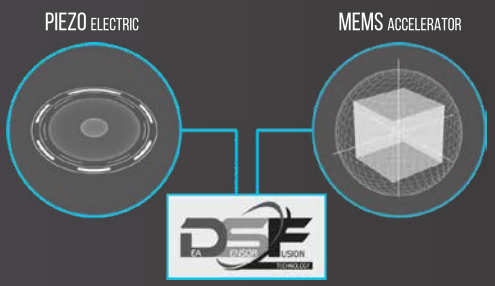
FUSION P2P®

Fence-mounted dual tech intrusion detection system

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 following an intrusion attempt for **cutting**, **breaking through** or **climbing**, discriminating all those noises which could generate 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** (which can be also supplied equipped with armoured cable), **electronic control units**, **junction** and **termination devices**. The control unit manages up to 300 detectors on 2 communication buses for 1.500 metres of perimeter if the spacing between the sensors is **5 metres** and for 900 metres if the spacing is **3 metres**. For smaller compounds, it is available the Control board Lite for the management of up to 100 sensors on a single communication bus. Besides enabling the configuration of the detectors by means of the related service software, the control boards automatically recognize and sort the field detectors and raise 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

Thanks to sophisticated adaptive intelligence algorithms, the system can work best on almost any metal fence and wall and in environmental conditions which could strain any other traditional detection system.

REDUNDANCY SUPPORT

Fusion P2P can be installed in a "loop" configuration which allows the system to continue functioning efficiently and completely also following a bus cable cut performed anywhere along the sensor-string.

SELF-TEST FOR EACH SENSOR

Fusion P2P detectors have a self-test function which autonomously checks the functioning of the concerned device. This makes periodical on-site inspection unnecessary and service operations (if needed) quicker.

PROFESSIONAL EASY-PLUG CONNECTORS

The prewired sensor-strings employ, on both their ends, professional easy-plug IP-68 military standard connectors. These connectors make the electrical connection of the sensor-strings very fast and error-proof.

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.

MAXIMUM CLIMATIC IMMUNITY

The immunity to environmental and climatic nuisances featuring SERIR systems is here at its utmost. As a matter of fact, thanks to its noise limiter function, FUSION P2P is able to recognize and digitally filter the disturbances generated by adverse climatic conditions.

IP NATIVE SUPPORT

The controller board is equipped with an ethernet interface which allows the system to connect to any TCP/IP network and to exchange data with 3rd party systems and equipment, such as PSIM and VMS software.

ANTI-TAMPER AND ANTI-REMOVAL DEVICES

Each sensor is equipped both with an anti-removal device which detects its removal from the fence and with a device which identifies and signals thermal tamper attempts against the detector.

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 means of a robust steel plate.

ELECTRONIC BOARD.
Electronic control board which powers and manages up to 100 FUSION P2P sensors on a single communication bus. It performs several functions among which the automatic acquisition and sorting of the sensors, the processing of the alarm signals and the native support to the centralization and remote management of the system over IP networks or DEA NET proprietary network.

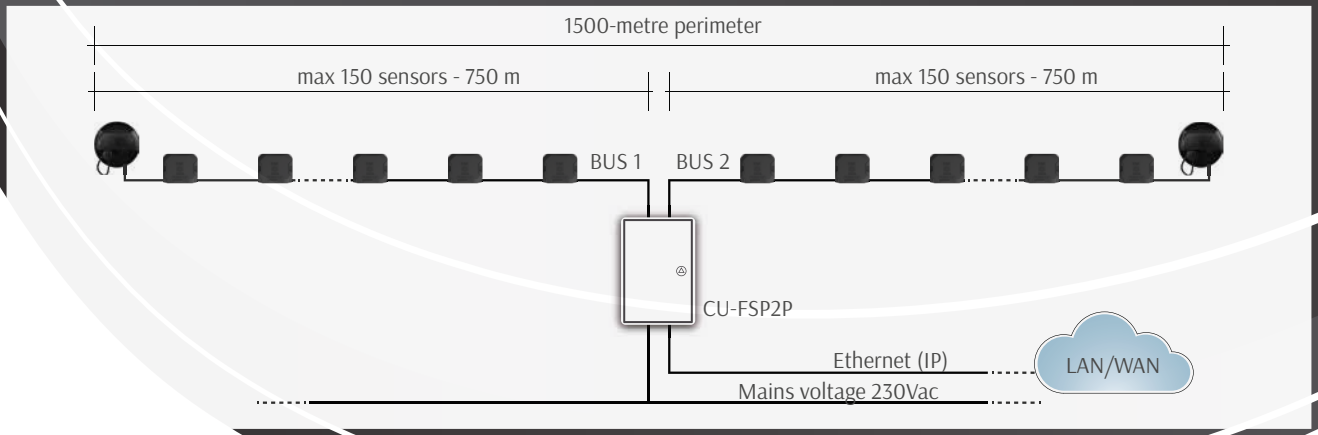
CONTROL UNIT.
Preassembled in a polyester cabinet, it is composed of an electronic controller board, two optoisolator, a DIN rail power supply unit, two backup batteries and a tamper device.

JUNCTION/TERMINATION CONNECTORIZED.
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 discoid support for a quick fixing to the fence.

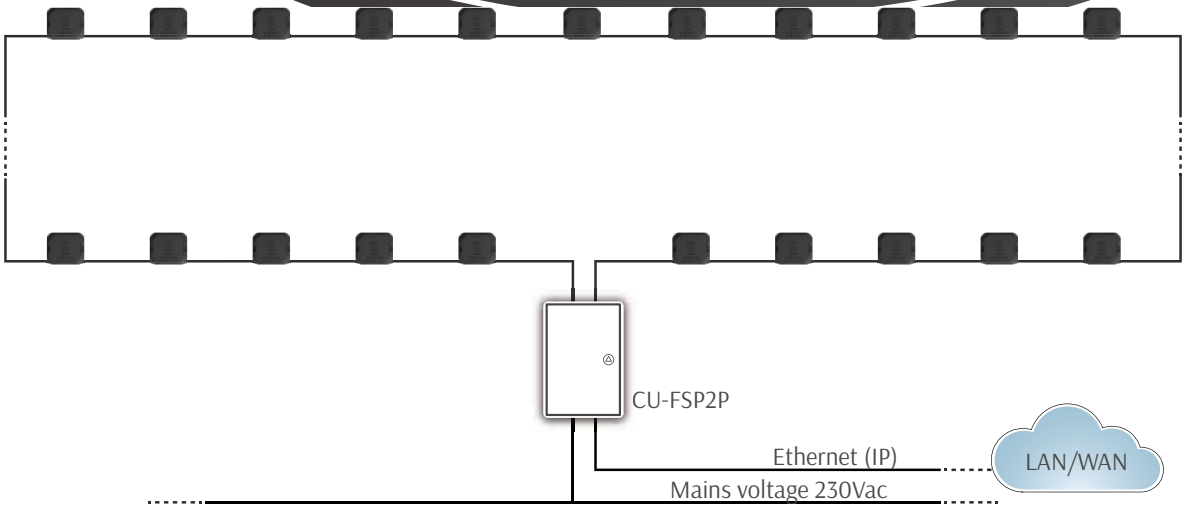
THE REDUNDANCY

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 the control unit to go on communicating with all the field sensors. In such configuration a single control unit can manage up to 150 sensors.

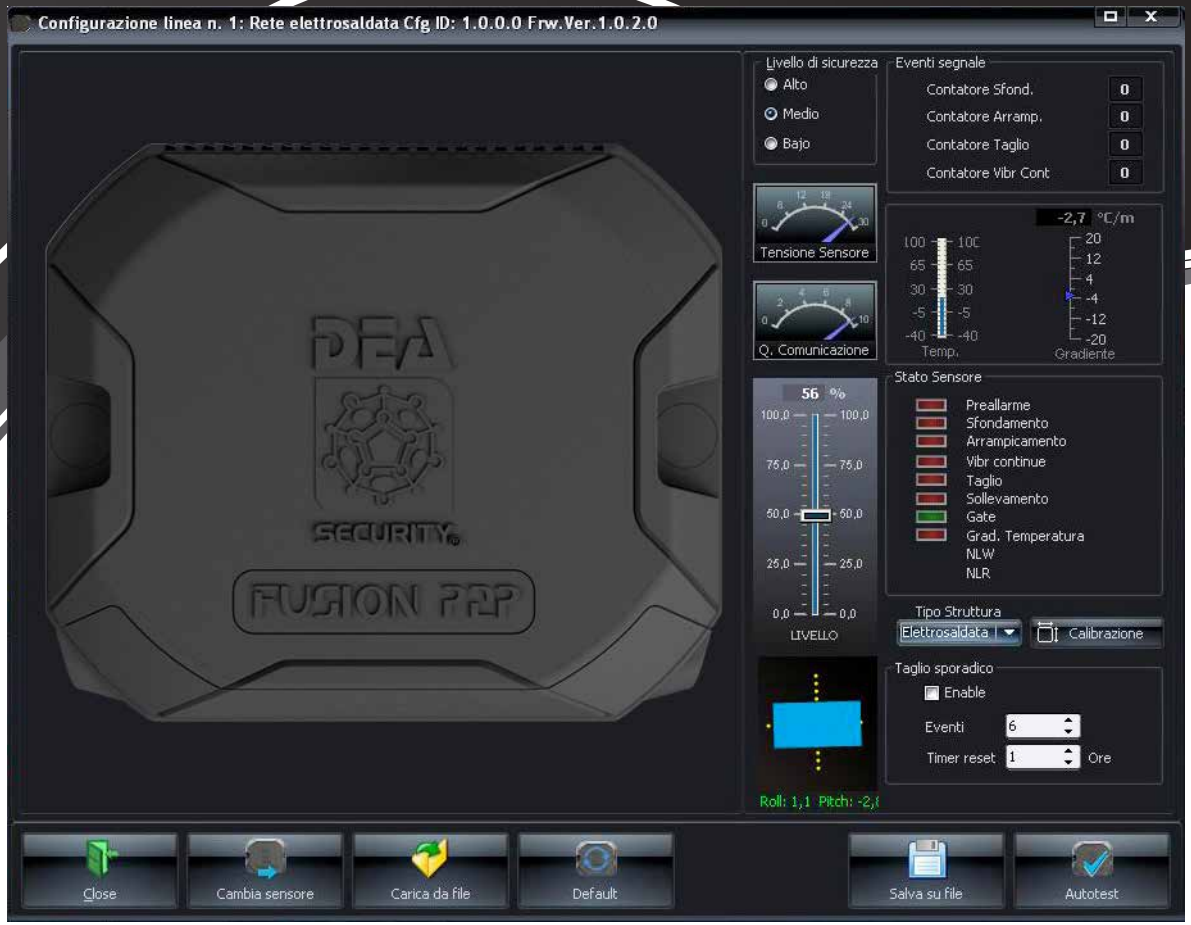
Bus configuration



Simple loop (from Bus 1 to Bus 2)



SERVICE SOFTWARE



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 for the sensors and the sensor-strings**, easily reached from a single screen.

From software 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.

COMPONENTS OF THE SYSTEM

Control Unit (CU-FSP2P)
The control unit manages up to 300 detectors on 2 communication buses for 1.500 metres of perimeter if the spacing between the sensors is 5 metres and for 900 metres if the spacing is 3 metres. Besides enabling the configuration of the detectors by means of the related service software, the control unit automatically recognizes and sorts the field detectors and raises the alarm signals.

Control board Lite (BR-FSP2PLT-CTRL)
This board manages up to 100 sensors on a single communication bus. It has all the main features and functionalities of the Standard Controller (the one included in the Control Unit).

Connectorized sensor-strings (LN-FSP2P)
Prewired connectorized sensor-strings with either 3-metre or 5-metre spacing between the sensors. The versions with 3-metre spacing are available in strings composed of 5, 15 and 25 detectors, the ones with 5-metre spacing are available in strings with 5 and 15 detectors. It is also available a version of the sensor-strings equipped with rodent-proof armoured cable (LN-FSP2P-A).

Sensor (SN-FSP2P)
Dual-tech sensor with embedded electronics, prewired in an unconnectorized sensor-string. It can be supplied singularly or prewired with other sensors for customized sensor-strings or for the use as spare part. It is also available a version of the sensor equipped with rodent-proof armoured cable (SN-FSP2P-A).

Connection cable (CB-FSP2P)
Four-wire cable plus shield to be used for the connection of the CU-FSP2P control unit to an unconnectorized sensor-string or to the CBINL-FSP2P initial string connectorized cable. It can be also used to execute repairs along the string or to bypass potential discontinuities along the fence. It is also available an armoured version of the cable (CB-FSP2P-A), namely protected by a robust, rodent-proof galvanized iron braid.

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