

# FiberPatrol® FP3100-X

## Wall-Mounted Intrusion Detection System

### Description

The FiberPatrol FP3100-X wall-mounted intrusion detection systems are designed to detect and report intruders attempting to scale or breach masonry walls. The FP3100-X systems feature such aspects of the FiberPatrol technology as long-range perimeter coverage, location sensing, and cable cut tolerance.

Masonry walls frequently comprise a part of or even the entire perimeter of high-value facilities, especially those located in urban areas. Monitoring walls against intrusion attempts is an essential component of perimeter protection. However, wall-mounted applications present a significant challenge to most intrusion detection systems originally developed for light-weight fencing. Compared to traditional fence-mounted sensors, the sensitivity of a wall-mounted sensor needs to increase drastically for effective intrusion detection.

The FiberPatrol wall-mounted intrusion detection systems are based on Optellios' revolutionary fiber-optic sensing technology, featuring unsurpassed sensitivity. The FP3100-X system detects any attempt to climb over the wall that disturbs the sensor cable. This includes such common intruder actions as leaning a ladder against the edge of the wall, tossing a rope over the wall, and grabbing the edge of the wall to pull up. The location-sensing abilities of the FP3100-X also allow the system to report the exact position of an intrusion attempt, facilitating a swift and precise response to a given threat.

These systems can be installed to monitor masonry walls, building facades, rooftops, bridges, and other solid architectural structures. Multiple cable installation options are available to effectively match wall construction, owner requirements, and budget targets. Depending on the selected installation approach, the sensor cable can protect the outer edge of the wall, both the outer and the inner edges, or the entire wall-top area. Low-profile cable installation has minimal impact on the appearance of decorative walls.

### Features

#### Wall-Top Intrusion Detection

- > Detects wall scaling and breach attempts
- > Low-profile to preserve visual appeal
- > Retrofit installation on existing wall

#### Long Range Fiber-Optic Sensor

- > No electrical power required in the field
- > EMI / RFI and lightning immunity
- > Available fiber-optic video and data links
- > Multiple I/O options for system integration
- > Economy-of-scale pricing

#### Location Sensing

- > Accurate location of intrusion attempts
- > Detection of multiple simultaneous events
- > GPS mapping of site perimeter
- > Reconfigurable virtual detection zones
- > Intrinsic rejection of non-localized events

#### Cut Immunity

- > Remains operational after a cable cut
- > Supports self-healing ring architecture
- > Supports redundant sensor configurations
- > Option to postpone cable repairs

# Specifications

## Intrusion Detection

Max Sensor Length:	10 miles (16 km)
Sensor Layout:	Closed loop or dead end
Alarm Location Accuracy:	Better than 75' (23 m) maximum Better than 25' (8 m) typical
Min Virtual Zone Length:	100' (30 m) recommended
Max Virtual Zone Count:	52/mile (33/km) recommended

## Sensor Cable

Cable Type:	Gel-filled loose tubes, single jacket, unarmored
Rating:	Outdoor aerial and duct
Fiber Count:	2 sensing, up to 70 spare
Sensing Fiber Type:	Corning SMF-28e+ or equivalent
Optical Loss:	< 0.40 dB/mi (0.25 dB/km) @ 1550 nm
Outer Diameter:	0.44" (1.1 cm)
Weight:	55 lbs/kft (82 kg/km)

## Installation

Configurations:	Single or dual edge
Sensor Cables:	1 or 2

## Electrical Power

Consumption / Field:	None
Consumption / Head End:	400 Watts maximum
Requirements / Head End:	100..240 Volts, 50 / 60 Hz

## Sensor Controller / Optical

Laser Output Classification:	Class 1
Laser Wavelength:	1550 nm
Connector Type:	FC/APC

## Alarm Processor / Software

CPU*:	1.86 GHz Intel Nehalem
RAM*:	6 GB DDR3
HDD*:	2x500 GB RAID array
Networking*:	Dual Gigabit NIC
Operating System*:	Windows 7 Pro 64bit
Default Alarm Interface:	XML over TCP/IP
Optional Alarm Interfaces:	RS232, relay contacts, analog current loop

\* Similar or better configuration may be substituted

## Head End Mechanical

Combined Dimensions:	19" x 19" x 16" (48x48x41 cm)
Combined Rack Space:	19" (48 cm), 9 RU
Rack Clearance:	2" (5 cm) [front], 6" (15 cm) [back]
Combined Weight:	125 lbs (56.7 kg)

## Environmental

Op. Temp / Head End:	+50°F..+95°F (+10°C..+35°C)
Op. Temp / Field:	-40°F..+158°F (-40°C..+70°C)
Humidity / Head End:	20%..80%, non-condensing
Humidity / Field:	No restriction

## Certifications and Compliance

Electromagnetic Compatibility:	FCC Part 15 Class A EC EMC Directive 2004/108/EC
Safety:	EC Low Voltage Directive 2006/95/EC



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