

# FD525™ Fiber-Optic Intrusion Detection System

## *Multiple-Point, Intrusion Detection at the Speed of Light*

*When the project calls for a tested and proven high-security system that senses multiple-point intrusion attempts simultaneously, the FD525™ Intrusion Detection System provides maximum perimeter security protection.*



For security projects that require the best perimeter protection available, the **FD525** Alarm Processing Unit (APU) from Fiber SenSys is the solution. This all-fiber-optic intrusion detection system is capable of detecting simultaneous intrusion attempts on multiple zones along your perimeter. Know instantly when an intruder – or a group of intruders – is attempting to breach your perimeter.

- Remote APU detection up to 25 zones
- Detection zone up to 500 meters long
- Insensitive lead-in cable up to 5-12 km

Fiber SenSys has an optional **OM525™** module for alarm and fault relays that includes LED outputs for up to 25 zones. The **OM525** module can be located up to 25 feet away from the APU, and connected via a CAT-5 cable supplied with the Module. With zone sizes as small as 10 meters, one **FD525** uses the power of fiber optics to identify intrusion attempts along a perimeter. When one or more zones are breached, the system instantly identifies the zone of each intrusion attempt, while continuing to monitor the rest of the perimeter. This combination of features and system capabilities has allowed the **FD525** to receive high levels of certification and approval from the U.S. Government and the Department of Defense (DOD).

### Proven Reliability

The **FD525** uses advanced optical design and processing algorithms that allow the system to detect simultaneous intrusion attempts and equates them with zones along the perimeter. This innovative technology detects intrusion attempts where and when they happen, making the Fiber SenSys system extremely difficult to defeat. This information can be graphically displayed and immediately communicated for prompt incident response. Fiber SenSys systems are based on fiber-optic technology that is immune to EMI/RFI, making our systems the most reliable, accurate, and tamper-proof available.

- XML TCP/IP communication option and USB programming
- Military compliance
- USB Port for communications

## How the System Works

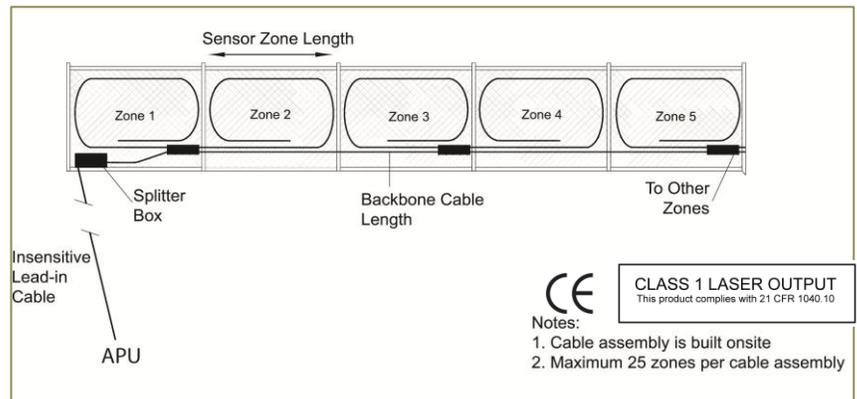
The **FD525** employs an insensitive backbone cable, and up to 25 individual sensor cables. Each sensor cable is attached to a fence, wall, other perimeter barrier, or is buried. If the barrier is disturbed, the **FD525** immediately detects a change and instantly sends operators a message identifying the location of the intrusion attempt. The **FD525** has superior immunity to nuisance events, such as wind or other non-threats. The optional **RLM525** and **OM525** modules provide expanded system operation with up to 25 alarm and fault relays.



OM525 Relay/LED Module



RLM525 Relay Module



**Note:** Zone re-ordering capability is built in to the solution.

## FD525 Specifications

System Type: Single-ended, vibration-sensing intrusion detection  
 Zone Capacity : Up to 25 zones, zones as small as 10 meters  
 Max. APU Perimeter Protection: Fence 5 km (16,404 ft.), Buried 3 km  
 Max. Sensing Cable Length: 500 m or 250 m loop back  
 Cable temperature range: -55°C to + 75°C (-67°F to 167°F)  
 APU & Relay operating temperature: -40°C to 70°C (-40°F to 185°F)  
 APU operating humidity range: 0 to 95% non-condensing  
 Input Power: +10 to 28 VDC or 90 to 250 VAC with adapter  
 Max. Power FD525: 14W @12 VDC, 25 °C  
 Max. Power FD525 plus RLM525: 16W @12 VDC, 25 °C  
 Max. Power FD525 plus OM525: 17W @12 VDC, 25 °C  
 Opt. Relay Module RLM525: (25) Zone Alarm & Fault relay outputs  
 Opt. Output Module OM525: (25) Zone Alarm & Fault outputs with (25) LEDs

Alarm and Fault relay rating: 100mA @ 24 VDC  
 Fault relay: Normally-closed / Form B contacts  
 Alarm relay: Normally-open, Normally-closed / Form C contacts  
 ACC Bus Fault Relay: Normally-closed  
 Tamper Switch: Normally-closed  
 APU Dimensions: 10.19" (L) X 12.38" (W) X 1.34" (H)  
 25.9cm (L) X 31.4cm (W) X 3.4cm (H)  
 Signal Discrimination: Real-time Intelligent DSP  
 Communications: TCP/IP to XML via RJ-45 Connector, USB programming  
 Sensing Element: Proprietary sensor cable  
 Max. Insensitive lead-in: 12 Km w/ up to 15 zones, 5 Km w/ 25 zones  
 Max. length lead-in: APU to Relay Module 25 ft. Cat 5 cable

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**Fiber SenSys**

High Performance – High Reliability – High Security