

## CORE FEATURES

- Locating resolution of 2 to 3 m (6.5-10 ft.)
- Detection and location of simultaneous multiple intrusions
- Software-based zoning
- Sensitivity adjustable per sensor or zone
- Cable cut immunity
- Adaptable to most types of fences
- One or two pass
- Relay inputs available at any location
- Environmentally resistant
- Very low False Alarm Rate (FAR)
- Pinpoint troubleshooting
- Easy to install and integrate
- Robust and reliable



## DESCRIPTION

**Fensor** - is an advanced solid state fence mounted perimeter intrusion detection system. The system is comprised of a multitude of accelerometer type sensors pre-wired to a power and communication cable at 2 to 3 m (6.5 to 10 ft.) intervals. The signal of each sensor is both individually and commonly analyzed to provide the most sensitive, reliable and accurate intrusion detection.

**Fensor** electronic sensors detect vibrations and movements caused by an intrusion attempt such as cutting, climbing or lifting of the fence fabric while providing the exact intrusion location within 2 to 3 m (6.5 to 10 ft.).

**FRU** (Fensor Reporting Unit) processors are located every 2 km (1.2 mi) along the protected perimeter, monitoring the status and condition of each individual sensor. The FRU communicates with the command and control center through Ethernet network.

A typical one pass system configuration consists of one line with up to 667 sensors (2000 m) connected on both ends to FRU's. This configuration is repeated to obtain the required system length. The configuration provides cut immunity – it will fully function even after a cable cut. For fences higher than 3 m (10 ft.) a second pass of sensor line should be used.

**Fensor** is adaptable to most metal fabric fences and walls, providing consistently reliable detection that automatically compensates for weather effects.

## MARKETS

**Fensor** is a cost-effective solution for Critical Infrastructure Protection (CIP) facilities, military and law enforcement sites, transportation compounds and border applications. The sensor is easy to install on any existing fence structure.

## BENEFITS

- Precise location of the intruder; enables pinpointing a camera to the specific intrusion location.
- Capability to detect and locate simultaneous multiple intrusions along a single zone.
- Very low false alarm rate since each sensor is analyzed separately.
- Increased immunity to harsh weather conditions.
- Zone and single sensor sensitivity can be easily adjusted.
- Improved maintainability through the inherent fault isolation to the level of the individual sensor.

## TECHNICAL SPECIFICATIONS

### VIBRATION SENSOR

- MEMS accelerometer
- Operating temperature: -40°C to 70°C (-40°F to 158°F)
- Completely weather proof IP 67
- Size: 95 x 35 x 29 mm (3.7 x 1.4 x 0.8 in.)
- Weight: 125 g (4.4 oz)

### SENSORS LINE

- Preassembled sensors every 2, 2.5 or 3 m (+10%)
- Maximum number of sensors in a sensor line: 667
- Supplied in Reels of 330 m (for 300 m fence)

### RELAY INPUTS

- Input Units are mounted on the sensors line
- One relay inputs per Input Unit
- Supervised by End-of-Line resistor

### FRU - INDOOR/OUTDOOR PROCESSOR

Supply voltage: 18 - 36 VDC

Power consumption:

- 8 W for 2 km single pass
- 16 W for 2 km double pass configuration

Transient suppression:

- All I/O's are lightning protected

Temperature range: -40°C to 70°C (-40°F to 158°F)

Humidity: No restriction (when in outdoor enclosure)

Outdoor Enclosure: Weatherproof NEMA 12 / 13, IP66

Unit size: 240 x 180 x 100 mm (9.4 x 7.1 x 3.9 in.)

Inputs:

- 4 sensor line cables (2 inputs and 2 outputs)
- 1 tamper cover switch
- 5 auxiliary inputs (supervised by End-of-Line resistor)

Outputs:

- 1 Normally Open (NO) line 1 alarm relay
- 1 Normally Open (NO) line 2 alarm relay
- 1 Normally Closed (NC) fail relay
- All relay contacts are 500 mA 50 VDC
- Can be extended to 96 relays

Enclosure:

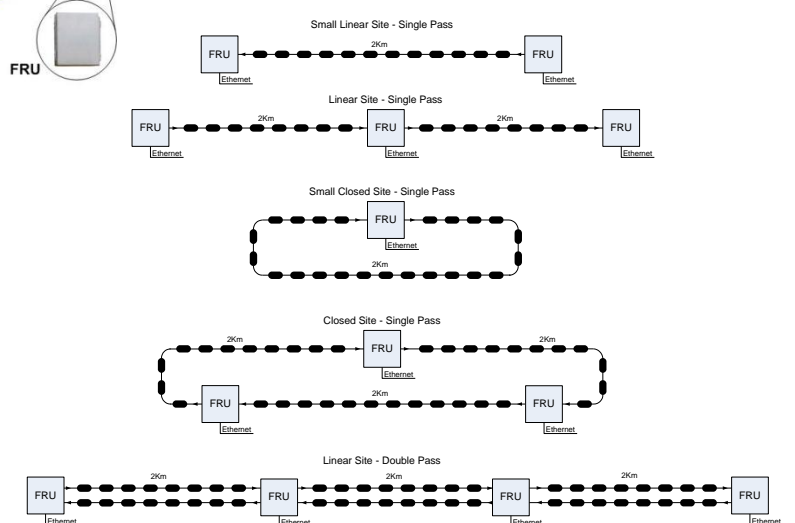
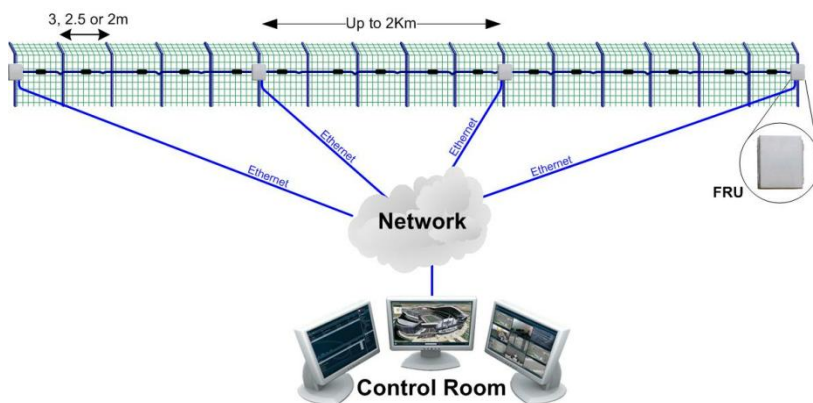
- Outdoor (IP66) or indoor enclosure

Data communication:

- 10/100BASE-TX Ethernet or RS-485

Regulatory compliance:

- CE (including RoHS 2)
- FCC



## SYSTEM CONFIGURATIONS