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 system 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.

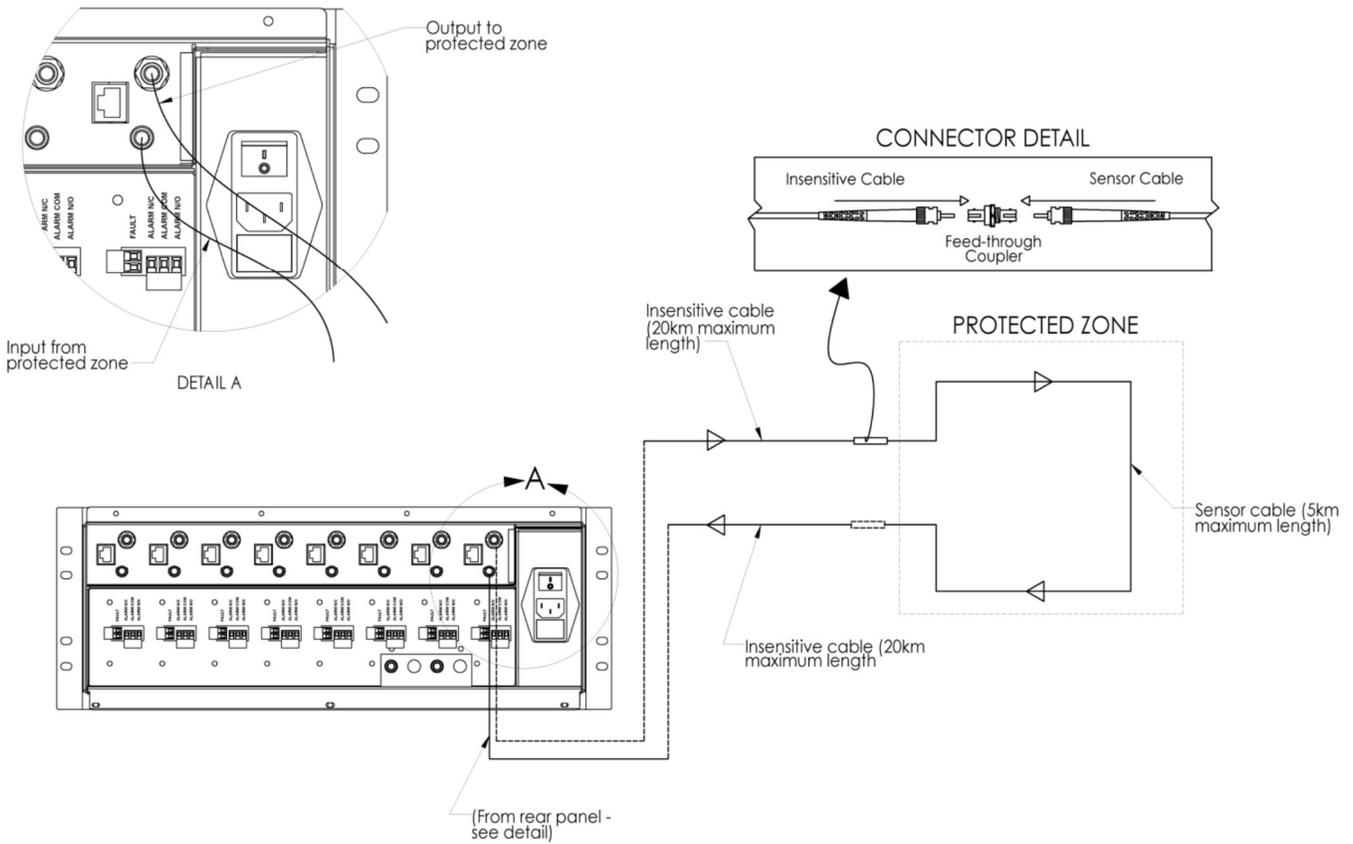| FEATURES	APPLICATIONS
Sensor immune to lightning and EMI	Electrical substations
Supports dual-zone operation	Solar farms
Sensing cable up to 5 km	Aviation and train locations
20 km remote lead-in cable capability	Oil and chemical facilities
Intrinsically safe sensor	Military facilities
TCP/IP communication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

For more information, contact us at
info@fibersensys.com
Tel: +1(503) 692–4430
Toll free (US) +1(800) 641–8150
www.fibersensys.com

TYPICAL FIELD INSTALLATION

Fence Line Zone

20 km max distance

2.5 km / 8200 ft maximum zone length

Rack / Cabinet

Fiber Optic Patch Panel

Insensitive cable

FD348R APU

Base Unit Controller

Power Strip

5 km / 3.1 miles maximum sensor cable end-to-end length

Junction Box

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)

17.07

12.33

2.25

4.00

.33

18.38

19.04

6.98

DETAIL A
SCALE 2 : 3

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

Model FD-348R

Power
Alarm
Event
Fault

DATA

Fiber SenSys, LLC.
Made in USA
503-692-4430

TEST

RS232

Data transmission indicator

Processor test button

RS-232C communications connector

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

FD348R PRODUCT SPECIFICATIONS

System Type	Rack-mount and vibration-sensing APU intrusion detection cards
Operating Power	• Input: 120-240 VAC @ 50/60 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) (loopback 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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Fiber SenSys
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