



**SL-50**

## **Single Channel Long Range Security**

Fiber Optic Based Acoustic Sensing System



*This product is developed with the cooperation  
of SAMM and TÜBİTAK BİLGEM*



SAMM Teknoloji

- [fotas.samm.com](http://fotas.samm.com)
- [fotas@samm.com](mailto:fotas@samm.com)
- +90 444 17 26



TÜBİTAK BİLGEM

- [bilgem.tubitak.gov.tr](http://bilgem.tubitak.gov.tr)
- [bilgem@tubitak.gov.tr](mailto:bilgem@tubitak.gov.tr)
- +90 262 648 10 00

## Single Channel Long Range Security SL-50

### SL-50 Fiber Optic Based Acoustic Sensing System

FOTAS SL-50 is an acoustic sensor based on fiber optic infrastructure and it can be easily distributed in variant terrains. SL-50 is best for pipeline security that requires sensing very long distances.

Laser beams sent by the laser source traveling the entire system. Providing information while flowing through the fiber optic cable. When laser beams come back to the FOTAS, a computer software analyzes them. Noises and unrelated data are eliminated through the software. Finally FOTAS AI classifies the alarms.

Actions that create vibration can be watched live on the system. Noisy areas can be isolated and deactivated at the request of user. All alarms received and reported over the web interface. They are stored and can be exported.

It is one of the proven early warning security systems. FOTAS detects third-party intervention, illegal crossing attempts and unauthorized excavations along a line spanning several kilometers to thousands of kilometers. You can also take a look at the FOTAS Website for further information.



### Applications Types

With FOTAS SL-50 a large variety of activities can be detected remotely along a fiber line, such as the below applications:

- **Environmental and Border Security**  
A detection fiber can detect unauthorized excavations, when laid on the ground; and it can detect climbing and cutting attempts when mounted along a wire-fence.
- **Pipeline Security**  
When deployed along an oil, natural gas or water pipeline, FOTAS SL-50 can detect sabotage and unauthorized excavations.
- **Telecom Line Security**  
The advanced FOTAS artificial intelligence allows the detection of multiple events, and offers a wide range of application areas. Damages along communication lines can be monitored in-real time and any unauthorized excavations can be easily detected.

### Technical Specifications

Detection Distance	50 km Single Channel
Position Accuracy	≤ 10 m
Number of Channels	1 fiber per device
Dimensions and Weight	49 cm(19") x 50 cm x 8.9 cm(2U), 8 kg 49 cm (19") x 65 cm x 17.8 cm (4U), 20 kg
Electrical Requirements	Input voltage: 115/220 VAC 50/60 Hz Average Power Consumption: ~400 W Maximum Power Requirement: 675 W
Operating Conditions	Sensing Cable: -40~70 °C DF-30 Device: 0~60 °C (AC environment)
System Interface	Web 2.0 - Mobile Compatible

### Applications Areas

- Industrial, Residential and Commercial Sites Security
- Oil, Natural Gas and Water Pipelines
- Military, Public and Private Facilities Security
- Airports, Railways and Highways Security
- Power Plants Security
- Border Security
- Security of Mining Enterprises

### Functional Features

- The fiber optic line can be monitored live using GIS based Human Machine Interface.
- No installation is required to use the operator interface.
- Types and regions of threats can be defined along the desired regions of fiber cables.
- Past threats can be accessed and analyzed.
- Access can be granted to multiple users.
- With CCTV integration, threat zones can be located and visually monitored.
- FOTAS can be integrated with other security solutions.

### Functional Features

- Access to FOTAS with multiple devices via web interface
- Fast and reliable with 24/7 access
- Up to 50 km of real-time security with one device
- Up to 10 m sensitivity range
- Ease of use and installation
- Compatible with previously deployed fiber cables and can have dedicated fiber cables
- No electricity or electronic devices needed along the protected area