

Fire Monitoring

Fiber Optic Linear Heat Detection for Special Hazard Applications

Unsurpassed quality and reliability bring you peace of mind and lower cost of ownership.

A blazing fire can have devastating consequences: risk to human life, damage to valuable infrastructure and assets, and long downtimes. A proper fire protection installation is made more complex when the area is affected by harsh environmental conditions. Industrial facilities frequently produce dirt, dust, humidity and corrosive atmospheres in the production, storage or transport of goods. Conventional sensor technology often fails and tends to produce false alarms. Some of the costs of false alarming include, for example, activating the deluge or high-expansion foam fire suppression systems in aircraft hangars. These technologies also require periodic, time-consuming maintenance efforts.

The FiberStrike Linear Heat Detection (LHD) solution reduces operational costs and offers maximum reliability even under severe conditions like:

- ✓ Dirt, dust and corrosive atmospheres
- ✓ High humidity and extreme temperature changes
- ✓ Solvent vapors and radioactivity
- ✓ Electromagnetic interference (EMI)
- ✓ Explosive environments due to gas or dust (ATEX / IECEx)



Distributed Temperature Sensing

Our solution is thoroughly tested and certified (VdS EN 54-22, UL521, ULC S530, FM 3210, ATEX II(1) GD M2, KFI, CCC, SIL2) with the industry's fastest fire detection and lowest false alarm rate. Our Distributed Temperature Sensing (DTS) system detects fires precisely and can accurately track the size and direction of a spreading fire, regardless of air currents. No other fire detection system can withstand temperatures up to 750 °C (1382 °F) without losing monitoring capabilities. With this unique feature, fire-fighting countermeasures can be used effectively during the fire event. Our solution also includes certified and maintenance-free sensor cables to fit your requirements.



The fiber optic-based LHD has multiple advantages in comparison to conventional fire detection systems or non-fiber optic LHD. One single passive fiber covers a long range up to 10 km, whereas traditional solutions would need many sensors as well as individual systems. The high sampling interval is less than one meter, which permits quick activation of countermeasures in an emergency situation. Because of its low laser power, our LHD is well-suited for hazardous environments such as those found in chemical plants, coal storage facilities, mining conveyor belts, or other facilities requiring ATEX/IECEX certification. It is easy to integrate into existing fire alarm systems and can be utilized either as an alternative or an enhancement to existing fire detection systems. LHD enables early identification of rate of heat rise, and therefore detects heat abnormalities earlier than other technologies, with discrete trigger points at a higher temperature. Based on temperature delta, our LHD system differentiates between fire and temperature increases due to seasonal changes. Thanks to the distributed fiber optic technology, linear heat monitoring enables gapless monitoring and complete asset coverage.



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SmartVision™

The SmartVision software provides a visual overview of alarm zones, operational status, and real time temperatures at a glance, controlled by an easy-to-use graphical interface (GUI). Monitored assets and facilities are mapped and color-coded to show the measured temperatures, alarm zones and fire locations, as well as fire size and spreading. Alarm zones can be individually defined for flexible alarm levels and types. **SmartVision seamlessly integrates many sensors**, such as Distributed Acoustic Sensing (DAS), DTS, CCTV and others, into a single platform.

With a proven track record and continued innovation, Cleveland Electric Labs FiberStrike offers a completely integrated, end-to-end solution. Our team works together with you to select the right combination of technologies to fit your requirements. We also provide onsite services, hotline support, maintenance and product trainings.

