



COPPER WIRE Security

**LITECOPPER: COPPER WIRE SECURITY
AND ALARM FOR MANHOLE OPENING**

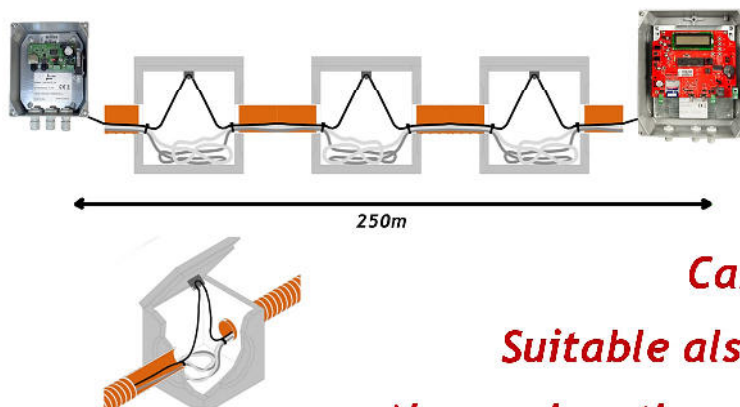
**INVISIBLE PROTECTION
100% RELIABLE**

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

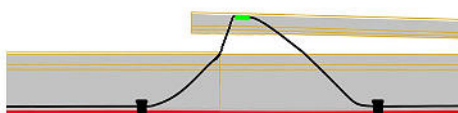
Quick installation

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



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** normally 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.