Fiber SenSys
PERIMETER SECURITY

FD348R Fiber–Optic Intrusion Detection System
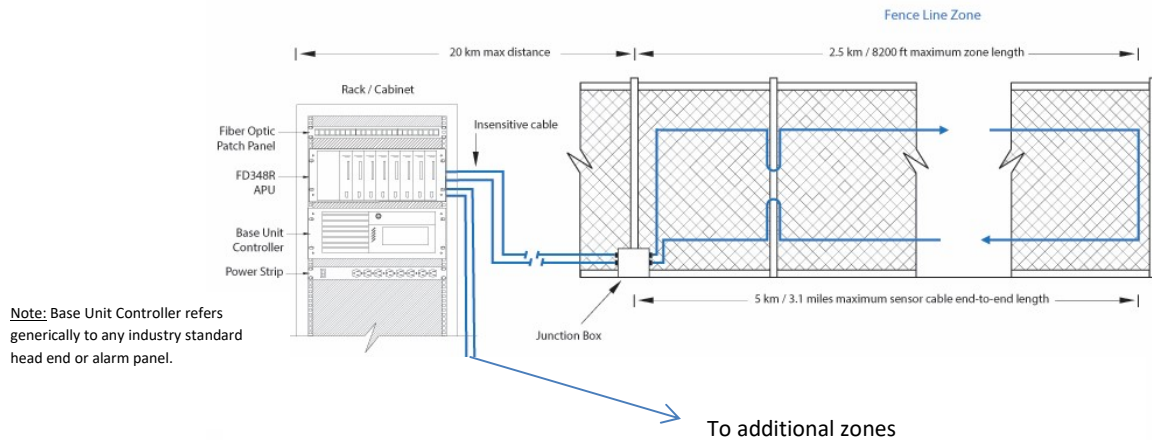## *Specification Sheet*

As a high security, rack-mounted perimeter intrusion detection system designed for remote deployment, the **Fiber Defender® FD348R™** Alarm Processing Unit (APU) is a next-generation alarm processor equipped with insensitive lead-in cable design advantages. This high-performance intrusion detection enables remote sensing capabilities up to 20 kilometers away from where the APU is located, with no power requirements in the field. The rack-mounted APU offers additional features, such as XML integration via TCP/IP and recording of multiple alarm conditions. The **FD348R** is an ideal platform for protecting areas in or near EMI/RFI fields, areas of extreme temperatures, or for protecting environments with corrosive and flammable materials harmful to components.
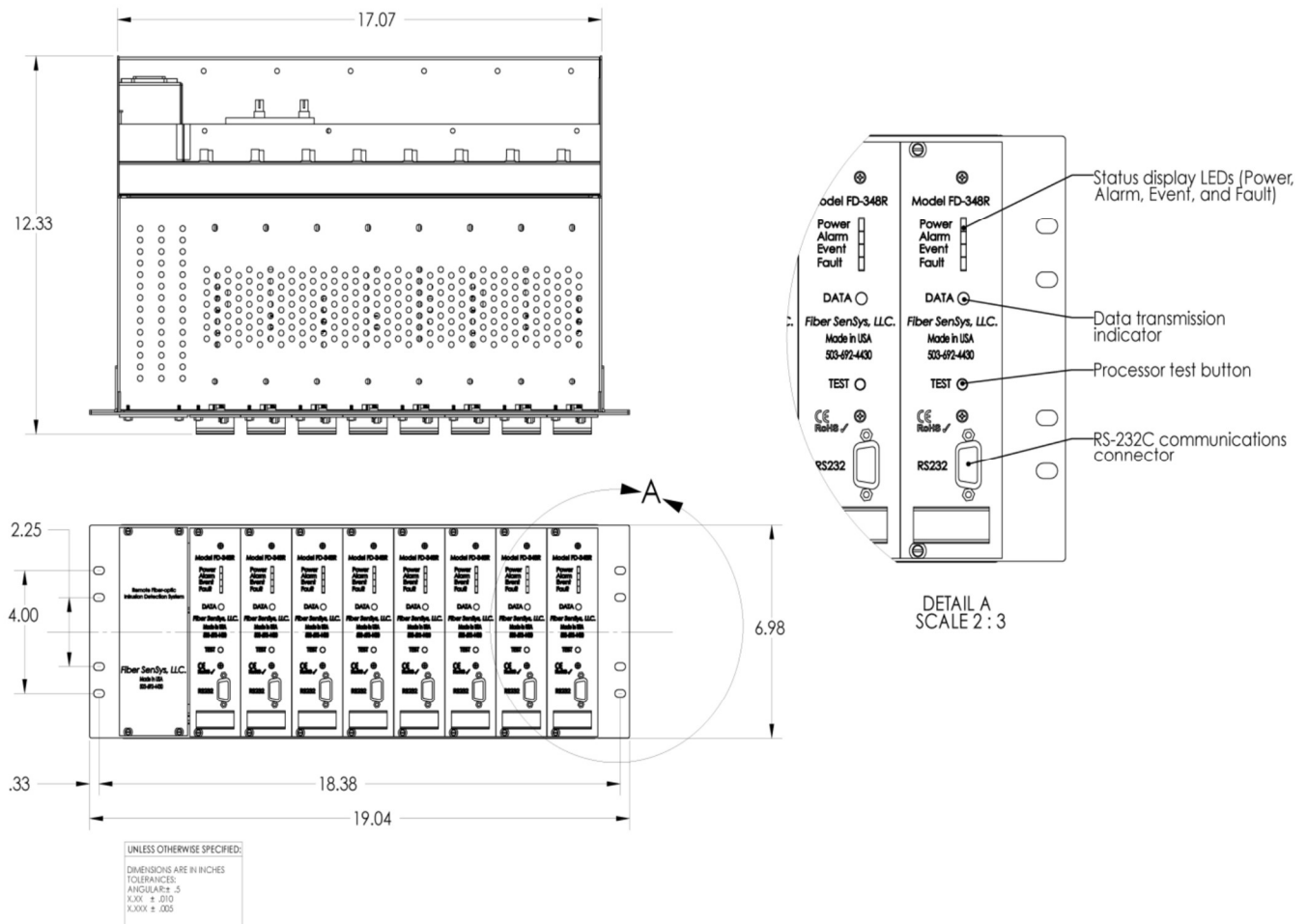
The **FD348R** supports up to 5 km (16,400 feet/3.1 miles) of sensor cable, and digital signal processing (DSP) enables detection and analysis of sensor cable stimulation. The APU also provides discrimination between natural phenomena and actual intrusion attempts. Using a pre-programmed algorithm, the **FD348R** senses wind effects and adjusts the system sensitivity to compensate. Both a perimeter fence and wall detection zone can be protected from the same rack-mount system. Made in the USA, the **RK348** rack-mount chassis holds up to eight (8) **FD348R** APUs and ensures maximum system performance and high-security.

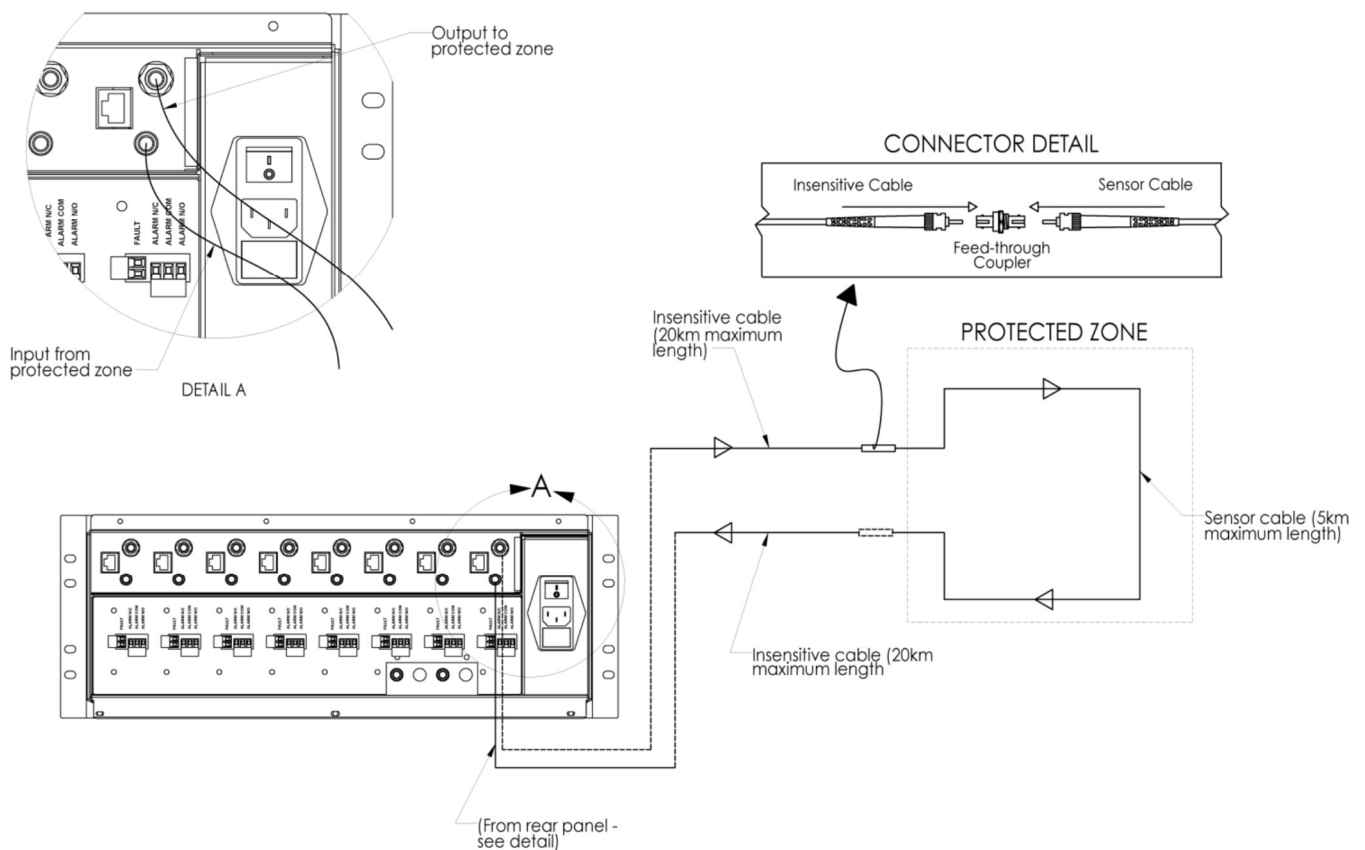| Features	Applications
Sensor immune to lightning & EMI	Electrical substations
Supports dual-zone operation	Solar farms
Sensing cable up to 5 km	Aviation and train locations
20 km remote lead-in cable capability	Oil and chemical facilities
Intrinsically safe sensor	Military facilities
TCP/IP communication option	College campuses
Linear, uniform sensitivity	Commercial installations
Adaptive wind processing	Correctional facilities

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Typical Field Installation

Note: Base Unit Controller refers generically to any industry standard head end or alarm panel.

To additional zones

Assembly Diagram RK348 Rack-Mount Chassis (with FD348R APUs installed)

Status display LEDs (Power, Alarm, Event, and Fault)

Data transmission indicator

Processor test button

RS-232C communications connector

DETAIL A
SCALE 2 : 3

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
ANGULAR:± .5
X.XX ± .010
X.XXX ± .005

RK348 and FD348R

FD348 APU Card Application Diagram

Output to protected zone

Input from protected zone

DETAIL A

CONNECTOR DETAIL

Insensitive Cable

Sensor Cable

Feed-through Coupler

Insensitive cable (20km maximum length)

PROTECTED ZONE

Sensor cable (5km maximum length)

Insensitive cable (20km maximum length)

A

(From rear panel - see detail)

FD348R Product Specifications

Parameter	Specification
System Type	Rack-mount & vibration-sensing APU intrusion detection cards
Operating Power	• Input: 120 or 240 VAC @ 50 or 60 Hz, 25 Watts (full rack) • 2.5 Watts per FD348R • Fuse Rating: 100-240V – 1.0 Amp, 250 V (T)
Communications	• TCP/IP to XML via RJ-45 connector • PC Programming via RS-232 (also with USB adaptor)
Signal Discrimination	Intelligent Real-time Digital Signal Processing (DSP)
APU Alarm Memory	Stores 24 alarms
Fault and Alarm Relays	• Individual dry contact relays for each zone alarm – both Normally Open and Normally Closed (NO / NC) • Dry contact relay for fault – Normally Closed (NC) • 28 to 14 AWG • 100 mA, 24 VDC non-inductive • Dry Contact Resistance 11 Ω typical, 17 Ω max • Alarm relay duration adjustable from 0 to 10s
Environmental	• 0°C to 40°C (32°F to 104°F) • Humidity of 0 to 95% non-condensing
Maximum lead-in Cable Length	20 km (12.4 miles)
Maximum Sensor Cable Length	5 km (16,400 feet / 3.1 miles) (loop-back design will affect distance)
Sensor Cable Sensitivity	Uniform over entire length
Dimensions (RK348)	Height = 17.78 cm (7.00 inch) Width = 48.26 cm (19.00 inch) Depth = 34.93 cm (13.75 inch)
Regulatory Standards and Certifications	• CE Class B • RoHS • FCC Part 15
Software Compatibility	AutoTune™ Calibration Software; Fiber Commander™; SpectraView™

Ordering Information

Model / Part Number	Description	Options / Notes
FD348R	Alarm Processor Unit	Rack-Mounted Configuration
RK348	Rack-mount chassis	For installation of up to eight (8) FD348R APUs
SC-3	Sensing cable	SC-3 available in duplex or single-strand
SC3-C	Sensing cable in conduit	Max. continuous length 800m

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