**Fiber SenSys**®
D A T A   S E C U R I T Y

FD348R Fiber–Optic Intrusion Detection System
Data Security Specification Sheet

As a high security, rack-mounted intrusion detection system designed for indoor environments, the Fiber Defender™ **FD348R** Alarm Processing Unit (APU) is a next-generation alarm processor designed with insensitive lead-in cable. This high-performance intrusion detection enables remote sensing capabilities up to 20 kilometers away from where the APU is located, providing maximum design flexibility and reduced 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 indoor, data raceway and conduit network environments.
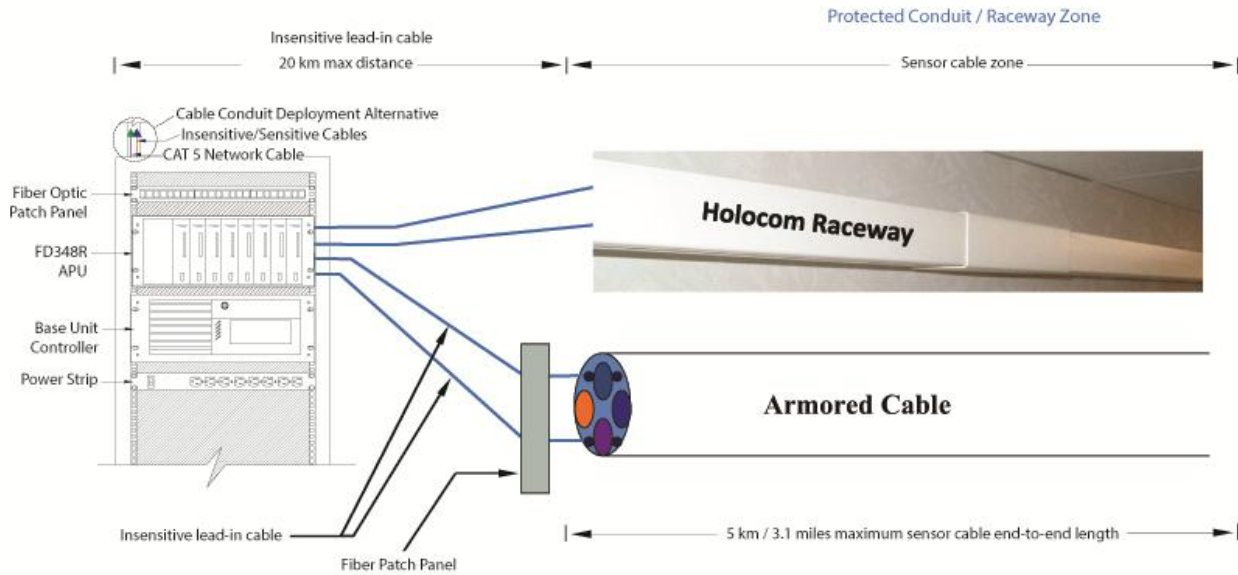
The protection of information technology networks is a priority in the private sector and also within the branches of the U.S. Military at the Department of Defense (DOD). Ensuring that information is never compromised forms the basis for all network communications security initiatives. The **FD348R** provides discrimination between normal interior environmental conditions and actual intrusion attempts. Using a pre-programmed algorithm, the **FD348R** monitors the network raceway, and is tuned and calibrated to adjust the system sensitivity. Made in the USA, the **RK348** rack-mount chassis holds up to 8 **FD348R** APU's and ensures maximum system performance and high-security.
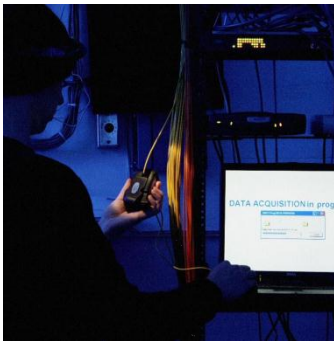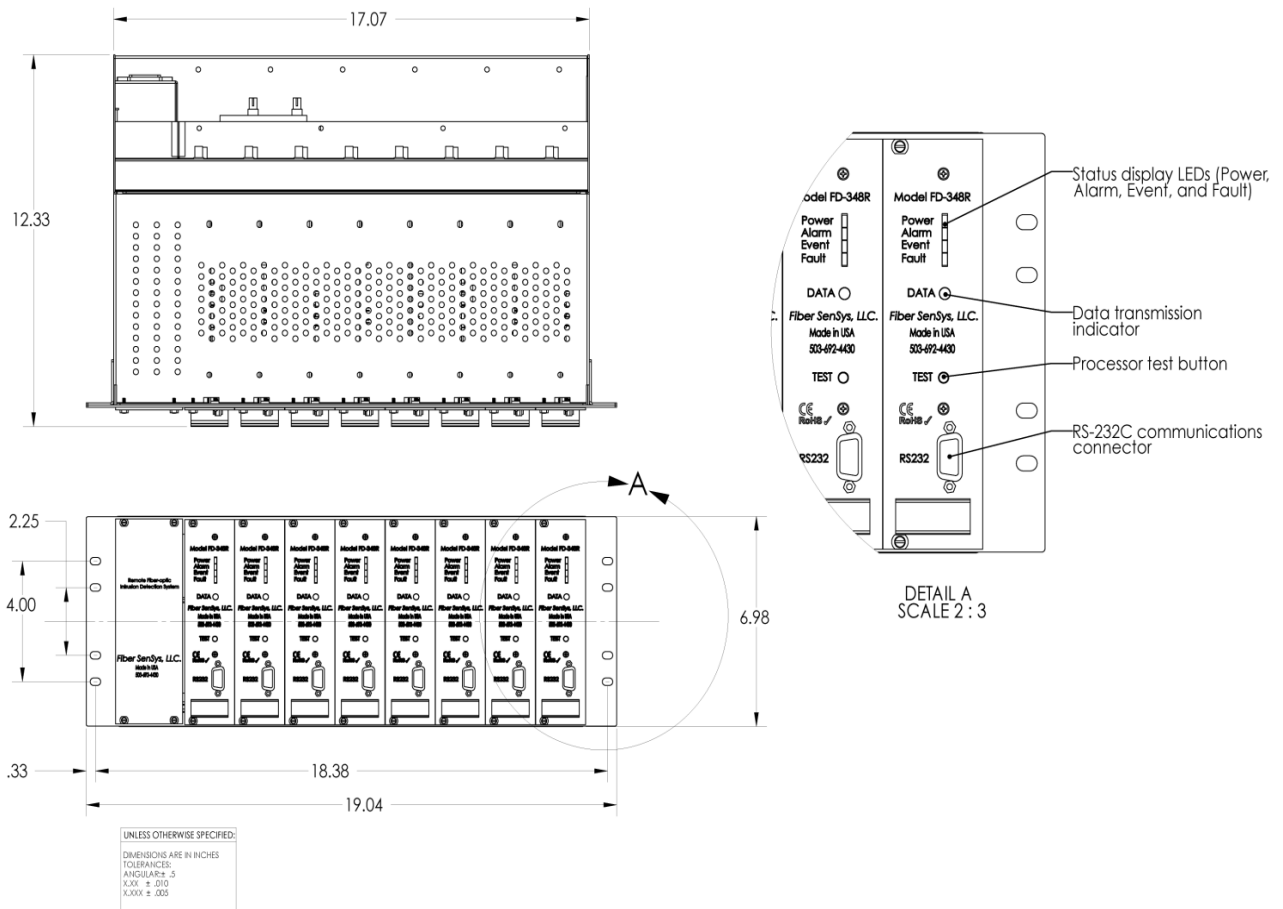
Features	Applications
Sensor immune to EMI and RFI	Protected Distribution Systems (PDS)
Supports multiple-zone operation	Military facilities
Sensing cable up to 5 km	Government networks
20 km remote lead-in cable capability	Corporate networks
IP/XML communication option	College campuses
Linear, uniform sensitivity	Commercial installations

Fiber SenSys®

2925 NW Aloclek Drive, #120
Hillsboro, Oregon 97124, USA
Tel: +1(503)692–4430 • Toll free (US) +1(888)736–7971
www.fibersensys.com

Typical Installation – Physical Data Security

Insensitive lead-in cable
20 km max distance

Protected Conduit / Raceway Zone

Sensor cable zone

Cable Conduit Deployment Alternative
Insensitive/Sensitive Cables
CAT 5 Network Cable

Fiber Optic Patch Panel

FD348R APU

Base Unit Controller

Power Strip

Holocom Raceway

Armored Cable

Insensitive lead-in cable

Fiber Patch Panel

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

Assembly Diagram RK348 Rack-Mount Chassis (with FD348R APU's installed)

17.07

12.33

2.25

4.00

.33

18.38

19.04

6.98

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 Block

Output to protected zone

ARM N/C
ALARM COM
ALARM N/O
FAULT
ALARM N/C
ALARM COM
ALARM N/O

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

(From rear panel - see detail)
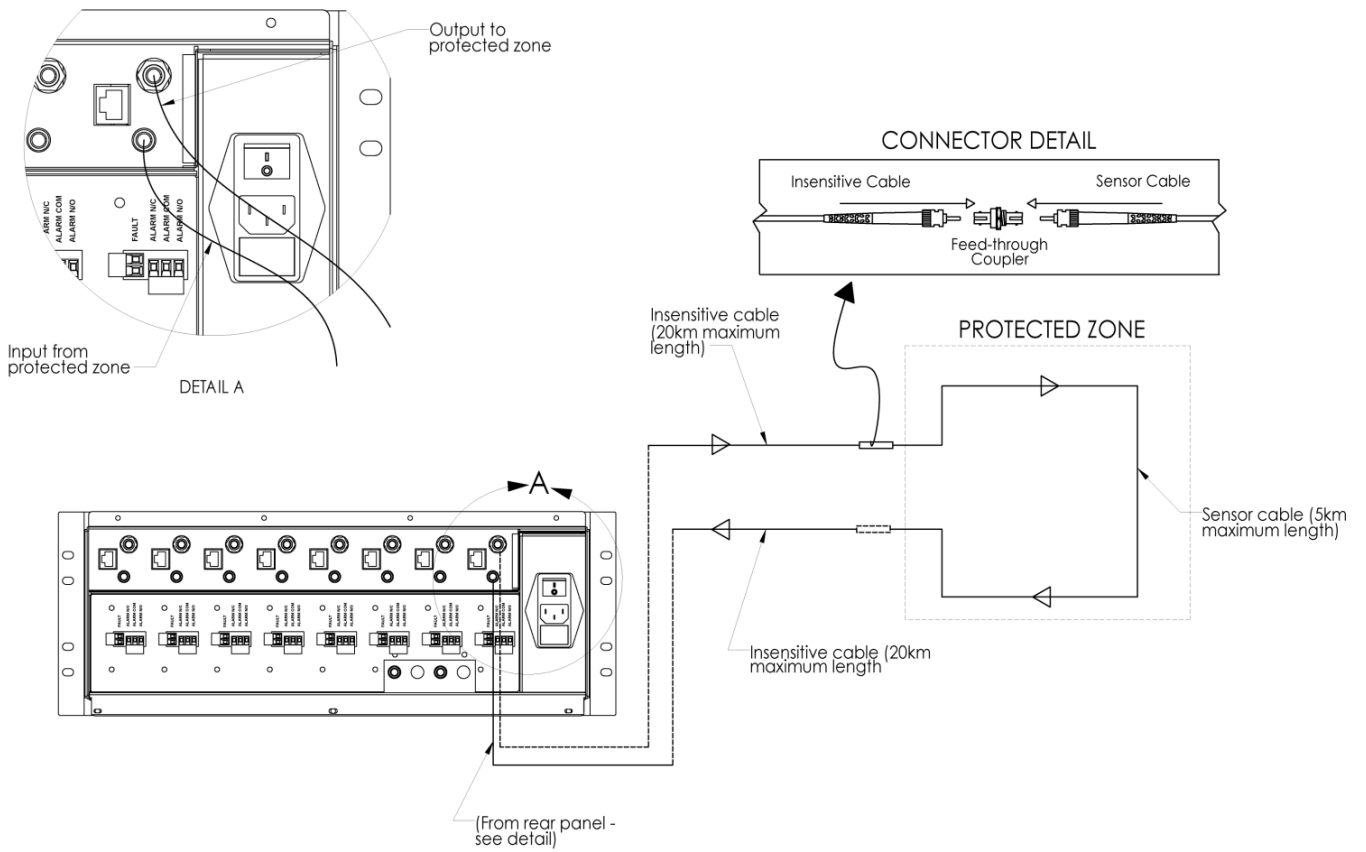
FD348R Product Specifications

Parameter	Specification
System Type	Rack-mount & vibration-sensing APU intrusion detection cards
Input Operating Power	Operation: 120 - 240 VAC , 50 to 60 Hz, ~3 W plus 3 W per APU card Input Power: ~ 28 W @ 120 VAC (w/ 8 APU Cards), Power Factor 50
Communications	TCP/IP to XML via RJ-45 connector ; PC or Hyperion Programming via RS-232 (also with USB adaptor)
Signal Discrimination	Intelligent Real-time Digital Signal Processing (DSP)
Programming Method	RS-232 using laptop PC or Hand Held Calibrator
APU Alarm Memory	Stores 24 alarms
Alarm Output Relay	Form-C type, 100 mA (1) normally-closed, (1) normally-open relay contacts
Alarm Relay Ratings	28 to 14 AWG, 24 VDC non-inductive
APU Operating Temperature Range	0°C to 40°C (32°F to 104°F)
Cable Temperature Range	- 40°C to 85°C (-40°F to 185°F)
Maximum lead-in Cable Length	20 km (12.4 miles)
Maximum Sensor Cable Length	5 km (16,400 feet / 3.1 miles)
Sensor Cable Sensitivity	Uniform over entire length
Alarm Relay Activation Duration	Programmable 0 to 10s
RK348 Rack Chassis Dimensions	17.78 cm x 48.26 cm x 34.93 cm (7" x 19" x 13.75") H x W x D
Regulatory Compliance	CE, RoHS, FCC Part 15
Software Compatibility	AutoTune™ Calibration Software; Fiber Commander™; SpectraView™
Industry Compatibility	Compatible with many varieties of network architectures, including secure passive optical networking (PON)

Drawing Notes:

- The FD348R Alarm Processor Unit is compatible with all industry leading head end systems. The "Base Unit Controller" refers generically to controller units common to all annunciators and head end systems.
- To achieve positive network shutdown of affected zones (in the event of an alarm condition), FSI optical cutoff switches (OCS) may be used (not shown).
- For specific design and applications of the FD348R, including the alarming of existing "dark" fiber (within distances and specifications), please refer to FSI application notes, available from the FSI website, or by contacting your territory representative.

For more information, contact us at:

info@fibersensys.com

Tel: +1(503) 692-4430
Toll free (US) +1(888)736-7971
www.fibersensys.com

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High Performance – High Reliability – High Security