level
- End of life

Enhanced wireless interconnection

All FireProtect 2 AC detectors in the system can synchronously notify about the fire alarm. There are two ways: primary and fallback (both work in parallel). In case of danger, the initiating detector sends a fire alarm to the hub. The hub initiates the primary interconnect: all fire detectors will activate the built-in sirens in 20 seconds. This is three times faster than the fire standard requires. All information is immediately available in Ajax apps: initiating detector's location, fire alarm type, and exact time. Meanwhile, the initiating detector activates the fallback interconnection, directly sending the alarm to other fire detectors. Even if the connection with the hub is lost, raising the interconnected alarm takes a minute.

Primary interconnected alarm via the hub	Fallback interconnected alarm from detector to detector
20 seconds to activate up to 200 fire detectors	Less than a minute to activate up to 50 fire detectors

Unleash the Ajax power

The Ajax smart and complex ecosystem brings new standards to the fire safety industry. FireProtect 2 AC is ready to protect your home without an Ajax hub but can do even more when connected to it. Intuitive Ajax apps provide remote setup and all detector information in real-time from anywhere the Internet is available, on a smartphone or PC. With instant notifications, there is no chance of missing a fire alert, and scenarios let you automate fire security to enhance home protection while you're away. A complete set with stable wireless communication — essential reliability tested over the years by nearly two million users.

Full monitoring for the building

Data-rich notifications

The system instantly notifies about alarms with the critical alerts from the Ajax apps. Security companies and users know exactly which device triggered, when and where it happened. The system controls each device state and reports if there is a malfunction or it's time to replace the batteries.

Detailed event log

The event log records 500 recent events within the system. The data is explicit with the device, time, and description of the event. It helps reconstruct the actual event and find the causes to obtain comprehensive information for firefighters or an insurance company.

Monitoring with PRO Desktop

With PRO Desktop, building administration staff can observe not only security but Ajax fire detectors for instant reaction to alarms. Device statuses, event log, batteries data — the CMS operator has a complete picture in one intuitive interface, all informative and centralized. The installation engineer can remotely change the settings and provide services in time.

Advanced automation for greater safety

Ajax fire detectors are a part of the Ajax ecosystem and can interact with automation devices and PhOD detectors of the MotionCam lineup through scenarios. In the case of a fire alarm, the WallSwitch relay de-energizes the house, and Relay activates emergency lights. At the same time, MotionCam (PhOD) sends pictures into Ajax apps to identify the cause of the alarm. The result is a reliable combination of security and automation that works as a Swiss watch.

Photo evidence of fire	Power supply control	Electric locks unlocking
To find out the situation at the protected facility and quickly respond to it.	To power off the possible cause of the fire and protect appliances from the consequences of firefighting.	To speed up people's evacuation and ease firefighters' access to the building.
Fire detected > FireProtect 2 > MotionCam (PhOD) > Cause of fire	Fire detected > FireProtect 2 > WallSwitch > Mains power-off > Relay > Emergency lights on	Fire detected > FireProtect 2 > Relay > Emergency exits unlocked

Unique wireless technologies

The Ajax system uses two-way secure radio communication based on the Jeweller proprietary protocol. It supports block cipher encryption and device authentication on every session with the hub to prevent sabotage, spoofing, or data theft.

- Up to 1,700 m of radio communication with a hub
- Encrypted two-way radio communication
- Notifications about jamming and connection loss

Jeweller

Ajax wireless technology has up to 1,700 m of radio communication range in an open space. This distance is on average longer than competing solutions. Automatic power adjustment ensures energy efficiency by avoiding the constant use of maximum power in system devices' radio transmitters. Also, Jeweller technology is more stable due to using less noisy radio frequencies. Ajax hubs use frequency hopping to protect against radio interference and signal interception. The system automatically changes frequency within a band and notifies the security company and users about the jamming.

Jeweller uses polling to display the real-time device status and transmits alarms, events, and all measured readings into the Ajax apps. Features encryption and authentication to prevent spoofing.

Scaled and comprehensive

For complex radio signal conditions like large houses with thick walls or warehouses with several buildings, there is the ReX range extender. It boosts the range of all Ajax devices and manages their communication with the hub via Jeweller. And ReX 2 assures stable communication even through steel and concrete via Ethernet using the wire as the additional communication channel. Up to 5 range extenders can operate within one Ajax system to expand the network twice as big, covering underground parking, basements, and metal hangars.

- Up to 5 range extenders within one system
- Ethernet as an alternative communication channel

- Security on a big estate and large facilities
- Coverage of basements and underground parking

Effortless installation and maintenance

FireProtect 2 AC is ready to operate straight out of the box. It takes only 90 seconds to install the detector with no need to disassemble the enclosure. The upgraded SmartBracket mounting panel now has the lever-actuated WAGO 221 connectors familiar to every industry expert. An installer can wire the power supply without a screwdriver, secure the detector on ceilings, and level it at 90° angles after mounting.

The device is paired with the hub by scanning the QR code in the Ajax apps. And it can always be reconfigured remotely without site visits. A self-test system automatically diagnoses sensors and reports their state to the hub. Testing can also be run manually anytime in the app or by pressing the detector front panel.

Connection	Installation	Setup	Maintenance
Pairing with the hub via QR code	SmartBracket with the WAGO 221 connectors to secure the wires without screwdriver	Configuring and testing in the mobile or desktop apps	The dustproof smoke chamber that does not require cleaning