

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 and suitable for buried 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.

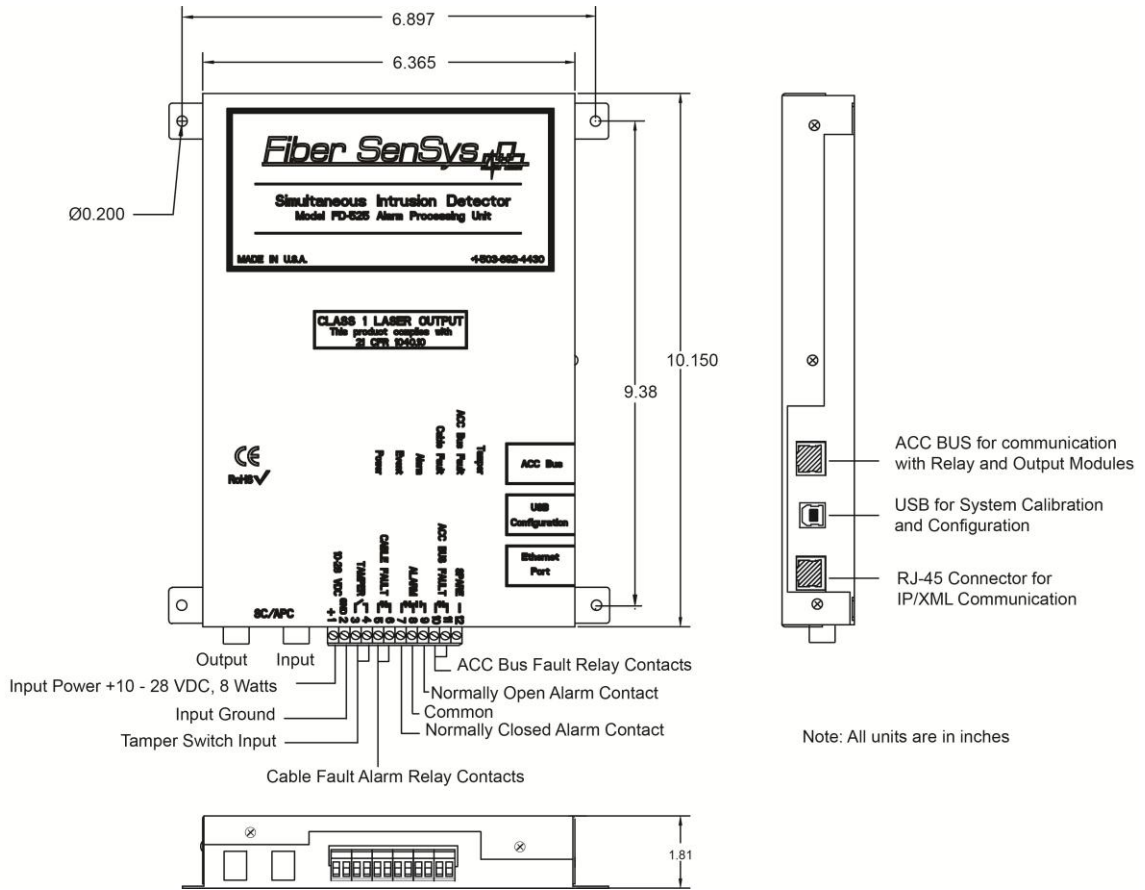
An optional relay module (**RLM525™**) can be connected to the FD525 APU to activate zone-specific alarm and fault relay outputs for up to 25 zones. Another optional output module (**OM525™**) provides zone-specific LED indicators in addition to the relay outputs.

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



Features	Applications
Supports up to 25 zones	Electrical substations
Simultaneous intrusion detection (all zones)	Oil pipelines
Maximum sensor cable length (per zone) – 800 meters	Aviation and train locations
Maximum lead-in cable (insensitive lead) – up to 15 zones: 12km	Oil and chemical facilities
Maximum lead-in cable (insensitive lead) – up to 25 zones: 5km	Protected Distribution Systems (PDS)
Linear, uniform sensitivity	Military facilities
XML communications capability	Pharmaceutical facilities

FD525 Assembly Diagram



Relay Module and Output Module

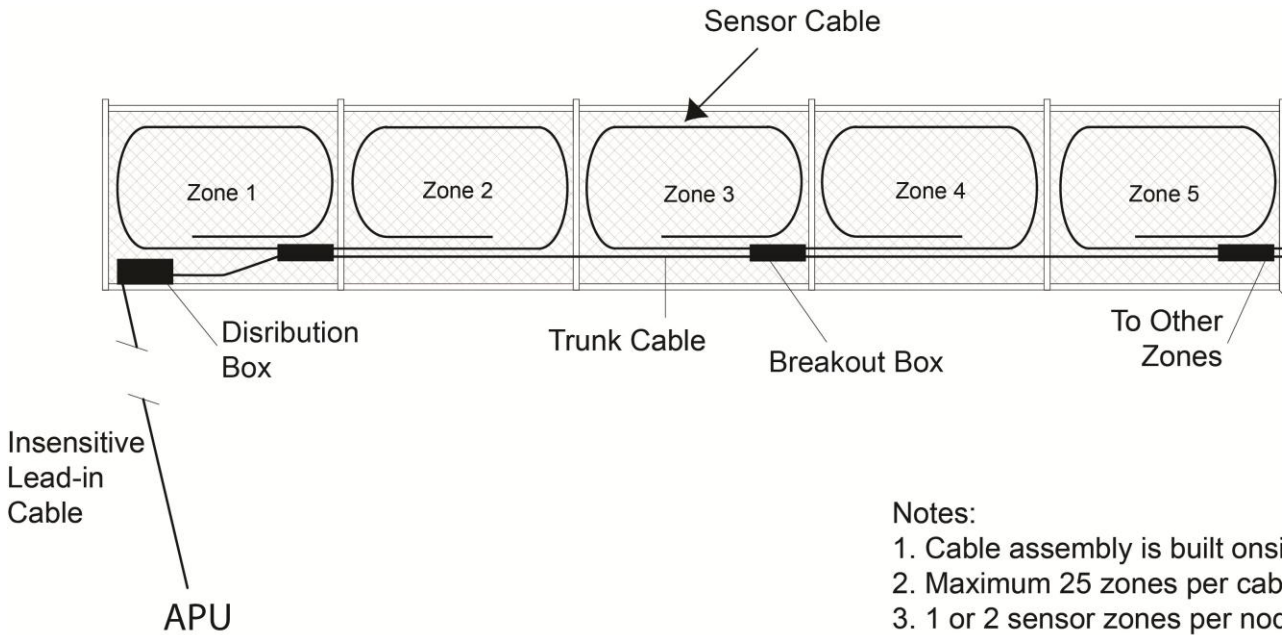


RLM525 Relay Module

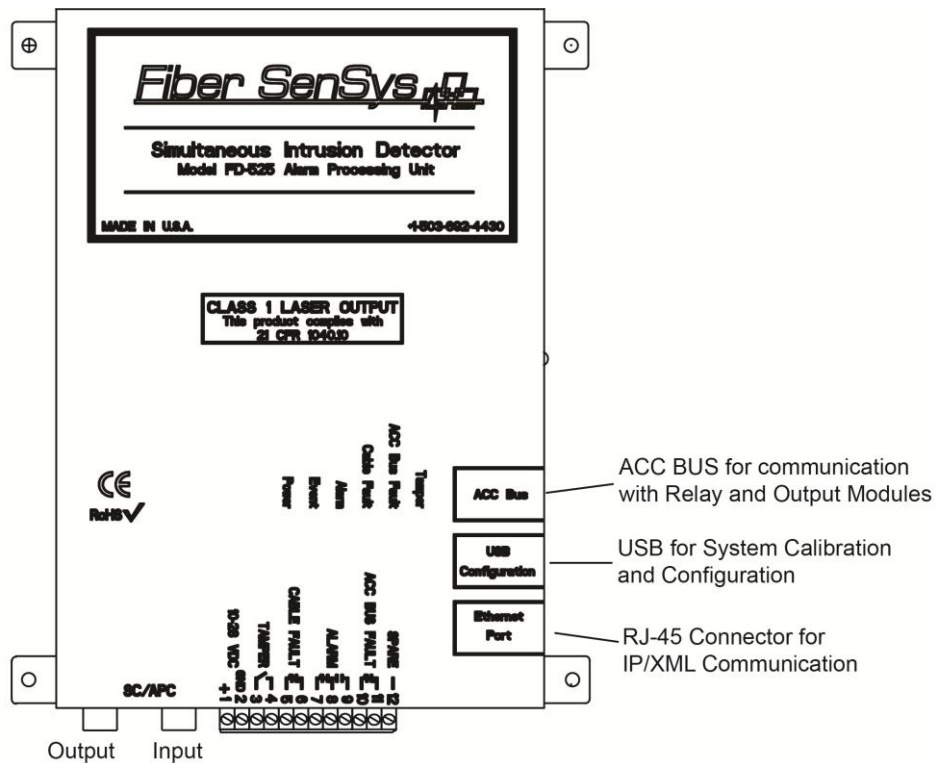


OM525 Output Module

Application Diagram



Communication Block Diagram



FD525 Product Specifications	
System Type	Vibration-sensing Intrusion Detection System
Maximum Number of Zones per APU	25
Maximum event location accuracy	1 m (Accurate to within the zone length)
Maximum Protected Perimeter Length per APU	5 km (16404 feet/3.1 miles) for fence applications, or 3 km (9842 feet/1.86 miles) for buried applications
Maximum Sensing Cable Length (per zone)	800 m which translates into 350 m zone length for loop back and 240 m zone length for PL-1 installations
Maximum Insensitive Lead-in Cable Length	12 km for up to 15 zones or 5 km for up to 25 zones
Input Power Requirements Voltage Maximum Power for FD525 and FD525B Maximum Power for FD525 plus RLM525 Maximum Power for FD525 plus OM525	+10-28 VDC 14.0 Watts @ 12 VDC, 25°C 16.0 Watts @ 12 VDC, 25°C 18.0 Watts @ 12 VDC, 25°C
Communications USB serial port TCP/IP port Optional Relay Module (RLM525) Optional Output Module (OM525)	Configuration and alarm outputs Alarm outputs and communication via XML Alarm and fault relay outputs for up to 25 zones Alarm and fault outputs via relays and LEDs for up to 25 zones
Fault and Alarm Relays Contact Ratings Fault Relay Default Alarm Relay Default ACC Bus Fault Relay Default	100 mA @ 24V Normally Closed (NC) Normally Open (NO) or Normally Closed (NC) Normally Closed (NC)
Tamper Switch Input	Normally-closed contact input
Operating Temperature (FD525, RLM525,OM525) Operating Temperature (FD525B) Relative Humidity	-40°C to 70°C (-32°F to 158° F) 0°C to 70°C (32°F to 158° F) 95% Non-condensing
APU Dimensions	10.206 in x 7.525 in x 1.81 in (L x W x H) (25.92cm X 19.11cm X 4.6cm)
Product compatibility	AutoTune™ Calibration Software
FD525 Software Suite	FD525Config, FD525View, FD525Log

Ordering Information	
Alarm Processing Unit	FD525, FD525B, and/or RLM525, and/or OM525 For rack-mountable APU refer to FD525RTM Specification Sheet
Configuration & Calibration Software	FD525 Software Suite
Supported Fiber Optic Cable Assemblies	Cable assemblies built on site by Fiber SenSys or Fiber SenSys



<p>CLASS 1 LASER OUTPUT This product complies with 21 CFR 1040.10</p>

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