

SENTIFibre

The guardian of your passive infrastructures



Infrastructure oversight

Infrastructures such as electricity, gas, water and telecommunication networks are critical. Although complete protection is unattainable, vigilant monitoring, especially at critical nodes, is essential to maintain their long-term integrity.

SENTIFibre is an optical monitoring system designed to detect events occurring within networks and assist in maintaining their operational integrity.



Universal

SENTIFibre allocates a distinct wavelength to each sensor, enabling it to accommodate various network configurations.

Monitoring can thus be conducted using individual fibers or distributed among multiple sensors or a sensor alongside other services.

SENTIFibre integrates with all current monitoring systems through a secure web interface, SNMP, SSH, Syslog, or even dry contacts.



Passive and reactive

SENTIFibre utilizes exclusively passive sensors that are suitable for explosive environments.

SENTIFibre can detect in real time the occurrence of any event at sites lacking power supply and the network segments that connect them. It subsequently issues alerts with a response time of less than one second.

SENTIFibre is intended to be linked to a doubt removal system if required.



Safe and secure

SENTIFibre is a comprehensive security and safety system.

Any anomaly identified by a remote sensor or any increase in attenuation on the fiber link impacts the optical signal emitted by the system, which the interrogator continuously monitors. Detecting a degradation or suppression of this signal ensures that no event is overlooked, thereby safeguarding the integrity of the information.

Safety and Security

To this end, IFOTEC's SENTIFibre system has been specifically engineered to facilitate:

- Monitoring access to sensitive network points, regardless of their nature, through passive detection of openings and closures.
- Continuous monitoring of optical attenuation in the observed sections.
- Detection of water presence in network chambers or fibre splice boxes as an option.



Patented

The SENTIFibre system is founded on optical sensor technology, the design and operation of which are protected by international patents.

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A straightforward and secure operational principle

The SENTIFibre system employs an optical contact as a sensor, utilizing one of the optical fibers to connect the passive site to an active site, which houses the control system for the remote contact(s) and serves as the transmission medium.

This solution was developed with safety as a priority : the opening results in the absence of a typically present optical signal rather than the generation of an ad-hoc signal that may not be emitted or detected accurately.

Consequently, this contact, linked to the fiber via a straightforward optical jumper, can be significantly pertinent for identifying the opening of various passive containers, ranging from buried chambers to interconnection boxes or cabinets.

At the opposite end, the control system involves transmitting a signal into the fiber and detecting the returning signal.

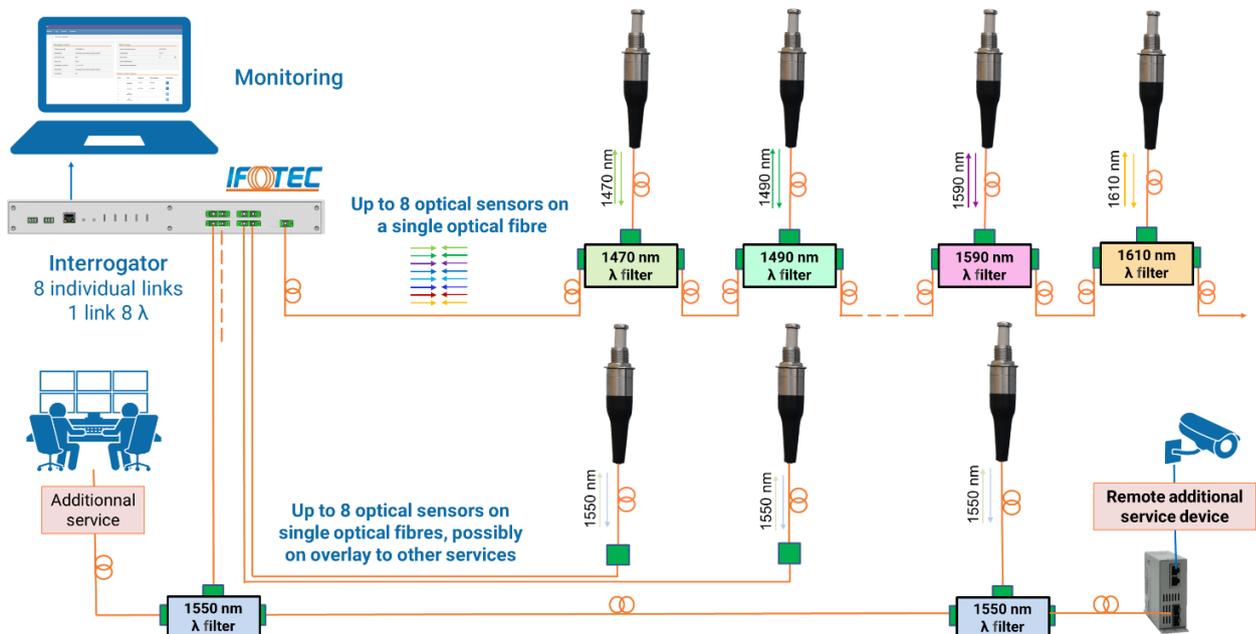
- Slightly diminished if the contact is closed,
- Significantly diminished if the contact is open.

This detection function is performed using an interrogator, a straightforward optical transmitter/receiver that utilizes a fiber from the connecting cable (or a wavelength from one of them), analyzes the return signal, and activates an alert if necessary, all within less than one second after the contact is opened.

The interrogator can also remotely operate a doubt removal system (camera, etc.).

By its fundamental design, the system facilitates ongoing verification of the integrity of the connecting cable and the detection of various phenomena, such as the presence of water in a chamber or splice box, through the use of specialized sensors. Furthermore, each sensor is distinctly identified by its connecting fiber or interrogation wavelength.

Configurations utilizing individual optical fibers or those shared among multiple sensors and/or services.



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