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#### EN 14604 2005 AC:2008 EN 50291-1 2018



# FireProtect 2 (Heat / Smoke / CO) Jeweller

Wireless smoke, heat, and carbon monoxide detector. Featured with a built-in siren for alarm and event notification. It can operate as part of the Ajax security system and autonomously without a hub.





Find the detailed information





support.ajax.systems/en/manuals/fireprotect-2-heat-smoke-co/



The device is available in two options. The model with replaceable batteries has a mark **RB** in the name, and with non-replaceable batteries — the **SB**.

# Key features



Accurate detection of threats

1. HazeFlow 2 software algorithm to prevent false alarms on the smoke.

2. Bispectral optical sensor for filtering false alarms on the smoke.

3. Maintenance-free smoke chamber.



- 1. An interconnected alarm of all fire detectors at the facility in 20 seconds.
- 2. Built-in siren with a volume of 85 dB at a distance of 3 meters.
- 3. Ability to operate autonomously without an Ajax hub.
- 4. Up to 10 years on non-replaceable batteries, and up to 7 years on replaceable.



1. SmartBracket mounting panel with the ability to align the detector after installation.

2. Remote control and configuring via Ajax apps.

3. Pairing with the Ajax hub via QR code.

# **Operating principle**





#### **Smoke detection**

FireProtect 2 detects smoke and does not react to water vapour thanks to a bispectral optical sensor with blue and infrared LEDs. LEDs emit light with different wavelengths, which allows the detector to determine the size of the volatile particles and react only to smoke.

The detector's smoke chamber is protected from dust, dirt, and insects. Even if dust enters and settles in the smoke chamber, it does not threaten or impair the detection. The optical system is designed so that nonvolatile particles or insects cannot be in two beams simultaneously and cause a false alarm.

### **Detection of a rapid** temperature rise

Two built-in thermistors are responsible for the reaction to temperature rise. Thermistors are located outside the detector for faster threat detection.



If the room temperature exceeds 64°C or increases at more than 10°C per minute, the detector recognizes this as a rapid temperature rise and raises the alarm. The temperature alarm can trigger even if there is no smoke in the room.



#### Detection of a dangerous concentration of carbon monoxide

A built-in chemical sensor with a service life of at least 10 years is responsible for detecting a dangerous concentration of carbon monoxide in FireProtect 2.

Carbon monoxide (CO) is a colourless, tasteless, and odourless gas produced due to incomplete fuel combustion in automobile engines and heating appliances that use coal or other natural fuels. For example, it can be made by fireplaces, boilers, or heating systems. In airtight or closed rooms with poor ventilation, life-threatening concentrations of carbon monoxide can accumulate.

## Interconnected fire detectors alarms

The detector supports interconnected fire alarms. The feature activates built-in sirens of all Ajax fire detectors at the facility if at least one of them is triggered. In case of a fire, this allows alerting as many people as



possible.

FireProtect 2 detectors have an improved interconnected fire alarm algorithm that activates all fire detectors' sirens within 20 seconds. The function is available only when the detectors operate with the hub.

## Operation without a hub



FireProtect 2 detectors can be used without

connecting to an Ajax hub. In this case, the detector notifies fire alarms with a built-in siren and LED indication but does not send a notification to the user's smartphone, Ajax Translator, or PRO Desktop.

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# Manual and automatic testing

FireProtect 2 regularly checks the status of batteries and built-in sensors. If a malfunction is detected, the hub will notify users and the monitoring station instantly. And the detector will turn on the light and sound alert by the built-in siren and LEDs. All detector states can be checked at any time in Ajax apps.

The detector supports manual testing mode. It is activated by pressing the device's front panel. The front panel has a mechanical button, which can be pressed either manually or with a floor mop. During the test, the built-in siren and testing of sensors are run. This allows the installer to test the device at any time and to demonstrate to the customer the light and sound indication of the detector for various types of alarms.

## Autonomous operation

Two models of FireProtect 2 (Heat / Smoke / CO) are available — with replaceable and non-replaceable batteries. Detectors with replaceable batteries operate for up to 7 years with pre-installed CR123A batteries. After their discharge, the batteries can be replaced with new ones. The model with non-replaceable batteries works from built-in lithium batteries for at least 10 years. After the batteries are discharged, such a detector should be substituted with a new one.





Jeweller is a radio protocol for fast and reliable two-way communication between hubs and connected devices. The protocol provides a wireless radio communication range with FireProtect 2 up to 1700 meters. This communication range allows you to install detectors even on large-scale objects.

Jeweller is responsible for transmitting alarms and events. The radio protocol also provides an interconnected

fire detectors alarm activation within 20 seconds in a system with any number of FireProtect 2. Thanks to Jeweller, users and the monitoring station can always see the current status of detectors in Ajax apps.

# Quick pairing and installation



To install FireProtect 2, it is not necessary to disassemble the detector enclosure. Replaceable or non-replaceable batteries are pre-installed, and the SmartBracket mount is removed from the detector without tools. SmartBracket mounting panel has a degree of freedom of 90°. This allows the installer to align the position of the device after installation.

The detector connects to the Ajax security system in less than a minute. An installer needs to open the Ajax app, scan the QR code, and add the device to the room and security group.

# **Technical specifications**

Communication with control panel or range extender

Jeweller communication technology

Frequency bands

Compatibility

Hubs Hub Plus Hub 2 (2G) Hub 2 (4G) Hub 2 Plus

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) Up to 20 mW

Hub Hybrid (2G) Hub Hybrid (4G)

Range extenders

ReX ReX 2

Communication range
up to 1,700 m
Without obstacles.

# Compliance with special fire standards

EN 14604:2005/AC:2008 EN 50291-1:2018 Qmark

Smoke detection

Sensitive element double-spectrum optical sensor Recognizes smoke by the size of particles in the air.

Protection from false
alarms
The detector does not react
to water vapour.

			Patented smoke chamber Protects the smoke sensor from dust, dirt, and insects.
Detection of	Sensitive element	Carbon monoxide	Sensitive element
dangerous	thermistor	(CO) detection	chemical CO sensor
temperature	According to the		
	requirements for		Alarm if accumulated dose
	temperature detectors of		of CO is exceeded
	A1 class of EN 54-5 and		more than 50 ppm
	BS 5446-2 standards.		(0.005%) — no more than in

	High temperature Alarm at temperatures above 64°C		90 minutes more than 100 ppm (0.01%) — no more than in 40 minutes more than 300 ppm
	Rapid temperature rise Alarm when the temperature rises more than 10°C in 1 minute or less		(0.03%) — no more than in 3 minutes <b>Sensor life</b> 10 years
Additional features	<b>In-built siren</b> volume 85 dB (at a	Anti-sabotage protection	Tampering alarm

# distance of 3 meters) Protection against spoofing device authentication

Additional features

Interconnected fire detectors alarms All fire detectors in the system turn on built-in sirens if at least one of the detectors registers an alarm. The interconnected alarm is activated after no more than 20 seconds.

Anti-sabotage protection Detection of communication failure within 15 minutes The time to detect communication loss depends on the number of undelivered data packages setting (specified in the Jeweller or Jeweller/Fibra settings). The polling

LED indication green is a power indication Lights up once every 56 seconds.

yellow is an indication of malfunctions Lights up when malfunctions are detected. For example, in the case of discharged batteries, contamination of the smoke chamber, or end of the service life. interval is fixed at 300

seconds.

red is an indication of fire

alarms

Lights up when the detector detects a fire alarm.

Button on the front panel of the detector In normal mode, when pressed, it starts the

smoke chamber test. In the event of an alarm or malfunction, the pressing turns off the detector sound notification.

Power supply

For FireProtect 2 RB (Heat/Smoke/CO) 2 × CR123A battery Up to 7 years of battery life.

For FireProtect 2 SB (Heat/Smoke/CO) 2 non-replaceable lithium batteries

Enclosure and installation

Dimensions  $124 \times 124 \times 45$  mm

Weight TBC For FireProtect 2 RB (Heat/ Smoke/CO).

TBC For FireProtect 2 SB (Heat/

#### 10 years of battery life.

#### Smoke/CO).

**Operating temperature** range from 0°C to +50°C

**Operating humidity** up to 80%

**Protection class IP20** 

Colours Black

White

Complete set

For FireProtect 2 RB (Heat/ Smoke/CO) FireProtect 2 RB (Heat/ Smoke/CO) Jeweller SmartBracket mounting panel Installation kit 2 × CR123A batteries **Pre-installed** Quick Start Guide

For FireProtect 2 SB (Heat/ Smoke/CO) FireProtect 2 SB (Heat/ Smoke/CO) Jeweller SmartBracket mounting panel Installation kit Quick Start Guide