



# SISMA CA

## Invisible perimeter protection

**SISMA CA** is a perimeter intrusion detection system for the protection of **flooring with concrete foundations**. This system is composed of special **pressure sensors** which, installed inside the screed of the flooring, **detect a person walking or standing** on the protected area.

SISMA CA protects all the areas **before building entrances** (windows, doors and glass doors) or **walkways and driveways**.

**Invisible.** Placed on the surface of the slab and drowned in the screed, SISMA CA sensors are totally invisible.

**Accurate.** SISMA CA allows you to accurately locate the area concerned by the intrusion and identify the single access under alarm.

**Maintenance free.** Thanks to their particular technology, the sensors do not need any planned maintenance.

**Immune to environmental nuisances.** The system is not affected by adverse climatic events (snow and hail including) and by the falling of leaves or small boughs.

**Sensitive.** Even though it is installed under a thick layer of concrete and it is designed to resist loads of tons, SISMA CA sensors can perceive the slightest step.

**Intelligent.** The system can discriminate the passing of small animals from real intrusions.

**Quick to install.** SISMA CA sensors are provided in prewired modules, while the electronic boards are preassembled in special polyester cabinets.

**Individual calibration.** It is possible to calibrate and configure each sensor module independently of the others, by varying its security level according to the risk level relevant to that area.



## The sensors

SISMA CA system uses special sensors which **detect a person crossing or standing on the protected area**. While the flooring is being built, the sensors are placed on the surface of the slab and then they are covered with the cement of the screed.

Being completely invisible, the system **does not affect the aesthetics of the place to be protected**: this is appreciated not only in residential sites, but also for the protection of museums, art galleries and archaeological sites.

The functioning of the system is not affected by climatic events such as snow, hail and high temperature changes and by other common environmental nuisances such as the falling of leaves and small branches. In addition, SISMA CA can tolerate the passing of small animals.

The sensitive core of SISMA CA sensor is composed of a **piezoceramic transducer**, sealed and protected against seepage of water, corrosive agents and mechanic stress. **The sensor does not need any maintenance** and is not subject to electric failure since it does not contain active electronic components.

For an easy and quick installation, **the sensors are provided in prewired modules** for the protection of areas from 1 up to 4 square meters. It is possible to cover surfaces of any size by placing more modules side by side.

Since each sensor-module is connected to its own processing board, and the latter can be univocally identified, SISMA CA **allows to accurately locate the area concerned by the intrusion** and to calibrate each zone independently, by varying its security level according to the risk level relevant to that area. This zoning also makes SISMA CA system suitable for coupling with CCTV systems.



## The processing boards

The signals generated by the sensor-modules are sent to special microprocessor boards which **analyse and interpret what is perceived by the detectors**. The advanced analysis algorithms can discriminate real intrusions from potential causes of improper alarms.

There are two solutions to manage and process the alarm signals, each one is designed to meet different requirements:

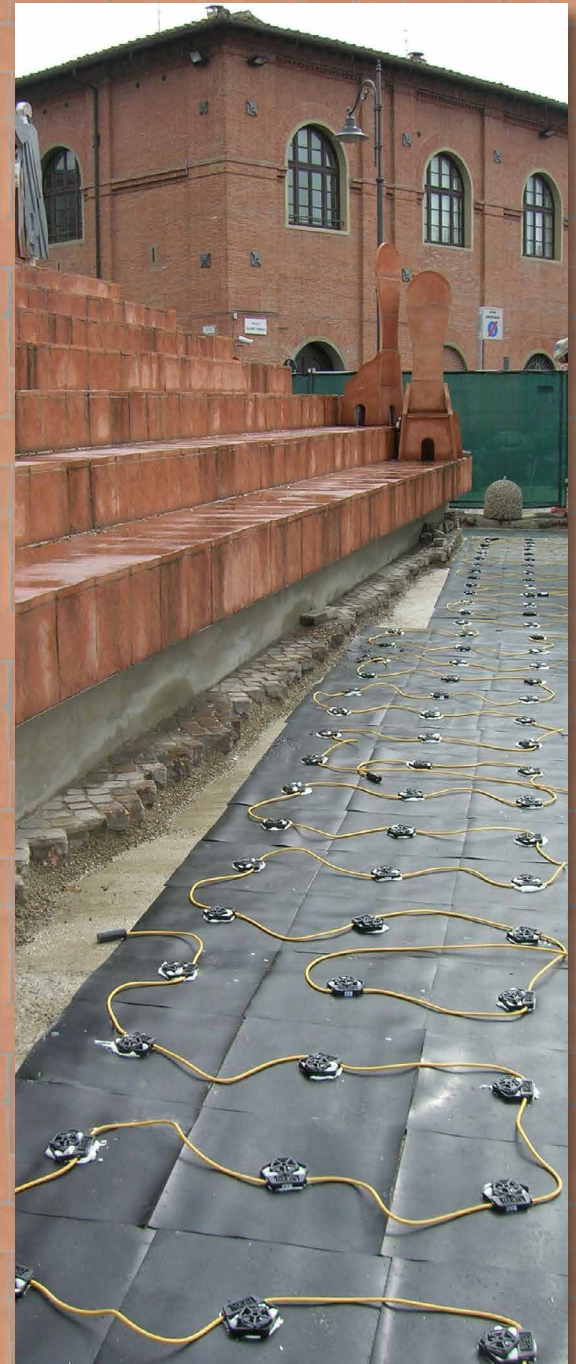
- **SC-SMCA-Z1**, a stand-alone processing board which collects and analyses the signals coming from one sensor-module (alarm zone) and provides them through relay outputs;
- **SC-SMCA-CTRL + SC-SMCA-PU**, a modular solution which simultaneously manages a large number of zones, up to 24, in a flexible and centralized way. Under this configuration each sensor-module is connected to an interface board, named SC-SMCA-PU, which is in its turn connected to SC-SMCA-CTRL board by means of a special communication bus.

The use of SC-SMCA-Z1 boards is recommended for systems composed of 7 sensor-modules maximum: beyond this number, the use of SC-SMCA-CTRL boards is more cost effective.

The processing boards **allow to adjust the sensitivity parameters and the detection algorithms of the sensor-modules** to maximize the performance of the system according to specific requirements of the project.

The calibration and programming of the processing boards are carried out via PC, by using a specific service software which shows a **real-time graph** of the signals coming from each sensor-module and the status of the inputs and the outputs.

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

## Sensor-module (MD-SMCA)

Detection module to protect 1, 1.5, 2, 3 or 4 square metres composed of 4, 6, 8,12 and 16 sensors respectively.

## Processing boards (SC-SMCA)

Microprocessor electronic boards which analyse the signals coming from the sensor-modules.

Two models are available: a single-zone board, which manages one sensor-module only, and a multi-zone board, which manages up to 24 sensor-modules by means of specific peripheral interface boards.

## Connection cable (CV-SMCA)

Shielded cable to connect the sensor-modules to the single-zone processing board or to the peripheral interface boards.

## Wiring accessories

They comprise a small case (JBX-SMCA) for the junction of the sensor-modules, a small case (TBX-SMCA) for the termination of the sensor-modules and a 100-gram pack of polyurethane resin (RP-100) to seal the junctions and the terminations.

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



© 2015 DEA Security S.r.l.  
v. 1.0.3

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.: 00291080455  
[www.deasecurity.com](http://www.deasecurity.com) - [dea@deasecurity.com](mailto:dea@deasecurity.com)