GPS
STANDARD
Committed to security.

PERIMETER

FIBRE OPTIC PERIMETER PROTECTION SNAKE ™

SNAKE

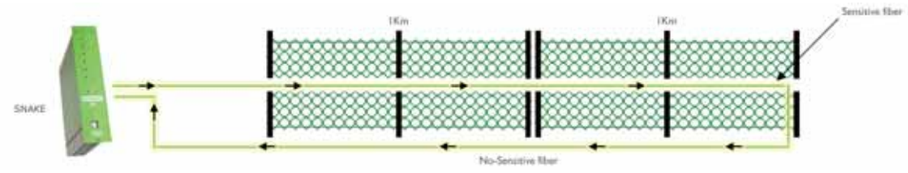
FIBRE OPTIC perimeter protection

SNAKE™ is a perimeter protection system using fibre optics for the detection, suitable for internal and external applications.
It uses opto-phonic technology to detect, in external applications, all typical attempts to climb, cut or break through a fence and for internal applications it can indicate attempts to break through or penetrate a wall. The advantages that fibre optic technology provides for fence mounted perimeter detection are, among many, accurate detection, the ability to cover long distances without the need for intermediate power supplies and in particular the complete immunity to high frequency interference from high voltage lines or atmospheric disturbances. It is also well suited to sites with corrosive or inflammable atmospheres or subject to extreme temperatures.
Typical applications are: sensitive systems for use on chain link and welded mesh fences and also as a sensor to detect penetration on the surface or inside a wall structure (brick, blocks).

OPERATION

The sensing element is the optical fibre that carries light signals. These are subjected to variations directly correlated to the physical variations in the cable caused by intrusion attempts or by variations in the area surrounding the optical fibre. The DSP - Digital Signal Processor- processes and analyses the variations in the signal generated by the differences between the transmitted and received light signals. It uses a sophisticated software algorithm, discriminating between natural phenomena, such as wind, rain, hail, etc, from attempted cut or climb intrusions.
Also, by simulating the actual events that must be detected, it is possible to add these to the installation in real working conditions and optimise the detection parameters, drastically reducing the potential for false alarms. SNAKE™ is able to manage up to four optical fibre sensors. Each of these can cover a maximum distance of 2000 metres.

SNAKE™ provides indications of fault, pre-alarm, alarm and fibre cut via an RS485 serial line, for all the monitored channels.



PERIMETER

Components

SENSITIVE FIBRE OPTIC
This is a special fibre optic cable that is installed along the entire length of the protected area. It has a particular characteristic that makes it sensitive to mechanical disturbances produced during attempts to overcome the protection (climbing, breaking through, cutting, etc). These signals are converted into an electrical signal that is continuously monitored by the SNAKE™ processor. Dependent on the configuration of the perimeter and the level of sensitivity required the layout of the fibre optic can assume different configurations but in any case cannot use more than 2000 metres of fibre per zone.

NON-SENSITIVE FIBRE OPTIC
This is a 9/125 single mode fibre and is used to connect the SNAKE™ processor to the Sensitive Fibre Optic, and it can be up to 10 km long (5 km. go and 5 km. return).
For each zone on the SNAKE™ system there must be at least 20 metres of non-sensitive fibre (10 metres from the processor to the start of the sensitive zone and 10 metres from the end of the sensitive zone to return to the processor).

SNAKE™ PROCESSOR
There are many versions of the SNAKE™ processor:
-Stand Alone for 1 fibre optic zone with 4 relay contact outputs
-Stand Alone for 2 fibre optic zones with 6 relay contact outputs
-Stand Alone for 4 fibre optic zones with 10 relay contact outputs
-Multiplex for 2 fibre optic zones or 4 fibre optic zones for connection to the Multiplex2000 system, where the signals are carried via a cable (RS485) to the MIND unit, which can monitor up to 64 sensors simultaneously, connected to relay boards for each remote sensor.
It is designed using DSP technology, which has enormous processing power available and allows the implementation of Fourier transformation, digital filtering and many others processes.
It is able to monitor up to four separate zones (channels) of 2000 metres each, providing for each pre-alarm, alarm and fibre cut signals, available via relay contacts on the Stand Alone or via RS485 serial line for the multiplex version.
Using the serial line (USB for the Stand Alone, RS485 for the Multiplex) it is possible to set the system parameters, monitor and record the signals directly on a PC using the dedicated software. All versions of SNAKE™ are contained in appropriate metallic container for use either in a rack on as a table version.

SNAKE™ does not need any power supplies in the field.

SNAKE™ is resistant to electromagnetic interference.

SNAKE™ is resistant to weather conditions.

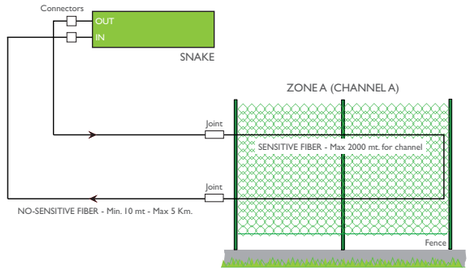
SNAKE™ is particularly suited for environments with corrosive or inflammable atmospheres.

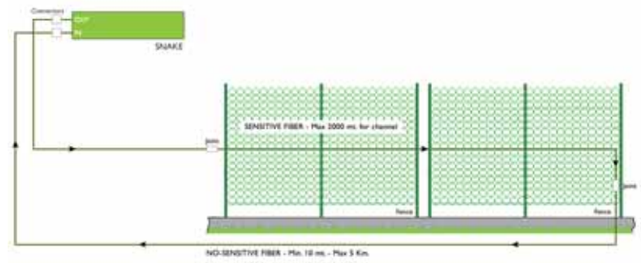
Available versions

SNAKE™ STAND ALONE
The SNAKE™ Stand Alone sensor is designed for those installations where there is no requirement to deploy a Multiplex system. The system provides pre-alarm, alarm and fibre cut indications using relay contacts. Each relay can be programmed using PSW2000SA Management Software to provide one or more simultaneous signals.
There are three versions of the stand alone system:
-Single zone with four relay contact outputs
-2 zone with 6 relay contact outputs
-4 zone with 10 relay contact outputs

SNAKE™ MULTIPLEX
The SNAKE™ Multiplex sensor is, in general, the same as described for the SNAKE™ Stand Alone. The difference is in the fact that it can be integrated directly into the Multiplex 2000 system, a system that is able to interconnect, using a single data/power cable, up to 64 different sensors to a single Universal Communications Processor (MIND).
This unit is able to manage and output the signals provided by the sensors using central relay output boards.
Management of all the sensor functions is performed using a special software package running under Windows 95/98/2000/NT/XP/Vista.
There are two versions of the multiplex system:
- 2 zones
- 4 zones

SNAKE - System configurations





TECHNICAL SPECIFICATIONS

	Stand-Alone	Multiplex
Coverage per unit	2000 meters (single pass) 1000 meters (doble pass)	2000 meters (single pass) 1000 meters (doble pass)
Parameter Set-Up	Local using PC	Remote using PC
PC connection	USB	COM115
Local relay outputs	4 (1 zone) 6 (2 zone) 10 (4 zone)	-
Cabinet	Metallic box	Rack mount metallic box
Cabinet dim. (LxHxD)	220x48x180 mm	220x48x180 mm
Weight	1,5 kg.	1,5 kg.
Operating temperature	-30° +70°C	-30° +70°C
Relative humidity	90%	90%
Power supply	10,5÷16 Vcc (12Volt nom.)	10,5÷16 Vcc (12Volt nom.)
Current max	280mA @ 12Vcc	150mA @ 12Vcc

Retailer of confidence

COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

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