

# Advanced Distributed Fibre Optic Sensing Solutions

Alartech DS provides advanced sensing and monitoring systems for critical assets across industrial, civil, and energy applications. Our solutions help customers detect issues early, reduce risk, and protect operations.

# Where Alartech DS solutions perform



## Duct Temperature Monitoring

Monitor temperature variations across ducts and enclosed air pathways to identify **abnormal heat build-up**, improve **system efficiency**, and support **safer HVAC or facility operations**.

This application is particularly relevant in **smart buildings, climate-controlled facilities**, and **data-driven environments** where thermal stability matters.



## Tunnel Temperature Monitoring

Enable continuous temperature surveillance inside tunnels to detect **heat accumulation**, support **preventive maintenance**, and improve **operational safety** in confined infrastructure environments.

Reliable tunnel monitoring is valuable wherever long linear assets require **real-time thermal awareness** and **fast incident response**.



## Oil & Gas Pipeline Monitoring

Track temperature changes along pipelines to help detect **operational abnormalities**, improve **situational awareness**, and support **safer transport of critical resources**.

For oil and gas operators, continuous pipeline monitoring **strengthens integrity management** and helps reduce the risk of **unplanned shutdowns or asset damage**.

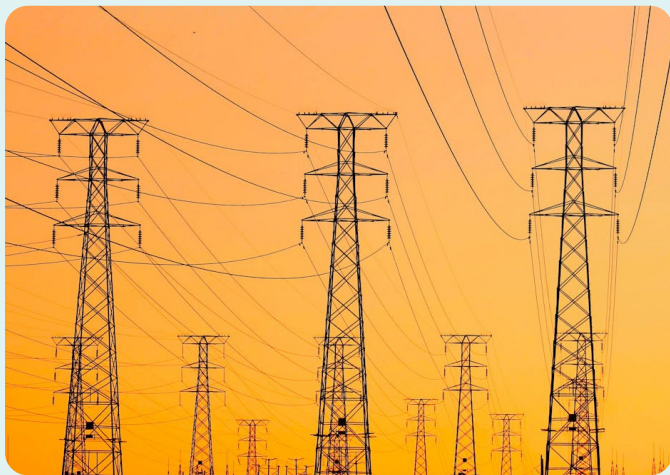
# Expanded Applications



## Structural Health Monitoring

Support the long-term integrity of bridges, buildings, industrial structures, and engineered assets through **continuous sensing of thermal variations** and related structural behavior.

Structural health monitoring commonly uses sensor networks to observe **temperature, strain,** and other indicators that inform maintenance planning and risk reduction.



## Overhead Powerline Monitoring

Monitor conductor temperature and related operating conditions in real time to help utilities identify **overheating risks,** reduce **sag-related concerns,** and improve **network performance.**

Distributed temperature sensing on overhead lines can provide temperature profiles over long distances, supporting more effective grid management.



## Geo-Technical Engineering

Provide continuous monitoring support for geotechnical assets and engineered ground environments where thermal and trends can influence safety and performance.

This application can be positioned around critical projects such as **embankments, retaining systems, underground works,** and other civil infrastructure requiring dependable field intelligence.



## Data Centre Thermal Bus Duct Monitoring System

In data centre thermal bus duct monitoring, continuous temperature visibility helps operators **detect hotspots early, reduce electrical failure risk, and support uninterrupted facility performance.**

Real-time bus duct monitoring is especially valuable in high-density and hyperscale facilities because it **improves safety, enables proactive maintenance, & reduces dependence on periodic manual inspection.**



ALARTECH **DS**

Ruby Castle, 64/1, Raja Muthiah Rd,  
Periamet, Chennai-600003

[www.alartechds.com](http://www.alartechds.com) | [jawad@alartechds.com](mailto:jawad@alartechds.com) | +91 93616 43346

INTELLIGENT MONITORING FOR **CRITICAL INFRASTRUCTURE**