COPPERHEAD™

Fiber SenSys

Perimeter Fence Security

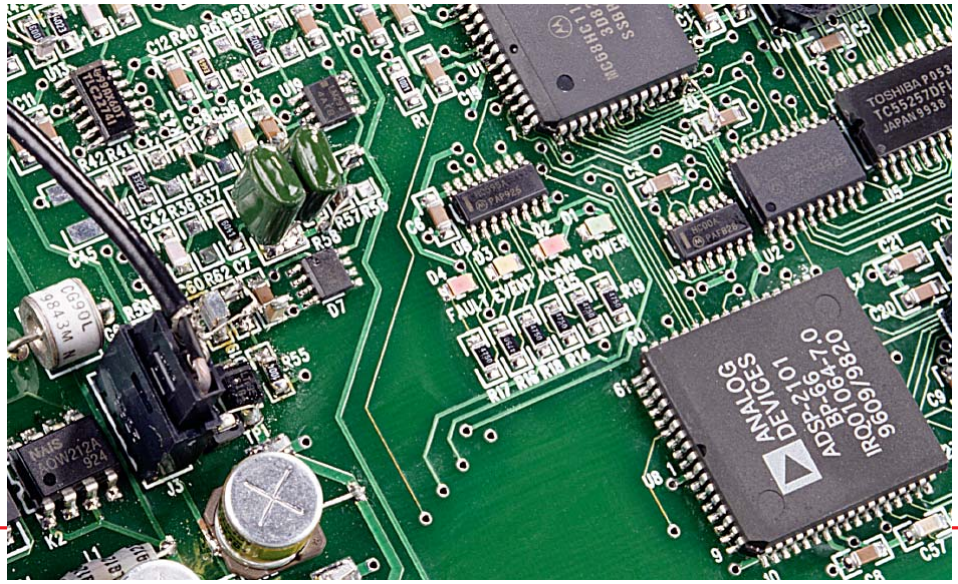
Finally there's a low-cost copper-based perimeter fence security product worthy of the Fiber SenSys label – the Copperhead™ 400 Series fence intrusion detection system.

As the industry leader in fiber-optic sensors, Fiber SenSys has security systems protecting some of the world's most critical sites. Years of testing and signal analysis experience have led to the development of this new best-of-class copper-based sensor product for commercial and institutional fence applications.

Copperhead brings a new level of performance and simplicity to almost any fence security application. Zone lengths up to 500 m (1,640 ft.) and the ability to insert insensitive cable anywhere in the zone give you installation flexibility you can't get from competing products.

Sturdy and compact, Copperhead is a fence security solution that's affordable, reliable, and easy to install and maintain.

- Advanced DSP Algorithm
- Reliable Detection of Cutting, Climbing and Lifting
- Resists Nuisance Alarms
- Wind Rejection
- Insensitive Cable Anywhere in 500 m Zone
- No Special Tools or Equipment Required
- Convenient Low-Cost Solution



Digital signal processing prevents nuisance alarms

Copperhead incorporates an advanced Digital Signal Processing (DSP) algorithm for unmatched intrusion detection, immunity to nuisance sources, and wind rejection. This high-speed DSP technology was originally developed and tested by Fiber SenSys for deployment in fiber optic intrusion sensor systems used in critical high-security applications.

Powerful algorithms work in real time to differentiate cutting, climbing, and lifting of fence fabric from wind-generated signals. Copperhead's dual processors instantly check all sensor signals against 18 specific evaluation criteria before triggering an alarm.

Multiple filters work together to reject random environmental events such as road and rail traffic, rain, snow, hailstorms, lightning, and seismic activity. Additional filters reject interference from local AC sources and sporadic events such as small animal activity and windblown debris.

Copperhead's digital processor detects the two most common fence line intrusion occurrences with its 'climb' and 'cut' profiles, using a special algorithm that guards against the stealth activities of sophisticated intruders.

A critical feature available with Copperhead's advanced DSP chip is exceptional intrusion detection sensitivity during high wind conditions. A proprietary wind rejection feature continuously optimizes the sensor for best performance without requiring anemometers or weather stations.

Cost-effective security for a wide range of commercial applications

Copperhead's cost-effective features, superior overall performance, and simple installation provide the ideal basic solution for almost any outdoor commercial or industrial perimeter security application. Copperhead uses UV-resistant tie wraps to attach the sensor cable to the fence fabric. The system is designed to meet the security needs of:

- self-storage lots
- fleet yards
- material and equipment storage yards
- new and used car lots
- boat yards and marinas
- outdoor retail establishments
- gated residential communities
- correctional institutions
- nursing facilities

Copperhead has EMC / performance certifications to the highest U.S. FCC and European CE mark standards.

Why a piezo sensor?

Piezoelectricity is an electrical charge generated by mechanical energy such as impact or motion. Copperhead was designed to use this principle in its uniquely sensitive yet rugged piezoelectric cable.

Copperhead's piezoelectric sensing cable can be mixed with insensitive cable. The processing electronics may be located indoors next to other reporting devices. An insensitive lead connects the Copperhead alarm processor to the sensing cable.

Insensitive cable may also be placed anywhere in the zone to create insensitive segments, a feature that allows easy transitions past gates or buildings.

Copperhead's sensing cable is more durable than conventional electrical fence sensors. Copperhead's piezoelectric cable is also less expensive than most competing products and available in longer zone lengths.

Fast, easy installation, calibration and startup

One small screwdriver is all that's needed to install, calibrate and activate the Copperhead 400 Series.

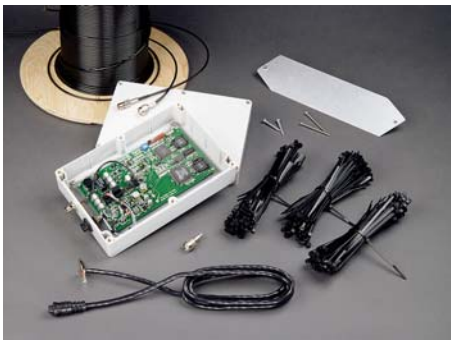
Insensitive cable makes it easy to install the alarm processor in the most convenient location, either indoors or mounted on the fence. Both insensitive and sensing cables come pre-equipped with a male connector at one end and a female at the other so cables may be joined in any combination.

Cable ties are provided for mounting the sensing cable to the fence fabric or ornamental fence sections. One person can handle the entire installation. A built-in audio alarm even makes it possible for the same person to simulate intrusion and perform the calibration.

Copperhead kit: all you need

Available Copperhead kits contain everything for fast, trouble-free installation. All you provide is a DC power supply and an annunciator or alarm panel.

The single-zone kit includes an alarm processor in an outdoor NEMA enclosure, 100 m (328 ft.) of pre-connectorized sensing cable, 300 UV-resistant cable ties, mounting bracket, mounting screws, and an end-of-line terminator designed for simple screw-in installation. The two-zone kit contains everything necessary for two 100 m zones.



Single-zone kit CH401KT

The sensor cables use standard weather-resistant TNC connectors so additional sensing cable can be added by mating junctions. A 1.5 m (5 ft.) pigtail is provided for connection to the alarm panel.

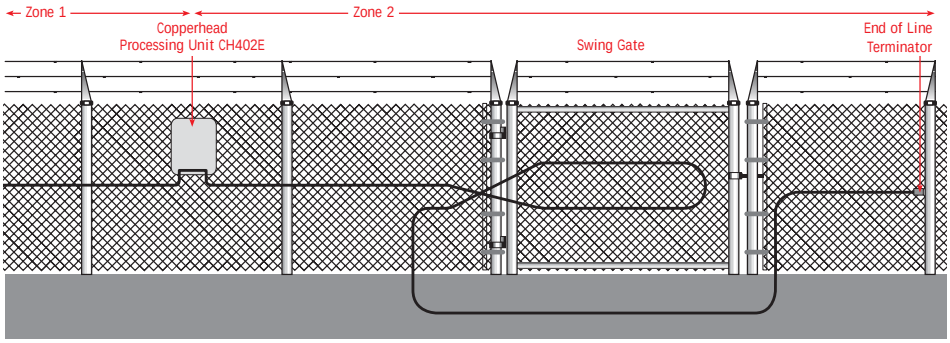
Pre-connectorized extension cables are available in ready-cut 50 m (164 ft.), 100 m (328 ft.), and 200 m (656 ft.) lengths. The end-of-line terminator is placed at the end of the cable run to ensure zone cable integrity and facilitate supervision.

Insensitive cable is available as an option, providing insensitive regions anywhere in the zone. This cable is also pre-connectorized in 50 m (164 ft.), 100 m (328 ft.), and 200 m (656 ft.) lengths. Additional connectors are available to make non-standard lengths of both insensitive and sensor cables.

Call us at Fiber SenSys for the location of your local representative or check out our web site for complete information on Copperhead and other Fiber SenSys products.

Specifications

Sensing Zone Length	500 meters (1,640 ft.) maximum
Insensitive Lead Length	500 meters (1,640 ft.) maximum
Power Requirements	10-26 vdc. 1.5 Watt typical
Environmental	Temperature: -30°C to +70°C
Outputs	Alarm contact closure (Form C) - 1 A, 24 VDC, non-inductive Low-level audio (100 mv rms) Tamper contact closure (optional) Fault contact closure (optional)
Input	Test (optional)
Enclosures	Polycarbonate, gasket sealed Model 401E: 22.2 x 14.6 x 7.6 cm (8.75 x 5.75 x 3 in.) Model 402E: 26.7 x 18.4 x 9.5 cm (10.5 x 7.25 x 3.75 in.)
Sensing Cable	Coaxial 3.5 mm (.14 in.) diameter
Insensitive Cable	Coaxial 5 mm (.195 in.) diameter
Connectors	TNC, moisture-resistant
Alarm Indications	Supervisable relay contacts



Typical 2-zone installation with gate

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