DEA
SECURITY®

SERIR P2P
Point ID Technology

SERIR P2P is an advanced *Point ID* perimeter intrusion detection system for the protection of soft metal fences and semi-rigid panels.
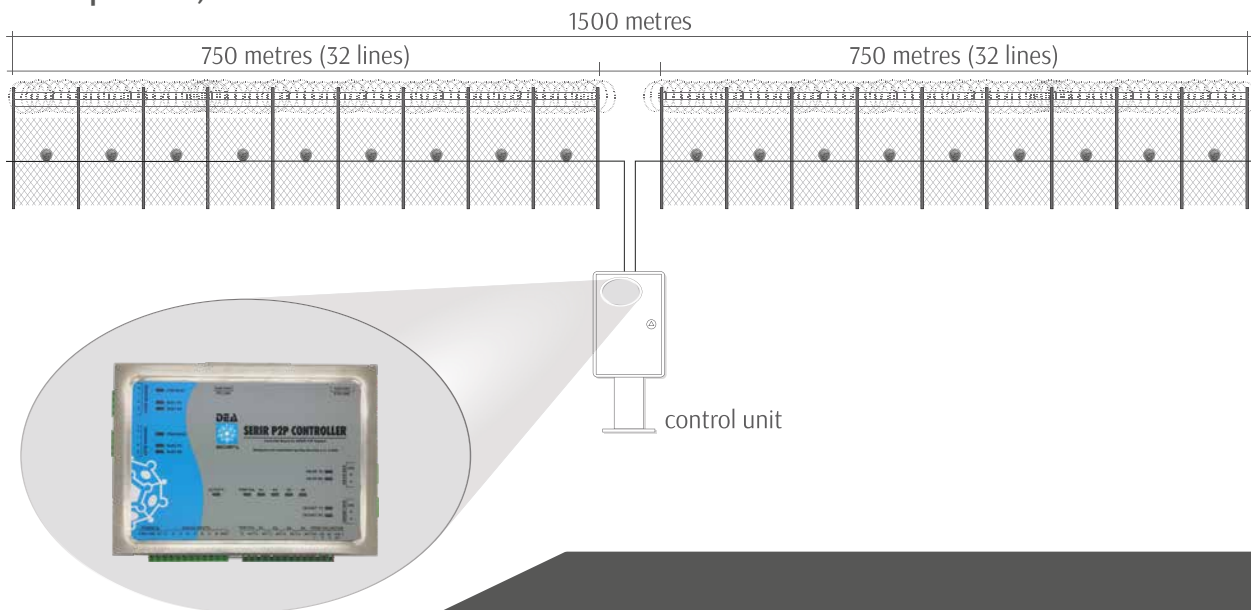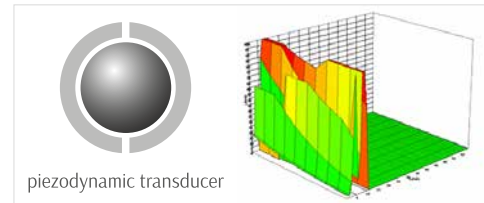
SERIR P2P is an evolution of SERIR 50 system which has been successfully employed for over 10 years in protecting **thousands of kilometres of fencing**, both in Italy and abroad, in sectors such as **government, military, oil & gas, energy and transportation**.

As SERIR 50 system, SERIR P2P deploys **piezodynamic sensors** which perceive the vibrations to which a fence is subjected during an intrusion attempt. The system detects **cut, break through and climb** on the fence, including intrusion events performed with single cuts over time.

Designed and patented by DEA Security, the piezodynamic transducer is a virtually inexhaustible element which dramatically increases both the **detection capability**, amplifying the vibrations reaching the sensor, and **the tolerance to environmental nuisances**.

piezodynamic transducer

Alongside the proven DEA technologies, SERIR P2P implements several technical innovations which make it one of the most reliable and efficient system currently in the market. **Its sensors have a very high technological content**: individually identified to allow you to precisely locate the point under alarm, they integrate a sophisticated signal analysis unit which discriminates the most insidious intrusion techniques.

The information coming from each sensor is managed by a **centralized control unit** which controls up to **500 sensors** (**up to 1.5 Km of perimeter)**.

1500 metres
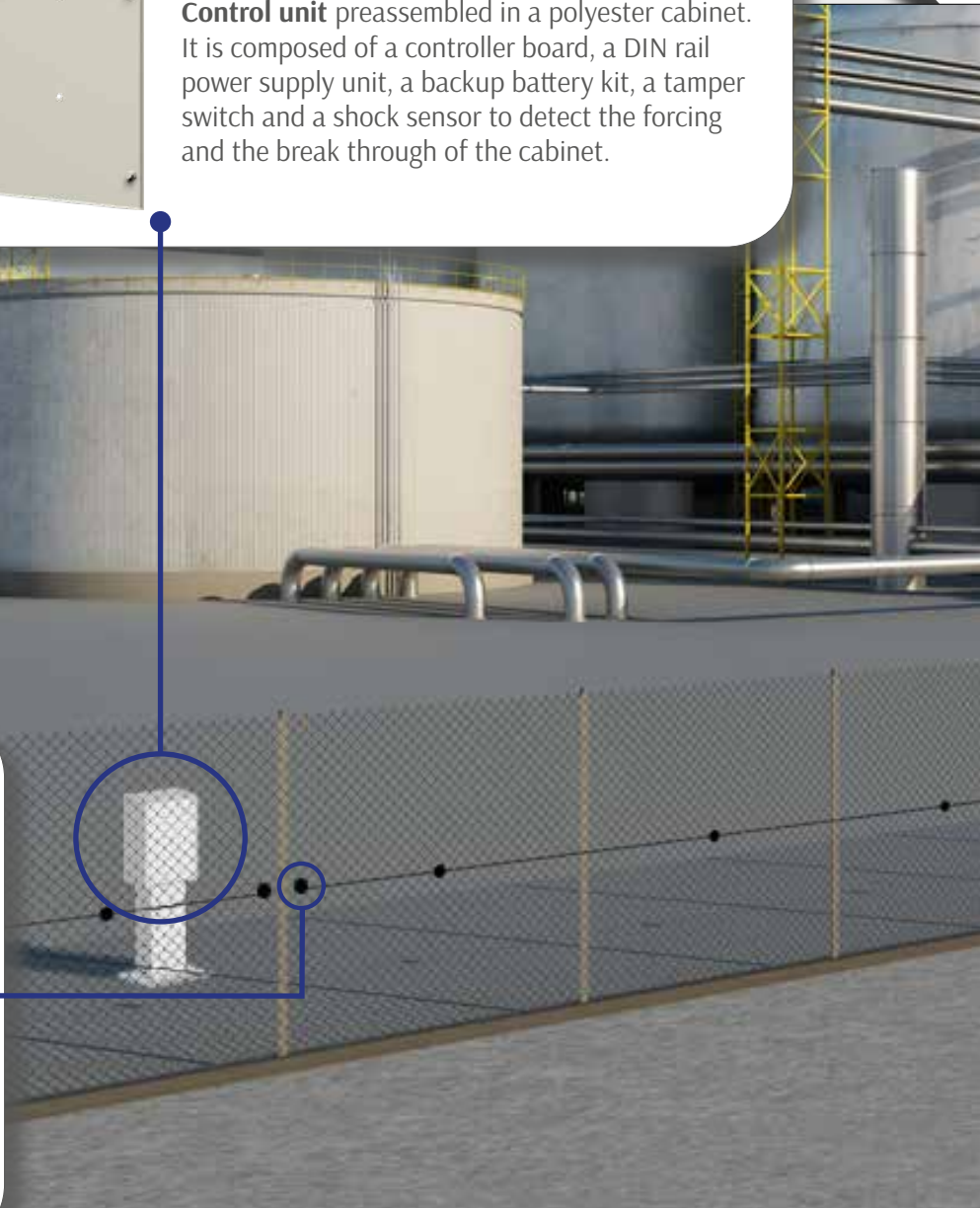
750 metres (32 lines) 750 metres (32 lines)

control unit

Point ID detection. Each sensor is individually identified to allow you to precisely locate the point under alarm: an alarm zone (logical line) can be also composed of a single sensor.

Up to 500 sensors managed on two communication buses to protect a perimeter up to 1500 metres long with a single control unit (if the sensors are installed every 3 metres). Such a feature remarkably simplifies the system wiring infrastructure, especially in big sites.

Self-test function. A self-test function is implemented in each sensor and checks the status of both the electronic part and the piezodynamic transducer. It also allows you to discriminate possible degrading factors before a failure may occur.

Anti-removal electronic device. It detects the removal of the sensor from the fence. It also allows you to chech, via software, if the sensor is correctly fixed to the protected structure.

Magnetic and thermal tamper devices. They identify and signal the attempts of tampering the sensor by exposing it to electromagnetic fields or extreme temperatures.

High tolerance to disturbances. The piezodynamic technology and the sophisticated detection algorithms make the system very tolerant to harsh weather conditions (wind, rain, snow and extreme temperatures), climbing vegetation and man-made factors (nearby heavy traffic roads and railways, machines operating near the fence).

Simple and quick installation. SERIR P2P sensors are provided in prewired strings for an easy and quick installation. The sensors are also equipped with a quick fastening device.

Sensor automatic identification and sorting. Upon the first configuration of the system, the control unit automatically identifies all the sensors that are linked to the bus and, using an algorithm patented by DEA, sorts and distributes them on 64 alarm logical lines. The logical lines can be manually reconfigured depending on the project requirements.

Calibration and configuration per logical line or per sensor. Each sensor can be calibrated and configured together with the others of the same line or individually. The calibration is easied by a real time 3D chart of the analog signal coming from each sensor.

Integration of 3rd-party devices, such as magnetic contacts or IR/MW barriers, by means of a special input module. The module can be placed everywhere along the bus.

Comprehensive signal analysis. For each sensor the following signals can be discriminated: cut, climb, break through, sporadic cuts, removal attempt, thermal and magnetic tamper, link quality, current and absorption, temperature and self-test.

Event memory. SERIR P2P is equipped with a digital memory which accurately stores all the signals detected by the system with millisecond precision. This allows you to analyse the logs and determine the cause for each single alarm signal.

Control unit preassembled in a polyester cabinet. It is composed of a controller board, a DIN rail power supply unit, a backup battery kit, a tamper switch and a shock sensor to detect the forcing and the break through of the cabinet.

Connectorized junction device for the prewired sensor-strings. The device is provided with a UV resistant housing, two easy-plug sockets and a fixing support.

Point ID sensor which integrates a piezodynamic transducer and an analysis unit. It is provided in strings prewired with 25, 10 or 5 sensors with 3-metre spacing.

Connectorized termination device for the prewired sensor-strings. The device is provided with a UV resistant housing, two easy-plug sockets and a fixing support.

Technical Features

Control Unit:
- Environmental class: IV (in accordance with EN 50130-5 standard)
- Cabinet dimensions: 300 x 400 x 200 mm (B x H x D)
- Material: glass fiber reinforced polyester, self-extinguishing, equipped with ventilation devices
- Operating temperature: -25 ÷ +70 °C
- IP rating: IP66 (IP54 with ventilation devices), IK10
- Power supply: 115/230 Vac ± 10% 50 Hz
- Backup battery: 2 x 12V lead-acid batteries / 7.2 Ah
- Digital inputs: no 4 optoisolated, service software programmable
- Relay NC outputs (positive security):
  - power fail
  - general intrusion alarm
  - general tamper
  - sensor failure
  - bus link loss
  - up to 128 external relay outputs on optional expansion boards (8 SC-DN-ER16 boards)
- SPDT relay outputs:
  - discharged or damaged battery
  - power from mains or from backup
- OC/NC outputs: 3 programmable outputs
- Communication ports:
  - USB port (PC link)
  - Ethernet port (RJ45)
- Calibrations, settings and event log management via software for Microsoft Windows
- CPU: 32 bits, 168 MHz
- Digital memory: more than 20.000 events
- Service software licence included

Sensor:
- Environmental class: IV (in accordance with EN 50130-5 standard
- Dimensions: 90 x 53 mm (Ø x H)
- Operating temperature: -40 ÷ +80 °C
- Relative humidity: 0-100%
- Material: glass fiber reinforced polyamide housing, sealed with polyurethane resin, resistant to UV rays, scratch, oils and hydrocarbons
- Fastening system: aluminium nut
- Coverage area: max 3 x 3 m (maximum dimension of the fence panel with sensor in mid-position)
- Colour: black

Connectorized sensor-strings:
- 25 SERIR P2P prewired sensors with 3-metre spacing
- 10 SERIR P2P prewired sensors with 3-metre spacing
- 5 SERIR P2P prewired sensors with 3-metre spacing

Connection cable:
- External diameter: 8.5 mm
- Wires: 4 twisted tinned copper wires
- Wire insulation material: high-density polyethylene
- Jacket: Special flame retardant, oil resistant PVC
- Colour: black
- Operating temperature: -40 ÷ +80 °C (fixed installation)
- Installation temperature: -15 ÷ +50 °C