HIGH PERFORMANCE
HIGH RELIABILITY
HIGH SECURITY

Fiber SenSys
PERIMETER SECURITY

FD33x Fiber-Optic Intrusion Detection System

Specification Sheet

For a high-performance perimeter intrusion detection system designed for rugged outdoor environments, the Fiber Defender™ Model FD331/FD332 Alarm Processing Unit (APU) provides a one or two zone solution. Based on the Fiber SenSys® 300 series fiber-optic system, the FD331 is a single-channel model and the FD332 is a dual-channel alarm processor. The FD332 two-channel unit is capable of supporting two separate zones of sensor cable. Used with the Fiber SenSys SC-3 fiber optic sensor cable in conduit or SC-4 fiber optic sensor cable buried in a suitable medium, the FD331/FD332 APU forms a complete intrusion detection system.

The FD332 APU can support sensor cable from two separate zone deployments, regardless of their applications, and enables independent control of the zones. Each channel can be programmed separately for fence line, wall or buried deployments, and both channels support up to 5 km (16,400 feet/3.1 miles) of sensor cable.

The FD331/FD332's digital signal processing enables detection and analysis of the sensor cable movement and vibration. An on-board digital signal processor (DSP), combined with the Fiber SenSys SpectraView™ calibration software, provides discrimination between natural phenomena and actual intrusion attempts. The Fiber SenSys pre-programmed algorithms, combined with the optional Model AN-200™ wind anemometer, allows for continuous system adjustments to compensate for the effects of wind

Features	Applications
Sensor immune to EMI, RFI and lightning	Electrical substations
Supports dual-zone operation	Oil pipelines
Zones up to 5 km in length	Aviation and train locations
Intrinsically safe sensor	Oil and chemical facilities
IP/XML communication option	Military facilities
Optional anemometer output	College campuses
Adaptive wind processing	Commercial installations
Linear, uniform sensitivity	Correctional facilities

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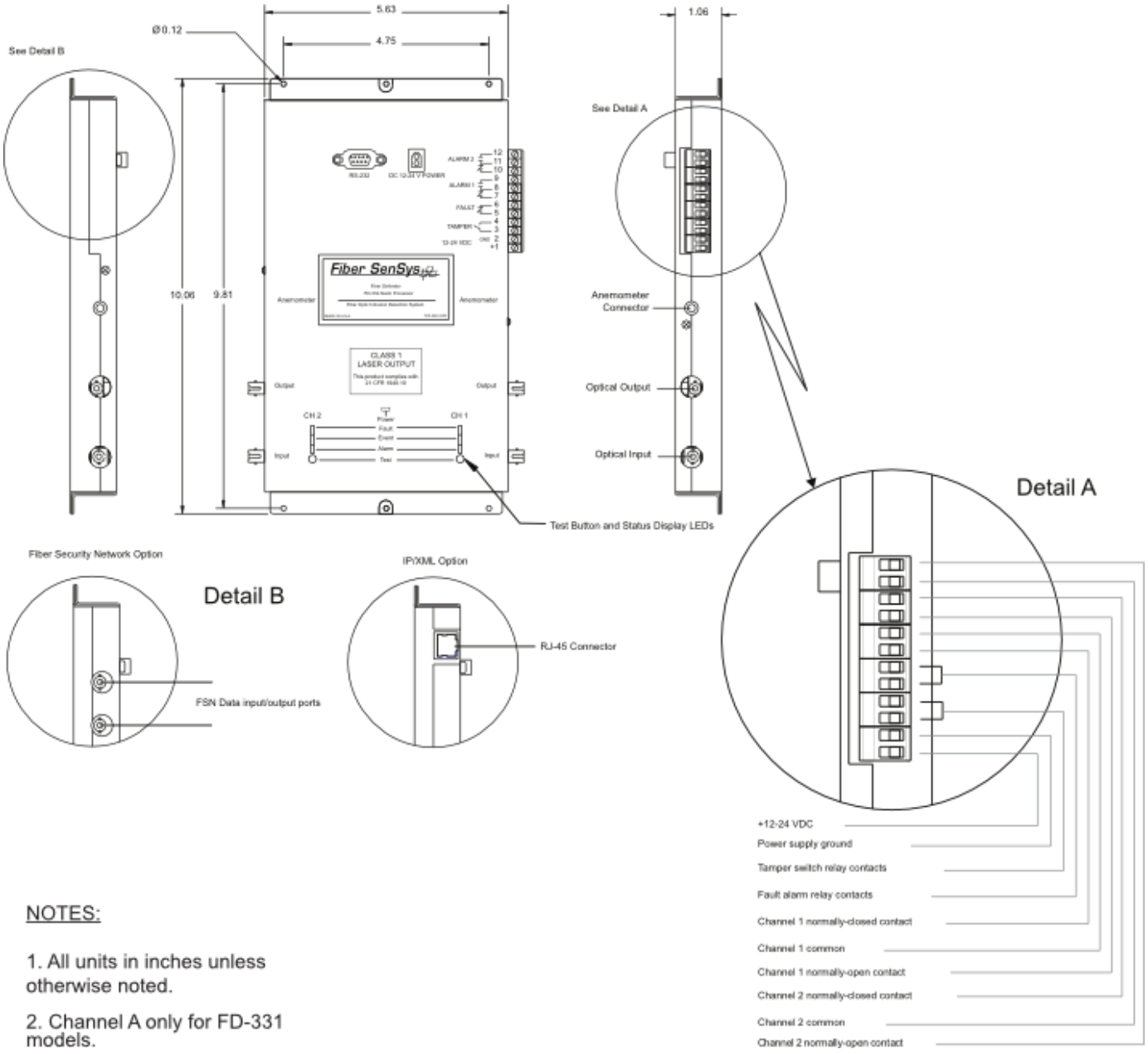
Assembly Diagram FD331/FD332 Alarm Processing Unit

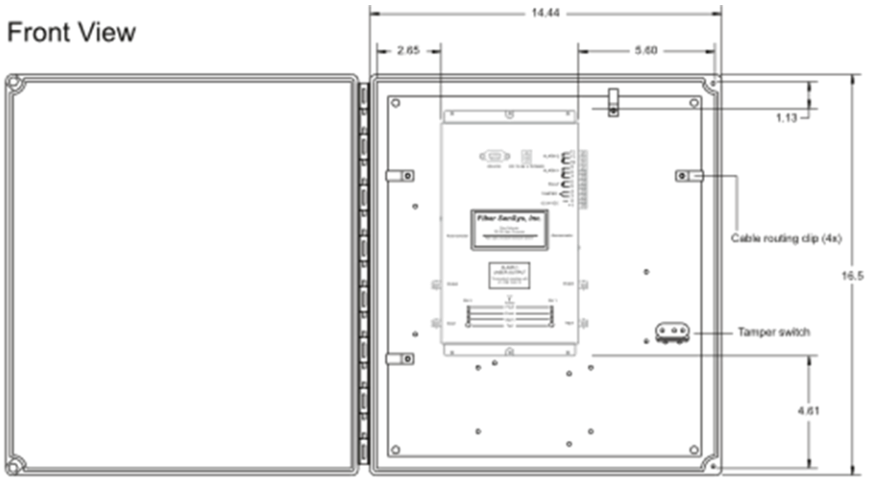


NOTES:

1. All units in inches unless otherwise noted.

2. Channel A only for FD-331 models.

FD331/FD332 Enclosure Drawing



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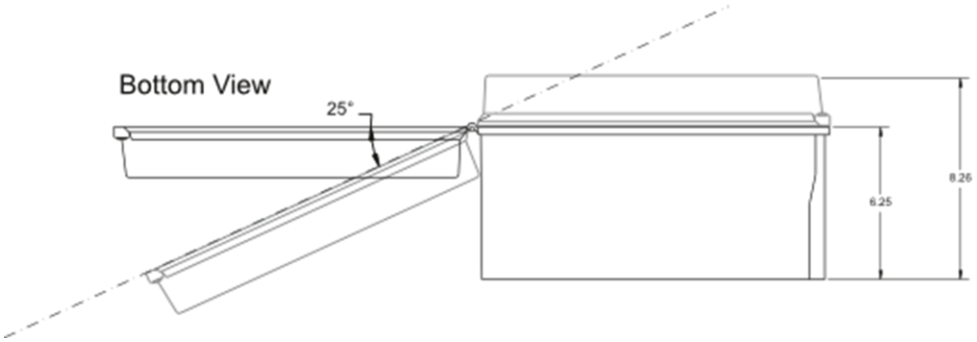
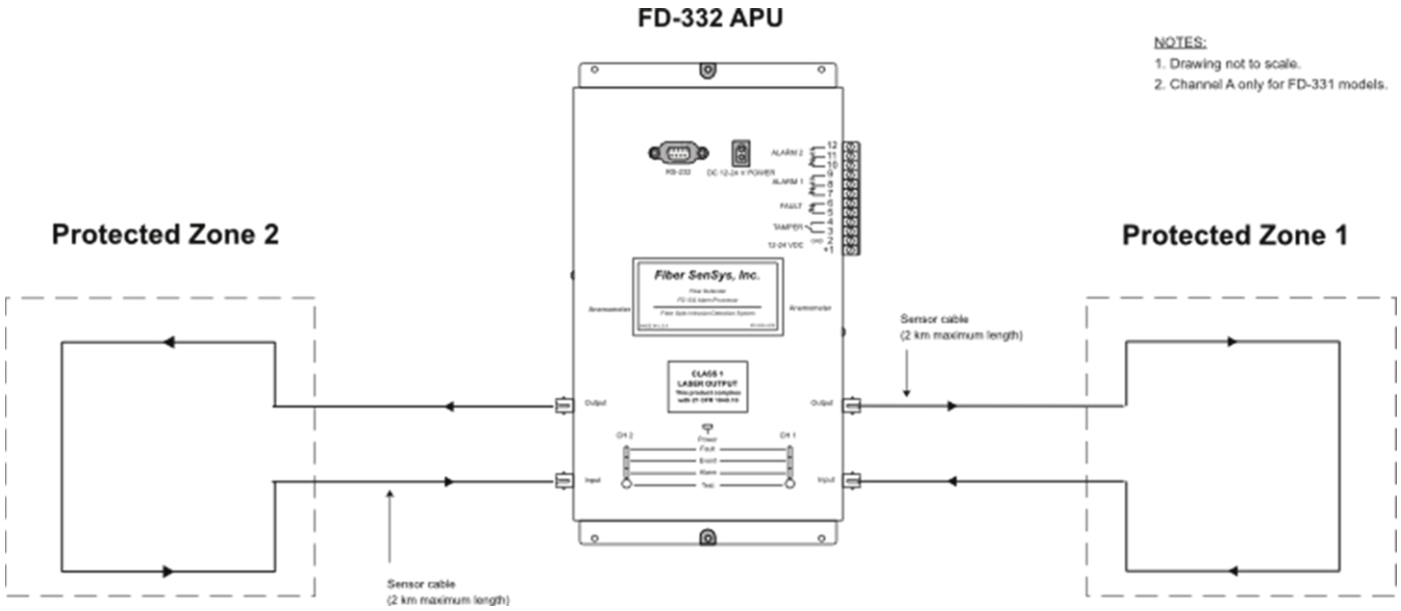


FD332 Application Block



NOTES:

1. Drawing not to scale.
2. Channel A only for FD-331 models.

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FD331/FD332 Product Specifications

Number of channels	(1) Channel FD331 or (2) Channel FD332
Voltage / Power	12-24 VDC / 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
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	SpectraView™ and AutoTune™ Calibration Software; Fiber Commander™

System Ordering Information

Model / Part Number	Description	Options
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 split 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 split non-split conduit kit	Black, Gray or custom color

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High Performance – High Reliability – High Security

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