Ground-Cell
Underground Seismic Detection System

The new **Ground Cell Seismic System** from El-Far incorporates innovative technology that delivers data fusion capabilities, significantly differentiating the system from current technologies available in the market. This "state of the art" system is highly reliable due to its sophisticated algorithms that provide it with the unique ability to filter nuisance alarms on several processing levels.

The system creates an invisible buffer zone around the protected perimeter, allowing for real time detection of any hostile activities. The system's detection capabilities extend above and below the ground, and include a wide range of events such as walking, crawling and digging. Several layers of processing provide complete detection and literally no further action is needed.

Another vital and extraordinary feature of the Ground Cell System is its excellent flexibility and adaptability to various types of terrain, such as beach sand, dirt roads, agricultural areas and even bushes.

The Ground Cell system is universal, and, due to its flexibility, can be adapted to any site's needs and requirements.

Configuration Options

The Ground Cell system can be deployed in four typical configurations:

- Seismic system as zoned, stand-alone solution
- Seismic system combined with smart fence - dual technology solution
- Underground invisible seismic detection system
- On building walls, inside and outside protection modes

Detection Method

Any movement within the buffer zone will be identified by several adjacent sensors within a fast time frame using patented" delta-sigma" pattern identification. The location of a typical event is pin-pointed to a small sector on a topographic map in the command and control centre. The Ground Cell size can be adjusted according to operational and tactical needs. The underground sensors can be installed at varying depths and distances from each other. Each sensor has an adjustable detection range that is usually overlapped by several units for increased reliability.

System Advantages

- **Ability** to be fine-tuned according to operational requirements
- **Adaptable** to various types of terrain e.g. sand, clay, soil, etc.
- **Ability** to calibrate various zones for different sensitivity at protected areas
- **High flexibility modes:** *stand-alone* solution, *dual technology* modes, *invisible installations*, and *walls* intrusion protection
- **Easily integrates** with other smart sensors to provide multi-layered protection and deliver data fusion for greater accuracy such as surveillance or back-up systems
- **Extremely difficult to locate and disconnect**
- **Ideal** for applications that require site to remain unchanged
- **Multiple applications** including borders, nuclear plants, oil pipes, chemical plants, military installations and critical infrastructure sites

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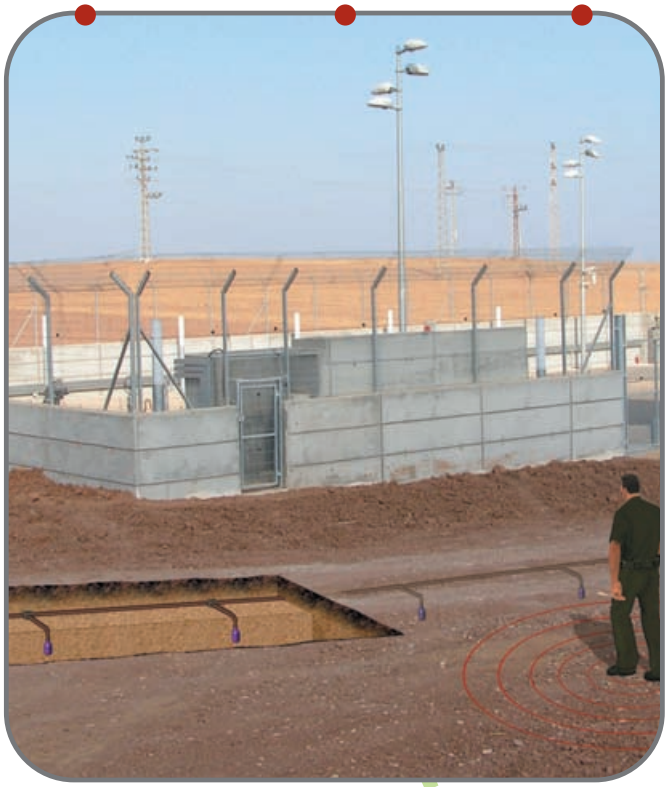
Features & Benefits

- **Weather proof** – Sensors are resistant to temperature changes, humidity, rain, snow and wind
- **Detection resolution** ±10 meters
- **Full control** of system features from remote center
- **Very low infrastructure expenses**
- **Low system power** – use inexpensive cabling solutions



Specifications

Operating temperature	-40°c to 85°c
Relative humidity	100%
Operating voltage	30-60 V D .C.
Power requirements	10mw / sensor
Enclosure	sealed to IP67, UV protected
Detection range	adjustable
Protected sector	up to 1500 meters each





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