E3i™

Low cost protection for building interiors

DESCRIPTION – The E3i™ is an intrusion detection sensor used to protect unsupervised building interiors. It adapts Senstar's proven strain-sensitive microphonic cable technology to the specialized requirements of indoor security applications.

APPLICATION – The E3i can function with a wide range of surfaces and materials when protecting structures such as walls, ceilings, roofs, stock cages, floors and pipes. It is easily integrated into most existing alarm systems.

Features

- Detects shock, impact and sustained attack
- Used on walls, roofs, ceilings, stock cages, floors and pipes
- Microphonic / strain-sensitive technology
- Selectable frequency response
- Up to 1,115 sq. m (12,000 sq. ft.) coverage per zone
- Built-in calibration indicator
- Built-in audio "listen-in" capability

Markets

- Warehouses
- Bank vaults
- Ammunition bunkers
- Weapons storage facilities
- Commercial / industrial facilities

Benefits

- Cost-effective
- Easy-to-install and adjust
- Low power consumption
- Uniform sensitivity
- Alarm deters intruders in unmanned scenarios
- Alarm alerts police / security forces
- Easily maintained with inexpensive splice kits

Technical Specifications

How it works

The E3i signal processor monitors and analyzes either of two selectable frequency bands. It produces an alarm when the signals generated by the E3i sensor cable exceed the threshold for the selected band. This enables the E3i signal processor to respond to the natural characteristics of the materials and structure to which the cable is attached. It also allows the processor to respond to the nature of the intrusion: cutting, smashing, crushing, sawing, etc.

Because the E3i sensor cable is microphonic, the signal processor also provides a "listen-in" capability for alarm assessment.

Power and relay activation is indicated by Light Emitting Diodes (LEDs) on the processor board. Once the sensor has been calibrated, the LEDs can be disabled for power conservation. Circuitry is protected from reverse polarity, transient and surge voltages. Since the alarm signal is generated by changes internal to the E3i sensor cable, the system has a high resistance to external electronic noise and interference.

In addition to selecting the optimal frequency response, the user can select the number of impacts required before an alarm is generated, the length of time during which those impacts must occur; and the minimum duration of a sustained attack required to generate an alarm. Total sensor sensitivity is adjustable to any of 10 discrete levels. Since all materials have different responses to an intrusion attempt, the E3i can be calibrated to provide optimum performance for each application. These calibration features have been designed to ensure a simple and quick installation and reliable, trouble-free operation.

Capability

The E3i signal processor can monitor up to 610 m (2,000 ft.) of sensor cable with a consistent probability of detection thus permitting a large area, up to 1,115 sq. m (12,000 sq. ft.) to be protected by a single sensor.

The E3i sensor cable is fully supervised against cutting and shorting. It carries a minute supervision current of five micro amps. The alarm output relays (Form A or Form B selectable) are fail-safe, and the signal processor is supervised for tampering.

SOLID STATE CIRCUITRY: Maximum length of sensor cable - 610 m (2000 ft.)

OPERATING POWER REQUIREMENTS:
10.5 to 15.0 VDC, maximum ripple 2%
90 mA- with displays disabled
250 mA - with displays enabled

INTRUSION (K1) AND SUPERVISION (K2): Alarm relay contacts - form A or B selectable, 28 V, 0.5 A

TAMPER SWITCH: SW1 - 1 pole 2-position

CONNECTORS: Phoenix type, 8-pin

CONTROLS:
SW3 - Frequency band selector switch
SS1 - Calibrated sensitivity selector; 10 steps
JP4 - Count (impact) selector: 9 steps
JP3 - Elapsed time (sustained attack) selector: 9 steps
JP5 - Count (impact) time window selector; 5 steps
SW4-1 - LED displays enable / disable
SW4-2 - Local terminator for processor testing
JP1- Supervision alarm relay contacts - form A or B selectable
JP2 - Intrusion alarm relay contacts - form A or B selectable

INDICATORS:
LD11 - Power on LED (green)
LD12 - Supervision alarm LED (red)
LD13 - Intrusion alarm LED (red)
LD1-LD10 - Signal level LED display - 10 segment (red)

INPUTS:
J1-1 - E-Flex sensor cable-shield
J1-2 - E-Flex sensor cable
J2-1 - Ground
J2-5 - +12 VDC

OUTPUTS:
Intrusion alarm - J2-2 and J2-3
Supervision alarm - J2-6 and J2-7
Audio "listen-in"
Sonalert

ENVIRONMENT:
Operating temperature: -10°C to +60°C (+14°F to +140°F) ambient
Storage temperature: -50°C to +70°C (-60°F to 158°F) ambient
Relative humidity to 95% non-condensing

ENCLOSURE: Steel (24.1 cm H x 21.6 cm W x 3.8 cm D)
(9.5 in. H x 8.5 in. W x 1.5 in. D)

COMPONENTS:
E3i sensor cable, 305 m (1000 ft.) per roll of Mark I cable (not plenum rated)
SK-8 cable splice and terminator kit

Specifications are subject to change without prior notice.

www.senstar.com
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