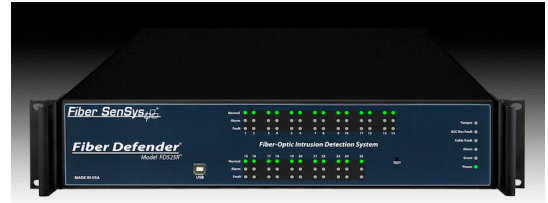


## FD525R Fiber-Optic Intrusion Detection System Specification Sheet

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 can detect multiple simultaneous intrusion attempts along a perimeter.



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. 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.

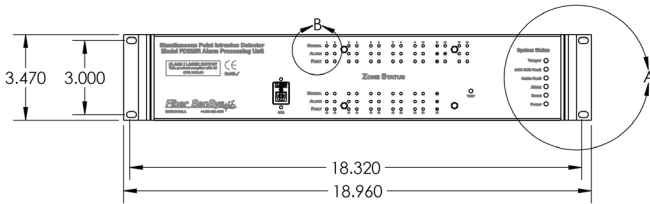
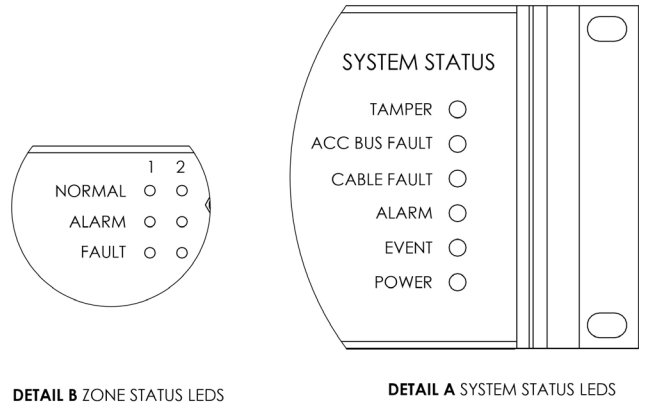
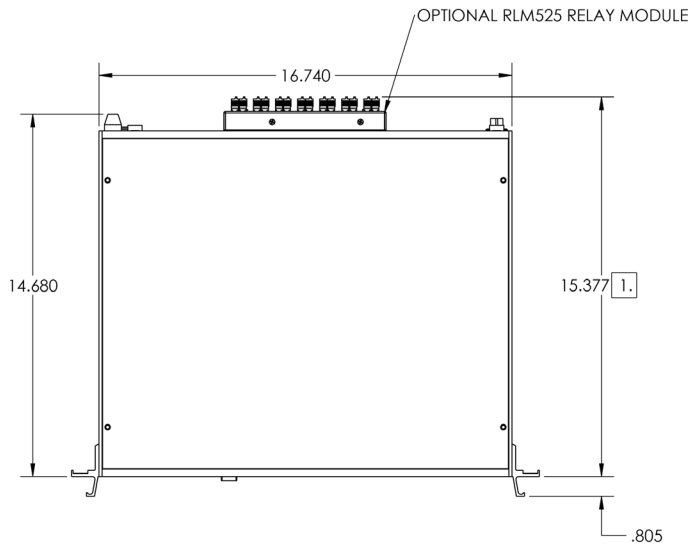
The **FD525R's** cable assembly consists of up to 25 individual sensor elements branching off a rugged, insensitive backbone cable. Sensor element placement along the backbone cable defines each zone location. The **FD525R** supports a variety of design considerations to maximize total perimeter length. An insensitive lead-in cable 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 high-security 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.

FEATURES	APPLICATIONS
Supports up to 25 zones, each fully independent and tunable Simultaneous intrusion detection (all zones) Maximum sensing cable length (per zone) – 800 meters Intelligent zone assignment and zone re-ordering FD500 Series software suite for nuisance alarm discrimination XML and contact closure communications capability Designed to fit in standard 19" data center rack	Military Facilities Oil and Gas Pipelines Electrical Substations Nuclear Power Plants Airports Pharmaceutical Facilities Chemical Depots

For more information, contact us at  
[info@fibersensys.com](mailto:info@fibersensys.com)  
 Tel: +1(503) 692-4430  
 Toll free (US) +1(800) 641-8150  
[www.fibersensys.com](http://www.fibersensys.com)

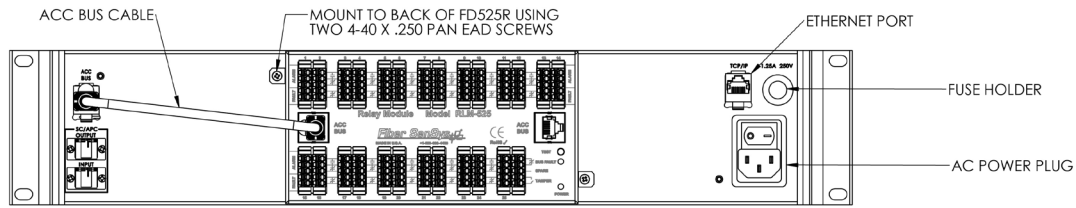
# FD525R ALARM PROCESSOR UNIT



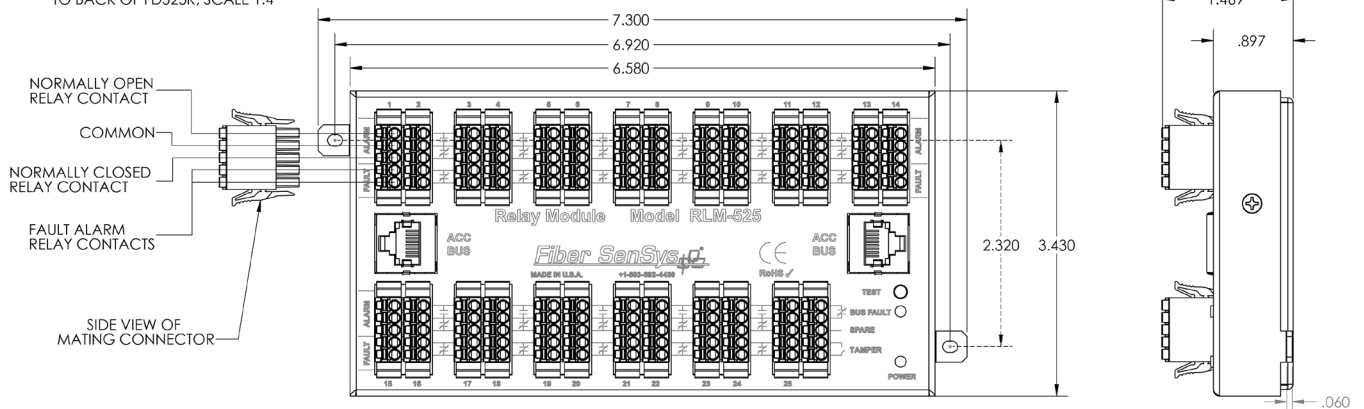
REAR PANEL SHOWN WITH OPTIONAL RLM525 RELAY MODULE

1. ALLOW 4 INCHES FREE SPACE BEHIND UNIT FOR CABLING AND REMOVAL OF RELAY MODULE PLUGS

# RELAY MODULE (RLM525)



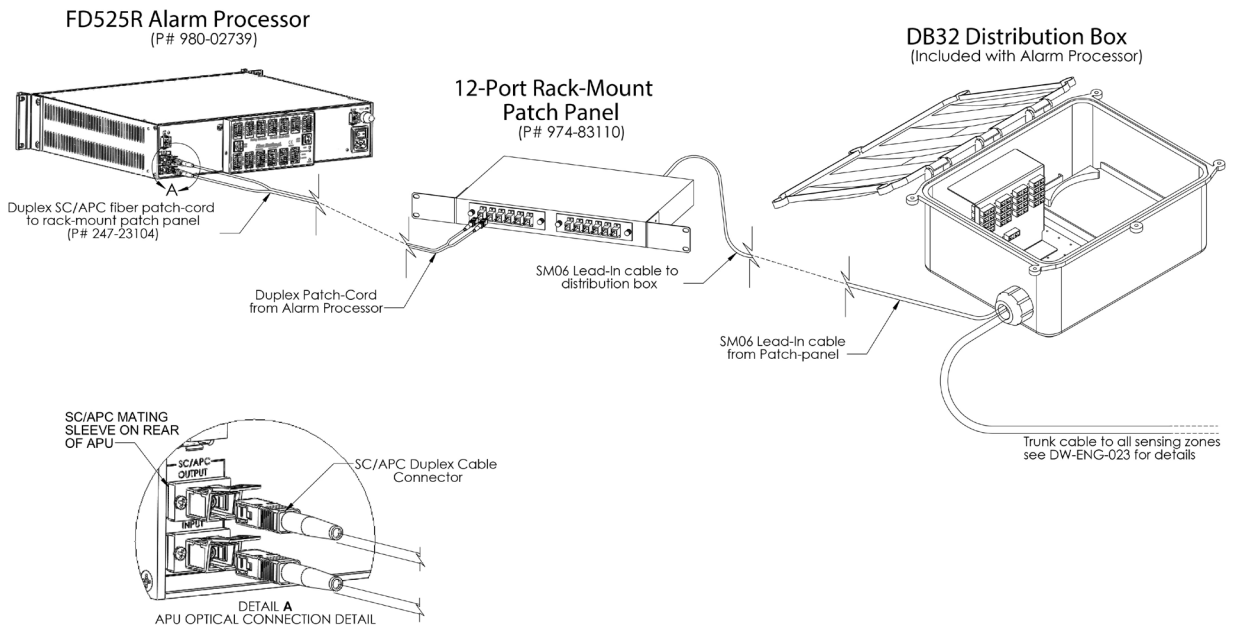
EXAMPLE OF RELAY MODULE MOUNTED TO BACK OF FD525R. SCALE 1:4



**NOTES:**

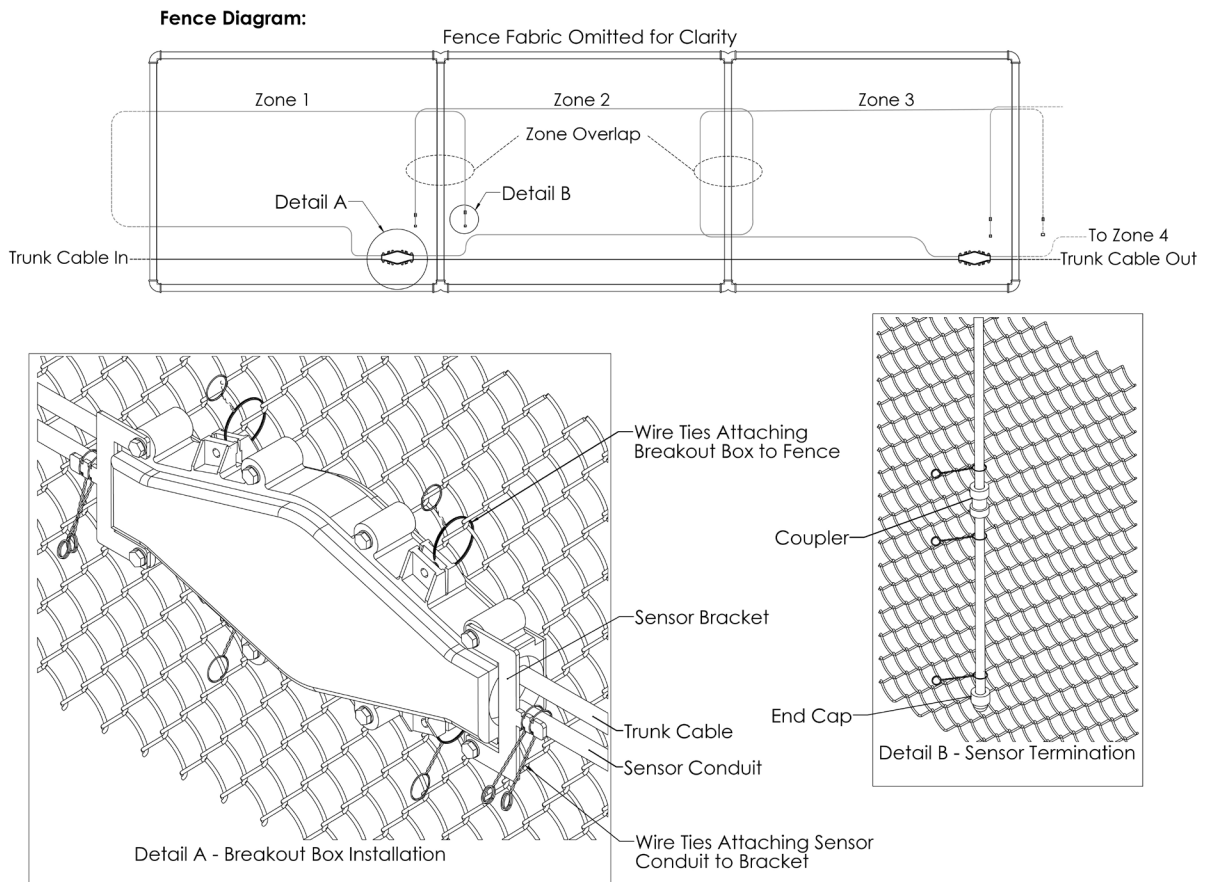
- 1.] RELAY MODULE IS POWERED THROUGH ACC BUS CONNECTION
- 2.] SEE SPECIFICATIONS IN MANUAL FOR MAXIMUM CABLE LENGTHS

# FD525R OPTICAL SYSTEM DEPLOYMENT DIAGRAM



Note: 525 System is also available in a single cable style deployer call Fiber-SenSys for details

# FD500 SERIES FENCE INSTALLATION



## FD525R PRODUCT SPECIFICATIONS

<b>System type</b>	Vibration-sensing intrusion detection system
<b>Number of zones per APU</b>	Up to twenty-five fully independent zones
<b>APU power requirements</b>	<ul style="list-style-type: none"> <li>• 90 to 250 VAC input</li> <li>• 17 watts power consumption (maximum)</li> <li>• Fuse rating: 1.25 A</li> </ul>
<b>Communications</b>	<ul style="list-style-type: none"> <li>• USB serial port for assigning zones to optical ports, and for tuning</li> <li>• TCP/IP port for alarm output and XML communication</li> <li>• Individual dry contact alarm and fault relays for each zone</li> <li>• Dry contact alarm relay for tamper</li> </ul>
<b>Contact ratings</b>	100 mA @ 24 VDC non-inductive
<b>Fault relay default</b>	Normally closed
<b>Alarm relay default</b>	Normally open, and normally closed
<b>ACC bus fault relay default</b>	Normally closed
<b>Network port</b>	Ethernet 10 Base-T/100 Base-TX (RJ-45)
<b>Dimensions</b>	Height = 8.81 cm (3.47 inch) Width = 48.16 cm (18.96 inch) Length = 42.52 cm (16.74 inch)
<b>Operating temperature range</b>	0° C to 55° C (32° F to 131° F)
<b>Operating humidity range</b>	0 to 95% non-condensing
<b>Compliance</b>	CE, FCC Part 15, RoHS
<b>Sensor configuration</b>	Fully independent zones, time-domain multiplexed through a multi-fiber trunk cable and breakout boxes
<b>Sensing fiber</b>	Multimode fiber, custom manufactured to Fiber SenSys, Inc. (FSI) specifications
<b>Insensitive lead-in fiber</b>	<ul style="list-style-type: none"> <li>• Single-mode fiber, custom manufactured to FSI specifications</li> </ul> Maximum length: 5 km
<b>Sensing cable / Zone lengths</b>	<ul style="list-style-type: none"> <li>• Sensing fiber ≤ 800 m (2625 ft.)</li> <li>• For each zone, sensing fiber + insensitive trunk cable ≤ 5.8 km (3.6 mi)</li> </ul>
<b>Trunk cable</b>	Outside Plant type cable containing (minimum) one single-mode insensitive fiber for each zone

## RLM525 PRODUCT SPECIFICATIONS

<b>Maximum number of alarm and fault relay outputs</b>	25 (one alarm and relay output for each zone)
<b>Alarm relay output</b>	100mA, 24V DC, normally closed / normally open relay contacts
<b>Fault relay output</b>	100mA, 24V DC, normally closed relay contacts
<b>Tamper switch input</b>	Normally closed contact input
<b>Maximum power</b>	2.0 Watts at 25° C
<b>Operating temperature range</b>	-40 °C to 70°C (-40° F to 158° F)
<b>Relative humidity</b>	95% non-condensing

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