DEA SECURITY®

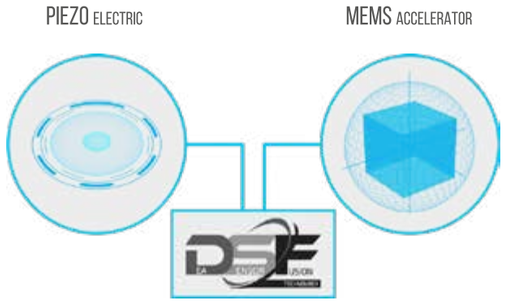
USION P2P®

Fence-mounted dual tech intrusion detection system

DSF SENSOR FUSION TECHNOLOGY

FUSION P2P is the new generation of DEA fence-mounted intrusion detection systems. It is the first outdoor perimeter system to employ **DEA Sensor Fusion** (DSF), dual tech detection technology, thanks to which it redefines the current industry standard as far as performance and versatility are concerned.

The system senses and analyses the vibrations and the movements of a fence while an intrusion attempt for **cutting**, **breaking through**, **lifting** or **climbing** is occurring, discriminating all of those noises which could trigger improper alarms.



The detectors **employ two different sensitive elements**: a well-proven **PIEZOELECTRIC** transducer and a **MEMS** accelerometer. The data coming from the two sources of signal are processed and analysed using **adaptive intelligence algorithms** able to recognize the intrusion attempts and to discriminate them from the environmental and climatic noises.

The system is composed of prewired **sensor-strings**, **electronic control units**, **junction** and **termination** devices. The control unit manages up to 300 detectors on two communication buses for 1.500 metres of perimeter if the spacing between the sensors is **5 metres** and 900 metres of perimeter if the spacing is **3 metres**. Besides enabling the configuration of the detectors by means of a service software, the control unit automatically recognizes and sorts the field detectors and raises the alarm signals.

KEY BENEFITS

DEA Sensor Fusion technology. The new DSF technology developed by DEA Security combines, in a single seismic sensor, all of the benefits of a traditional PIEZOELECTRIC transducer with the advantages of a MEMS accelerometer. The outcome is a detector capable of the highest performance.

- ✓ **Adaptive intelligence.** The system can work best on almost any metal fence and walls and in environmental conditions which could strain any other traditional detection system.
- ✓ **Maximum climatic immunity.** Thanks to its noise limiter function, FUSION P2P is able to recognize and digitally filter the disturbances generated by adverse climatic conditions.
- ✓ **Redundancy support.** Fusion P2P can be installed in a loop configuration which allows the system to continue functioning efficiently following a bus cable cut performed anywhere along the sensor-string.
- ✓ **Structure type preset.** In most cases it is possible to calibrate the system with a simple mouse click. As a matter of fact, the system provides seven different default configurations suitable for several types of structure.
- ✓ **Self-test for each sensor.** Fusion P2P detectors have a self-test function which readily signals potential functioning failures. This makes periodical on-site check unnecessary and service operations quicker.
- ✓ **Anti-tamper and anti-removal devices.** The sensors are equipped with devices signalling the removal and the thermal tamper attempts.
- ✓ **IP native support.** The controller board is equipped with an ethernet interface which allows the system to connect to a TCP/IP network and to exchange data with 3rd party systems and equipment.Thanks to specific plug-in software, the system can also integrate the main PSIM and VMS software.
- ✓ **Professional easy-plug connectors.** The prewired sensor-strings employ, on both of their ends, professional easy-plug connectors with IP68 rating and militare-grade specifications. These connectors make the electrical connection of the strigs very fast and error-proof.
- ✓ **Smart automatic sorting.** During the first activation of the system, the controller automatically performs the identification and sorting of the sensors.
- ✓ **General and individual calibrations.** Each sensor can be configured and calibrated together with the others on the same logical line or individually.
- ✓ **Factory wired sensors.** All of Fusion P2P detectors are factory wired, sealed and tested in order to reduce to zero potential wiring mistakes on site.

ELECTRONIC SENSOR.
Microprocessor detector composed of two different sensitive elements (a PIEZOELECTRIC transducer and a MEMS accelerometer), of an electronic analysis unit and anti-tamper devices. Specially designed for outdoor use, the sensors are fixed to the fence by a robust steel plate.

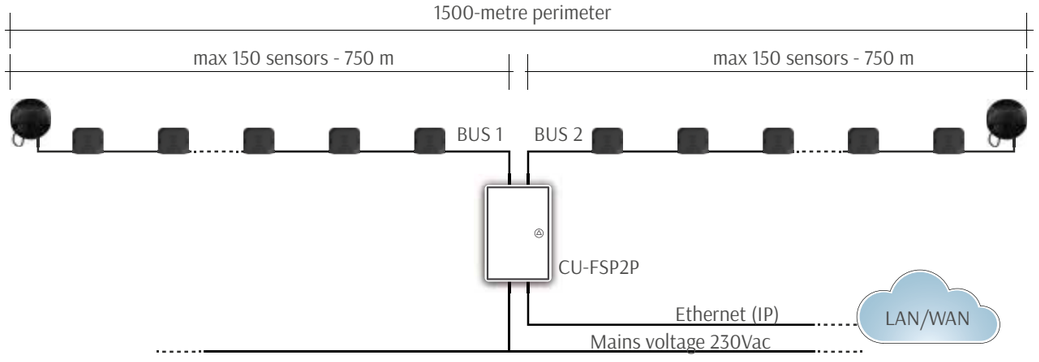
CONTROL UNIT preassembled in a polyester cabinet, it is composed of an electronic controller board, a DIN rail power supply unit, two backup batteries and a tamper device.

CONNECTORIZED JUNCTION/TERMINATION.
Special devices for the junction and termination of the prewired sensor-strings. They are equipped with a UV resistant housing, with two easy-plug IP68 sockets and a fixing support.

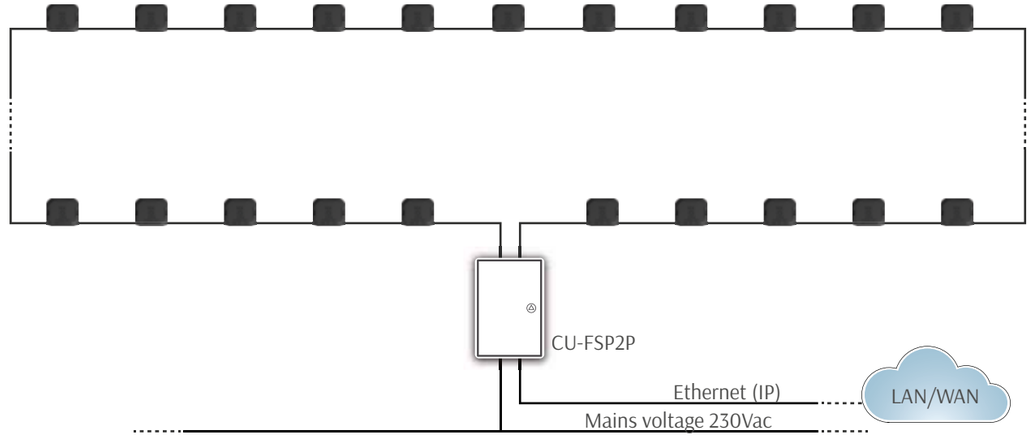
The redundancy

Besides the classical bus configuration, FUSION P2P also supports redundancy configurations. In this case bus 1 closes itself on bus 2 to form a loop configuration which, in case of bus cut in whatsoever point, allows communication redundancy with all of the field sensors. In such configuration a single control unit can manage up to 150 sensors.

Bus configuration



Loop configuration



Service software: main window

Fusion P2P is equipped with a user-friendly software which **allows you to check the operating parameters** of the system and **the input and output status**. The software also provides **the configuration and calibration tools of the sensors**, easily reached from a single screen. From here you can:

- select the **type of structure** to be protected;
- set the **security level**;
- calibrate the **sensitivity level**;
- configure the **sporadic cut** detection;
- calibrate the sensor **spatial positioning**;
- configure **the self-test** function;
- save or upload a **configuration file**;
- download, view, delete or send the **logs** via e-mail.

Technical Features

Control unit:
- Environmental class: IV (in accordance with Directive EN-50130-5)
- Power supply: 115/230 Vca ± 10% 50 Hz
- Backup battery: 2 x 12 V / 7,2 Ah
- Operating temperature: -30 ÷ +70 °C
- Cabinet type: glass fiber reinforced polyester, self-estinguishing
- IP rating: IP66 (IP54 with ventilation devices)
- Dimensions of the cabinet: 300 x 400 x 200 mm (B x H x D)
- Digital inputs: 4 optoisolated, service software programmable
- NC relay outputs (positive security):
  - low battery
  - general alarm
  - general tamper
  - sensor failure
  - bus link loss
  - up to 128 external outputs on optional boards (8 SC-DN-ER16 boards or 8 BR-XS-RE16L boards)
- SPDT relay outputs:
  - Low or damaged battery
  - Mains or battery power supply
- OC/NC outputs: 3 programmable
- Communication ports:
  - USB port (PC link)
  - Ethernet port (RJ45)
- Calibrations, settings and event management via software
- Digital memory: more than 20.000 events
- Service software licence included

Sensor:
- Environmental class: IV (in accordance with Directive EN-50130-5)
- Dimensions: 98 x 85 x 26 mm (L x H x D)
- Material: glass fiber reinforced polyamide housing
- Fastening system: aluminium nut
- IP rating: IP67
- Colour: black
- Operating temperature: -40 ÷ +80 °C
- Relative humidity: <95% non condensing
- Detection capability: up to 5 x 5 m for each sensor

Connectorized sensor-strings:
- 5 FUSION P2P prewired sensors with 3-metre spacing
- 15 FUSION P2P prewired sensors with 3-metre spacing
- 25 FUSION P2P prewired sensors with 3-metre spacing
- 5 FUSION P2P prewired sensors with 5-metre spacing
- 15 FUSION P2P prewired sensors with 5-metre spacing

Connection cable:
- External diameter: 7 mm (+/- 0,15)
- Wires: 4, two pairs of flexible stranded tinned copper conductor
- Cross sectional area:
  - 0,75 mm^2 (power supply - red/black)
  - 0,22 mm^2 (communication, RS-485 pair - white/blue)
- Operating temperature: -40 ÷ +80 °C
- Jacket: special flame retardant PVC
- Colour: black

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

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