NARIA
SECURITY

GENERAL CATALOGUE N.18

STOP FALSE ALARMS

Security for *PERIMETER FENCES*
COPPER WIRES
WORK EQUIPMENT
PHOTOVOLTAIC PANELS

CCTV converters for *"HD"* and *"Over IP"*

Alarmed security bars NEW

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... it's plastic fiber!

MADE IN ITALY

PERIMETER Security

INNOVATION BECOMES EASY:
NO PC, NO LEARNING PHASE,
NO FALSE ALARMS

ANTI-CLIMB PERIMETER SECURITY

This system is based on the principle that an attempt of climbing over produces waves, vibrations or bends. These mechanical stresses are magnified and transmitted over the plastic fiber attached to the fence with special fastening bolts, sensors or cable-ties.

The optical analyser **LiteFENCE** detects the variations in light transmission and triggers the alarm.

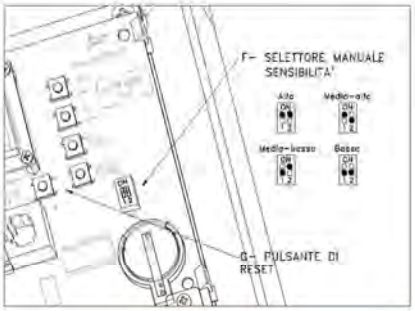
NO FALSE ALARMS: as the fence must be mechanically stressed for the analyser to detect a change in optical power, vehicles passing by or adverse weather conditions (like wind, rain, snow and falling leaves) DO NOT trigger false alarms.

Unaffected by wind gusts
Zero false alarms
Quick and easy installation
Maintenance-free
No particular learning required

Plastic fiber **LiteWIRE** has a special sun-light resistant jacket which makes it suitable for installation in the sunlight.

The plastic fiber is attached to the fence and connected to the analyser LiteFENCE.
In case of flexible fences, the fiber is tied to the mesh and fastened to the posts using special tensioning bolts.
In case of rigid fences and gratings, the fiber is also connected to the SV sensors and tied to the fence.

You can set the most suitable sensitivity for your installation by choosing one of the four sensitivity levels available (see picture), and/or, in case of rigid fences and gratings, placing the SV sensor higher or lower on the fence.



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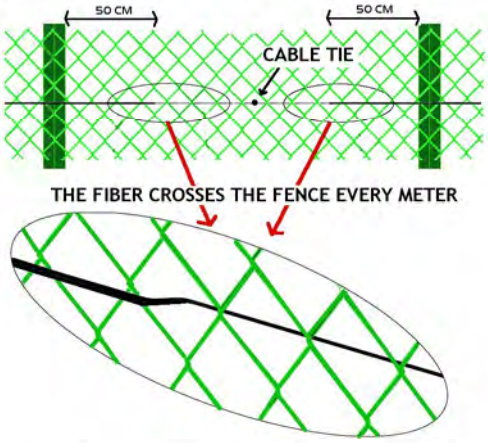
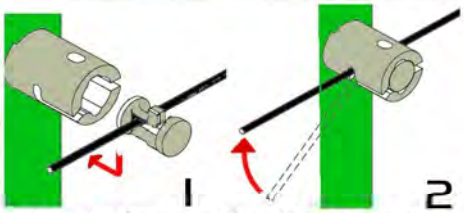
For any situation, also suitable for sloping and terraced grounds

The plastic fiber is "woven" along the fence with an enter and exit process, as shown below.



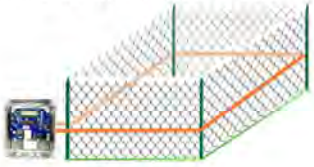


The fiber is then affixed to the posts with tensioning bolts (one every 10m), and to the fence with cable ties (one between the posts).

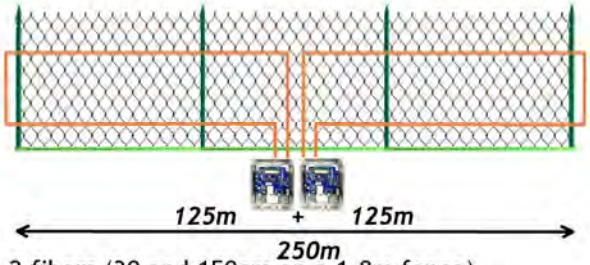
During an attempt to climb, the flexion of fiber due to climbing over, lifting or breaching is detected by LiteFENCE, which triggers an allarm either via a normally closed (NC) relay contact, which can be connected to any alarm control panel), or via an optical output which can be connected to a specific receiver.

Wind and vibrations caused by weather conditions and moving vehicles do not cause the fence to bend and so it does not trigger any alarm. For this reason, the installation of the perimeter protection system is simple and does not require the learning of any software program, ensuring a 'stop to false alarms'.

Depending on the required level of security, you can install on the fence:
- 1 fiber to the centre to detect breaking through and, depending on the fence, attempts to climb over;
- 2 fibers (30cm and 150cm from the ground up) to detect climbing over and lifting ;
- 3 fibers(30cm, 90cm 170cm from ground up) to detect climbing over and lifting on 2m high fences;
- 4 fibers (30cm, 60cm, 110cm, 150cm from the ground up) to create a barrier which is difficult to overcome even in case the fence is cut



1 fiber in the center
Anti-breaking through



(MOST COMMONLY USED)

2 fibers (30 and 150cm on a 1.8m fence)
Anti-climbing anti-lifting

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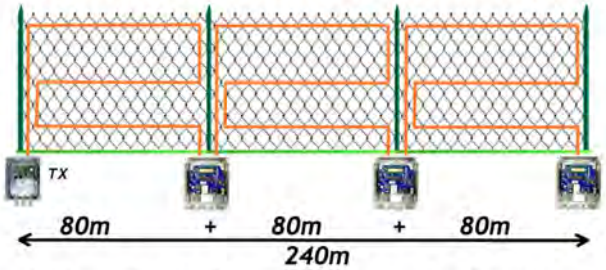
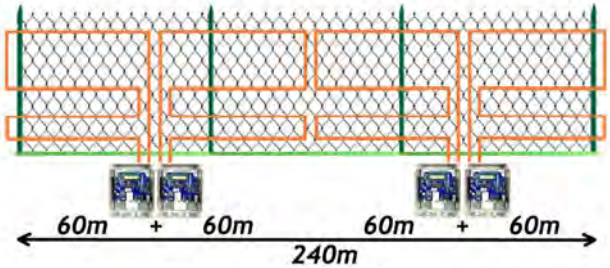


3 fibers (30cm, 90cm, 170cm on a 2m fence)
Anti-climbing, anti-lifting



4 fibers (30, 60, 110 and 150cm on a 1.8m fence)
ANTI-BREACH

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LiteFENCE SV Lite

SEMI-RIGID MODULAR FENCES

(rigid electro-welded fence and grating)

This system detects climbing over or lifting of a module of grating fences and rigid electro welded fences with a *minimum height of 145cm*.

The semi-rigid modular fences do not bend under the weight of the intruder, but, rather move back and forth along a single axis in response to the strain caused by the climbing ove; uch fluctuations are detectable by attaching the *SV Lite* sensor to the fence.

In fact, in the SV Lite sensor, light passes through two fibers facing each other and is constrained to move only on one axis, the same as that in which the fence sways. In the event of climbing over, swaying causes the misalignment of the fibers, the light beam completely stops and the LiteFENCE Lite analyser, which analyses the light signal, recognizes this variation triggering the alarm.

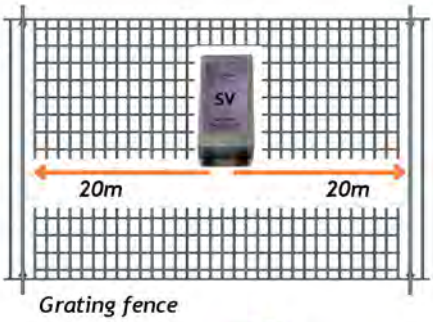
Grating fence

Simple vibrations resulting from weather conditions or moving vehicles fail to create a swing capable of completely stopping the light beam. Therefore ***the system has an excellent resistance to false alarms and does not require adjusting, new learning phases or software***.

Each SV Lite sensor detects oscillations up to 20m per side (depending on the type of fence) and protects **up to 40m of straight fence**.

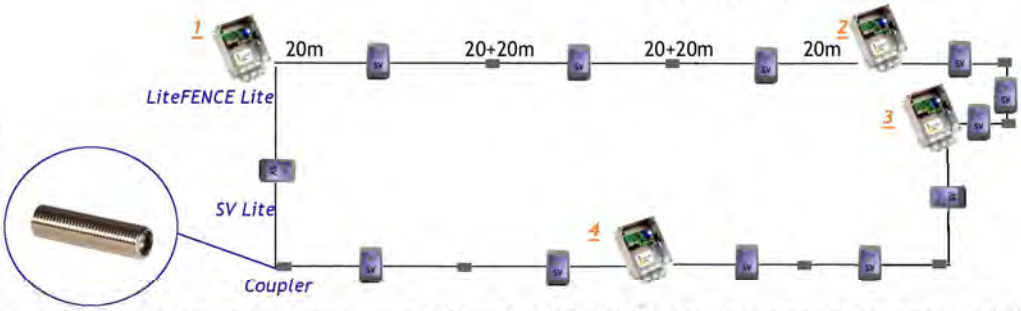
The sensor sensitivity to the climbing over can be adjusted by placing the sensor at a higher or lower position on the fence.

In addition to gates or interruptions along the fence, also corners decrease or block the propagation of oscillations, so the use of more sensors is required.



Grating fence

Example of closed perimeter 380m



In case the perimeter has a "C" shape (i.e. open loop), an additional LiteFENCE Lite (in transmission modality) is placed at the starting point of the fence.

Example of open perimeter 240m

All LiteFENCE Lite analysers and the SV Lite sensors are connected in a bus, and the plastic fiber is "woven" along the fence with an enter and exit process to prevent an entry attempt via the dismounting of a panel. We recommend to cross the fence once every meter.

- *Every LiteFENCE Lite manages up to 3 SV Lite sensors*
- *SV Lite sensors are pre-cabled with 2 x 20m of plastic fiber*

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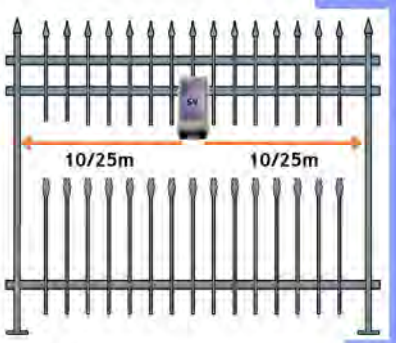
QUICK SPECS OVERVIEW
Height of fence: over 110cm
SV Sensor operating range: up to 50m (straight)
Pre-cabled: 3m+3m of armoured fiber
Type of fence: rigid fences and gratings

LiteFENCE SV

RIGID FENCES AND GRATINGS

This system detects the attempt to climb over a rigid/semi-rigid/ modular fence of *minimum height of 110cm*.

Rigid fences, as a result of an attempt to climb over, do not oscillate but vibrate: these vibrations are detected by SV sensor and LiteFENCE analyser.



LiteFENCE is able to detect the partial misalignment of the fiber caused by a slight vibrati and therefore detects vibrations:

- up to *10/15m per side*, for fences with a height *between 110 and 145 cm*

- up to *15/25m per side*, for fences with a height *over 145cm*)

One SV sensor protects up to 30/50m of a straight fence.

Curves and corners along the fence sensibly decrease the oscillations, so the use of more sensors is required.

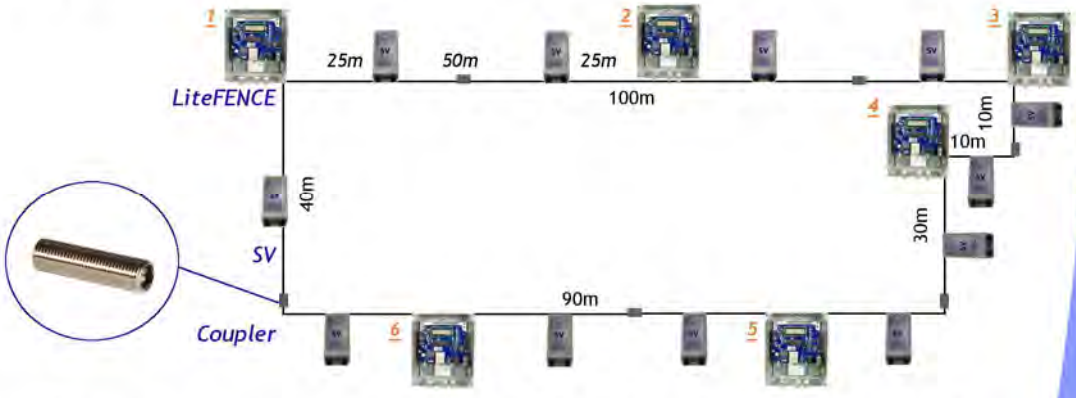
Excellent tolerance to false alarms is guaranteed by the high frequency of vibrations caused by weather conditions and moving vehicles on this type of fence, filtered by the inertia of the SV sensor and LiteFENCE firmware.

I parametri di LiteFENCE sono pre-impostati in fabbrica in base al tipo di rete da proteggere (selezionabile dal menù); per meglio adattarsi a esigenze specifiche l'operatore può comunque intervenire sulla taratura di:

- sensitivity level (high or low) from the 4 levels available;
- activation/deactivation of filter to high frequences;
- - pre-alarm time (i.e. how long should an oscillation/vibration last before triggering the real alarm).

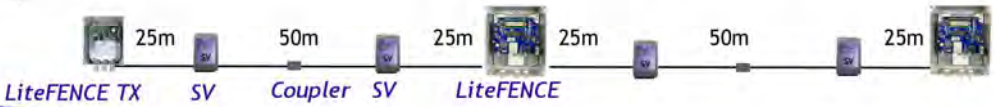
The plastic fiber is "woven" along the fence with an enter and exit process to prevent an entry attempt via the dismounting of a panel, in case of modular fence.

Example of closed perimeter 380m



In case the perimeter has a "C" shape (i.e. open perimeter), a LiteFENCE TX is placed at the starting point of the fence.

Example of open perimeter 200m



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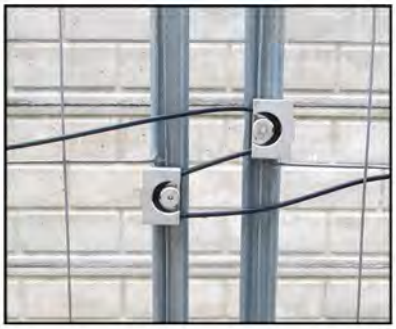
QUICK SPECS OVERVIEW
LiteFENCE opeprating range: 100m of fiber installed on fence
Precabled: no
Type of fence: temporary fence
Fiber: antirodent armoured LiteWIRE

TEMPORARY FENCES

This system detects the climbing, lifting or moving of a panel on a temporary fence for building sites.

This kind of enclosure cannot be protected by any traditional solutions because they oscillate too much while vehicles pass by or when there are gusts of wind. Besides, most alarm systems are not suitable for short-term building sites, which require a flexible solution which can be easily and quickly activated/deactivated by site workers.

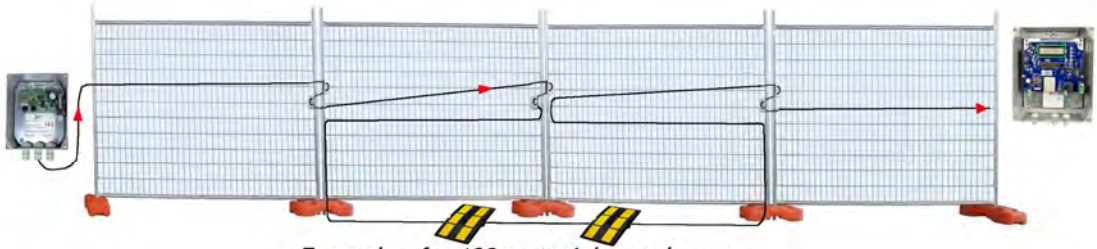
It is possible to protect a 100m enclosure in just a few hours, access the building site as easily as opening a padlock and it provides an ***ANTI-THEFT SYSTEM WITHOUT FALSE ALARMS***.



Oscillations of the fence, even strong ones, do not cause any flexing of the fence, but lifting a module or trying to climb over it will wrest the fiber triggering the alarm.

As it is ***easy and quick to install***, it is ***ideal for building sites***, also if it remains on site for a short period of time, and you can access by just unlocking the bolt with one hand.

Easy to lock/unlock
Suitable both for straight and closed enclosures



Example of a 100m straight enclosure

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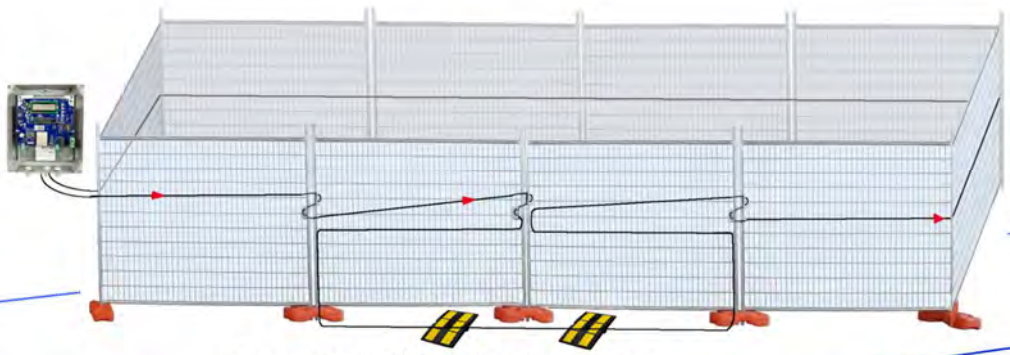

Example of a 100m closed enclosure

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QUICK SPECS OVERVIEW
LiteFENCE operating distance: 250m of fiber installed on barbed wire;
160m of fiber installed on a ø 4mm metal rope
Precabled: no
Type of fence: barbed wire, metal rope

BARBED WIRE/METAL ROPE

Perimeter walls and barbed wires can be protected with LiteFENCE analyser and LiteWIRE plastic fiber cable. Where barbed wire is not allowed or cannot be used for aesthetic constraints, a metal rope with a diameter of 4mm can be used as an alternative.

Any cut or flexion of the barbed wire (or metal rope) due to an attempt of climb over, is detected by LiteFENCE analyser, which triggers an alarm via the NC alarm output relay (connectable to any alarm control panel).

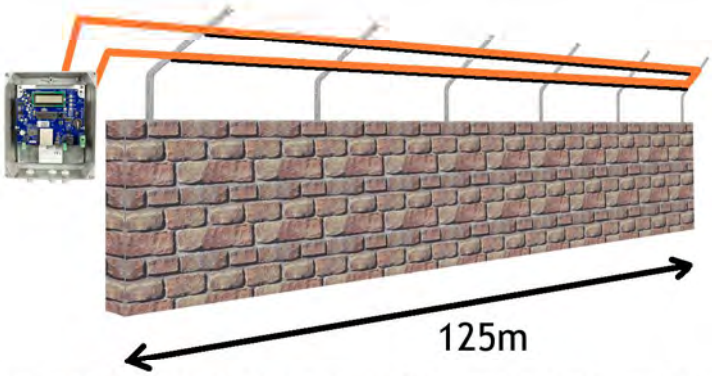
The plastic fiber LiteWIRE is fastened to the barbed wire (or metal rope) with cable ties and secured to the brackets with special tensioning bolts. Additionally, the fiber is secured to every bracket using special clips which keep the barbed wire (or metal rope) and the fiber together.

The same connection schemes used for chain link fences can be used for barbed wire/metal rope too, using two passages of fiber.

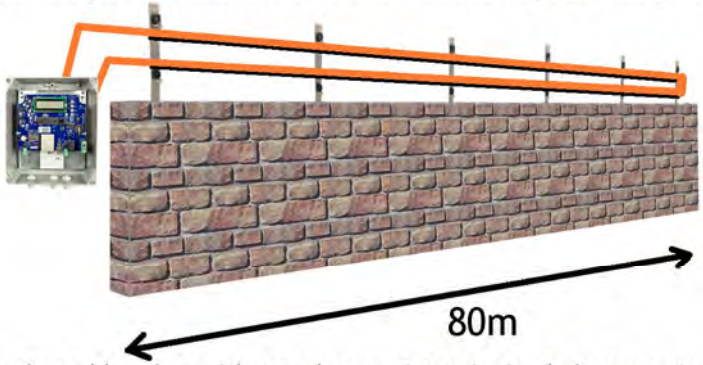
In addition to the clips, the fiber is fasted to the brackets using one tensioning bolt every 10m, when the barbed wire is used, and one every 4m when the metal rope is used. Using a more tensioning bolts with the metal rope, the operating range of LiteFENCE is reduced.

To increase the level of security, we recommend using tow passages of fiber, fastening it to the upper and lower barbed wire.

On request, Naria Security can supply overhang brackets and L-shaped brackets.



Example of overhang bracketwith barbed wire. 1 tensioning bolt every 10m.



Example of L-shaped bracket with metal rope. 1 tensioning bolt every 4m.

WATCH THE VIDEO

DEVICES AND ACCESSORIES

LiteFENCE (LFEN300F011S)

- Operating range: 0m ~ 250m(*)
- Selection switch for 4 levels of sensitivity
- SD card to record sensor activity (1 year)
- Protection rating: IP55, metal box
- Power supply +12V/24Vdc (+-10%)
- Devices are connectable in a series or ring configuration
- Operating temperature: -20°C ~ +70°C
- Consumption: 250mA max at 12V(3W max)
- Weight: 1900g; casing dimensions 220x255x90mm
- System status information display
- ✓ ***Built-in power meter***
- Optical anti-tampering sensor
- ***Optical and electrical*** NC relay output

LiteFENCE Lite (LFEN300F011L)

Only with SV Lite sensor

- Power: 9-12 VDC
- Consumption: 110mA a 12VDC
- Operating temperature: -20°C ~ +60°C
- Minimum height of fence: 145cm
- Peso: 520g
- NC relay output
- Mechanical anti-tamper
- Protection rating: IP55

LiteFENCE TX (LFEN300F011T) transmitter only

- Operating range 0m ~ 250m(*)
- Power: 9-12 VDC
- Protection rating: IP55
- Consumo: 110mA a 12VDC
- Weight: 520g
- Mechanical anti-tampering sensor

RX for NC (LCUT300S011S) Optical relay receiver for normally closed contacts (NC)

- It transforms the optical NC output of LiteFENCE into an electrical one
- Operating range of optical NC: 0m ~ 300m(*)
- It can be used as a signal amplifier
- Power: 9-12V - 110mA
- Protection rating:IP55

Tensioning bolt (BULF0D210110)

- It faastens the plastic fiber to the post of the fence or to the bracket of the barbed wire and holds it at the proper tension
- Anti-tampering: the alarm is triggered in case of removal attempt
- It is installed every 10m in order to achieve proper tension of the fiber and proper sensitivity of the system
- Attenuation: about 0.2dB (equal to about 2m* of fiber)

Fast bolt for armoured cable (GOLF580G060Z)

It is used in pairs on temporary fences

- It is secured in pairs and between two poles of a temporary fence
- It increases the attenuation by 0.5dB (equal to 5m* of fiber)
- When the fene is opened, the fiber bends, triggering the alarm
- With M6 threading to be fastened to the pole

Mounting clip for bracket (10pcs) (CLIP001S000P)

- It keeps ermette di fissare la fibra plastica al filo spinato o al cavo in acciaio in tensione
- Anti-tampering: the fiber prevents the screw from unscrewing
- It is installed on every bracket (i.e. every about 2 meters)

SV sensor (VBRS025S000)

Per rigid fences/gratings

- Totally passive (no power)
- Minimum height of fence: 110cm
- Operating distance: up to 15/25m per side, depending on the type of fence
- Protection rating: IP68
- Attenuation: 9dB (equal to about 90m* of fiber)
- Pre-cabled with 3m+3m of armoured fiber

Sensore SV Lite (VBRS025S000L)

For semi-rigid modular fences

- Totally passive (no power)
- Minimum height of fence: 145cm
- Pre-cabled with 20m+20m of fiber
- Protection rating: IP68
- Type of fence: only modular fences (rigid electrowelded fences, gratings)
- Attenuation of SV sensor, incl. 40m of fiber: 10dB (equal to 100m* of fiber)

Overhang bracket (STAF000V004S)

For barbed wire/metal rope, drilled for clips and tensioning bolts, for two passages of fiber.
Height: 38cm; distance between the fibers: 20cm.

Overhang bracket + Mounted clips and tensioning bolts (STAF0000V004C)

For barbed wire/metal rope, drilled for clips and tensioning bolts, for 2 passages of fiber + mounted clips and tensioning bolts
Height: 38cm; distance between the fibers: 20cm

L-shaped bracket (STAF000L004S)

For barbed wire/metal rope, drilled for clips and tensioning bolts, for two passages of fiber.
Height: 40cm; distance between the fibers: 20cm

L-shaped bracket + Mounted clips and tensioning bolts (STAF0000L004C)

For barbed wire/metal rope, drilled for clips and tensioning bolts, for 2 passages of fiber + mounted clips and tensioning bolts
Height: 40cm; distance between the fibers: 20cm

(*) this distance can be reached if the installation is carried out correctly (attenuation of the fiber lower than 0.1dBm at 525nm). Bends, passages on edges,misplaced or over-tightened cable ties and mechanical stresses on the fiber can increase the attenuation of the optical signal, reducing, even considerably, the maximum operating range,even preventing the system from working correctly.

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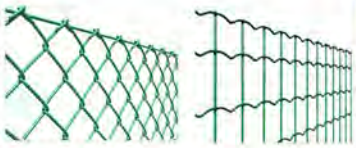
PRE-ASSEMBLED KITs

Pre-assembled kits for the protection of chain link flexible fences

2 passages of fiber



> **Kit FENCE 125 - 2P** *(for 125m of fence, 2 passages of fiber)* - **(FKIT125M002K)**
1 LiteFENCE, 250m LiteWIRE simplex anti-UV cable, 200 cable ties, 1 coupler, 25 tension bolts, 10 F-SMA connectors

> **Kit FENCE 250 - 2P** *(for 250m of fence, 2 passages of fiber)* - **(FKIT250M002K)**
2 LiteFENCE, 500m LiteWIRE simplex anti-UV cable, 300 cable ties, 1 coupler, 50 tension bolts, 10 F-SMA connectors

> **Kit FENCE 500 - 2P** *(for 500m of fence, 2 passages of fiber)* - **(FKIT500M002K)**
4 LiteFENCE, 1000m LiteWIRE simplex anti-UV cable, 500 cable ties, 2 couplers, 100 tension bolts, 20 F-SMA connectors

> **Kit FENCE 1000 - 2P***(for 1000m of fence, 2 passages of fiber)* - **(FKIT1KMM002K)**
8 x LiteFENCE, 2000m LiteWIRE simplex anti-UV cable, 1,000 cable ties, 4 couplers, 200 tension bolts, 30 F-SMA connectors

3 passages of fiber

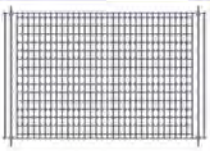
> **Kit FENCE 80 - 3P** *(for 80m of fence, 3 passages of fiber)* - **(FKIT125M002K)**
1 LiteFENCE, 250m LiteWIRE simplex anti-UV cable, 200 cable ties, 1 coupler, 25 tension bolts, 10 F-SMA connectors

> **Kit FENCE 160 - 3P** *(for 160m of fence, 3 passages of fiber)* - **(FKIT250M002K)**
2 LiteFENCE, 500m LiteWIRE simplex anti-UV cable, 300 cable ties, 1 coupler, 50 tension bolts, 10 F-SMA connectors

> **Kit FENCE 320 - 3P** *(for 320m of fence, 3 passages of fiber)* - **(FKIT500M002K)**
4 LiteFENCE, 1000m LiteWIRE simplex anti-UV cable, 500 cable ties, 2 couplers, 100 tension bolts, 20 F-SMA connectors

> **Kit FENCE 640 - 3P** *(for 640m of fence, 3 passages of fiber)* - **(FKIT1KMM002K)**
8 x LiteFENCE, 2000m LiteWIRE simplex anti-UV cable, 1,000 cable ties, 4 couplers, 200 tension bolts, 30 F-SMA connector

Pre-assembled kits for the protection of rigid fences and gratings



In case the perimeter is not a closed loop, add 1 LiteFENCE Lite to emit the signal.

> **Kit FENCE SV Lite 100 (FKIT100M0SVL)**
Min. height of fence: 145cm: 1 LiteFENCE Lite, 3 SVLite pre-cabled 20+20m sensors, 10 F-SMA connectors, 1coupler, 100 cable ties

In case the perimeter is not a closed loop, add 1 LiteFENCE transmitter to emit the signal .

> **Kit FENCE SV 100 (FKIT060M00SV)**
Min. height of fence: 110cm: 1 LiteFENCE, 2 SV sensors, 10 F-SMA connectors, 100 cable ties, 100m LiteWIRE simplex anti-UV cable

Pre-assembled kits for the protection of temporary fences

> **Kit FENCE MOBILE 50 (FKIT050M001T)**
1 LiteFENCE, 30 fast bolts for armoured cable, 50m LiteWIRE Simplex armoured cable terminated with FSMA connectors, 1 coupler, 100 cable ties.

> **Kit FENCE MOBILE 100 (FKIT100M001T)**
1 LiteFENCE, 60 fast bolts for armoured cable, 2x50m LiteWIRE Simplex armoured cable terminated with FSMA connectors, 1 coupler, 200 cable ties

Pre-assembled kits for the protection of barbed wire

> **Kit FENCE 125 BW** *(double passge of fiber)* - **(FKIT125M002B)**
1 LiteFENCE, 250m LiteWIRE simplex anti-UV cable, 300 cable ties, 1 coupler, 20 tension bolts, 10 F-SMA connectors, 120 clips

> **Kit FENCE 250 BW** *(double passge of fiber)* - **(FKIT250M002B)**
2 LiteFENCE, 500m LiteWIRE simplex anti-UV cable, 800 cable ties, 1 coupler, 50 tension bolts, 10 F-SMA connectors, 250 clips

> **Kit FENCE 500 BW** *(double passge of fiber)* - **(FKIT500M002B)**
4 LiteFENCE, 1,000m LiteWIRE simplex anti-UV cable, 1,500 cable ties, 2 Couplers, 100 tension bolts, 20 F-SMA connectors, 500 clips

Brackets can be supplied on request, also with bolts and clips already mounted

> Pre-assembled kits for the protection of metal rope

> **Kit FENCE 80 MR** *(double passge of fiber)* - **(FKIT080M002F)**
1 LiteFENCE, 200m LiteWIRE simplex anti-UV cable, 300 cable ties, 1 coupler, 40 tension bolts, 10 F-SMA connectors, 80 clips

> **Kit FENCE 160 MR** *(doppio passaggio di fibra)* - **(FKIT160M002B)**
2 LiteFENCE, 2x200m LiteWIRE simplex anti-UV cable, 600 cable ties, 1 coupler, 80 tension bolts, 10 F-SMA connectors, 160 clips

(*) this distance can be reached if the installation is carried out correctly (attenuation of the fiber lower than 0.1dBm at 525nm). Bendis, passages on edges,misplaced or over-tightened cable ties and mechanical stresses on the fiber can increase the attenuation of the optical signal, reducing, even considerably, the maximum operating range,even preventing the system from working correctly.

www.nariasecurity.it

COPPER WIRE Security

LITECOPPER: COPPER WIRE SECURITY AND ALARM FOR MANHOLE OPENING

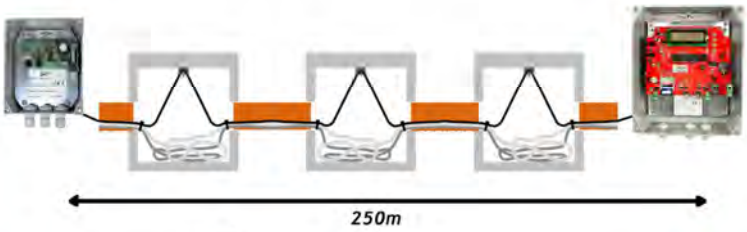
INVISIBLE PROTECTION 100% RELIABLE

The operating principle of this system is that plastic optical fiber carries less light when it is bent than it conducts when it is stretched out. This variation is detected by the analyser, which triggers an alarm.

The plastic fiber cable, usually with anti-rodent armouring, is joined to the copper wire inside the corrugated pipes with normal cable ties, and also connects to the manhole cover using a special fast bolt.

The optical analyser LiteCOPPER triggers the alarm when the manhole cover is lifted or when the copper cable is moved, allowing prompt intervention.

This system can also be used for wires in cable trays.



Zero false alarms

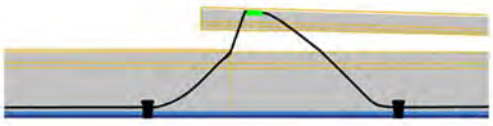
Quick installation

Immune to any EMI noises

Cables and manholes maintainable

Suitable also for fully operational facilities

Alarm when the manhole cover is lifted



Also for wires in cable trays

WATCH THE VIDEO

www.nariasecurity.it

DEVICES AND ACCESSORIES

LiteCOPPER (LCOP300C011S)

This analyser detects changes in the attenuation of the plastic fiber

- Operating range: 0m - 300m (*)
- SD card to store events (1 year)
- Alimentazione +12/24Vdc (+-10%)
- Power supply: +12V - +24V (+-10%)
- Weight 1900g, case dimensions 220x255x90mm
- anti-tampering optical sensor
- ***Optical and electrical*** ormally closed (NC) relay
- Selection switch for 4 levels of sensitivity
- Protection rating: IP55, metal case
- Devices connectable in a series or ring configuration
- Power consumption 250mA at 12V(3W max)
- Display with system status information
- ✓- ***Built-in power meter***

LiteCOPPER TX (LFEN300F011T) transmitter only

- Operating range 0m - 250m(*)
- Power: 9-12 VDC
- Mechanical anti-tampering sensor
- Protection rating: IP55, metal case
- Weight: 520g
- Consumption: 110mA a 12VDC

RX per NC (LCUT300S011S) Optical relay receiver for normally closed contacts (NC)

- It transforms the optical NC output of LiteFENCE into an electrical one
- Operating range of optical NC: 0m - 300m(*)
- It can be used as a signal amplifier
- Protection rating:IP55
- Power: 9-12V - 110mA

Fast bolt for armoured cable (GOLF580G060Z)

- It is fastened on the cover of the manhole using the screw provided
- The cable must be bent to be taken out of the bolt
- Attenuation: 0.5dB (equal to 5m* of fiber)

-Invisible from outside

Fast bolt (BULS020M006)

- It is fastened on the cover of the cable tray every 10m
- The cable must be bent to be taken out of the bolt
- No attenuation

-Invisible from outside

Pre-assembled kits for copper wire security in cable trays

> **Kit COPPER CABLE TRAY 250 (CKIT250L002P)**

1 LiteCOPPER TX, 1 LiteCOPPER, 250m LiteWIRE simplex BLUE cable, 25 fast bolts, 10 F-SMA connectors, 100 cable ties

> **Kit COPPER CABLE TRAY 500 (CKIT500L003P)**

1 LiteCOPPER TX, 2 LiteCOPPER, 500m LiteWIRE simplex BLUE cable, 50 fast bolts, 10 F-SMA connectors, 300 Cable ties

Pre-assembled kits for ducts/corrugated pipes + manholes

> **Kit COPPER CORRUGATI - 250m (CKIT250L002C)**

1 LiteCOPPER TX, 1x LiteCOPPER, 10x Fast bolts for armoured cable, 250m LiteWIRE simplex double armouring cable, 10 F-SMA connectors, 100 Cable ties

> **Kit COPPER DUCTS 500 (CKIT500L003C)**

1 LiteCOPPER TX, 2 LiteCOPPER, 20 fast bolts for armoured cable, 500m LiteWIRE simplex double armouring cable, 10 F-SMA connectors, 300 Cable ties

> **Kit COPPER DUCTS 1000 (CKIT1000L005C)**

1 LiteCOPPER TX, 4 LiteCOPPER, 40 fast bolts for armoured cable, 1,000m LiteWIRE simplex double armouring 10 F-SMA connectors, 500 cable ties

ALARM WHEN THE MANHOLE IS OPENED !

(*) this distance can be reached if the installation is carried out correctly (attenuation of the fiber lower than 0.1dBm at 525nm). Bends, passages on edges,misplaced or over-tightened cable ties and mechanical stresses on the fiber can increase the attenuation of the optical signal, reducing, even considerably, the maximum operating range,even preventing the system from working correctly.

www.nariasecurity.it

LiteBLOCK

STAND-ALONE AND PORTABLE ANTI-THEFT SYSTEM

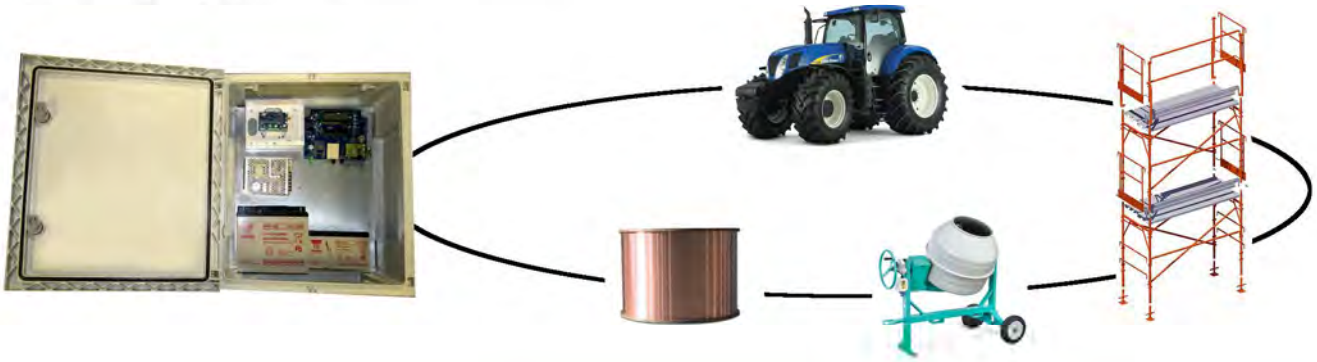
New LiteBLOCK is a portable, ***easy*** and ***intuitive*** anti-theft system which detects theft attempts of goods (also of big dimensions) indoors and outdoors. As it is stand-alone system, LiteBLOCK can be moved wherever it is needed.

The plastic optical fiber, mechanically protected by a double metal armouring, goes through and/or is fastened to the goods you want to protect. After the plastic fiber cable is connected to the ***New LiteBLOCK***, an alarm is triggered when the fiber is cut, moved or unfastened. This system is reliable and with **NO FALSE ALARMS**.

The alarm is transmitted to the user via a mini GSM dialer or via any other alarm panel available on the market.
LiteBLOCK can manage a loop of fiber with maximum length of 100mt.

Suitable for building sites, farms and factory environments.

DIMENSIONS: h.52cm, d.22cm, l.45cm



LiteBLOCK (LBLOCK020)

This system is in an outdoor box and is composed of:
- analyser for plastic fiber, sensitive to both cut and bending of the fiber
- 20m of pre-terminated LiteWIRE cable with steel armouring
- 3 open collector outputs (low battery, overload, network)
- 1 normally closed contact
- 230V power inlet
- Protection rating: IP55
- Battery compartment (***Batteries not included*** - for 3 days, one lead battery (12V 48Ah) is recommended)

LiteBLOCK + GSM (LBLOCK020G)

This system is in an outdoor box and is composed of:
- analyser for plastic fiber, sensitive to both cut and bending of the fiber
- 20m of pre-terminated LiteWIRE cable with steel armouring
- 1 normally closed contact
- siren output
- Protection rating: IP55
- 230V power inlet
- *GSM mini alarm panel*
  - *can be programmed/managed via SMS (functions and I/O)*
  - *contact ID transmission*
  - *Anti-jammer and life-test functions*
  - *Memory for 16.000 events*
  - *Buzzer when switching on/off the alarm*
  - *Message for no power/low battery*
  - *SMS and/or vocal messages to up to 8 telephone numbers*
- Battery compartment (***Batteries not included*** - for 3 days, one lead battery (12V 48Ah) is recommended)

ACCESSORIES

> **Patch cord 20 (PATC000N025A)**
20m of pre-terminated LiteWIRE cable with steel armouring (max. 5 patch-cords for every LiteBLOCK)

> **Patch cord 50 (PATC000N050A)**
50m of pre-terminated LiteWIRE cable with steel armouring (max. 2 patch-cords for every LiteBLOCK)

> **Patch cord 100 (PATC000N050A)**
100m of pre-terminated LiteWIRE cable with steel armouring + spooler (max. 1 patch-cord for every LiteBLOCK)

www.nariasecurity.it

"Over IP" CCTV transmission systems

"OVER IP" systems convert and transmit an Ethernet signal from a LAN over a single cable made up of two plastic fibers (***LiteWIRE Duplex***). These devices are completely ***plug and play*** and allow the conversion of Ethernet networks (with bus, star or tree topology) over plastic fiber, increasing performance and guaranteeing a constant flow at maximum speed (**100Mb/s**).

The network device (IP camera, PC, encoder, alarm panel, IP phone, etc) is connected via a CAT5e or CAT6 network cable to the RJ-45 port of the electro-optical converter, which can be a simple media converter or a switch.

The Media Converter (2 ports: one RJ-45 electrical and one F-SMA optical) converts the digital Ethernet signal input into an optical signal (and vice versa) which is then transmitted on a pair of plastic fibers (one for transmission and one for receiving) contained in the Duplex cable. This device has an operating range of ***100m@100Mbps***

With an operating range of ***100m@100Mbps***, this switch (4 ports: 2 RJ-45 electrical and 2 F-SMA optical) is an intelligent network device that is in charge of forwarding the data from an input port to a specific output port. Therefore, it's able to convert the electrical signal into optical (and vice versa) and to communicate between all four of its ports, whether it's communication between two optical ports, two electrical ports, or between one optical and one electrical port.

The switch also enables you to connect multiple devices using the fiber optic SFP uplink slot to define modular and scalable structures over time.

VIDA IP 200 SWITCH reaches up to *200m @100Mbps*. It has two electrical ports (RJ45) and two optical ports for plastic fiber LiteWIRE Duplex

Constant speed transmission
Can be installed along with electrical wires
Protection from ligthning and ground loops

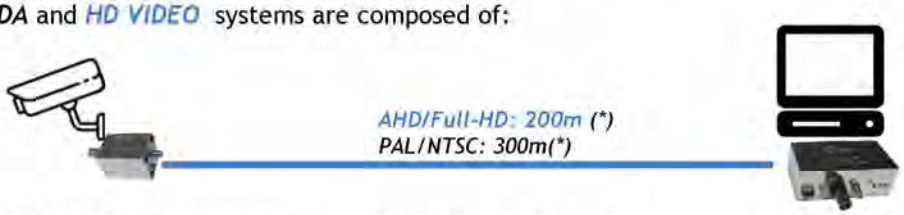
(*) this distance can be reached if the installation is carried out correctly (attenuation of the fiber lower than 0.1dBm at 525nm). Bends, passages on edges, misplaced or over-tightened cable ties and mechanical stresses on the fiber can increase the attenuation of the optical signal, reducing, even considerably, the maximum operating range,even preventing the system from working correctly.

www.nariasecurity.it

Video converters for analogue CCTV

The *VIDA* and *HD VIDEO* systems are installed like a common copper cable (one cable for each camera), with its same simplicity, its same costs, but with the plastic fiber unique quality, which eliminates all of the problems of distortion, isolation and lightning that come with coaxial cable and UTP.

The *VIDA* and *HD VIDEO* systems are composed of:



WATCH THE VIDEO

VIDA transmitter: compatible with any analogue camera up to 1000 lines (PAL/NTSC)
OR
HD VIDEO transmitter: compatible with any analogue AHD and Full-HD camera up to 1080p

Plastic fiber LiteWIRE, which can be:
- standard
- with anti-rodent armouring

VIDA receiver for PAL/NTSC only
OR
HD VIDEO receiver for AHD and Full- HD

If transmission is in PAL/NTSC, an amplifier can double the link length:

NEW

The *HD VIDEO* converters for AHD and Full HD, developed by Naria security, are *CONNECTOR-FREE*, so the plastic fiber doesn't need any termination kit. LiteWIRE is cut and plugged directly into the converter. The converters support *Full HD and AHD up to 1080p* (not TVI or CVI, for the moment).

Eliminates video disturbances
Installed along electrical wires too
Cable with only 2.2mm diameter
Protection from lighting and ground loops

RS-485 Converters

RS-485 signal converters can work in two modes:
- ***Half Duplex***, using a LiteWIRE Simplex cable for the MONO transmission, and a LiteWIRE Duplex cable for BIDI transmission
- ***Full Duplex***, using a LiteWIRE Duplex cable.

The signal can be repeated connecting the devices ina series several times, keeping the transmission quality intact.

Using a single LiteWIRE Duplex cable, you can use one fiber for video signal (converted by VIDA /HD VIEO conveters) and one fiber for RS-485 Half Duplex MONO signal.

Example Half Duplex MONO

Example: Full Duplex MONO

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www.nariasecurity.it

DEVICES AND ACCESSORIES

VIDA IP 200 SWITCH (VDIP202S200P)

- Power: 12VDC
- Operating range: 10-200m (*)
- 2 optical ports+ 2 electrical ports RJ45
- Operating temperature: -10°C + 60°C
- Transmission speed: 100Mbps
- Consumption: 5W (= max. 400mA)
- Dimensions: 154 x 88 x 31
- Protection rating: IP30

From November 2016

VIDA IP Switch + SFP (VDIP202S004S)

- Power: 10-24VDC
- Operating range: 10 - 100m (*)
- 2 optical ports + 2 electrical ports RJ45 + Slot SFP
- Operating temperature: -20°C +60°C
- Transmission speed: 100Mbps
- Consumption: 0,8A max. at 12V (10W max.)
- Dimensions: 164 x 88 x 31 mm
- Protection rating: IP30

VIDA IP Switch (VDIP202S004P)

- Power: 12 VDC
- Operating range: 10 - 100m (*)
- 2 optical ports + 2 electrical ports RJ45
- Operating temperature: -20°C +60°C
- Transmission speed: 100Mbps
- Consumption: 0,8A max. at 12V (10W max.)
- Dimensions 154 x 88 x 31 mm
- Protection rating: IP30

VIDA IP Media Converter (VDIP101S002P)

- Power: 10-24VDC
- Operating range 10 - 100m (*)
- Operating temperature -20°C +60°C
- Dimensions: 80 x 65 x 25 mm
- Transmission speed: 100Mbps
- Consumtion: 0,3A max. at 12V (5W max.)
- 1 optical port; 1 electrical port RJ45

HD VIDEO SYSTEM, 200m (TX+RX) (VIDEOHD0020S)

System composed of HD VIDEO transmitter + HD VIDEO receiver, manual gain adjustment. ***For AHD and Full HD up to 1080p***

CONNECTOR-FREE

VIDA200 system (TX+RX) (VIDA200C000S)

System composed of VIDA transmitter + manual VIDA 200 receiver - Up to 1000 TV lines

VIDA300 system (TX+RX) (VIDA300C150S)

System composed of VIDA transmitter + automatic VIDA 300 receiver - Up to 1000 TV lines

VIDA Transmitter (VIDA000S000T)

- Power: 12V - 0,08A max.
- Dimensions: 44 x 29 x 26 mm; protection rating: IP40
- It can be used with any VIDA receiver
- Up to 1000 TV lines
- Ingresso video BNC 75Ω
- Operating temperature -20°C +60°C
- Protection rating: IP55

VIDA 300 automatic receiver (VIDA300S002R)

- Operating range: 80-300m(*)
- Dimensions:66 x 45 x 26 mm; protection rating: IP40
- Operating temperature: -20°C +60°C
- Power: 12V - 0,2A max.
- automatic gain (distance) adjustment
- Up to 1000 TV lines

VIDA 200 manual receiver (VIDA200S002R)

- Operating range: 20-200m(*)
- Dimensions: 65 x 28 x 26 mm; protection rating: IP40
- Operating temperature: -20°C +60°C
- Power: 12V - 0,05A max.
- manual gain (distance) adjustment
- Up to 1000 TV lines

VIDA automatic repeater (VIDA300R151R)

- Distance from TX/RX: 80-300m(*)
- One single repeater is recommended
- Operating temperature: -20°C ~ +60°C
- It is installed half-way on the link
- Power: 12V - 0,2A
- Protection rating: IP40

VIDA 300 4/8/12-channel receiver, 19" rack (VIDA300M004R/8R/12R)

- Operating range: 20-300m(*)
- Dimensions: 19" rack, 1 unit. Protection rating: IP40
- 3 versions available: 4, 8 or 12 channels
- Power: 230VAC - Up to 1000 TV lines
- automatic gain (distance) adjustment
- Indicators: low signal, too strong signal, power on

RS485 BIDI system (SER4300C000S)

- Transmitter + receiver
- Operating range: 50-300m(*)
- Max speed: 115,2 kbit/s
- RS-485 bidirectional protocol
- Operating temperature: -20°C ~ +60°C
- Power 12-24V (0,5W). Protection rating: IP40

(*) this distance can be reached if the installation is carried out correctly (attenuation of the fiber lower than 0.1dBm at 525nm). Bends, passages on edges,misplaced or over-tightened cable ties and mechanical stresses on the fiber can increase the attenuation of the optical signal, reducing, even considerably, the maximum operating range,even preventing the system from working correctly.

SOLAR PANEL Security

800 MW PROTECTED, ZERO FALSE ALARMS

This system operates as a chain: the solar panels are linked together with plastic fiber and, depending on the necessary degree of security, the interface is connected to either the LiteSUN or LiteSUN Plus electronic system, which is able to detect only a cut to the plastic fiber or bends as well as cuts, respectively

ZERO FALSE ALARMS: the plastic fiber must be bent or cut in order for LiteSUN to trigger the alarms. So, weather conditions (like wind, rain or snow), leaves and birds do not trigger any false alarms. Besides, as plastic fiber is an insulating material, so it is not affected by any electromagnetic noise.

SECURE: the optical signal cannot be bypassed.

LiteSUN

This device is sensitive only to the cut of the fiber.

LiteSUN PLUS

This analyser monitors the light variations over the plastic fiber.
If the plastic fiber is bent there is a reduction of the light output compared to when the fiber is streched out. The sensor detects it and triggers the alarm.

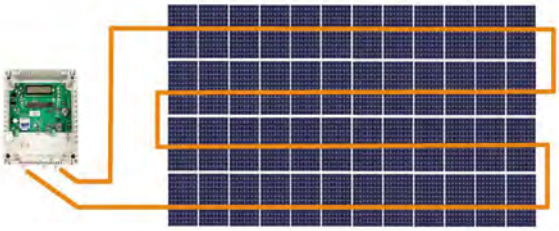
...the only effective anti-theft system for rooftop installations

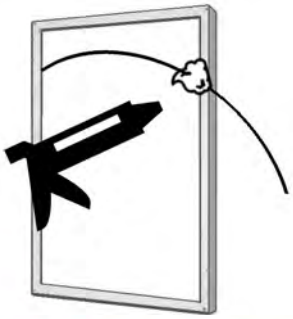
LiteSUN protects every signle panel

Easy installation and zero maintenance

A single device protects up to 200 panels

Zero false alarms





Special sun-resistant glue

NO NEED TO DRILL THE SOLAR PANELS!

For quick and easy installation, we have created special accessories to attach the plastic fiber to your solar panels

www.nariasecurity.it

DEVICES AND ACCESSORIES

LiteSUN (LCUT300S011S)

It detects the cut of the plastic fiber cable. The new version of LiteSUN can be used as a transceiver (making a closed loop), or as a transmitter, receiver or signal amplifier.

- It detects the cut of the plastic fiber
- Protection rating: IP55
- Alarm output (NC relay): 0.2 A/230VAC 1A/24 VDC
- Operating temperature. -20°C ~ +60°C
- Operating range: 20~300m (*)
- Anti-tampering sensor: mecchanical
- Power: 9-12 VAC, 0,12A max.
- Dimensions: 175 x 130 x 80 mm, 500g

LiteSUN Plus (LSUN300P011S)/ LiteSUN Plus AMPLI (LSUN300P011A)

- It detects the cut and the bending of the fiber
- SD card to record sensor activity (1 year)
- System status information display
- Alarm output (NC relay): 5A/240Vac
- Operating temperature -20°C ~ +70°C
- Consumption: 200mA
- Optical and electrical NC relay output *(optional)*
- Operating range: 0m ~ 300m(*)
- Selection switch for 4 levels of sensitivity
- Protection rating: IP55 with mechanical anti-tampering sensor
- Power +12V/24V (+-10%)
- Dimensions: 190mm x 255mm x 90mm
- ***Built-in power meter (optonal)***

LiteSUN Plus AMPLI amplifies the signal of LiteSUN Plus. This device has no display and no SD Card

TX + RX for normally closed contacts (LBAS300N001C)

The transmitter is mounted on the LiteSUN Plus board and works as a ***power meter*** too; the receiver is a separate device

Special sun-resistant glue (COLLSPEC100M) - *Only with LiteSUN Plus*

- it is applied in the holes of the rear frame of the panel, fixing the cable with special omega clips
- a sigle cartridge is enough for about 100 panels

Drilled pin (BULS010M012T)

Only for rooftop installations

- It is laid on the wholes on the back of the panel frame
- It in installed ***only if*** the panel is laid on the roof and if the back of the panel is not accessible to the intruder

-For use with LiteSUN/LiteSUN Plus

Drilled bolt M6x6 (BULS010M006I)

- It is screwed on the nut(15x35mm) throught the holes on the back of the panel
- The rectangular steel nut prevents the cut of the frame and the bolt from being removed
- Material: brass and galvanized steel

Structural adhesive tape (3MSCOTCH160M)

Used to secure the plastic fiber to integrated roof panels that are already installed, ***only with LiteSUN Plus***

- Used to secure the fiber to the back of the frame of integrated roof panels that are already installed
- Over time, the tape polymerizes and any attempt to remove it will trigger the alarm
- Tampe length: 16m - (for about 300 pannels)

Fast bolt (BULS020M006)

- It is used ***ONLY with LiteSUN Plus*** (which detects bend and cut of the fiber) and halves the installation time
- To remove the plastic fiber a bend must be induced on the fiber, triggering the alarm on LiteSUN Plus)

Drilled bolt/ Fast bolt on omega bracket

The drilled bolt(or the fast bolt) is mounted on an a specially drilled omega bracket in order to protect those panels which have no holes or which cannot be easily reached.

Example with fast bolt

IMPORTANT: ***Approximate*** *dimensions, calculated considering a 250W panel of 1 x 1.6m laid as shown in the pictures. If the installation is different, the quantity of bolts/pins/ fiber could be not enough to protect all the panels. We recommend getting in touch with Luceat for a more precise offer.*

Pre-assembled kits (for rooftop mounted panels)

> **Kit SUN 3kW** (FILO025C001S): 25m LiteWIRE anti-UV, 1 single loop device, 1 power supply, 15 drilled pins,1 cutter

> **Kit SUN 6kW** (FILO050C001S): 50m LiteWIRE anti-UV, 1 single loop device, 1 power supply, 30 drilled pins,1 cutter

> **Kit SUN 10kW** (FILO100C001S): 100m LiteWIRE anti-UV, 1 single loop device, 1 power supply, 60 drilled pins,1 cutter

Pre-assembled kits (for ground mounted panels)

For big plants, combine several kits, 50kW each (e.g. 1MW: combine 20kits, 50kW each)

> **Kit SUN 50kW** (SKIT200M50KW) 250m LiteWIRE Anti-UV, 1 LiteSUN, 200 bolts, 10 F-SMA connectors

> **Kit SUN Plus 50kW** (SKIT200P50KW) 250m LiteWIRE Anti-UV, 1 LiteSUN Plus, 200 fast bolts, 10 F-SMA connectors

(*) this distance can be reached if the installation is carried out correctly (attenuation of the fiber lower than 0.1dBm at 525nm). Bends, passages on edges,misplaced or over-tightened cable ties and mechanical stresses on the fiber can increase the attenuation of the optical signal, reducing, even considerably, the maximum operating range,even preventing the system from working correctly.

www.luceat.it

Plastic fiber cable *LiteWIRE* and Accessories

Plastic optical fiber is a polymeric material (plastic) that carries light inside with "very low losses", guaranteeing the "total reflection" of the input signal.

Every meter of fiber (as well as cable ties, bolts, couplers, bends, etc.) create a small loss of light, attenuating the signal. Tor this reason, in order to calculate the real operating range of the devices in terms of distance, you should consider the sum of the attenuation rates (in dB) for every signle component and check that it does not exceed the maximum attenuation rate which the device can manage (power budget):

Example: LiteFENCE for the protection of a chain link fence

LiteFENCE can manage an attenuation rate up to 30dB. The installation we recommend includes one bolt every 10m. The distance which can be reached is 250m, as the following elements must be taken into consideration:

250m of plastic fiber attenuate 25dB (= 250m x 0.1dB for every meter of fiber)
25 tensioning bolts attenuate 5dB (= 25 x 0.2dB for every tensioning bolt)
Total attenuation: 30dB

The devices which can detect the variation of light, like LiteFENCE and LiteCOPPER, have a built-in fuction which measures the optical power: the ***power meter***. This allows to keep the attenuation monitored during the installation and to detect any possible improper causes of attenuation.

Operating temperature of all Luceat LiteWIRE cables: -20°C +60°C

LiteWIRE Simplex Anti-UV

- It can be installed on fences and solar panels, where the fiber can be in the sunlight: it is UV resistant
- LPL1100P022M: 1000m /LPL1050P022M: 500m / LPL1025P022M: 250m / LEA1100B022M: per meter

LiteWIRE Simplex BLUE

- It can be installed in cable ducts or indoors, as it does not have UV-filters
- LPL1100V022P: 1000m /LPL1050V022P: 500m / LPL1025V022P: 250m / LPL1000V022P: per meter

LiteWIRE Duplex

- The Duplex cable has 2 fibers, e.g. to connect "Over IP" converters, or to connect dome cameras (1 fiber for the video, 1 fiber for the RS-485) or for 2 cameras.
- This cable can be installed both indorrs and outdoors in cable conduits.
- TOL2100V044P: 1000m spool; TOL2050V044P:500m spool/ TOL2025V044P: 250m spool

LiteWIRE Simplex anti-rodent, double armouring

- Flexible with double steel armouring
- KEY0500B050E: 500m / KEY0250B050E: 250m / KEY1100B050E per meter (50m, 100m, 150m...)

FSMA Connectors (SMAC001M022M)

- 1 pack = 10 pcs

FSMA coupler for plastic fiber (SMAA001M022M)

- Every coupler requires 2 FSMA connectors
- Every coupler attenuates 2dB (equal to about 20m of plastic fiber)

LiteWIRE connectorization kit (SMAK001M022M)

Toolcase containing: Crimp tool, automatic wire stipper, wire cutter, 2 couplers, 20 FSMA connectors, 5 micron sand paper, polishing disc for FSMA, instruction sheet

Demo and assistance toolkit "Naria Security" (KITD001A001N)

This toolcase contains:

- Connectorization kit:cutter, crimping tool, automatic cable stripper, 20 FSMA connectors, polishing disc for F-SMA, 5um sand paper.
- LiteFENCE on a panel (battery powered), patchcord in plastic fiber with transparent jacket, to see the light signal passing through the fiber and understand how the analyser works, patch cord with black jaket (anti-UV), samples of fixing bolts: tensioning bolt, drilled bolt, fast bolt, fast bolt for anti-rodent cable, easy bolt, clip.

www.nariasecurity.it

NEW

ALARMED SECURITY BARS

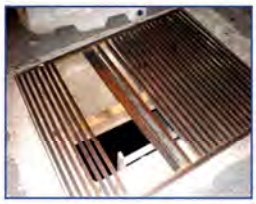
DETECT WHEN SECURITY BARS ARE CUT OR BENT

NO FALSE ALARMS

In spite of their thickness, traditional security bars on windows, air vents, automatic dispensers, etc. can be removed by burglars, and the security of people and objects is no longer guaranteed.

Naria Security has developed *Alarmed Security Bars*, a new generation of security bars, which combine their physical thickness to in-built alarm sensors. The sensors inside the bars detect if they are **cut**, **bent** or **torn off**, triggering an alarm. The sensors have a relay output which can be connected to any alarm panel.

This system is very **user friendly**, does not interfere with the habits of everyday life and is perfectly compatible with the presence of plants or animals. **As these sensors are not sensitive to vibrations, this alarm system is totally free of false alarms.**
In addition to this, the alarm system inside the bars is permanently active and there's no need to switch it on/off.



These bars can also be employed on big industrial windows, where traditional bars are too heavy to be mounted on.

These *Smart Security Bars* can be used in various **industrial** and **residential** applications: air vents, windows, automatic dispensers, grills, etc.

Naria Security has developed the alarm sensors inside the bars and is able to provide custom grills of different designs, in cooperation with local professional blacksmiths.

An alarm is triggered when the bars are cut, bent or torn off

NO FALSE ALARMS
Not sensitive to vibrations

www.nariasecurity.it

NARIA
SECURITY

We spread the use of plastic fiber,
creating opportunites for ourselves and our clients.

Our objective is to distinguish ourselves
in the security market
by creating products that,
thanks to plastic fiber,
protect people and property
in a new way,
simply and without false alarms.

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MADE IN ITALY

It's easy...

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