



Specification Sheet

Fiber Defender Model FD-208 Alarm Processing Unit

FD-208

The Fiber Defender series Model FD-208 Alarm Processing Unit (APU) is an ideal alarm processor for use in applications that require the intrusion detection control electronics to be placed in a remote location. The FD-208 requires insensitive leads to connect to a deployed sensor cable, leaving only the fiber optic sensor cable in the detection zone. This allows the FD-208 system to be deployed successfully in the presence of EMI/RFI, in corrosive or flammable environments, and in extreme temperatures where other sensor systems fail. Airports, oil pipelines, high-end estates, nuclear power plants, petro-chemical facilities, military compounds, and electrical substations are a few examples of deployment applications where the FD-208 is ideal.

The FD-208's digital signal processing enables detection and analysis of sensor cable stimulation. The Digital Signal Processor (DSP) and companion microprocessor also provide discrimination between natural phenomena and intrusion attempts. Using a pre-programmed algorithm, the FD-208 senses wind effects and continuously adjusts the system sensitivity to compensate. This ensures optimal intrusion detection performance in most weather conditions.

Two alarm relay contacts are provided in the FD-208 APU: a normally-open and a normally-closed set of



The FD-208 Alarm Processing Unit, shown with and without the optional enclosure

contacts. The corresponding relay changes state when the APU detects an alarm condition from the sensor cable. An additional fault alarm relay indicates when optical power is lost.

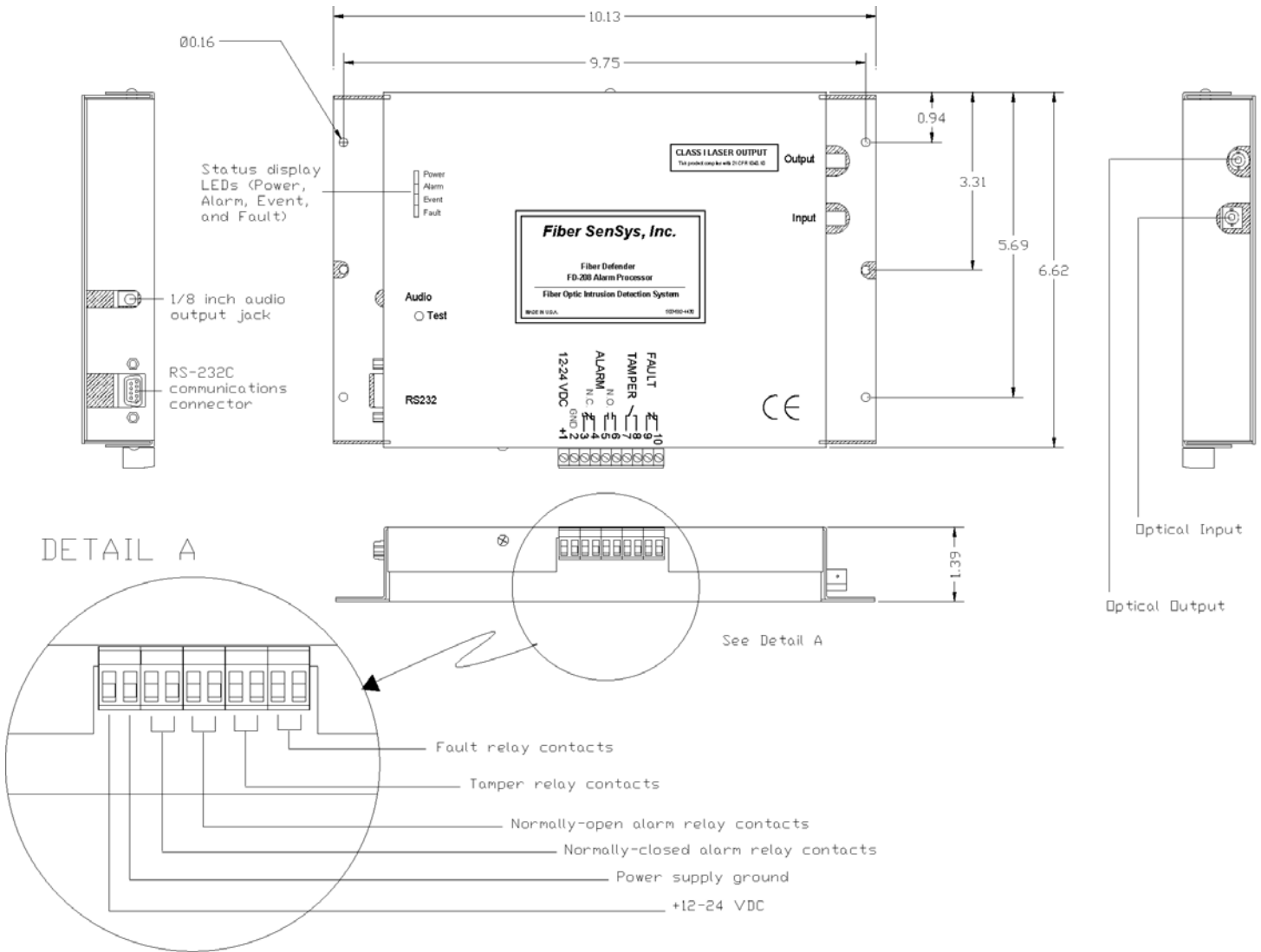
The FD-208 has an optional networking capability (FSN) that enables full integration with a central station or remote control software. Using the Fiber Security Network (FSN), up to 127 zones can be interconnected in a single system. Each FD-208 APU supports up to 20 km (12.4 miles) of lead-in insensitive cable and up to 5 km (3.1 miles/16,400 feet) of sensor cable.

The FD-208 Alarm Processing Unit is designed and manufactured in the U.S.A., and is backed by a full one-year warranty.

Features	Applications	Deployments
20 km remote operation	Commercial	Fences
Centrally located electronics	IT security (SecurLAN™)	Buried
Zones up to 5 km long	Oil pipelines	Walls
Sensor cable immune to lightning/EMI	Chemical depots	Secure data
Inert and intrinsically safe sensor	Military facilities	Gratings
Compatible with FSN	Campuses	Rooftops
Adaptive wind processing	Electrical substations	Lawns
DSP-based processing	Corrections	Beaches

Assembly Diagram

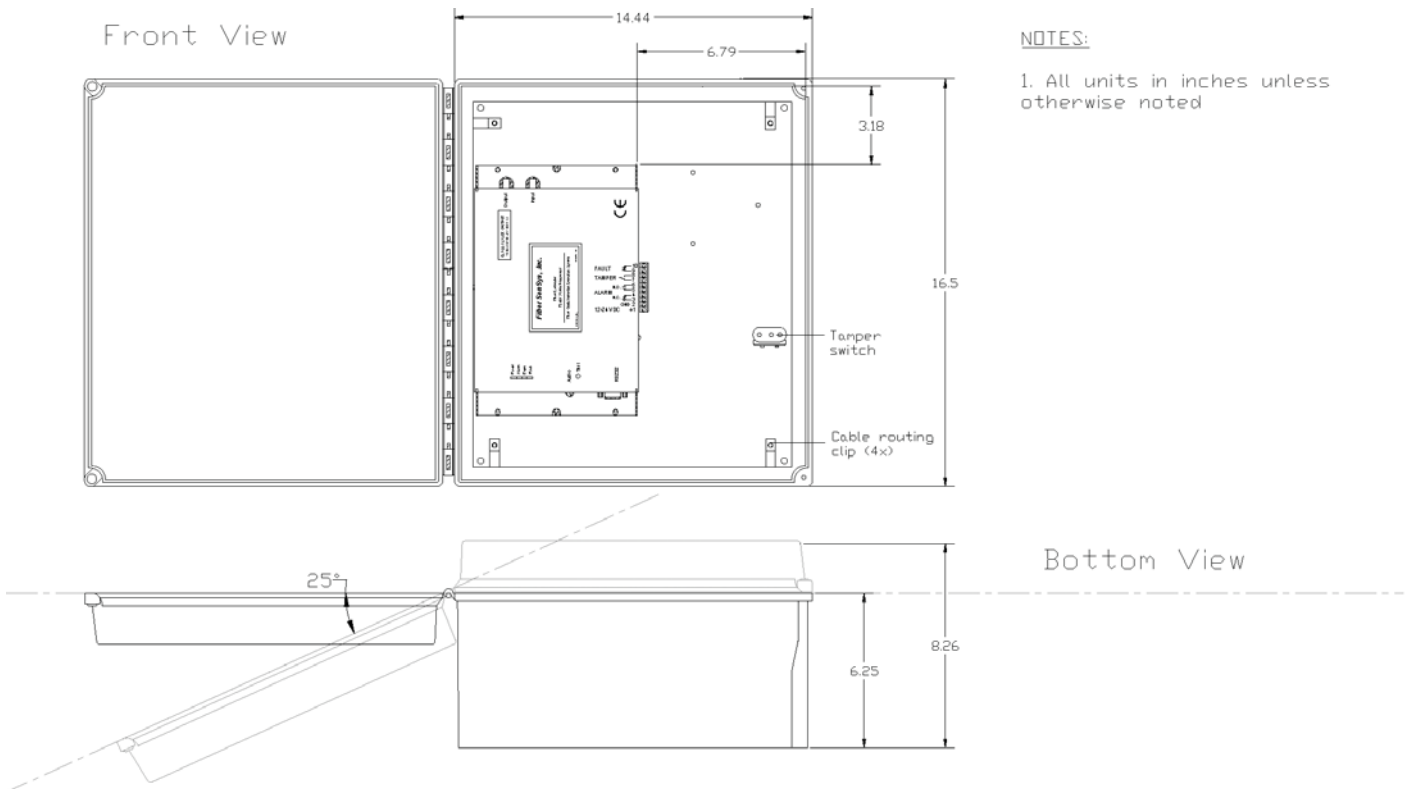
FD-208 Alarm Processing Unit



NOTES:

1. All units in inches unless otherwise noted

FD-208 Enclosure Drawing

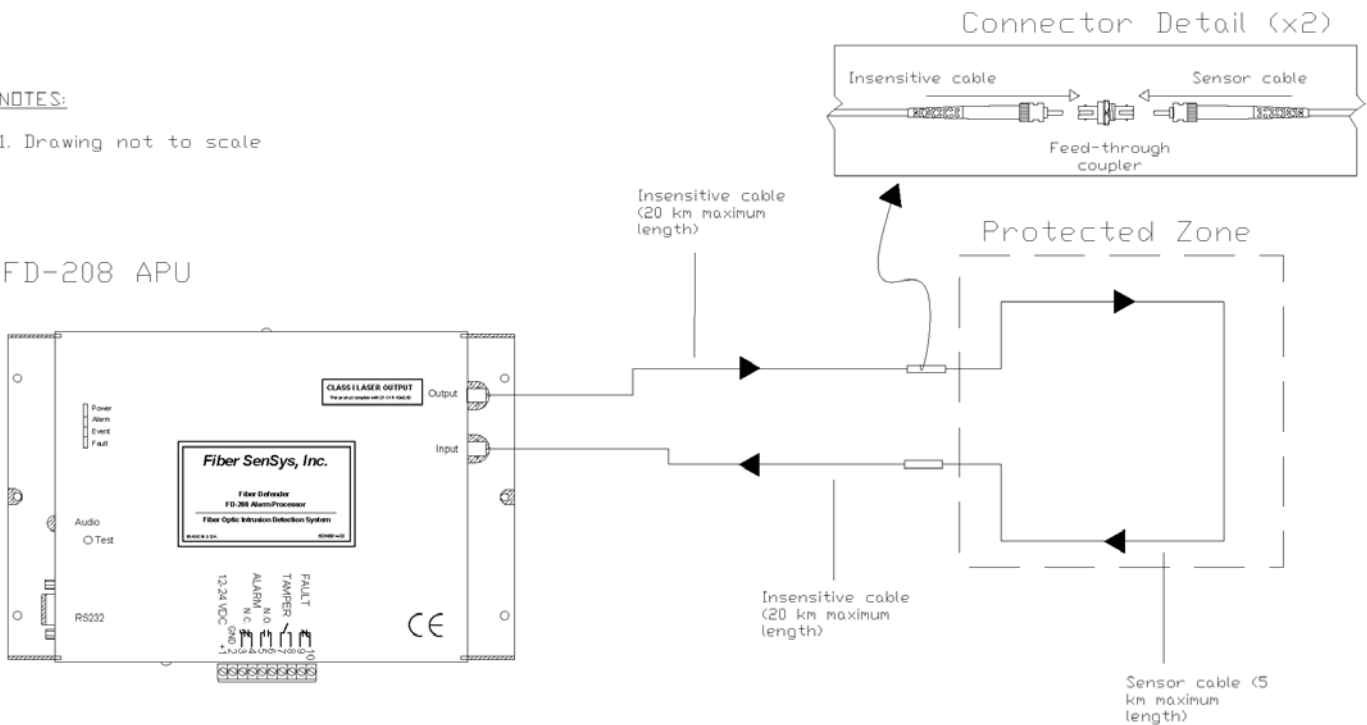


FD-208 Application Block Diagram

NOTES:

1. Drawing not to scale

FD-208 APU



Product Specifications

FD-208

Input Power Requirements	
Voltage	12-24 VDC
Power	3 Watts @12 to 24 VDC
Communications	Fiber Security Network (FSN compatible)
Programming	RS-232 using laptop PC or MC200 Hand Held Calibrator
Alarm	1 Amp, normally-closed/normally-open relay contact
Fault	Normally open
Audio Jack	1 kilohm @ 10-1000 Hz
Alarm and Fault Relay Ratings	28 to 14 AWG 1A, 24 VDC non-inductive
Operating Temperature Range	-30°C to +55°C
Humidity	90% non-condensing
Maximum Cable Length	
Insensitive Leads	20 km to protected zone
Sensor Cable	5 km
Sensor Cable Sensitivity	Uniform over entire length
Alarm Relay Activation Duration	Programmable
Fiber Security Network Communication	Optical input and output connectors (ST-type)
APU Dimensions	6.62 in x 10.13 in x 1.39 in (16.81 cm x 25.73 cm x 3.53 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

Ordering Information

Alarm Processor Units	
FD-208	Stand-alone APU model
FD-208/N	Stand-alone APU, network enabled
FD-208E	Stand-alone APU in enclosure
FD-208E/N	Stand-alone APU in enclosure, network enabled
Fiber optic sensor cable types	
Insensitive	Fiber SenSys part #IC-3 (3mm), IC-3D (duplex), IC-4 (buried)
Sensitive	Fiber SenSys part #SC-3 (fence), SC-4 (buried)
Conduit Kits (required for fence line applications)	
EZ-300NSS	100m non-split conduit kit
EZ-300SS	100m split conduit kit