

# Electro-Guard 5000-A NON-LETHAL ELECTRIFIED FENCE

### Introduction

*DeTekion Security Systems, Inc.* introduces the latest generation of Non-Lethal Electrified Fences. The ElectroGuard 5000-A is derived from the very successful and proven ElectroGuard 5000 Lethal / Non Lethal Electrified Fence. The Electro-Guard 5000-A System does not include a Lethal Energizer. It includes and operates with the same Electrifiers (Non-Lethal energizers and local PLC controller) that are also deployed within the ElectroGuard 5000. Each conductor wire is electrified at a 180 degree phase from its adjacent conductors. 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-A 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 a high resolution.

### Operation

The Electro-Guard 5000-A can operate in a Non-Lethal stun alarm mode or in a surveillance mode that is optimal for maintenance. The Non-Lethal stun alarm mode provides a highly effective shock to the individual that is touching the electrified wires, trying to climb the electrified wires, trying to spread apart the electrified wires and trying to cut the electrified wires. The electrified pulse meets all international safety standards. All of these actions will activate an alarm condition at DeTekions Open Media Network Interface (OMNI) PLC Controller and the alarm information including the associated zone in alarm will be displayed on the Graphic User Interface (GUI) in the control room.

### **Control and Integration**

The OMNI PLC Controller controls all of the functions of the ElectroGuard 5000-A and also facilitates documentation of events and reporting. The OMNI PLC Controller can also accomodate the integration of other sensor systems such as microwave, Infra Red etc. that may be used as part of the perimeter security system of the facility at sally ports, gates etc. The OMNI PLC Controller can also provide dry contact relay outputs for integration with other systems such as CCTV, Mobile Map Systems, (MMS) ,Roving Alarm Notification Systems (RANS) etc.

### Features

- *Formidable Physical and Psychological Barrier*
- Proven Technology that is applied at many Correctional Facilities
- No Electronics in the Field
- No Electrifiers / Energizers in the field
- *Environmentally Friendly*
- Latest Generation Non-Lethal Electrifier Technology
- Adjacent Electrified wires phased at 180 degrees provide Partial Redundancy
- Reliable Detection Capability
- Superior Delay Effect
- Weather Resistant and Robust Construction
- Highly Defeat Resistant
- *Balanced Current System Allows Zone Indication with a high resolution.*
- Up to a 2.5km 24 Wire Fence May Be Electrified with One (1) Electrifier / Energizer
- Silicon Metal Oxide Varistors (MOVs) provide optimal Protection from Lightning Strikes
- Can be Installed in "Stand Alone" and Outrigger only Configurations and Attached to Existing Fences



#### **Electrifiers / Energizers**

The Non-Lethal Energizer built in to electrifier cabinet is compliant to the International Electro-technical 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). One energizer can *therefore* energize a 1.65 mile (2.5km) 24-wire fence, or a 3 mile (5km) 12-wire fence. Alarms will be reported if the wires are cut, grounded, or earthed.

#### **Lightning Protection**

The Electro-Guard 5000-A uses the latest technology available for lightning protection. Silicon Metal Oxide Varistors (MOVs) rated at 5.1kV with a maximum residual voltage of more than 48kV are installed in the electrifier cabinet. Additional MOVs are also installed on each of the electrified wires where they enter into the building housing the equipment room. The MOVs protect the electrifiers from transient surges in the High Voltage Cables.

#### Insulators

For typical applications Nylon insulators are mounted on the ElectroGuard 5000-A Strain Posts and other associated posts. These insulators will break when a force of 35kg +/- 5% is applied to them insuring detection of the climber. For typical applications the Pull insulators are also made out of Nylon.

#### Non Lethal Electrified Wires (HV)

Typically a durable Stainless Steel Wire Rope is used. The SS Wire Rope is 1.8mm thick.





#### **DeTekion Security Systems, Inc.**

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## Specifications

Application	Electd <b>XW</b> fence to deter, detect and delay intruder activity
Zone Length	Dependent upon system design, camera location and personnel response.
Fence Length	5km maximum with 12 fence conductor wires
Dimensions	$1{,}675mm\left( H \right)x\ 600mm\left( W \right)x\ 600mm\left( D \right)$
<b>Operating Temperature</b>	e -40°C to +70°C
Electro Magnetic Compatibility	Class IV Insulation Electrifiers 75kV BIL
Power Requirements	240VAC Single Phase
Electrifier Outputs Non-Lethal	+5kV pulsing on Loop A –5kV pulsing on Loop B
Lighting Protection	5.1kV MOV Arrester Voltage Complying to IEC 99-4
Alarm Detection	Short between wire loops Ground of any wire loop Cut of any wire loop.
Alarm Indication	Full Graphic Panel Display and Control.
Maintenance	Routine inspection
Installation	By DeTekion or Trained Technicians
Location	Internally or externally mounted
Warranty	12 months from date of approved installation

Specifications subject to change. 6/2023