

Secure-Fence - Specification Sheet

The Perimeter Protection System

General

The Secure-Fence, Port Protection System is designed to protect the ports from illegal entry and the country from stowaways, criminals and terrorists who wish to sneak in.

Secure-Fence does this in three ways:

- Detection of a trespassing attempt – warning the security personnel.
- Scaring away the trespassers – very loud siren and flood lights.
- Deterring of this attempt – 9000 volt, non-lethal, shock

The Secure-Fence system has been developed on a totally different basis than the systems that protect property at present. The system has been developed to protect your land, fences, roof edges, walls, etc. against forcible entry from being climbed over.

The main difference, and strong point, is the **active manner** in which the protection works. Using electric shocks, this security system is an almost impregnable hindrance to burglars.

The advanced power system ensures that the system keeps detecting even when the power supply is cut and the Energizer system produces high voltage peaks with a maximum of 9000 Volts. This high voltage guarantees a shock at the slightest contact with the electrified wire. The shock effect resulting from high voltage is naturally a deterrent. It goes without saying that the shock is totally harmless. The maximum current within the wire is limited to approx 36mA. This produces a shock of 5 Joules, which is the legal limit.

Detection in the advanced power system is designed in such a manner that it is insensitive to all types of weather variations and influences of the environment, without the effectiveness of detection being impaired.



Features

The detection unit - The detection unit of the Secure-Fence system signals both break-in attempts and sabotage attempts. A certain number of conditions must be filled in for the alarm to be triggered. Thus, an important and sudden drop in the high voltage will sound the alarm. This voltage drop procedure is defined in such a manner that furtive contact with the wire will not trigger the alarm. Indeed, we assume that in such a case, the person is deterred and no longer constitutes a threat.

Should the power drop considerably for a longer amount of time ($\pm 3,5$ sec.), the alarm is triggered. Cutting the wire will immediately sound the alarm.

Accordingly, the alarm is sounded immediately if the electrified wire is grounded, or connected to grounded metal objects. Detection in the Secure-Fence system is designed in such a manner that it is insensitive to all types of weather variations and influences of the environment, without the effectiveness of detection being impaired.

The "Plus" detection unit – The advanced power system comes standard with three new features. The first feature is an extra alarm relays, which generates a signal when the high voltage on the wire drops under a predefined setting. This extra level is called **pre-alarm**. Its aim is to signal, for example, that some current is drained (leakage to plants during rain).

The second feature concerns the signal that is triggered when the wire is cut during low voltage operation (during day time for example). The **cut-proof alarm** is ensured by a low voltage signal on the electrified wire.

The third new feature concerns the possibility of running the system **autonomously** by using an emergency battery. The system continues to work, automatically switching to low voltage.

The energizer - The energizer of the APS guarantees the production of high voltage peaks with a maximum of 9000 Volts. This high voltage guarantees a shock at the slightest contact with the electrified wire.

The shock effect resulting from high voltage is naturally a deterrent. It goes without saying that the shock is totally harmless. The maximum current within the wire is limited to approx 36mA. This produces a shock of 5 Joules, The international legal limit is 8 Joules.

Furthermore, the energizer works in pulses. This means that the above-mentioned voltage peaks are only generated with a frequency of 50 per minute. This pulsing action combined with the low current guarantees that any danger of physical injury is totally excluded.

The Secure-Fence system complies with the European norms IEC1011, NEN5237, IEC60335-2-76 en EN61011.



The electrified fence - The electrified wire of the Secure-Fence system is fitted on the **inside** of the fence. The wire is insulated from the fence so that the fence itself is not electrified. The shock wires are attached to struts fitted to the fence poles. Depending on the type of the fence, a number of guides will be fitted. The struts are zinc-plated and can be coated in the same color as the fence to which they are being fitted. This method guarantees that the system will have a long life and be aesthetically pleasing.



The shock wires are tensioned using our patented tensioning springs. Elongation and shrinking caused by temperature changes are compensated by the double torsion springs. The shock wires are thus always taut. The electrified wire itself is made of 1.6 mm Steel, treated with Aluminum/Zinc coating to eliminate oxidation and rust.

It's important to mention that the entire shock-wire fencing will have to be fitted by law with a lightning arrestor system to prevent damage **in case of lightning**.

Protecting gates

The Secure-Fence system also includes gates in its protection scheme.

The gate is also fitted with shock wires and electrical connection points are installed at the opening locations. The gate can then be protected in three different ways:

A **serially** protected gate will always give a signal when it is opened. This means that opening the gate during the night or day will send a signal to the Secure-Fence system. This method is mainly applied to gates that are used for fire service access or emergency exit purposes.

A gate with **combined** protection sounds the alarm when opened during the night, but can be opened freely during the day without setting off the alarm. This type of protection is used the most.

A gate protected in **parallel** will not sound the alarm when opened. Such entrances allow access to the grounds without having to disable the Secure - Fence.

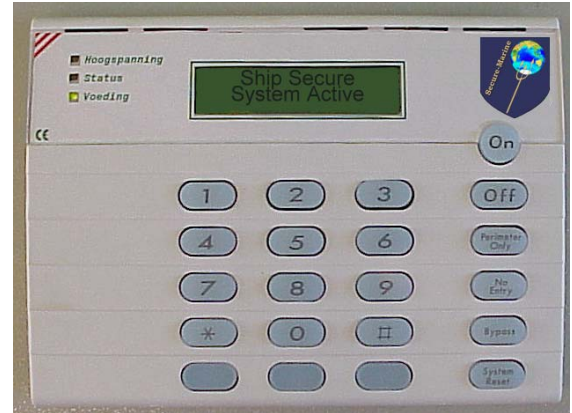


MemTel® control module – As a standard, the Secure-Fence system is connected to the main security monitoring system. It is possible to monitor the system as a standalone using the MemTel module.

The aim of the module is to manage the APS on the one hand, while recording and processing alarm events in a memory on the other.

The control module can be located in the office or near the gate for quick and easy access. Connection between the detection unit and the control module can be by fixed wire or wireless, so no wire “pulling” is required. The control module includes the following features:

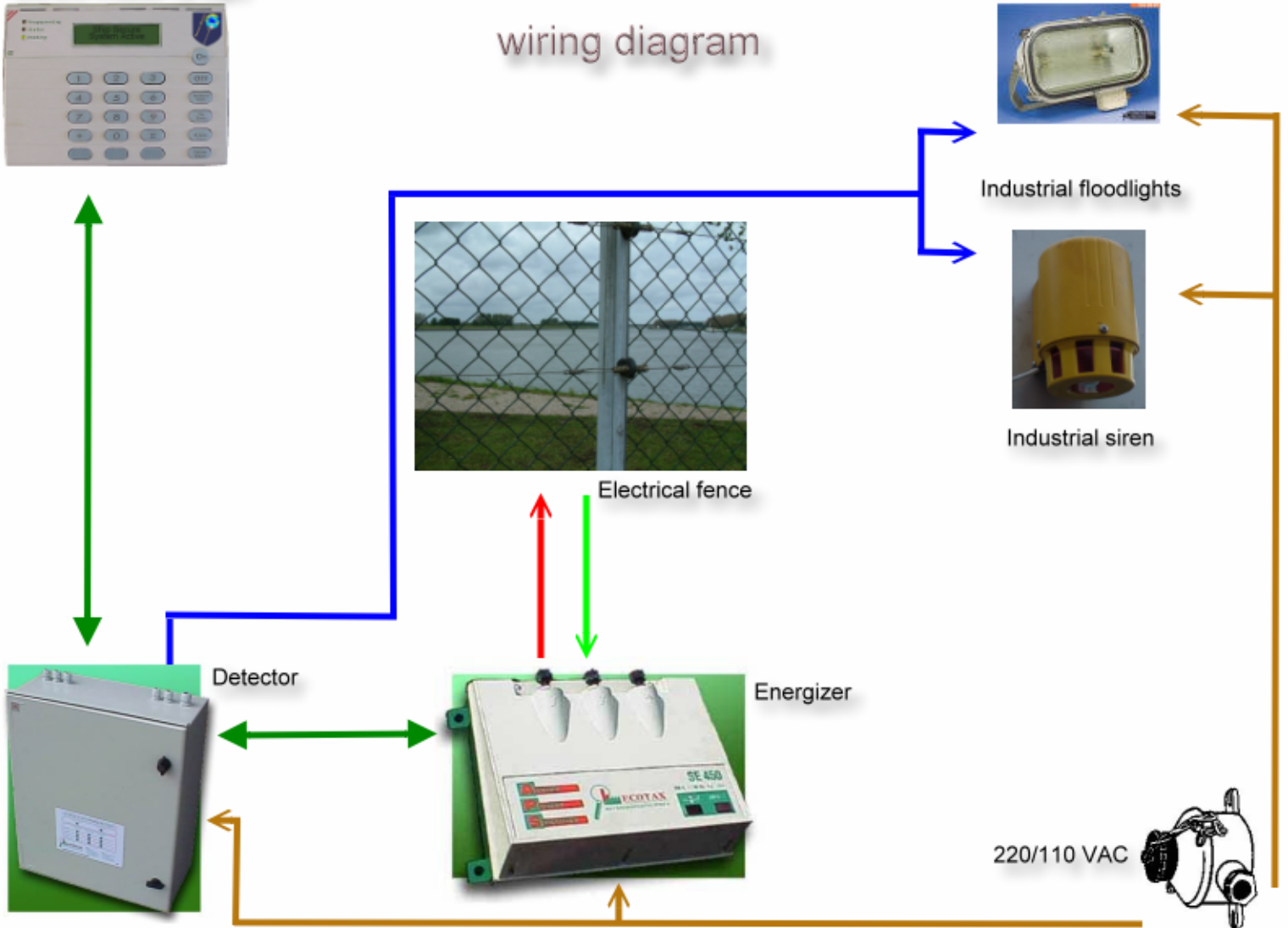
- Zones control (activate/de-activate – useful for protecting certain areas, while leaving others open, like for docking or cargo transfer)
- Control of alarms, sirens and lights
- Memory of last 400 alarm events



Control module (bridge)



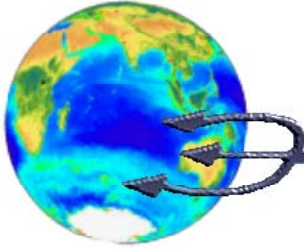
wiring diagram



Specifications

Input Voltage:	230 VAC
Emergency power supply:	24 hour backup low currency system
Number of detection zones:	Standard 1, expandable to 4 zones per unit
High power current voltage:	9000 volt
High power current energy:	5 Joule (pulse duration approx 200 usec)
Number of pulses:	50 x per minute
Sabotage detection:	Low currency signal
Alarm types per zone:	<ul style="list-style-type: none"> • High voltage circuit alarm • Low voltage circuit alarm • Pre-alarm for currency drainage • Los of main 230 V supply • Attempt to open control units
Activating /de-activating:	Per zone using the Memtel control unit
Dimensions Power casing:	60 cm x 50 cm x 23 cm (HxWxD)

For more information:



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