



Specification Sheet

Model **FD525R™** Alarm Processing Unit

Description

The Fiber SenSys **FD525R™** Alarm Processing Unit (APU) represents state of the art fiber optic sensor interrogation and signal processing technology for perimeter protection. The **FD525R** is designed to fit in a standard 19" rack and occupies only 2U (3.5") of rack height. When connected to its unique fiber optic cable assembly, the **FD525R** APU is capable of detecting simultaneous intrusion attempts from all zone locations on a perimeter.

Intended for fence line and suitable buried applications, the **FD525R'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 **FD525R** interrogates each zone continuously and analyzes the optical return signals from each zone to determine whether or not an intrusion is taking place. The **FD525R** provides users with the ability to tune each zone independently for optimal system effectiveness. An optional relay module (**RLM-525™**) can be connected to the **FD525R** APU to activate zone-specific alarm and fault relay outputs for up to 25 zones.

The **FD525R** APU transmits alarm and system status information in XML message format through its RJ-45 ethernet port. A separate USB serial port allows users to calibrate the system using the **FD525R** proprietary software suite.

The **FD525R's** cable assembly consists of up to 25 individual sensor elements branching off a rugged, insensitive backbone cable. Sensor element placement along the backbone cable defines each zone location. The **FD525R** supports a maximum protected perimeter length of 5 km



*The **FD525R** APU is designed to fit in a 19" rack. The relay module (**RLM-525**) can be attached to the **FD525R** APU in the back.*

for fence installations. An insensitive lead-in cable up to 5 km in length connects the APU to the remotely-deployed cable assembly to support up to 25 zones.

For the highest security installations, the backbone and lead-in cables can be buried and the sensing element can be installed in PL-1 configurations. By burying the insensitive lead-in and backbone cables, the system is further protected from a single point of failure – damage to a sensing element causes only one zone to fail while other zones continue to function normally.

The unique capabilities of the **FD525R** 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.

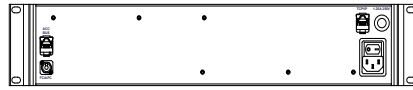
Features

Example Sites

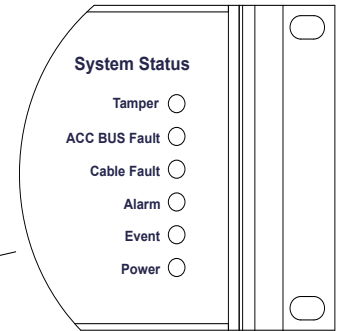
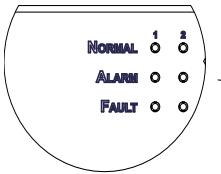
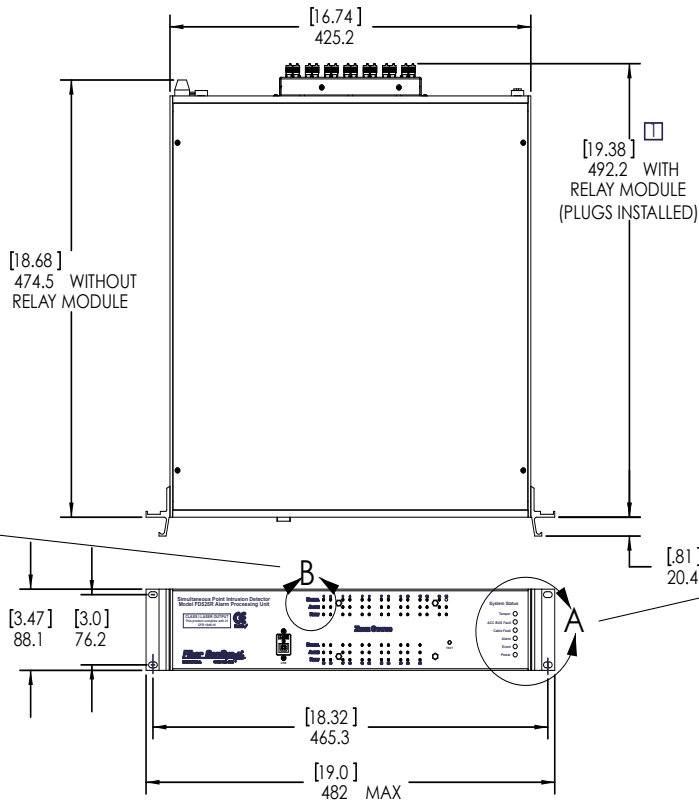
Deployments

Supports up to 25 zones	Military facilities	Chain link fences
Simultaneous intrusions on all 25 zones	Oil pipelines	Buried
Maximum protected perimeter length up to 5 km	Chemical depots	Welded mesh fences
Maximum lead-in length of up to 12 km	Electrical substations	Wrought iron fences
Maximum event location accuracy 1m	Power plants	Ornamental fences
Designed to fit in a 19" rack	Pharmaceutical plants	Walls
Optional alarm/fault relay and LED output for up to 25 zones		
XML message communication		

FD525R Assembly Diagram



REAR PANEL WITHOUT RELAY MODULE

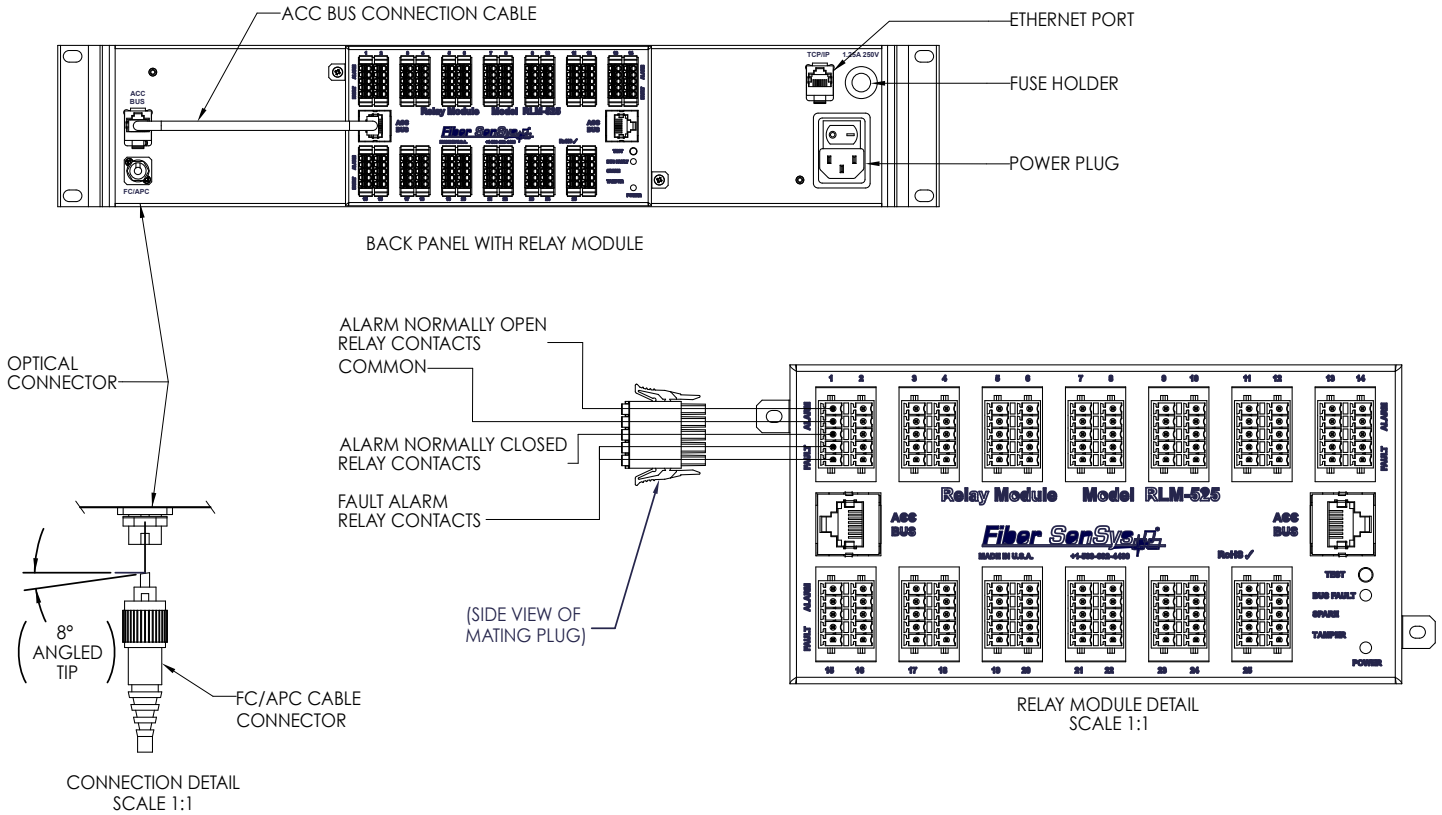


NOTES:

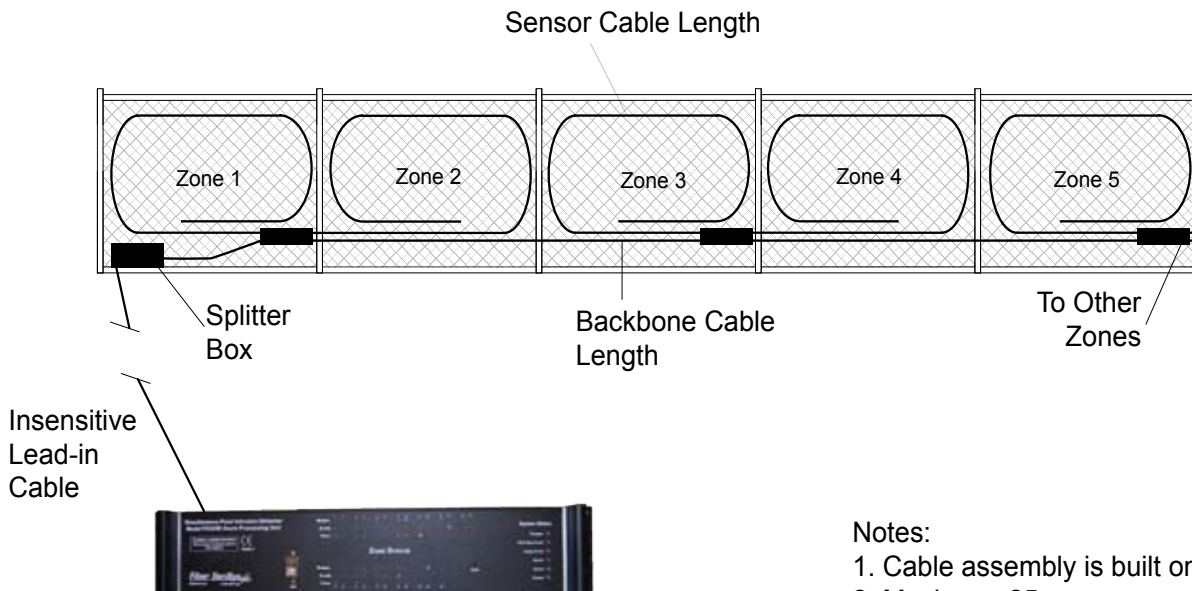
1. ALLOW 4 INCHES / 102 mm MINIMUM FREE SPACE BEHIND UNIT TO ALLOW FOR CABLING AND REMOVAL OF RELAY PLUGS
2. DIMENSIONS IN [INCHES] / mm

Relay Module and FD525R Application

Relay Module (RLM-525) Assembly Diagram



FD525R Application Illustration



Notes:

1. Cable assembly is built on site
2. Maximum 25 zones per cable assembly
3. 1 or 2 sensor zones per node

FD525R 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	500 m which translates into 225 m zone length for loop back and 150 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	+ 90 - 250 VAC
Power	12 Watts at 25°C
Communications	
USB Serial Port	Configuration and alarm outputs
TCP/IP Port	Alarm outputs and communication via XML
Alarm, Fault, and Tamper Relay Outputs	Via an optional relay module (RLM-525)
Operating Temperature Range	0°C to 55°C (32°F to 131°F)
Relative Humidity	95% Non-condensing
Alarm Activation Duration	Programmable from 1 to 10 seconds
APU Dimensions	19 in x 3.5 in x 18.38 in, Designed to fit in a 19" rack (48.3 cm x 8.9 cm x 46.68 cm), W x H x D
Product Compatibility	AutoTune™ Calibration Software

Relay Module (RLM-525) Product Specifications	
Maximum number of alarm and fault relay outputs	25 (one alarm and relay outputs for each zone)
Alarm relay output	100 mA normally-closed/normally-open relay contacts for each zone
Fault relay output	100 mA normally-closed relay contacts for each zone
Tamper Switch Input	Normally-closed contact input
Maximum power	2.0 Watts at 25°C

Ordering Information	
Alarm Processing Units	FD525R and /or RLM-525 <i>For standalone APU refer to FD525™ Specification Sheet</i>
Configuration & Calibration Software	FD525Config, FD525View, FD525Log
Supported Fiber Optic Cable Assemblies	Cable assemblies built onsite by Fiber SenSys or Fiber SenSys trained personnel

