DTGS-SCH-50KM-S | S-50 Single Channel

FOTAS DAS and DTGS S-50 is a fiber optic distributed acoustic sensing system that can be used easily in different situations. S-50 keeps your pipeline safe and sends early warnings of threats. It is one of the proven early systems for security. FOTAS detects third-party intervention and unauthorized excavations along a line spanning several kilometers. It can detect leaks that may occur in the pipeline. The tracking of the pig thrown to clean the pipe will also be possible thanks to acoustic monitoring.

S-50 Technical Details

Fiber Optic Cable	Single-mode fiber optic cable
Detection Channels	Single fiber channel of real time independent intrusion detection
Detection Distance	50 km
Sensing Technology	Phase OTDR and Low Frequency DAS Leak Detection Technology
Leak Detection Technology	DTGS (Distributed Temperature Gradient Sensing), which enables the detection of very small temperature changes, and DAS (Distributed Acoustic Sensing).
Maximum Fiber Loss	13dB (typical max distance ~ 50km /ch)
Operating Life	> 10 years (dependent on operating environment and regular maintenance)
Artificial Intelligence	Deep-learning-based intrusion detection algorithms optimize sensitivity and probability of detection. Locations can be changed with parameters to avoid nuisance alarms. Different algorithms exist for buried and fence applications. The system is hybrid since both are applicable.
Detection Resolution	4 m (13.1 ft) between detection points along sensing fiber (250 measurements per km of sensing fiber) 40 m (131 ft) minimum cable separation between individually reported disturbances (simultaneous)
System Interface	Web 2.0
Sensor Sections	Software configurable, independent sensor sections (detection zones)
Temperature Range	Sensing Cable: -40~70 °C / S-50 Device: 0~40 °C (AC environment)
Connection Ports	TCP/IP (Ethernet), relay closures (via FOTAS connected PLC or ADAM module or alternatives)
Inputs and Outputs	FC/APC single mode optical connector (back, for sensing cable) 1 x USB2 ports (on back) 1 x Ethernet ports (10/100/1000 Mbps, on back)
Power Supply	110 to 240 Vac, 47 to 63 Hz, auto ranging.
Power Consumption	85 W typical, 125 W max
Dimensions / Rack -Clearance / Weight	49 cm (19") x 50 cm x 8.9 cm(2U), 8 kg
Laser Safety Class	Class 1 (IEC 60825-1, 21CFR1040.10), shutoff: key switch on front panel
MTBF	> 80,000 hours
Warranty	2 years, with optional per year warranty extension available.
Regulatory Certification	ISO9001 accredited design and manufacturing is CE certified (Electromagnetic compatibility Directive (EMC) 2014/30/EU (EN 55032:2015 Class A, EN IEC 61000-3-2:2019+A1:2019, EN 61000-3-3:2013+A1:2019, EN 55035:2017+A1:2020, EN 61000-4-2:2009, EN 61000-4-3:2020, EN 61000-4-4:2012, EN 61000-4-5:2014+A1:2017, EN 61000-4-6:2014, EN 61000-4-8:2010, EN 61000-4-11:2020) The low voltage directive (LVD) (2014/35/EU) (IEC 62368-1:2018, EN IEC 62368-1:2020 + A11:2020)