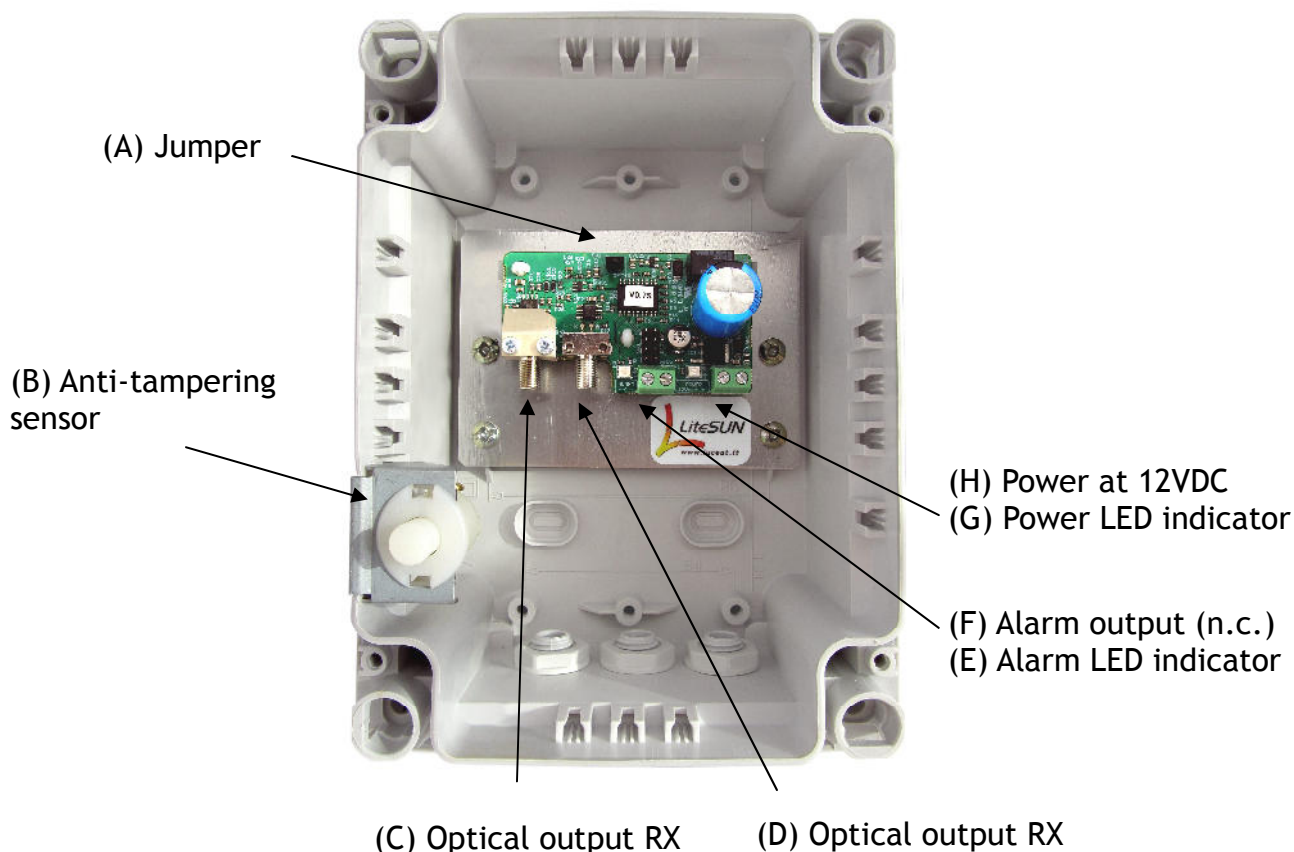




NEW LITESUN

QUICK INSTALLATION MANUAL



Power	9-12 VDC
Consumption at 12V	110mA max
Alarm output	0,2 A/230VAC 1A/24 VDC
Anti-tampering sensor	Mechanical (IP55)
Optical power budget	-30dBm (equal to ca. 300m* of plastic fiber LiteWIRE)
Plastic optical fiber	LiteWIRE Simplex with anti-UV filters
Operating temperature	-20 °C ~ 60 °C
Dimensions	19x13x8 cm
Weight	500g

The jumper (A) is usually inserted: in this mode, the alarm is not propagated along the fiber, so you can have independent alarm zones also in case of cascade connection

(No. analysers= No. alarm contacts)

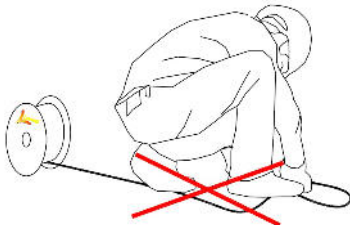
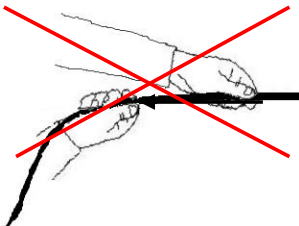
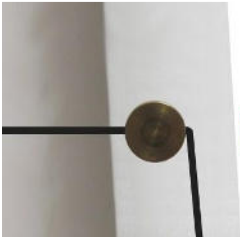
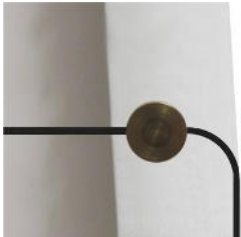
If the jumper (A) is taken away, the alarm is propagated along the fiber, so in case of cascade connection this results in a single alarm zone

(No. analysers= 1 single alarm zone)

* **This distance is reachable with a correct installation with fiber attenuation <0.1 dB/m at 525nm.
(Sharp curves, cable ties or mechanical stress while placing the fiber can reduce the distance)

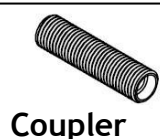
General precautions

Plastic fiber is very resistant and does not break, but bends and angles may reduce, also significantly, the maximum distance of the system

Do not tread or walk on the LiteWIRE cable	
Do not pull hard on the cable LiteWIRE	
Minimum bending radius is 2.5 cm	
Do not make narrow angles	 NO!  OK!
Do not over-tighten cable ties	



Do not pass the fiber directly through framework holes: use the special bolts/pins
Do not drill the solar panels (it could invalidate the warranty)



You can splice the cable mechanically.

N.B. Each coupler reduce the max. distance of the system by 2 dBm (about 20m)



How **NEW LiteSUN** works

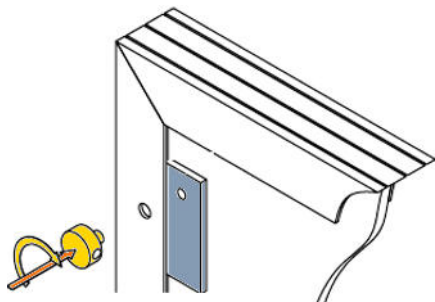
This device contains a transmitter (D) and a receiver (C) for plastic optical fiber, and a normally closed relay output (F). The transmitter inside the device emits an encrypted light signal which goes across the fiber to the receiver. The device continually compares the emitted and the received signal. In case of no signal (due to fiber cut or no power) or in case of heavily altered signal (due to cable damages, not to a simple bend of the fiber), the device opens the relay triggering the alarm: the alarm LED indicator (E) glows.

The NEW LiteSUN does not requires any settings, and it can work as:

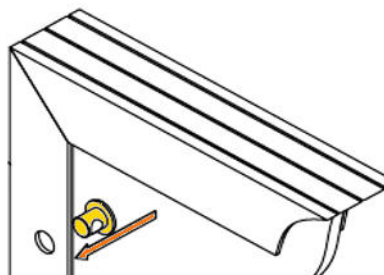
- transceiver (tx + rx): if the fiber is laid as a loop, i.e. if the fiber goes out and returns to the same device
- transmitter (TX) or receiver (RX): if the fiber exits a device and enters another device making simple fiber links (no loops).
- amplifier: if the fiber enters and exits the same device, which amplifies the signal for further 300m (approximately)

1 - Fix the bolt or the drilled pin to the panel

Bolt for ground mounted panels

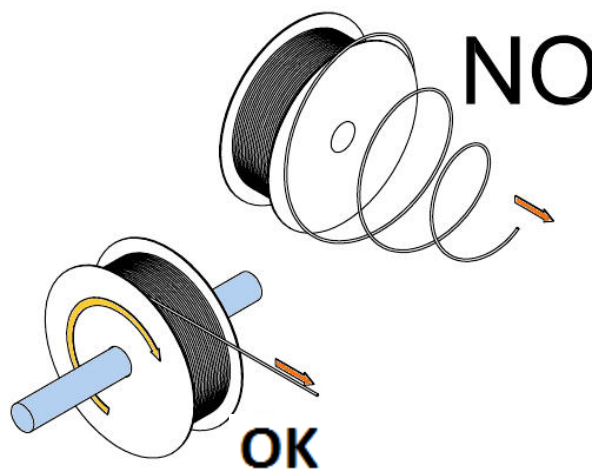


Drilled pin for roof mounted panels



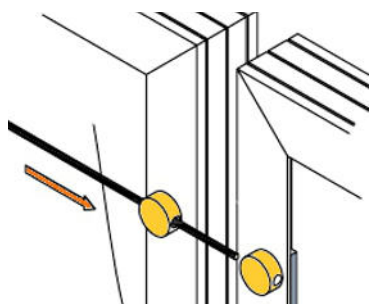
2 - Un-spool the cable

Use a cable dereeler to prevent the cable from twirling

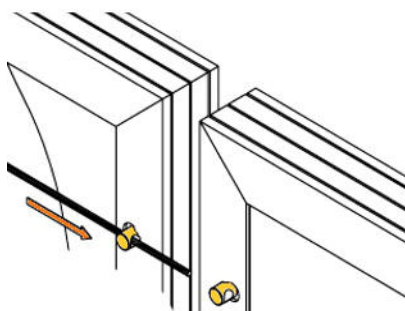


3 Pass the fiber through the bolts or the pins

Bolt for ground mounted panels

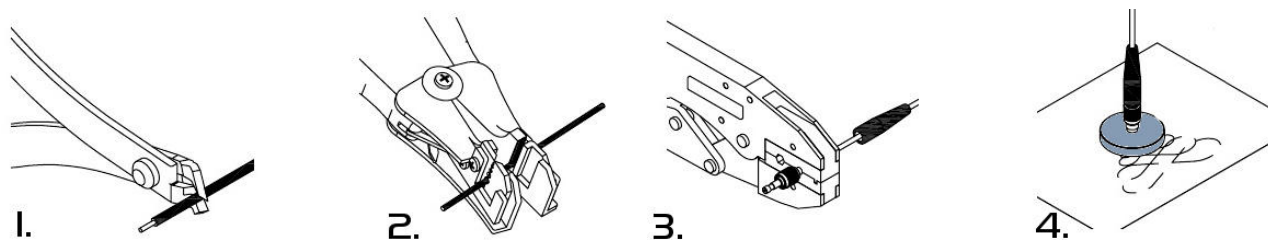


Drilled pin for roof mounted panels



4 - Insert the LiteWIRE fiber into the cable glands of the IP55 casing

5 - Crimp the FSMA connectors on the fiber



6 - Connect the cable to the device

7 - Power the device (e.g. to the battery of the alarm panel)

After powering the device, the Power LED indicator (G) will glow.

8 - Make sure that the device has operating margin

To avoid false alarms, make sure that the device has enough operating margin in this way:

- unscrew the FSMA connector and pull it out bit (less than 1mm)

OR

- bend both fibers over a diameter of around 20mm, e.g. around two fingers.

In both cases, if the system triggers an alarm, we suggest checking the way the cable has been installed (e.g. if there are sharp angles, remove them; if the cable has been fastened with over-tightened cable ties, loosen them a bit). Then, check the operating margin again and, if the cable has been placed correctly, put an additional NEW LiteSUN half way, which will work as a signal amplifier.

9 - Connect the alarm zone (F)

The circuit is normally closed, so the alarm relay is closed .

In case of disconnection, fiber break, no signal or no power, the circuit opens and the alarm is triggered.

Connect the alarm relay (F) to the alarm panel, adding the anti-tamper contact in series.

Luceat S.r.l.
Via A.Canossi,18
25030 Torbole Casaglia (BS) - Italy
Tel. +39 030 9771125
Fax +39 030 5533158
sales@luceat.it

www.luceat.it

