

## FD34X Fiber-optic Intrusion Detection System Specification Sheet

Designed for remote deployment with no power or communications requirements in the field, the indoor and outdoor rated **Fiber Defender® Model FD341/FD342** Alarm Processing Unit (APU) is a next-generation alarm processor unit that utilizes insensitive fiber-optic cable in addition to sensing fiber. The use of insensitive lead-in cable allows the APU to be located up to 20 kilometers away from the protected zone. Movement or vibration in the physical environment causes the sensing fiber to report back to the APU that there is a disturbance. This feature makes the **FD341/FD342** an ideal platform for protecting areas in or near EMI/RFI fields, areas of extreme temperatures, high humidity climate or corrosive environments.

The **FD341** is a single-channel model, and the **FD342** is capable of supporting two separate zones of fiber-optic cable. Each channel in the APU can be programmed and tuned separately using the Fiber SenSys **SpectraView™** tuning and software.

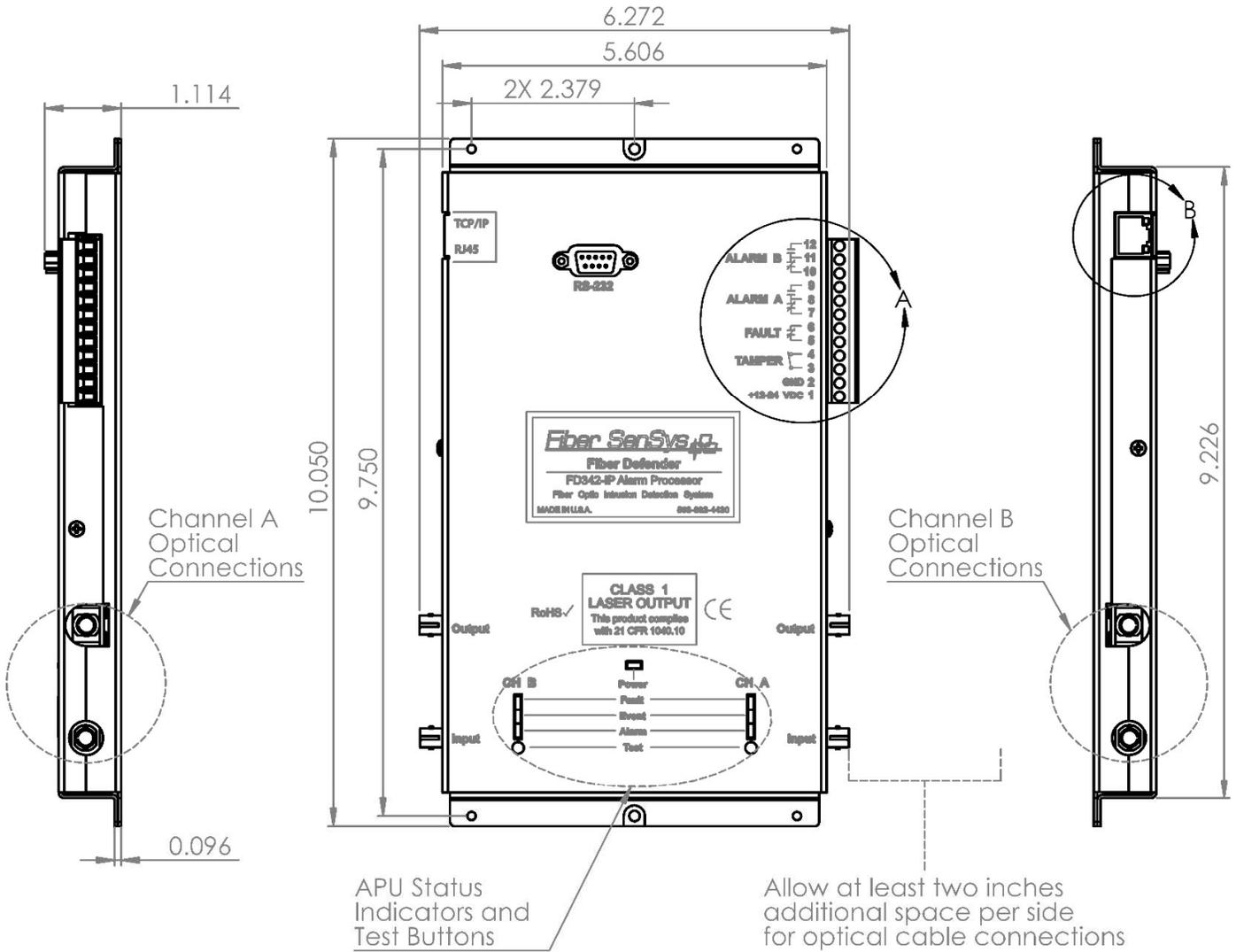
Each **FD342** channel supports up to 5 km (16,400 feet/3.1 miles) of sensor cable. The **FD341/FD342's** digital signal processing enables detection and analysis of sensor cable. The Digital Signal Processor (DSP) also provides discrimination between natural phenomena and intrusion attempts. Using a proprietary algorithm, the **FD341/FD342** monitors wind effects and actively optimizes the system response to compensate. Two alarm relay outputs are provided in each **FD341/FD342** channel - a normally-open and a normally-closed set of relay contacts. Corresponding relays change state when the APU detects a sensor cable alarm condition. Also included is an RJ-45 connector for TCP/IP communication.



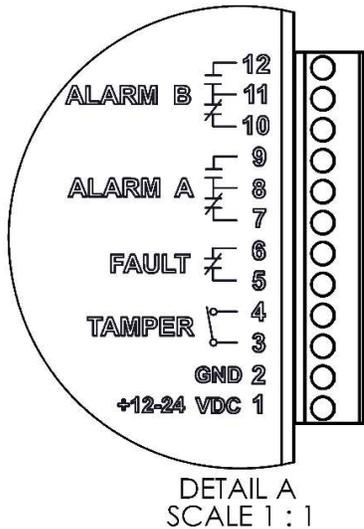
FEATURES	APPLICATIONS
Immune to lightning, EMI and RFI	Electrical substations
Sensing cable up to 5 km per channel	Aviation and train locations
Intrinsically safe sensor	Oil and chemical facilities
20 km remote operation	Military facilities
TCP/IP communication option	Information technology networks
Linear, uniform sensitivity	Solar farms
Adaptive wind processing	Correctional facilities

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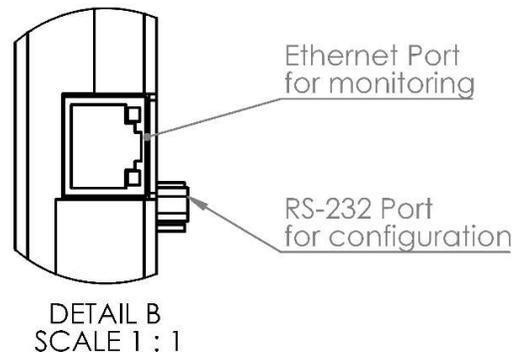
# FD341/FD342 ASSEMBLY DIAGRAM



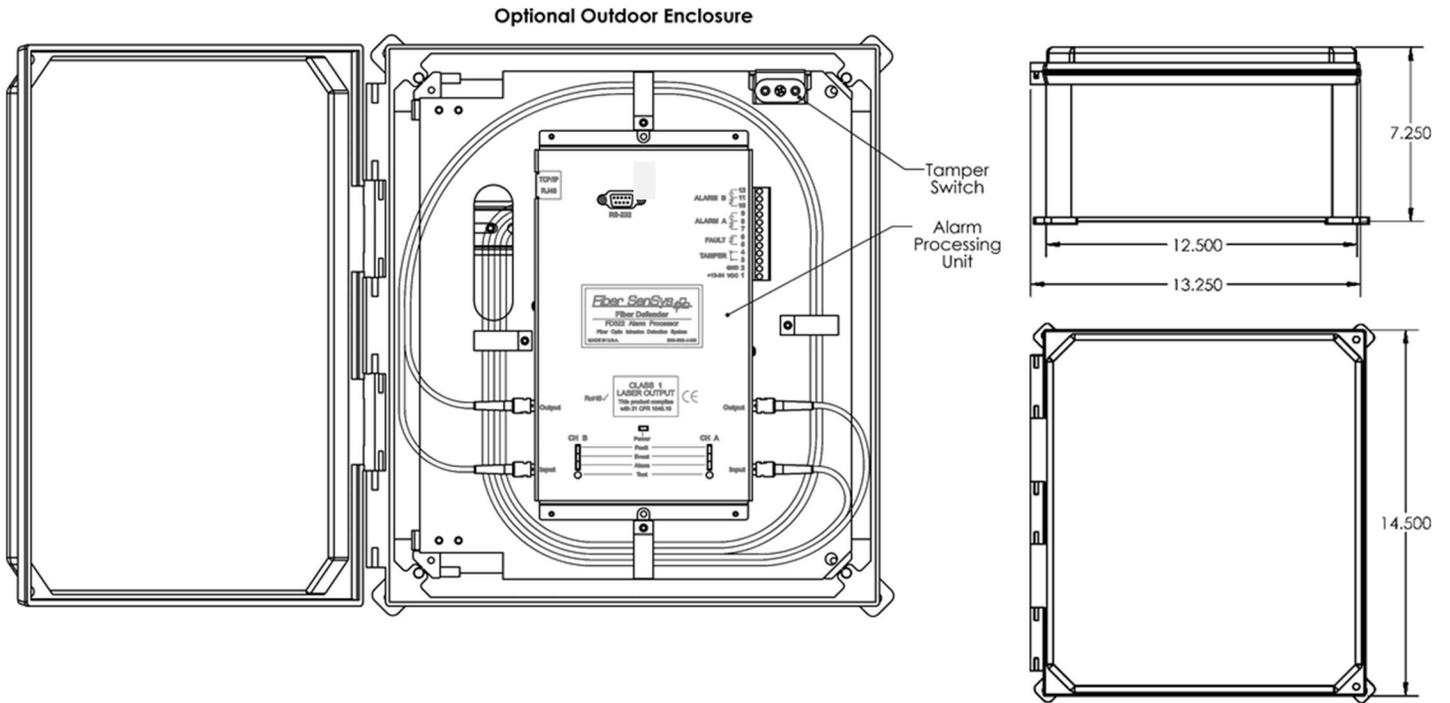
## Power, Relay, and Tamper Connection Arrangement



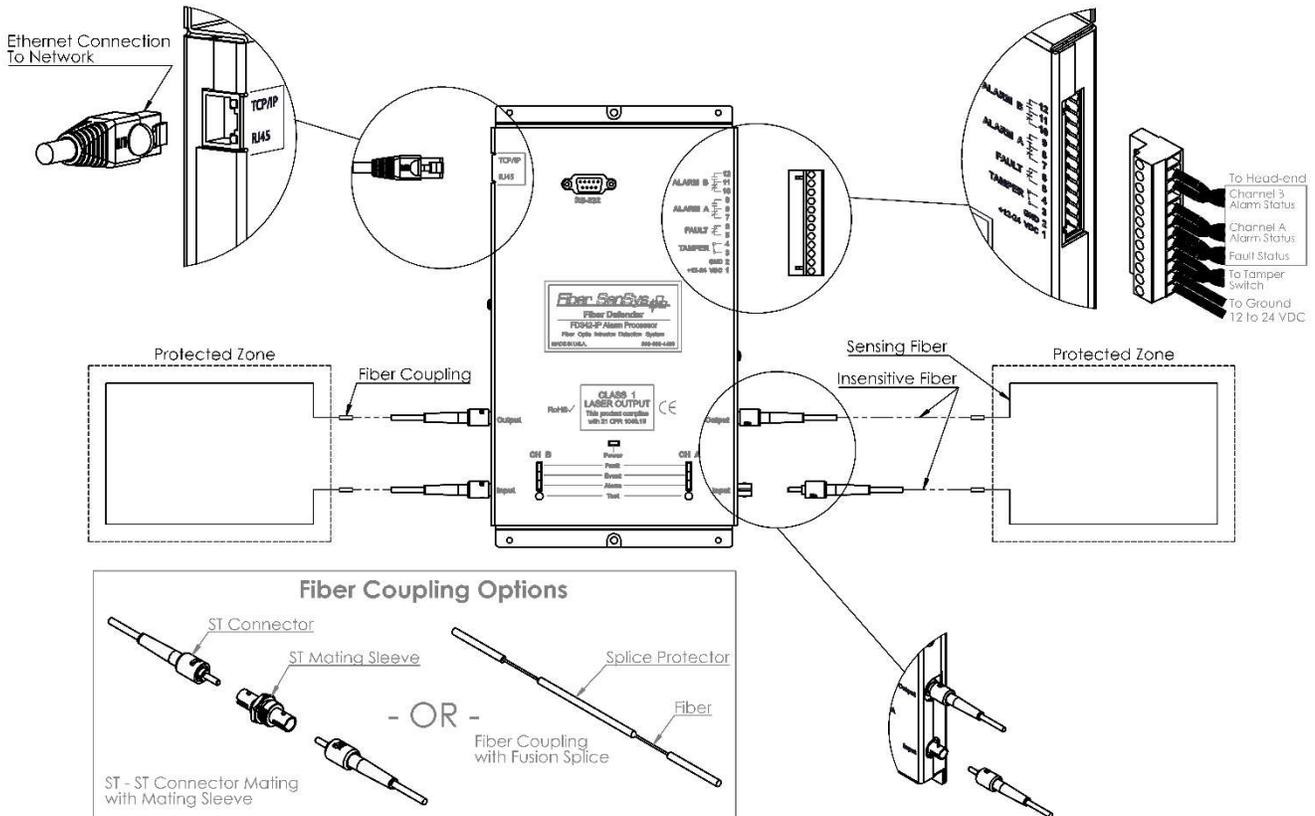
## Ethernet and Serial Connections



# FD341/FD342 ENCLOSURE DIAGRAM



# FD342 APPLICATION BLOCK DIAGRAM



FD341/FD342 PRODUCT SPECIFICATIONS	
<b>Number of channels</b>	(1) Channel FD341 or (2) Channel FD342
<b>Voltage</b>	12-24 VDC
<b>Power</b>	4.0 Watts @ 25° C
<b>Communications</b>	<ul style="list-style-type: none"> <li>• TCP/IP to XML via optional RJ-45 connector</li> <li>• PC Programming via RS-232 (also with USB adaptor)</li> </ul>
<b>Fault and Alarm Relays</b>	<ul style="list-style-type: none"> <li>• Individual dry contact relays for each zone alarm – both Normally Open and Normally Closed (NO / NC)</li> <li>• Dry contact relay for fault – Normally Closed (NC)</li> <li>• 28 to 14 AWG</li> <li>• 100 mA, 24 VDC non-inductive</li> <li>• Dry Contact Resistance 11 Ω typical, 17 Ω max</li> <li>• Alarm relay duration adjustable from 0 to 10s</li> </ul>
<b>Operating Temperature Range</b>	-40°C to 70°C
<b>Humidity</b>	95% non-condensing
<b>Maximum Sensor Cable Length</b>	5 km (16,400 feet/3.1 miles) per channel (loop-back design will affect distance)
<b>Sensor Cable Sensitivity</b>	Uniform over entire length
<b>APU Dimensions</b>	10.06 in x 5.63 in x 0.94 in (25.55 cm x 14.30 cm x 2.39 cm) H x W x D
<b>Product Compatibility</b>	AutoTune™ Calibration Software; Fiber Commander™, SpectraView™

SYSTEM ORDERING INFORMATION		
Model	Description	Options
FD341-IP	Single-Channel APU	TCP/IP Communications (-IP)
FD342-IP	Dual-Channel APU	TCP/IP Communications (-IP)
SC-3 (fence)	Fiber-optic cable	SC-3 duplex or single-strand
SC3-C (fence)	Sensing cable in ½" conduit	Max. continuous length 800m
Outdoor Enclosure	IP66 Enclosure for 300 Series APUs	

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