

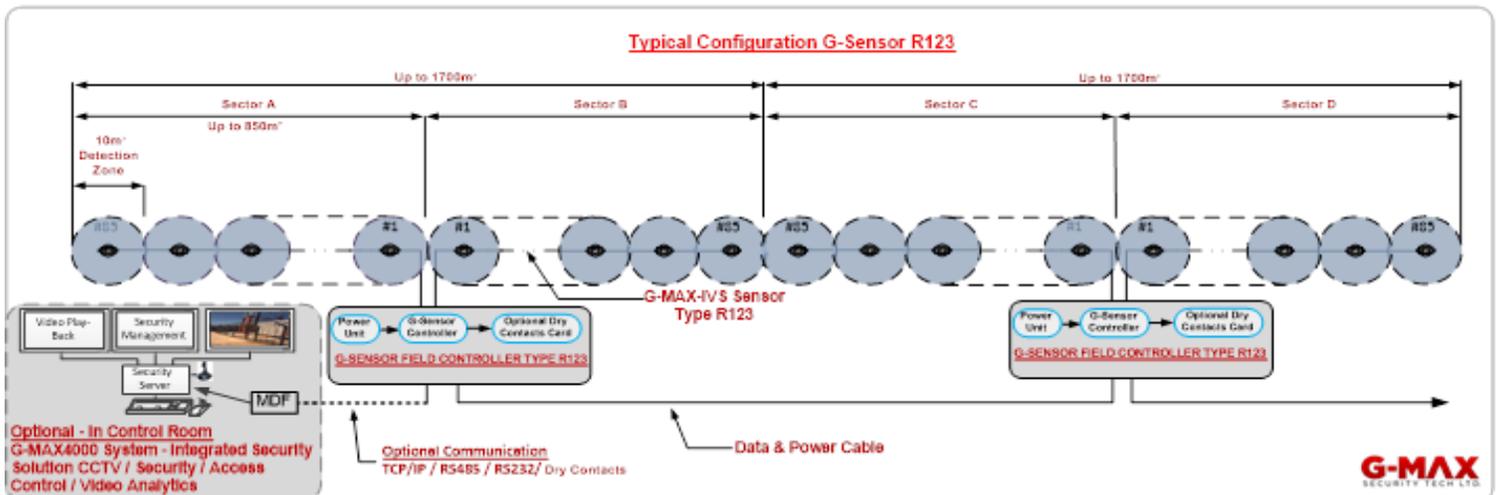
G-Max G-Sensor

Seismic intrusion detection systems



WHITE PAPER

Typical Configuration G-Sensor R123



G-Max G-Sensor

INTRODUCTION

G-Max's G-Sensor is an advanced underground seismic intrusion detection system offering a reliable and cost effective solution to intrusion detection in various environments.

G-Sensor providing incredibly high levels of alarm accuracy and detection over vast stretches of perimeter that reliably detects and precisely locates intruders walking, running or crawling along a facility's perimeter.

G-Sensor incorporates enhanced digital signal processing for even higher detection performance in challenging site conditions. It's the next step forward in the capability of security deployments, dramatically improving sensitivity and detection, yet minimizing false alarms at the same time.

OVERVIEW

The G-Sensor is a concealed underground intrusion detection system based on cutting edge geophone sensors lines buried along a facility perimeter in soil, asphalt or concrete to detect low-level intruder vibrations.

The G-Max G-Sensor system consists of a rugged, cutting edge addressable geophone sensor line with no mechanical moving parts.

Each addressable sensing geophone sensor delineates individual "detection zones" along the geophone sensor line.

With a coverage range of up to 2,000 meters, a single G-Sensor controller can monitor two detector lines with up to 250 geophones addressable sensors on each line, providing pinpoint location of perimeter alarms.

Multiple G-Sensor controllers can be linked together for larger systems.

All signals are processed by the G-Sensor controller and analyzed to selectively discriminate between actual intruders and natural disturbances. The system's high signal-to-noise ratio, smart adaptive algorithms and precise target location produce superior probability of detection and a very low false/nuisance alarm rate (FAR/NAR).

SOLUTION DETAILS

- **Precise location of the intruder;** enables pointing a camera at a specific intrusion location.
- **Effects of rain and harsh weather** are significantly reduced through improved algorithms which capture detailed statistics from many sensors.
- **Very reliable and low maintenance** - sensors operate electrically with no active mechanical parts; sensors are fully encased with an ingress protection rating of 67 (dust-tight and water-immersion resistant)
- **Smart Computerized Test Unit** - provides easy diagnostic & maintenance.
- **Sensors built-in test** - automatic or manually by remote activation.

SYSTEM ADVANTAGES

- **Accurate detection to within just few meters**
- **Adjustable sensitivity per sensor**
- **Software based zoning**
- **Very low False Alarm Rate (FAR)**
- **Easy-to-install and integrate**
- **Easy linkage to existing alarm panel**
- **Simple integration with security management system**
- **Detection and location of simultaneous multiple intrusions**

SYSTEM APPLICATION

- **Covert protection system installation as a long-range system.**

G-SENSOR-RS485 - SPECIFICATIONS

System

Resolution/Intrusion Detection:

- Down to the detector 2-10m, access to each node.

Physical Data Input/output to transducers:

- Optional RS485 with G-Max Protocol
- Relay Cards
- RS232
- TCP/IP

General:

- Seismic, optional Active Self-Testing

Platform:

- Embedded platform
- Built in database storage

G-Max controller

Input Voltage:

- 60-12VDC Less than 1A

Data Exchange with G-Max controller:

- Vibration alarm with classification
- Line tamper
- Live signal – active self-test

Operating Temperature:

- 30°C to 70°C

Configuration:

- Support 2 chains of 250 detectors Limit 1000 m' length

Geophone

Humidity:

- 0% - 100%
- Fully encapsulated

Transducer Enclosure:

- IP67 – Fully encapsulated
- Water & weather proof

Operating Temperature:

- -30°C to 70°C

Physical Data:

- RS485 with G-Max Protocol