FIRE DETECTION

Fiber Optic Linear Heat Detection (LHD)
for Special Hazard Applications
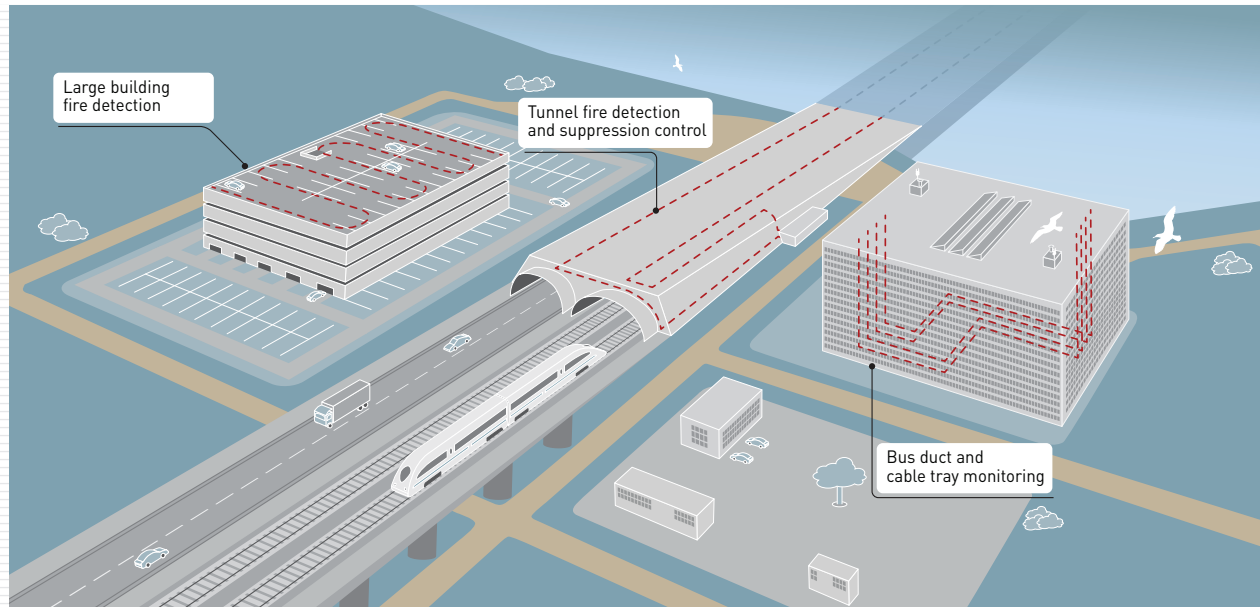
Leading the Way with Passion.
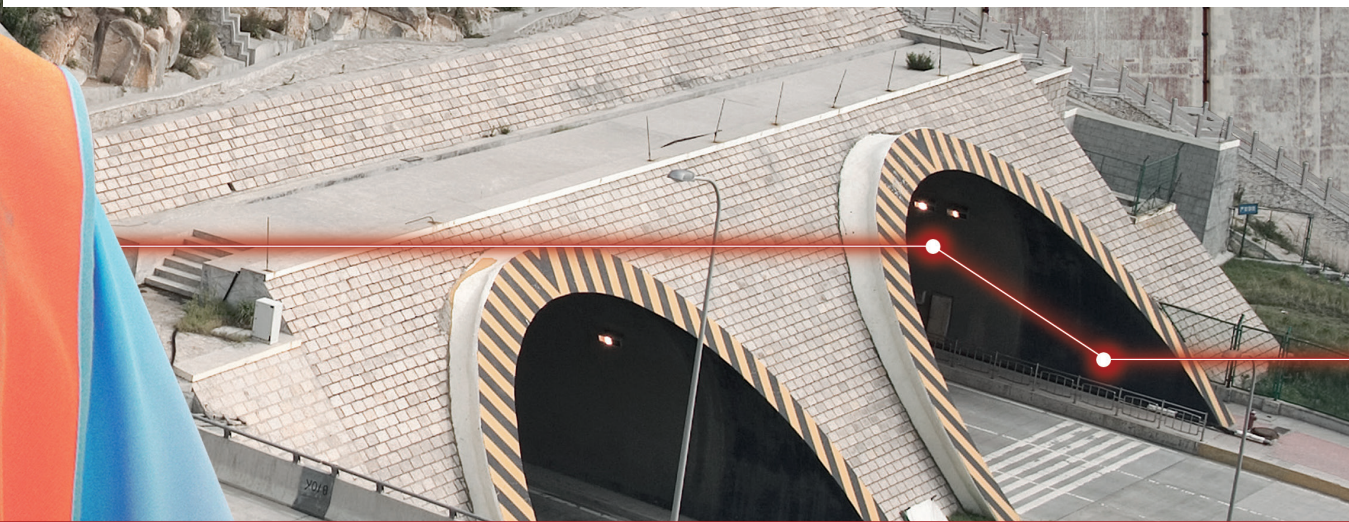
AP Sensing:
Your trusted partner for
fire detection

AP Sensing is your **global solution provider for Linear Heat Detection (LHD) in special hazard applications.** Based on a proven track record our Distributed Temperature Sensing (DTS) solution ensures reliable asset protection even in the most challenging environments.

Our product **quality and reliability are unsurpassed**, which brings you peace of mind and lower cost of ownership.

The heart of our DTS solution is based on **key technologies developed by HP/ Agilent Technologies**, the world leader in optical test and measurement for over 35 years.

Building on HP/Agilent's processes and knowledge, we have established ourselves as **the leading solution provider for Linear Heat Detection in a wide range of applications.**


Large building fire detection

Tunnel fire detection and suppression control

Bus duct and cable tray monitoring

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Our expertise:
The perfect fit for you

We understand your fire protection challenges, especially **when your facility is exposed to harsh environmental conditions**. AP Sensing's fiber optic LHD solution minimizes your operational costs and performs with maximum reliability. Safety systems demand highly reliable and quick fire detection.

Larger facilities have challenging installation and commissioning requirements and higher maintenance efforts.

AP Sensing addresses these problems by using a standard fiber optic cable as a precise, distributed heat sensor. Our technology measures **an accurate temperature profile every few seconds along a fiber optic cable, up to several thousand meters**.
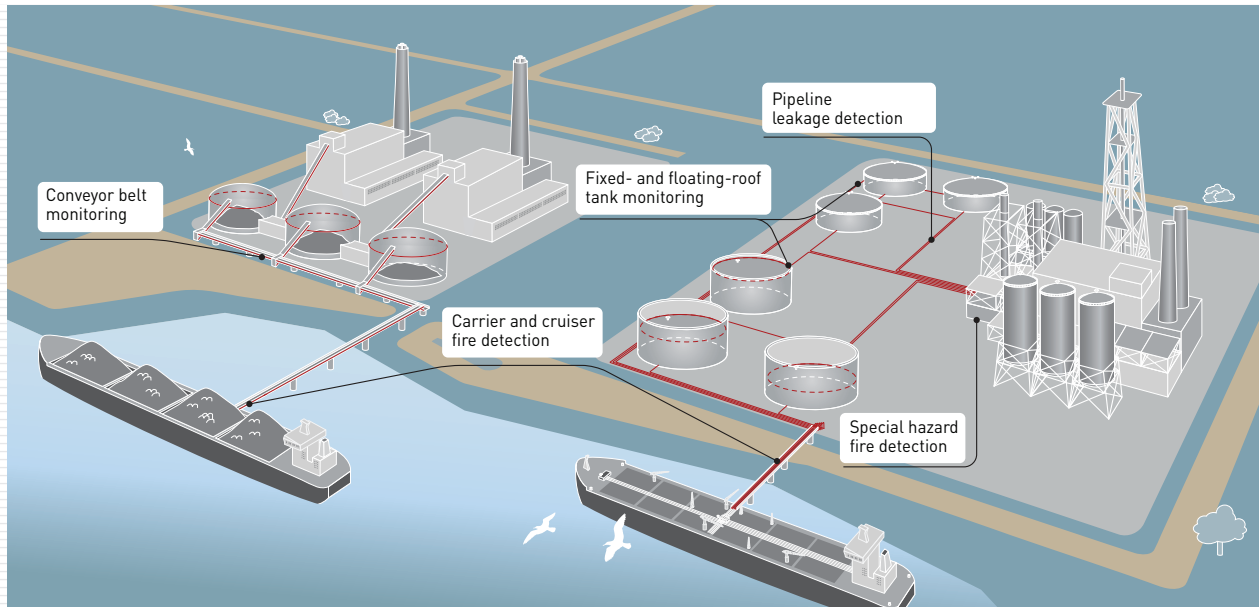
Fiber optic LHD solution advantages

A single passive cable, easy to install

Immune to EMC, dirt, dust and humidity

Maintenance-free, longest lifetime

Largest coverage

Functional even at 750°C

Precise location of all fire events

Fire size and spread monitoring

Five different alarm criteria for quick detection

Flexible zone and alarm configuration

Applications

Tunnels, metros, car parks

Conveyor belts

Cable trays and transformers

Tank farms, coal storage

Production areas

Power plants including NPP

Refineries and chemical plants

Warehouses and freezers

Solar farms

Battery storage

Conveyor belt monitoring

Pipeline leakage detection

Fixed- and floating-roof tank monitoring

Carrier and cruiser fire detection

Special hazard fire detection

Maximum safety and protection for your assets

A fire in a special hazards area can have devastating consequences: risk to human life, damaged infrastructure, and long downtimes. Our technology goes far beyond conventional fire detection systems. A fiber optic-based LHD solution detects fires quickly and precisely identifies their location.

The fire detection is unaffected by air currents and hence accurately determines the size and direction of a spreading fire. **No other fire detection system can withstand temperatures up to 750°C (1400°F)** without losing monitoring capability. With AP Sensing's LHD solution fire-fighting countermeasures can be used effectively before and throughout the fire event.

"When you do business with AP Sensing you get the feeling that you are working together as partners, because they listen to you and understand the challenges of your day-to-day operations.

Communication with AP Sensing is always professional and it's obvious that they have the experience and technical know-how to answer our queries."

Marcin Cichy, Honeywell

Flexible configuration – examples for tunnels:

Setup I: 1 spur: no redundancy
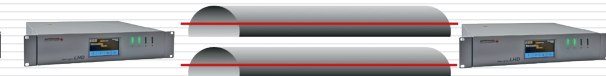
Setup II: 1 spur: full redundancy

Setup III: 2 spur: no redundancy

Setup IV: 2 spur: full redundancy

Setup V: 2 spur: full redundancy

Setup VI: loop, cable redundancy only

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Ideal for large-scale infrastructures

In large-scale infrastructures the sensor cable typically runs through different areas under various temperature conditions. The fiber optic LHD solution lets you configure the appropriate alarm criteria in hundreds of zones along the same cable run, regardless of how long your sensor cable actually is. **The industry's fastest fire detection and lowest false alarm rate** are in balance even under challenging conditions, regardless of the application. The system is **immune to dirt, dust, corrosive environments, organic vapors, extreme temperatures or radiation**.

AP Sensing's solutions include **certified sensor cables** for cost-sensitive, standard or specialized applications. All cables have an expected lifespan of 30 years and are maintenance-free.

Sensor cable with embedded fiber:
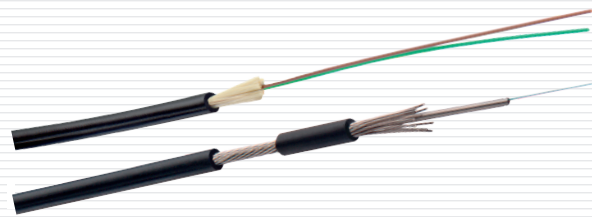
Your AP Sensing advantages

Best detection performance due to patented code correlation

Lowest false alarm rate thanks to patented single receiver

Low-power laser for safe use in hazardous areas

Highest availability based on quality components and 35 years of experience

Real-time operating system designed for mission-critical applications (VxWorks)

Fire monitoring capabilities even at highest temperatures (cable tested at 2 h and 750°C)

Certified for maximum sensor cable length and spacing

Market's most complete test reports and certifications (VdS, UL, ULC, FM, KFI, SIL2, IECEx, ATEX)

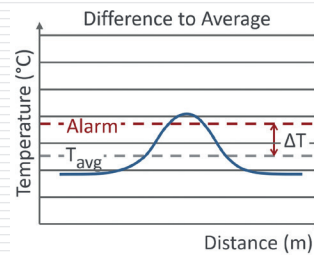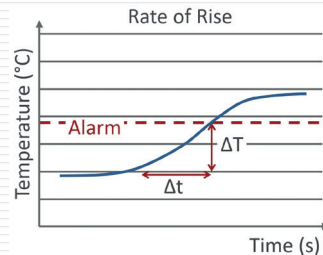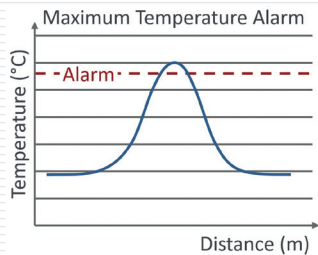State-of-the-art IT security standards

Easy integration and superb insight for your operators

Your personnel responsible for emergency situations needs **an immediate and accurate overview of the situation by looking at one screen.** AP Sensing's SmartVision alarm management system offers just such an overview. It provides schematic asset visualization for easy orientation and instant status of all configured linear heat detection instruments. This includes **asset visualization with color-coded temperatures.**

Our fiber optic LHD solution **integrates easily into your existing management platform** (SCADA systems) by dry contacts and/or communicating directly over Ethernet (TCP/IP), using **standard protocols.**

"AP Sensing's DTS is simply the best fit. We apply it together with ConveySafe in our coal power plants to protect our conveyors. The systems are rugged and completely reliable, need very little power, and can be seamlessly integrated into customer SCADA environments. Best of all, you don't just buy a box from them and that's it – their post-sales support is outstanding."

Harald Grzybeck, STEAG

Maximum Temperature Alarm — Temperature (°C) / Distance (m) — Alarm

Rate of Rise — Temperature (°C) / Time (s) — Alarm, ΔT, Δt

Difference to Average — Temperature (°C) / Distance (m) — Alarm, T_{avg}, ΔT

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Your complete solution provider

AP Sensing is your long-term partner. **We listen to your challenges and strive to provide the best solution for your application**. Our complete offering fits your heat detection and monitoring demands, and protects your valuable assets.

AP Sensing works together with expert regional partners to ensure complete and professional support services for you. Our experienced team of project engineers **delivers onsite services, hotline support, maintenance and product training.** Take advantage of our complete offering and see what we can do for you.

Why choose AP Sensing?

Industry-leading linear heat detection technology

Experienced, dedicated team for engineering and project management

Range of certified sensor cables to fit every need

Intelligent alarm management software: SmartVision

Easy integration through flexible protocols and interfaces

Industry's most comprehensive list of certifications and product tests

Highest quality and longest product life

World-class service, support and training

Worldwide presence with expert regional partners

Our mission is to ensure your success

Drawing on our HP/Agilent heritage in optical testing, we have established ourselves as **the leading solution provider for distributed Fiber Optic Sensing (DFOS).**

We remain committed to delivering **well-designed, comprehensive solutions** to our customers.

We have worldwide offices **with highly qualified and motivated employees, and a network of expert regional partners.**

At AP Sensing we recognize that we can only be successful when our customers and partners are successful. Therefore, we take a **respectful and proactive role** in all our commitments.

With the industry's most complete set of tests and certifications, **AP Sensing helps you comply to relevant security standards** and ensures environmental and employee safety.

Contact us for more information!

info@apsensing.com
www.apsensing.com

Passion for Plants.

For every unit sold, AP Sensing plants 100 trees.

Leading the Way with Passion.