



# Electro-Guard 5000

## LETHAL/NON-LETHAL ELECTRIFIED FENCE

### Introduction

*DeTekion Security Systems, Inc. introduces the latest generation of Lethal / Non-Lethal Electrified Fence. The Electro-Guard 5000 System operates on dual electrifiers so that each adjacent conductor wire operates from different electrifiers. An alarm condition is signaled when a wire is shorted to ground, a wire is cut, or when any adjacent conductor wires touch. The Electro-Guard 5000 System employs the latest technology for locating an alarm. The Balanced Current System (BCS) provides the Central Control Station the capability to identify an alarm condition to within 50 meters of its occurrence.*

### Operation

The Electro-Guard 5000 normally operates in Non-Lethal stun alarm surveillance mode. This mode provides a highly effective shock that activates an alarm condition. On alarm detection, the system can switch to Lethal mode instantly or after a programmable short time delay. This feature protects birds or small wildlife that may have caused the initial alarm condition. The Electro-Guard 5000 may also operate in either a full time Lethal mode or a full time Non-Lethal mode. This provides flexibility for changes in the legal climate or circumstances at the facility.

### Features

- *Formidable Physical and Psychological Barrier*
- *Automatic Activation of Lethal Mode*
- *Interlocked to Prevent Legal Entry into Fence Area until Electrifiers are Safely Turned Off*
- *Environmentally Friendly in Non-Lethal Alarm Condition*
- *Full time Lethal or Full time Non-Lethal Modes Available*
- *Latest Generation Lethal / Non-Lethal Electrifier Technology*
- *Dual Electrifiers Provide Redundancy*
- *Reliable Detection Capability*
- *Superior Delay Effect*
- *Weather Resistant and Robust Construction*
- *Highly Defeat Resistant*
- *Balanced Current System Allows Zone Indication to Within 50m*
- *Up to a 5km Fence May Be Electrified with One Electrifier Unit*
- *Highly Resistant to Lightning Strikes*



## Electrifiers

The lethal electrifiers (energizers) are rated at 3.3kV at 500mA, AC. The voltage is supplied to the two wire loops. These loops are energized out of phase resulting in 6.6kV between adjacent wires, resulting in a lethal voltage.

The Non-Lethal energizer built in the same electrifier cabinet is compliant to the International Electrotechnical Committee Specification IEC 335-2-76. In this Non-Lethal mode the energizer's output is a pulsating DC voltage adjustable to 10kV between fence loops, -5kV on one loop, +5kV on the other. The maximum loop length that can operate in this mode with an energizer delivering 8 Joules measured into a 500-ohm non-inductive load is 18 miles (30km) regardless of the wire type. One energizer can *therefore* energize a 1.65 mile (2.5km) 24-wire fence, or a 3 mile (5km) 12-wire fence.

In both Lethal and Non-Lethal modes alarms will be reported if the wires are cut, grounded, or earthed. The system operates in one mode at a time, and can be programmed to switch between the modes automatically.

## Isolator Switch

Electro-Guard 5000 uses a system Isolator Switch to safeguard access to the electrified fence area. This switch isolates and earths the power cables to the fence so there is no danger to maintenance personnel. This isolation is accomplished using a series of keys from the electrifier, isolator switch and eventually the actual gate lock on the outer or inner fence to obtain access to the lethal area. No access is possible until the electrifier is de-energized.

## Lightning Protection

The Electro-Guard 5000 uses the latest technology available for lightning protection. Four Silicon MOV's rated at 5.1kV with a maximum residual voltage of more than 48kV are installed in the electrifier cabinet. The MOV's protect the electrifiers from transient surges in the High Voltage Cables.

## Insulators

Glass or porcelain insulators are mounted on the support post for each wire. These high quality insulators are utilized to eliminate nuisance alarms from environmental contamination that attaches to lower quality nylon or plastic insulators.

*Distributed By*



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*Specifications subject to change.*



## Specifications

|                                       |   |
|---------------------------------------|---|
| <b>Application</b>                    | Electrified free standing fence to deter, detect and delay intruder activity                  |
| <b>Zone Length</b>                    | Dependent upon system design, camera location and personnel response. Normally less than 50m. |
| <b>Fence Length</b>                   | 5km maximum with 12 fence conductor wires   |
| <b>Dimensions</b>                     | 1,675mm (H) x 600mm (W) x 600mm (D)   |
| <b>Operating Temperature</b>          | -40°C to +70°C  |
| <b>Electro Magnetic Compatibility</b> | Class IV Insulation Electrifiers<br>75kV BIL  |
| <b>Power Requirements</b>             | 240VAC Single Phase   |
| <b>Electrifier Outputs</b>            | Switchable to any of three modes either manually or automatically under programmed control.   |
| <b>Non-Lethal</b>                     | +5kV pulsing on Loop A<br>-5kV pulsing on Loop B  |
| <b>Lethal</b>                         | 3.3kV AC on Loop A<br>3.3kV AC on Loop B (180° phase shifted)                                 |
| <b>Lightning Protection</b>           | 5.1kV MOV Arrester Voltage<br>Complying to IEC 99-4   |
| <b>Alarm Detection</b>                | Short between wire loops<br>Ground of any wire loop<br>Cut of any wire loop.                  |
| <b>Alarm Indication</b>               | Full Graphic Panel Display<br>and Control.  |
| <b>Maintenance</b>                    | Routine inspection  |
| <b>Installation</b>                   | By DeTekion Technicians   |
| <b>Location</b>                       | Internally or externally mounted  |
| <b>Warranty</b>                       | 12 months from date of<br>approved installation   |