

FD525 Fiber-Optic Intrusion Detection System

Specification Sheet

The Fiber SenSys **FD525™** Alarm Processing Unit (APU) represents state of the art fiber optic sensor interrogation and signal processing technology for perimeter protection. When connected to its unique fiber optic cable assembly, the **FD525™** APU is capable of detecting simultaneous intrusion attempts from multiple zone locations on a perimeter.



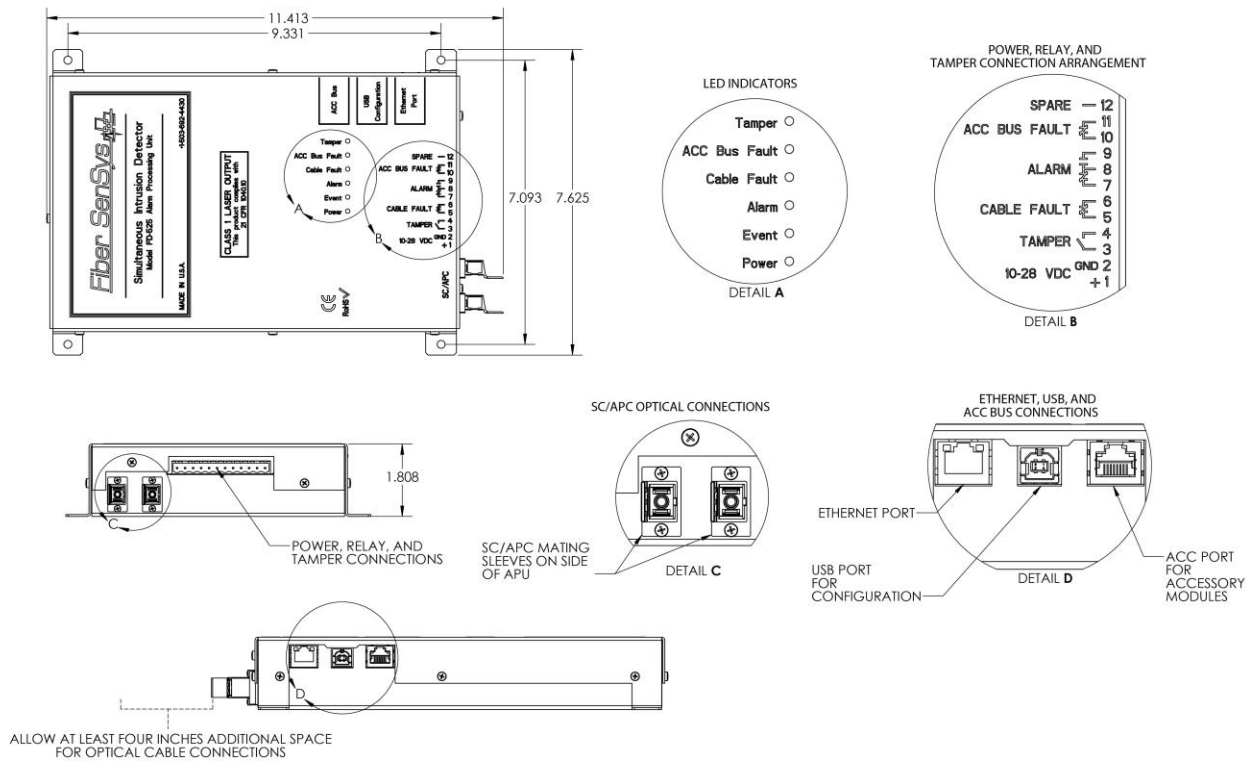
Intended for fence line applications, the **FD525's** cable assembly divides a perimeter into a maximum of 25 zones per APU. Each of these independent zones is sensitive to vibrations from intrusion attempts. The **FD525** interrogates each zone continuously and analyzes the optical return signals to determine whether or not an intrusion is taking place. The **FD525** provides users with the ability to tune each zone independently for optimal system effectiveness.

The unique capabilities of the **FD525** provide the highest levels of perimeter security in the market: detection of simultaneous events on all zones, installation of sensing elements in high security configurations (PL-1N), and mitigation of single-point failures in the environment.

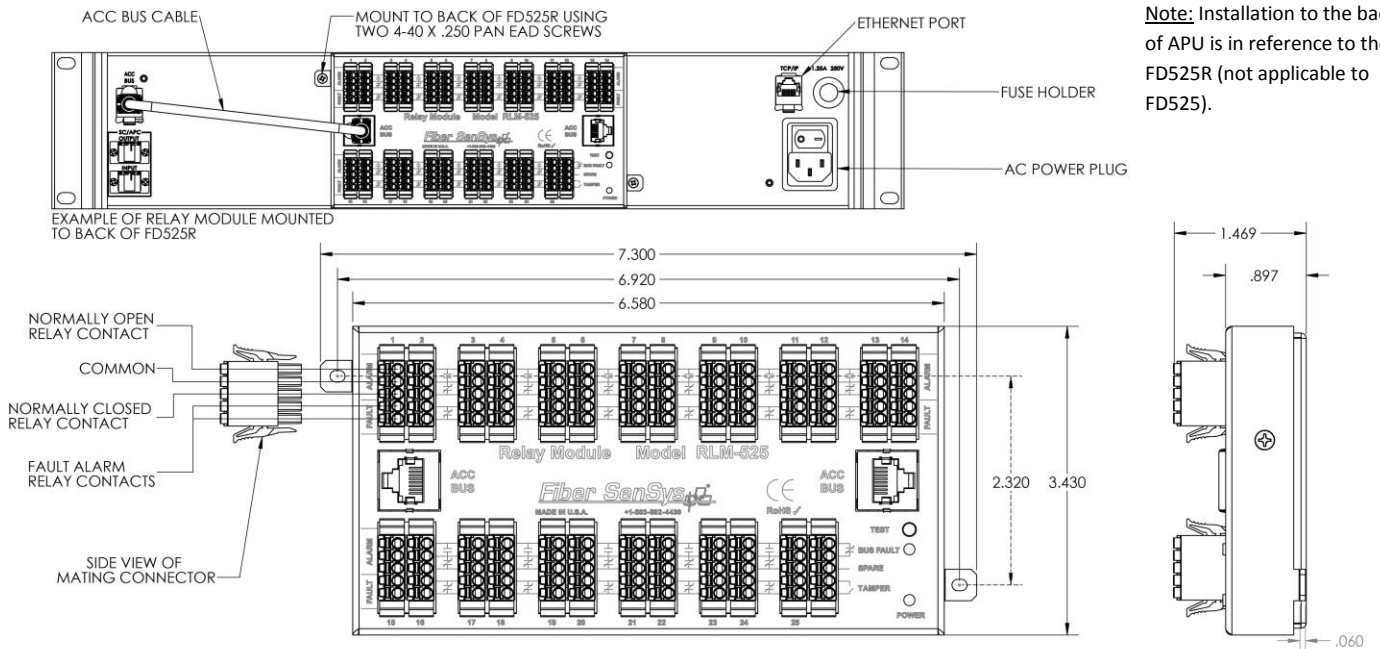
An optional relay module (**RLM525™**) can be connected to the **FD525** APU to activate zone-specific alarm and fault relay outputs for up to 25 zones. Another optional output module (**OM525™**) provides zone-specific LED indicators in addition to the relay outputs.

Features	Applications
Supports up to 25 zones in a stand-alone APU Simultaneous intrusion detection (all zones) Maximum sensor cable length (per zone) – 800 meters Intelligent zone assignment and zone re-ordering FD500 Series software suite for nuisance alarm discrimination Linear, uniform sensitivity XML and form C contact closure communications capability	Electrical substations Oil pipelines Aviation and train locations Oil and chemical facilities Protected Distribution Systems (PDS) Military facilities Pharmaceutical facilities

FD525 APU DETAILS



RELAY MODULE (RLM525)

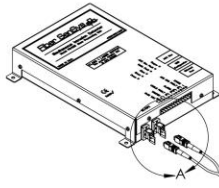


Note: Installation to the back of APU is in reference to the FD525R (not applicable to FD525).

- NOTES:
 1.) RELAY MODULE IS POWERED THROUGH ACC BUS CONNECTION
 2.) SEE SPECIFICATIONS IN MANUAL FOR MAXIMUM CABLE LENGTHS

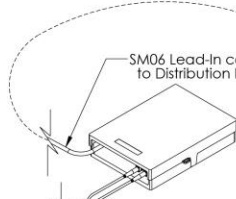
FD525 OPTICAL SYSTEM DEPLOYMENT DIAGRAM

FD525 Alarm Processor
(P# 980-82758)



to wall-mount patch panel
(P# 247-23104)

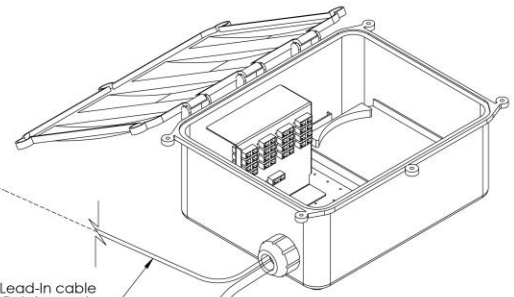
6-Port Wall-Mount Patch Panel
(P# 974-63501)



SM06 Lead-In cable to Distribution Box

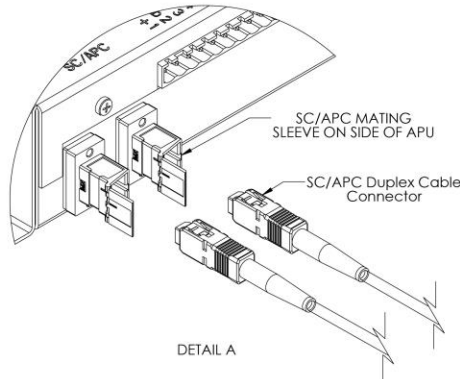
Duplex Patch-Cord from Alarm Processor

DB32 Distribution Box
(Included with Alarm Processor)



SM06 Lead-In cable from Patch-panel

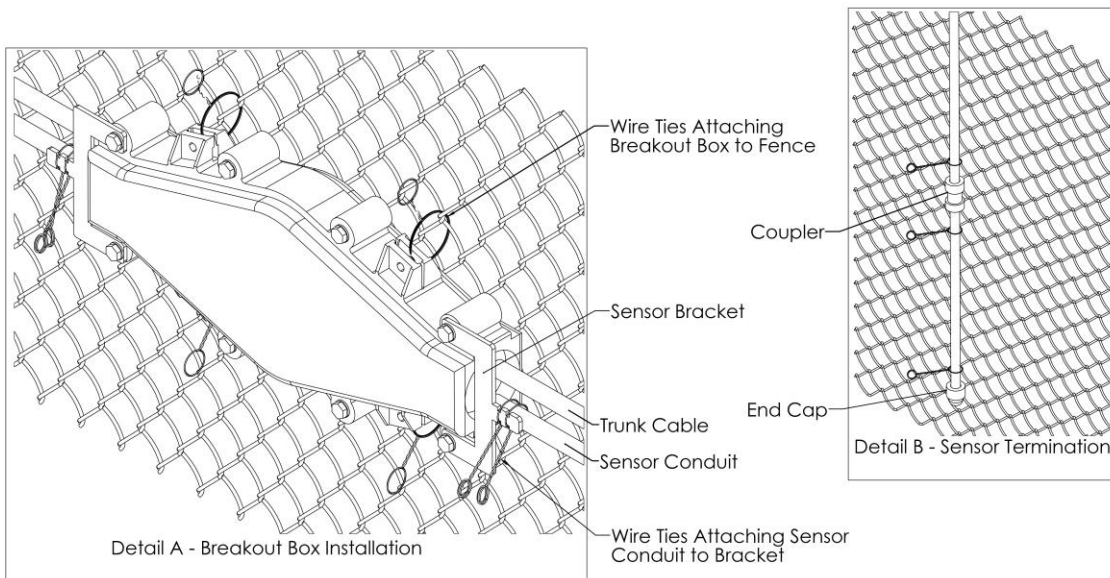
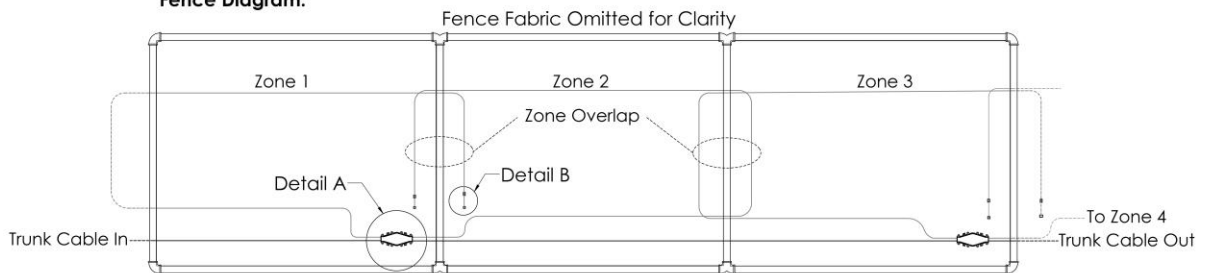
Trunk cable to all sensing zones
see DW-ENG-023 for details



DETAIL A

FD500 SERIES FENCE INSTALLATION

Fence Diagram:



FD525 PRODUCT SPECIFICATIONS

Alarm Processing Unit	
System type	Vibration-sensing intrusion detection system
Number of zones per APU	Up to twenty-five fully independent zones.
APU power requirements	<ul style="list-style-type: none"> • 10-28 VDC input • 14 watts power consumption (maximum)
Communications	<ul style="list-style-type: none"> • USB serial port for assigning zones to optical ports, and for tuning • TCP/IP port for alarm output and XML communication • Individual dry contact alarm and fault relays for each zone • Dry contact alarm relay for tamper.
Contact ratings	100 mA @ 24 VDC non-inductive
Fault relay default	Normally closed
Alarm relay default	Normally open, and normally closed
ACC bus fault relay default	Normally closed
Network Port	Ethernet 10 Base-T/100 Base-TX (RJ-45)
Dimensions	Height = 4.60 cm (1.810 inch) Width = 19.11 cm (7.525 inch) Length = 25.92 cm (10.206 inch)
Operating temperature range	-40° C to 70° C (-40° F to 158° F)
Operating humidity range	0 to 95% non-condensing
Compliance	CE, FCC Part 15, RoHS

Standard Cable Assembly	
Sensor configuration	Fully independent zones, time-domain multiplexed through a multi-fiber trunk cable and breakout boxes.
Sensing fiber	Multimode fiber, custom manufactured to FSI specifications
Insensitive lead-in fiber	<ul style="list-style-type: none"> • Single-mode fiber, custom manufactured to FSI specifications • Maximum length: 5 km
Sensing Cable / Zone lengths	<ul style="list-style-type: none"> • Sensing fiber ≤ 800 m (2625 ft.) • For each zone, sensing fiber + insensitive trunk cable ≤ 5.8 km (3.6 mi)
Trunk cable	Outside Plant type cable containing (minimum) one single-mode insensitive fiber for each zone.



CLASS 1 LASER OUTPUT
This product complies with 21 CFR 1040.10

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