

FD34X Fiber-Optic Intrusion Detection System

Specification Sheet

Designed for remote deployment with no power or communications needed 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, calibrated and tuned separately using the Fiber SenSys **SpectraView™** tuning and calibration software.

Both FD342 channels support up to 5 km per zone (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 IP/XML communication.



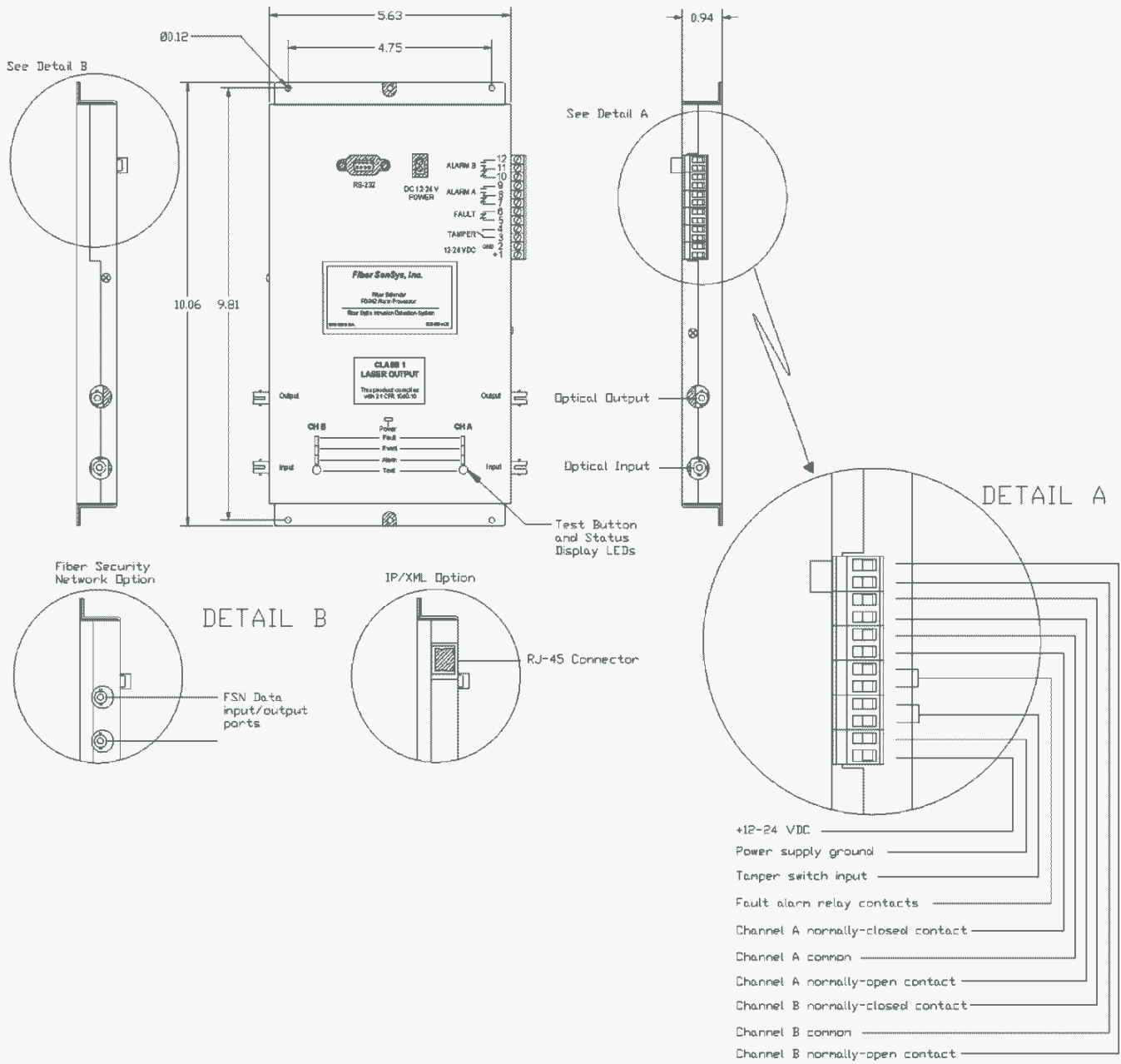
Features

- Immune to lightning, EMI and RFI
- Sensing zones up to 5 km
- Intrinsically safe sensor
- 20 km remote operation
- IP/XML communication option
- Linear, uniform sensitivity
- Adaptive wind processing

Applications

- Electrical substations
- Aviation and train locations
- Oil and chemical facilities
- Military facilities
- Information technology networks
- Oil Pipelines
- Correctional facilities

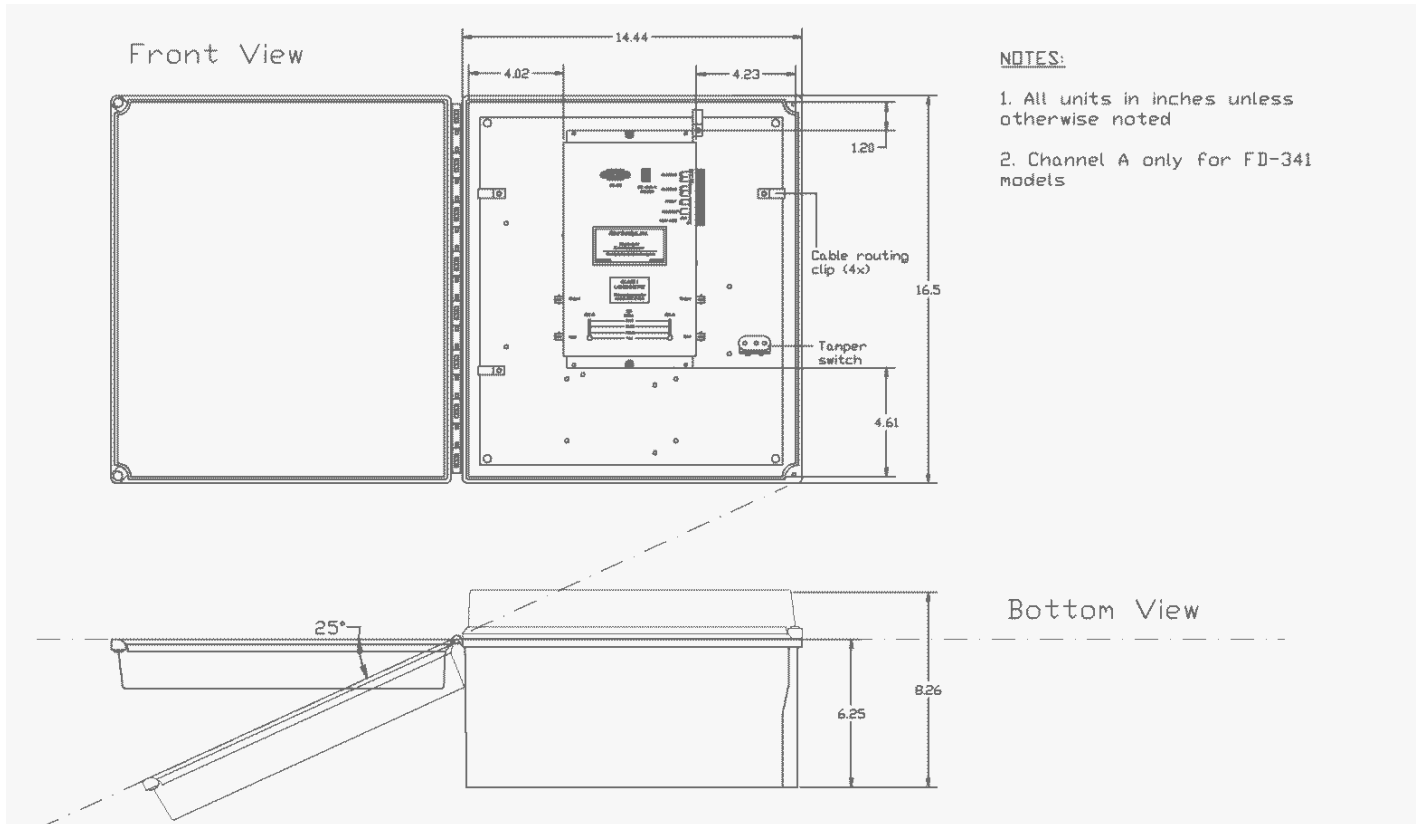
FD341/FD342 ASSEMBLY DIAGRAM



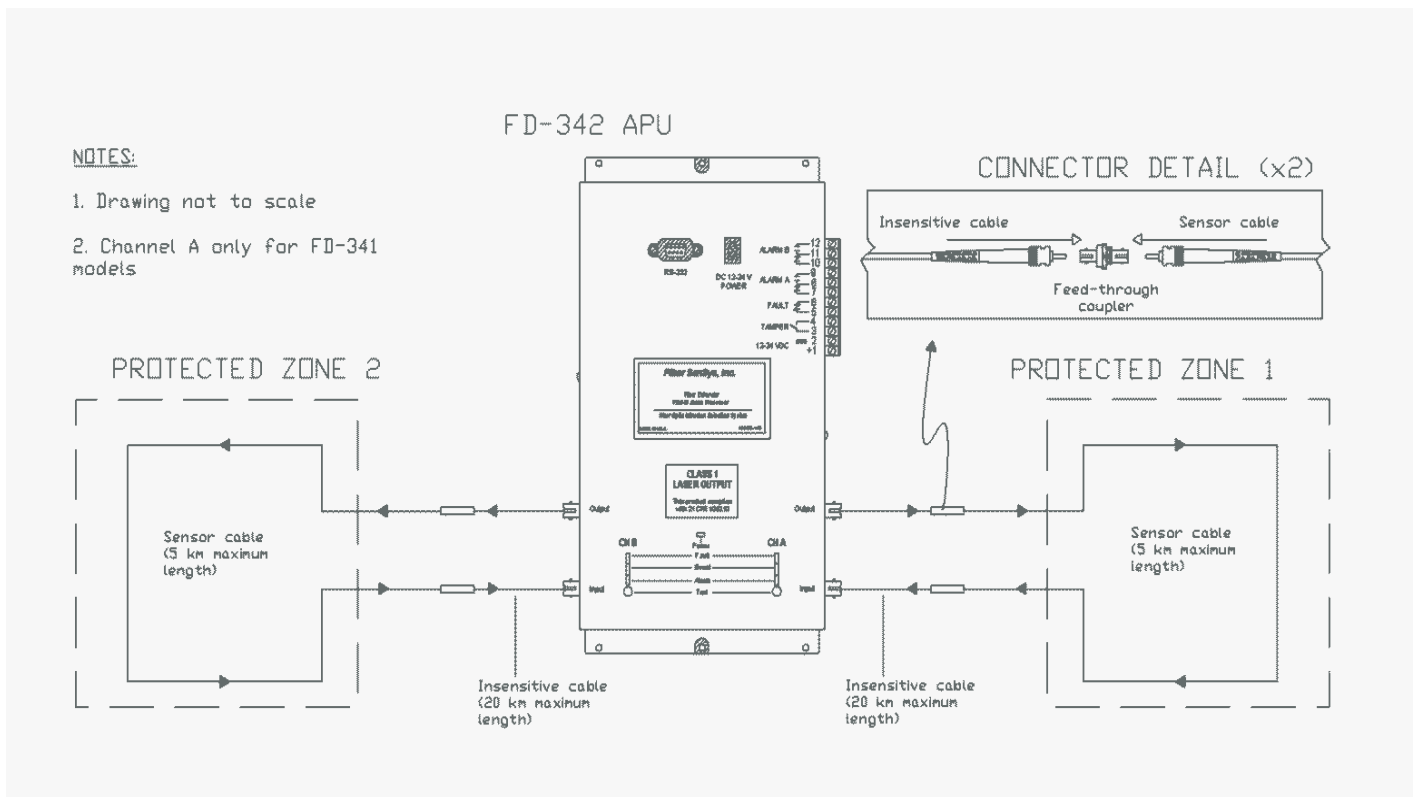
NOTES:

1. All units in inches unless otherwise noted
2. Channel A only for FD-341 models

FD341/FD342 ENCLOSURE DIAGRAM



FD342 APPLICATION BLOCK DIAGRAM



FD341 / FD322 PRODUCT SPECIFICATIONS

Parameter	Specification
Number of channels	(1) Channel FD341 or (2) Channel FD342
Voltage	12-24 VDC
Power	3.0 Watts @12 VDC
Communications	RS-232 serial communications (standard) or IP/XML (IP Option)
Programming Method	RS-232 using laptop PC or Hand Held Calibrator
Alarm Output	100 mA normally-closed/normally-open relay contacts on each channel; XML via TCP/IP (IP Option)
Alarm Relay Ratings	28 to 14 AWG, 100 mA, 24 VDC non-inductive; Form C
Operating Temperature Range	-40°C to 70°C
Humidity	95% non-condensing
Maximum Sensor Cable Length	5 km (16,400 feet/3.1 miles) per channel
Sensor Cable Sensitivity	Uniform over entire length
Alarm Relay Activation Duration	Programmable
APU Dimensions	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
NEMA Enclosure Dimensions	16.50 in x 14.44 in x 8.26 in (41.91 cm x 36.68 cm x 20.98 cm) H x W x D
NEMA Enclosure Material	Fiberglass polyester NEMA-EEMAC type 4x UL 508. Type 4 and 5 standards with an enclosure flammability rating of UL94-5v
Product compatibility	AutoTune™ Calibration Software; Fiber Commander™, SpectraView™

ORDERING INFORMATION

Model / Part Number	Description	Options
FD341 (-IP)	Single-Channel APU	IP/XML Communications (-IP)
FD342 (-IP)	Dual-Channel APU	IP/XML Communications (-IP)
SC-3 (fence), SC-4 (buried)	Fiber optic cable	SC-3 duplex or single-strand
SC-3C (fence)	Sensing cable in ½" conduit	Max. continuous length 800m
Conduit Kits (required for fence applications):		
EZ300SS	100 meter split conduit kit	Black, Gray or custom color
EZ300NSS	100 meter non-split conduit kit	Black, Gray or custom color
EZ400SS (LT.)	100 meter split conduit kit	Black, Gray or custom color
EZ400NSS(LT.)	100 meter non-split conduit kit	Black, Gray or custom color

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