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Linear Heat Detection Solutions

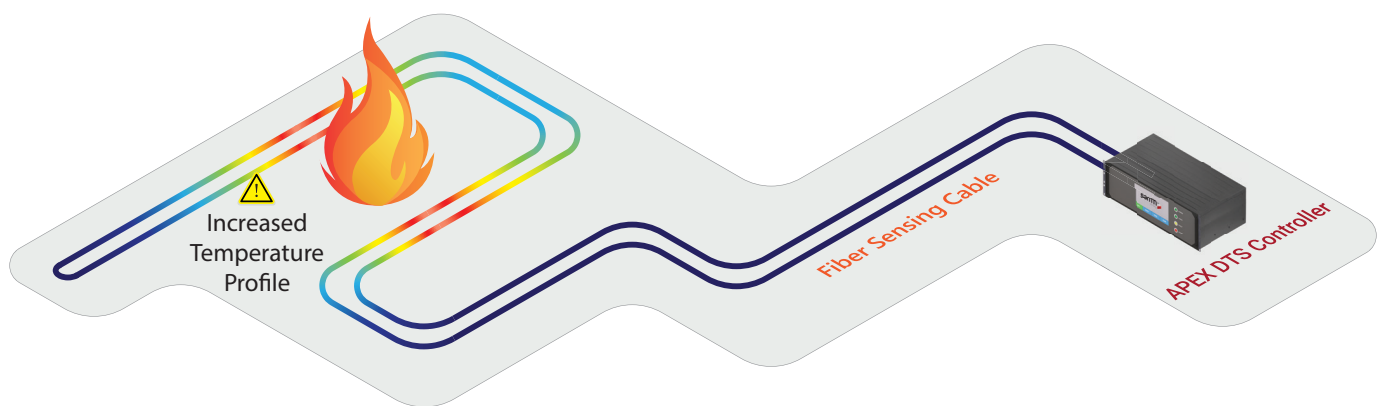
Advanced Fire Detection Utilising Optical Fiber Technology

Transform Safety and Monitoring with Optical Fiber Based Linear Heat Detection (LHD)



A next-generation Distributed Temperature Sensing (DTS) solution using optical fiber as a continuous linear heat detector, providing real-time temperature monitoring over long distances with pinpoint location accuracy.

Unlike point detectors or traditional linear heat detection cables, this system delivers continuous digital thermal intelligence along the entire sensing path even in the most challenging environments.



How Does It Work?

An optical fiber cable is installed along the area to be protected

The system uses laser pulses to detect temperature changes at every meter along the fiber, continuously and in real time.

Any abnormal rise in temperature is detected instantly, triggering an alarm and enabling a rapid response before the fire can take hold.

Key Benefits

- ▶ **Continuous Detection** - monitors temperature 24/7 along the full length of the fiber.
- ▶ **Early Warning** - identifies overheating and fire risks at the earliest possible stage.
- ▶ **Pinpoint Accuracy** - locates the exact position of temperature anomalies, enabling targeted intervention.
- ▶ **Immunity to EMI/RFI** - fiber optic technology is unaffected by electromagnetic or radio frequency interference.
- ▶ **Low Maintenance and Long Lifespan** - minimal upkeep required.
- ▶ **Fast Installation** - no power or electrics needed along the monitored route.
- ▶ **Integrated Response** - can be integrated into existing Building Management System (BMS) to automatically trigger ventilation control systems or provide real time site visualisation including hot spots.
- ▶ **Flexible Application** - suitable for multiple sites including tunnels, cable trays, culverts, frozen storage, car parks, warehouses, conveyor belts, and more.

Why choose our solution?

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More than 20 years of expertise in fiber optic sensing



Seamless integration with building management and fire control systems



Customisable solutions to match unique site requirements



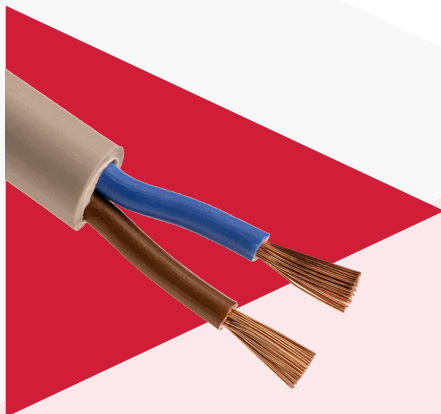
Expert technical support and comprehensive after-sales service

Why Choose Optical Fiber DTS Over Conventional Technologies?



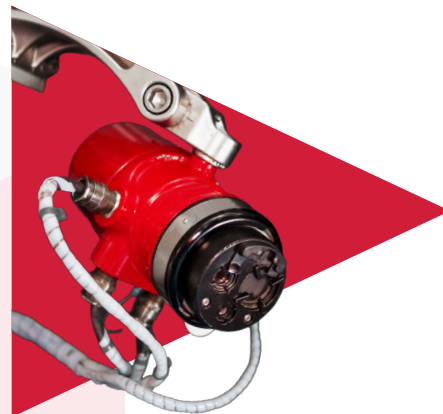
vs. Point Smoke / Heat Detectors

- ▶ Continuous coverage instead of spaced points
- ▶ No blind spots between detectors
- ▶ Better suited for linear assets (cables, tunnels, conveyors)



vs. Traditional Linear Heat Detection Cables

- ▶ Digital temperature measurement instead of binary trigger
- ▶ Accurate temperature profiling, not just alarm/no alarm
- ▶ Location precision rather than general zone detection
- ▶ No degradation of sensing cable over time like polymer-based cables



vs. Infrared / Flame Detection

- ▶ Immune to line-of-sight obstruction
- ▶ Works in smoke-filled or dusty environments
- ▶ Detects overheating before flame formation
- ▶ Lower false alarm sensitivity to optical disturbances

Designed for compliance with:

EN 54-22 linear heat detection systems

VdS approval requirements

SIL 2 Safety Integrity Level 2 approval for system reliability

Contact Us

Ready to enhance your facility's safety and monitoring capabilities? Reach out to our team for a free consultation or demonstration.

Email: fotas@samm.com

Web: fotas.samm.com

