

CombiProtect Fibra

Wired indoor motion and glass break detector

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| <ul style="list-style-type: none">● Immunity to pets with a weight of up to 20 kg and height up to 50 cm● Two-factor glass break verification algorithm● Energy consumption up to 60 μA● Remote control and setup● Software algorithm to prevent false alarms | <ul style="list-style-type: none">● Temperature compensation● Two colours casing● 180° Glass break detection angle● Fibra line connection up to 2,000● Data-rich notifications |
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CombiProtect Fibra – is the device of the new Fibra wired product line. Such devices can only be purchased, installed and administered by accredited Ajax partners.

Communication protocol Fibra

The new wired line of Fibra devices has inherited all the advantages of the Jeweller wireless line. Data transmission that is encrypted and protected from sabotage, unprecedented range and energy efficiency, remote control and maintenance, the fastest possible installation.

Fibra technology allows building complex protection regardless of facility size, steel or concrete obstructions. Security is enhanced by informative notifications, photo verification of alarms, real-time system control in the app, and automation scenarios.

Pet immunity

When properly installed and configured, **CombiProtect Fibra** ignore animals that are up to 50 cm in height and weigh up to 20 kg.

To assess the threat, motion detectors use the SmartDetect software algorithm developed by Ajax Systems. When motion is detected, SmartDetect analyses the signal waveform of the infrared sensor and compares it with values specific to human motion.

Because as the heat spot of an animal is small, and the signals enter the lower zone of the Fresnel lens (which transmits less radiation to the sensor), the detector does not raise an alarm.

Software algorithm to prevent false alarms

Motion detector

CombiProtect Fibra track the movements of heat-emitting objects. They are configured in such a way as to react to people from their first steps in the protected area, and to filter out false signals from natural interference and animals.

The device detects motion even in hot climates by means of temperature compensation. It filters false alarms caused by thunder, dogs barking or the sound of passing trucks.

Under ideal conditions, the human body temperature (36.6°C on average) differs from the ambient temperature. Their contrast allows the CombiProtect Fibra to record the movement of a person in space accurately. In situations where the ambient temperature is very close to body temperature, temperature compensation is necessary.

Glass break detector

The detector uses a two-stage algorithm to exclude false alarms. The detector must record a dull (low-frequency) sound of an impact and then a ringing (high-frequency) sound of falling fragments in 1.5 seconds to register the alarm.

Temperature compensation

CombiProtect Fibra track the movements of heat-emitting objects. They are configured in such a way as to react to people from their first steps in the protected area, and to filter out false signals from natural interference and animals.

Temperature compensation is implemented at the software level and is based on regular measurements of the ambient temperature by the detector. At an ambient temperature of 14°C to 42°C, with each measurement, the detector introduces a correction according to the table of correction factors stored in its memory, i.e., either increases or decreases the sensitivity of PIR sensors.

Two-factor glass break verification algorithm

CombiProtect Fibra detects glass breaking using a built-in electret microphone. The detector's microphone responds only to acoustic vibrations typical of the glass breaking sound to exclude false alarms.

Owing to this algorithm, the detector does not respond to the barking of dogs or cars passing by the protected facility.

Technical specifications

General settings	
Classification	Combined motion and glass break detector
Color	White, Black
Installation method	Indoors
Type of detector	Wired
Limitations	
Compatibility	Hub Hybrid (2G) Hub Hybrid (4G)
Communication	
Fibra protocol	Transmission of events and alarms Alarm delivery time: 0.15 s
Recommended cable type for detector connection	Signal cable 4 × 0.22 (copper) Twisted pair U/UTP cat.5 (4 × 2× 0.51)
Connection wire length	Up to 2000 m
Polling interval	From 12 to 300 seconds
Sensor parameters	
Sensing element	IR sensor Electret microphone
Sensitivity	Adjustable, 3 levels
Detection distance	Motion detection – up to 12 meters Break detection – up to 9 meters

Motion detector viewing angles	Horizontal – 88.5° Vertical – 80°
Microphone coverage angle	180°
Motion detection speed	From 0.3 to 2.0 m/s
Pet immunity option	Yes. The detector does not react to animals up to 50 cm tall and weighing up to 20 kg when properly installed and configured. Learn more
Anti-sabotage protection	
Tampering alarm	Yes
Protection against forgery	Yes
Power supply	
Detector power supply	24 V $\overline{=}$
Current consumption	60 μ A (average value)
Enclosure	
Dimensions	110 × 65 × 50 mm
Weight	92 g
Operating temperature range	From -10°C to +40°C
Operating humidity	Up to 75%

Protection class	IP50
Service life	10 years