

# SERIR 50<sup>®</sup>

## The first piezodynamic system



**SERIR 50** is an **intrusion detection system for metal fences**. It is suitable for the protection of small compounds as well as very complex and long perimeters in residential, industrial, military and government sectors. It is composed of special piezodynamic sensors and sophisticated processing boards which detect **cutting, breaking through and climbing attempts** on chain-link or welded fences and semi-rigid panels.



- Immune to environmental nuisances.** The functioning of the system is not affected by adverse climatic events such as rain and wind by man-made factors nearby the fence such as roads, railways or machinery.
- Compatible with the vegetation.** The detectors can be also installed on fences completely covered with evergreen climbing plants or touched by thin bushes.
- Maintenance free.** Thanks to the use of heavy-duty and passive sensors, the system does not need any planned maintenance.
- Flexible.** The sensor-strings adapt to the ground contour and to the perimeter route.

- Versatile.** SERIR 50 is available in three colours (grey, green or black) and may have three different sensor spacing (2 metres, 2,5 metres or 3 metres). The black colour sensors are made of polyamide and are particularly suitable for the protection of petrochemical compounds.
- Easy to install.** For a quick and easy installation of the system, the sensors are supplied in prewired strings and the processing boards are preassembled in polyester cabinets.
- Smart.** The system can discriminate the different intrusion techniques, among which the so-called sporadic cuts, i.e. attacks against the fence performed with single cuts over time.

# THE SENSORS

SERIR 50 deploys **piezodynamic passive sensors** which perceive the vibrations of a fence while a cutting, a climbing or a breaking through action is occurring.

The technology employed in each sensor makes the system immune to **harsh weather conditions** (wind, rain, snow and strong temperature ranges), and to man-made factors nearby the fence, such as roads, motorways and railways. **The sensors can be even installed on fences completely covered with evergreen climbing plants.**

The sensors **are not subject to electric failure** since they do not contain active electronic components; in addition, they are not disturbed by electromagnetic fields or radiofrequency emissions.

**The detectors are supplied in prewired strings up to 50 metres long.** One string can be composed of 16, 20 or 25 sensors depending on the post to post spacing which is 3 metres, 2,5 metres or 2 metres, respectively. DEA can also provide **sensor-strings with customized length.**

The flexibility provided by the sensor-strings **allows to adapt the system to the ground contour and to the perimeter route**, making it possible to follow slopes and differences in level, to avoid obstacles and bypass possible interruptions of the fence. In case a sensor or the relevant connection cable are intentionally or accidentally damaged, the regular functioning of the system can be quickly recovered by executing a simple electric junction.

The sensors can be provided either with ABS body or with **polyamide housing**, the latter being specially designed for the protection of petrochemical compounds. The sensors with ABS housing are also available with the connection cable protected by flexible metal tube.



# THE PROCESSING BOARDS

The signals coming from the sensor-strings are amplified and processed by the **SC-SR50-Z1 and SC-SR50-Z4 microprocessor boards**, which analyse the signals perceived by the sensors. The former manages one sensor-string (alarm zone) while the latter manages up to 4 sensor-strings.

The processing boards **allow to adjust the sensitivity parameters and the detection algorithms individually**, so as to maximize the performance of the system in each single installation or according to specific needs.

The advanced detection algorithms of the processing boards enable the system to discriminate the different types of intrusion, among which the so-called “**sporadic cuts**”, namely those attacks against the fence performed with single cuts over time. This type of intrusion is the most insidious one, since it aims at making a hole on the fence by gradually cutting it over time (hours or even days).

**The calibration and the programming of the processing boards can be performed via a PC** by using a specific service software which displays a **real time graph of the signals** coming from each sensor-string and the input and output status. By this software you can also upload a configuration previously saved and view the event logs where all the signals from the sensor-strings are recorded in chronological order. DEA Security's engineers can analyse these events to determine the cause raising the alarm (if any).

The processing boards raise alarm, tamper and failure signals through dry relay contacts (C/NC), but can be also connected **over DEA NET centralization network or over Ethernet with IP protocol.**

# THE COMPONENTS OF THE SYSTEM

## ☆ Standard sensor-strings (LN-SR50)

Sensor-strings of 50-metre length prewired with 16, 20 or 25 sensors with ABS body (in grey or green colour) or with polyamide housing in black colour.

## ☆ Customized sensor-strings (SN-SR50)

Sensor-strings provided in a customized length (less than 50 metres) and composed of a variable number of sensors with same spacing, colours and material as the standard sensor-strings.

## ☆ Processing boards (SC-SR50)

Microprocessor electronic boards which amplify and analyse the signals coming from the sensor-strings. Two models are available: a single-zone board, which manages one sensor-string, and a multi-zone board, which manages up to 4 sensor-strings.

## ☆ Connection cable (CV-ST50)

Shielded cable to connect the sensor-strings to the relevant processing board. The cable is available in a PVC version (grey or green colour) to be used with the sensors having the ABS housing and a polyurethane version (black colour) to be connected to the sensors with polyamide housing.

## ☆ Wiring accessories

They comprise a 100-piece pack of tie wraps (FPM-100) to fix the cable to the fence, a case (JTBX-ST50) for the junction and termination of the sensor-strings and a 100-gram pack of PUR cast resin (RP-100) to seal the junction and the termination cases.

For further information about SERIR 50 system, please refer to “SERIR 50 brochure” which can be downloaded, in a PDF format, from our website.



© 2019 DEA Security S.r.l. - v. 2.0.0

DEA Security S.r.l. reserve the right to vary at any moment and without notice the information and the specifications herein.

DEA Security S.r.l.  
Via Bolano, snc - 19037 Santo Stefano di Magra (SP) - Italy  
Tel. +39 0187 699233 - Fax +39 0187 697615  
VAT No.: IT00291080455  
[www.deasecurity.com](http://www.deasecurity.com) - [dea@deasecurity.com](mailto:dea@deasecurity.com)

