



Fire Protection in Parking Garages

The Challenge

Parking garages are used frequently in modern-day society, which means that protecting them from fire damage is of the utmost importance. Similar to traffic tunnels, parking garages are enclosed spaces that face serious structural and safety risks in the case of a fire. The ability to quickly detect and respond to a fire is paramount in saving human lives and protecting other valuable assets.

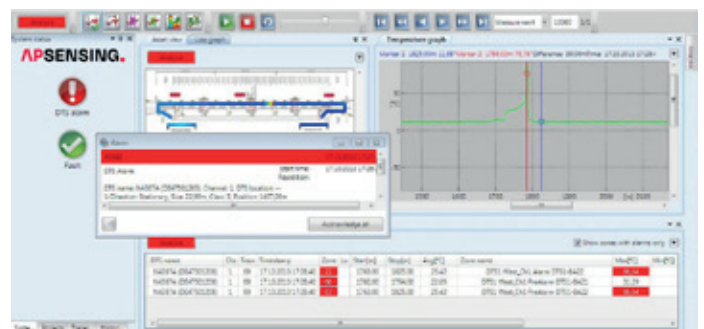
However, parking garages are often harsh environments filled with exhaust emissions, dust and other misleading debris. Many have ventilation systems and high airflow, as well as large open spaces that can create a challenge for most fire detection systems. This potential for false alarms makes having a robust and reliable fire detection system even more important.

The Innovation

AP Sensing's fiber optic Linear Heat Detection (LHD) solution addresses all of the challenges encountered when searching for a robust heat detection system to monitor parking garages. A passive fiber optic cable is utilized as a linear temperature sensor. This cable is light, easy to install and virtually maintenance-free. Our sensor cable withstands severe conditions and

delivers fast detection, while also having the industry's lowest false alarm rate. Due to the continuity and linearity of our sensing system, thousands of temperatures within the parking garage are measured in real-time, pinpointing any hotspot or fire with complete accuracy.

AP Sensing's unique sensor cable design allows temperature measurement up to several hundreds of degrees, tested as per IEC 60331- 25 at 750°C. This enables the system to not only detect, but also monitor fire development by providing vital information about fire size and spread. With our comprehensive asset-visualization software SmartVision, all information is available at a glance and rendered for further



SmartVision asset visualization during a fire test

processing by SCADA. The system is also fully integrable with other tools and fire suppression systems.

Fast & Adaptable Detection

The AP Sensing LHD solution consists of a fiber optic sensor cable and a fully-tested control instrument that measures a complete temperature profile in the parking garage within seconds. As an addressable linear heat detector, multiple project-specific fire zones are mapped to the control instrument and a variety of alarm parameters (rate-of-rise, maximum, adaptive) can be programmed to each fire zone. This solution delivers fast detection while minimizing false alarms.

Pre- and main alarms can be programmed to initiate automatic countermeasures. In the event of a fire, our linear heat detection system provides immediate information regarding fire location, size and spread. All information is available through dry-contacts and high level communication, e.g. Modbus protocol.

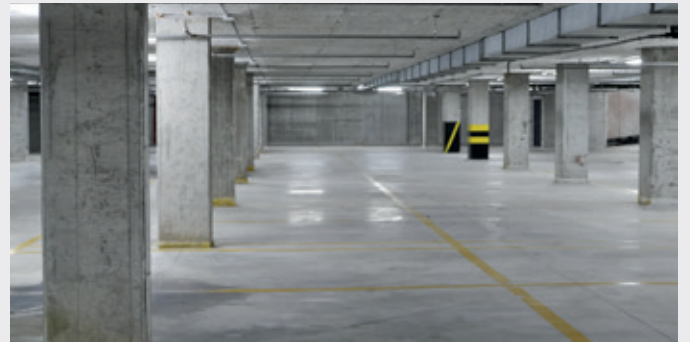
Reliable & Cost-Effective

Our LHD solution is thoroughly tested, with a 35-year MTBF and the most complete set of certifications on the market (VdS EN 54-22, UL 521, ULC-S530, FM 3210 and 3010, and additional approvals for ATEX, IECEx and SIL). It is robust and has passed highly demanding type tests. The sensor cables are proofed against IEC 60331-25 for high temperatures, ensuring the system withstands the demands of fire monitoring.

The sensor cable is passive, robust, immune to EMI, resistant to dirt and dust, and does not require maintenance. In the case of a break, the cable is easily spliced – reducing off-times. Regulation stipulates testing of the fire protection system in certain intervals; testing of AP Sensing's LHD system is simple, time-saving and does not require down-time of the parking garage. Heating a few meters of sensor cable in an accessible area is sufficient to test the entire system.



Passion for Plants.
For every unit sold, AP Sensing plants 100 trees.



Why AP Sensing?

- Industry-leading Linear Heat Detection (LHD) technology with fast response times, excellent accuracy, and low maintenance
- All product variations are fully certified and in compliance with internationally recognized standards
- Our experience and proven deployment in all regions in the world – our project reference list is extensive and comprehensive
- Range of certified sensor cables to fit every need
- Easy system integration through flexible protocols and interfaces
- World-class service, support and training



More Information:
+49 7031 309 6610
www.apsensing.com
info@apsensing.com