BOSCH

FIRE THREAT DETECTED

Superior high-speed flame and smoke detection with AVIOTEC

AVIOTEC by Bosch is an advanced video-based fire detection system which excels among all classic fire safety solutions in terms of speed, precision, reliability and application flexibility. Safety managers are bothered less frequently by false alarms thanks to smart, pre-trained algorithms which trigger alerts for a real fire or smoke occurrence – within seconds! People and premises, indoors and outdoors, are kept safe with round-the-clock monitoring, resulting in fewer evacuations and interruptions to business continuity.

Benefits of choosing AVIOTEC

All-in-one solution for rapid fire detection

The video camera with a 4-megapixel image resolution, lens, infrared illuminator for overnight monitoring and IP67 weatherproof housing are all integrated in one product. This means AVIOTEC saves valuable time and effort in installation and maintenance. It requires no additional accessories for fire safety monitoring.

Highly robust against false alarms with AI

Deep learning AI algorithms have been trained specifically on diverse fire risk scenarios. Within seconds, AVIOTEC can analyze video footage and precisely differentiate between real flames and smoke and harmless situations. Additional tools are available for further configuration, for instance, to minimize false alarms, such as verification time and sensitivity settings and masks to block certain areas from the field of view.

Continuous monitoring 24/7, inside & outside

AVIOTEC continues to operate efficiently after business hours. Infrared lighting automatically operates in low-light and nighttime conditions. For outdoors, robust housing protects the camera and the lens from dust, moisture and frost. Redundant alarm transmission is possible when required.

Unprecedented range and detection speed

AVIOTEC offers customized and flexible installation options. The camera detects fires at their source, making the technology superior to common detector technologies where the smoke must first reach the device to trigger an alarm. When comparing its video-based system to current aspirating smoke detectors in the company's own in-house fire laboratory, Bosch found that AVIOTEC 8000i IR detects smoke from test fires up to three times faster.*

The latest smart technology behind AVIOTEC

AVIOTEC 8000i IR films and examines live footage with high-quality images for signs of fire and smoke. They comprise smart AI algorithms which have been thoroughly pre-trained and tested to accurately analyze the video footage with the help of integrated artificial neural networks. They recognize the difference between real fires and false alarm scenarios within seconds. Alarms are only triggered if the characteristics of real flames, smoke or smoldering are detected. Automatically activated infrared illuminators provide the same standard and speed of detection in pitch-dark overnight conditions as in bright daylight or well-lit spaces.

Applications where AVIOTEC overcomes fire safety challenges

Industrial sites and production plants

The performance of AVIOTEC algorithms reduces unwanted nuisance alarms and optimizes the detection reliability during manufacturing activities. This can save hours of unnecessary downtime. The technology alerts personnel within seconds for instance, based on an overheating event with a conveyor belt. Even half-open storage areas are constantly monitored for signs of flames or smoke.

Warehouses, storage sites and logistics

Vast areas storing a potentially hazardous mix of materials and substances with a high fire load can be protected reliably by AVIOTEC. Indoor and outdoor storage is constantly monitored for every scenario, from smoldering to open flames, to avoid damage to goods and premises.

EV charging stations and parking lots

Electric vehicle batteries can catch fire easily when overheated. AVIOTEC technology is extremely rapid in recognizing hazardous situations. It can therefore contribute to drastically lower the risk of uncontrolled damage at sites for charging EVs, as well as on regular parking spaces housing both electrified vehicles and those with combustion engines.
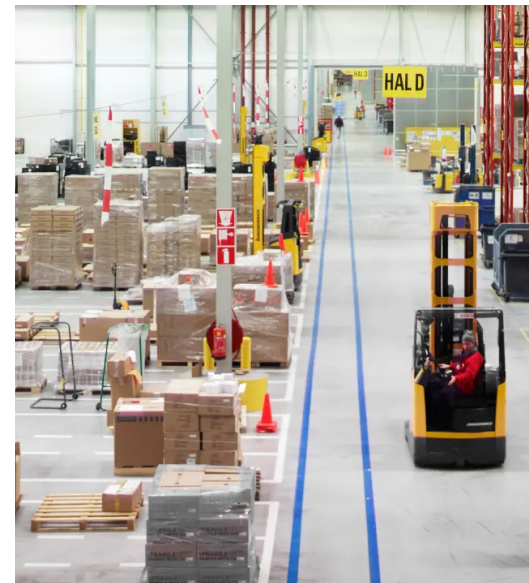
Airports, hangars and train stations

Transportation hubs are partially indoor spaces with high ceilings and partly undercover areas open to the elements. AVIOTEC can monitor all such areas day and night. High-value equipment and premises are protected from a possible outbreak of fire. Staff and passengers can be kept safe and only need to evacuate when a real fire occurs.

Power generation

Reliable protection of renewable energy facilities, such as photovoltaic plants, and their converters and inverters, is essential as interruptions to their power supply must be avoided. Combustion risks on sites like solar panel installations on a roof of a large commercial building mean insurance companies require safety certification before providing coverage. AVIOTEC offers the most convenient solution as its technology can be configured to recognize flames and smoke on such settings.