LineProtect

Module to protect devices on the Fibra line from short circuits and sabotage

Increased security for wired devices with LineProtect Fibra

LineProtect is a module to protect the Fibra line and devices from electrical sabotage. If an intruder tries to damage the security system and, for example, hits the StreetSiren Fibra with a stun gun, LineProtect will take the hit. All devices between LineProtect and the hub will continue to operate. The module can be installed at any point of the Fibra line. It can extend the Fibra line by an additional 2,000 m[1]. LineProtect inherits all the advantages of Ajax smart devices: it is easy to control the module from the app, receive event notifications, and configure or test LineProtect remotely.

Protection from ● short circuit ● overvoltage ● applying 110/230 V ● shock with a stun gun	Can be installed at any point of the Fibra line	Fibra wired connection Two-way communication, TDMA, Encryption, Protection against spoofing, Protection against short circuit	Up to 2,000 m distance of wired communication with an Ajax hub	Additional length of Fibra line + 2,000 m for each LineProtect output[1]
Informative notifications in the app **Office:** Short-circuit failure on the output line, LineProtect Fibra in Corridor. **Production:** Signal lines overvoltage failure, LineProtect Fibra in workshop № 1.	Remote control and configuration	Low power consumption up to 0.17 W	Tamper alarm when mounted into Case [2]	Compliance Grade 3 (EN 50131) PD 6662:2017

Compatible hubs

● Hub Hybrid (2G)
● Hub Hybrid (4G)

Protect against electrical shock

LineProtect Fibra protects Ajax hubs and wired devices from sabotage when an intruder causes short circuits, applies 110/230 V~, or uses stun guns. The module monitors the input and output voltage on the Fibra line. If LineProtect detects an abnormal voltage on the line, it activates the fuses and cuts off the power supply to the devices installed between LineProtect and the hub. Note: LineProtect does not protect devices between the module and the end of the line.

Protecting Fibra devices from:

Short circuits	Applying 110/230 V~	Stun guns	High voltage on the Fibra line

Easy to mount into Case

LineProtect is inserted into Case. This casing has an optimal arrangement of wire channels, special holders for the module, and the tamper module. Several variations of casings are available. You can mount one LineProtect module into Case or fit several devices.The required minimum number of casings can be selected for the facility's needs, which saves the budget and speeds up the installation of the security system.

Adapt innovative software to any system

LineProtect is designed to respond to threats quickly without giving intruders a single chance to sabotage the security system. We have developed a unique software algorithm to analyse the line to which LineProtect is connected. During the Lines Power Test, the module receives enough information to set its thresholds for detecting a short circuit and normal voltage values. The algorithm considers all critical parameters to select the optimal thresholds for maximum system protection.

- Analyses devices and cable lengths on the line
- Using software algorithms to detect sabotage as quickly as possible

Unique wired technology

Fibra is a protocol to ensure fast and secure two-way wired communication between the hub and connected devices. Fibra delivers instant data-rich notifications: security companies and users know which device was triggered, when, and where it happened.

Fibra features encryption and authentication to prevent spoofing and polling to display the current statuses of the devices. Supporting up to 2,000 m of wired connectivity, Fibra is ready to protect any object and deliver the best user experience for both system owners and installers.

Even more, can be installed at any point of the Fibra line. Each LineProtect extends the Fibra line by an additional 2,000 m^3. Any Fibra device can be connected to the module: opening or glass breaking detectors, sirens, detectors with photo verification, etc.

Encrypted two-way communication	Connect any Fibra device to the line	Fibra line extension up to 2,000 m[1]

Energy efficiency first

The module consumes up to 0.17 W at peak consumption times. With such low power consumption, an installer can connect more devices to a single Fibra line and lengthen the wired connectivity.

Fibra communication follows the TDMA principle. Each device has a short time frame to exchange data with a hub. The rest of the time, their communication modules are inactive. This significantly reduces power consumption and helps avoid interferences even when multiple devices communicate simultaneously.

- Module's consumption is up to 0.17 W
- TDMA and power-saving modes

Sabotage resistance

Tamper alarm[4]	Device authentication against spoofing
The casing where LineProtect is installed has a tamper module that warns a monitoring company and system users about an attempt to open Case or detach the casing from the wall	The hub checks the device's unique parameters for authentication during each communication session. If any parameter fails the check, the hub ignores device commands.
Encryption of transmitted data	Event notifications
All data the system stores and transmits is protected by block encryption with a dynamic key. Encryption makes it extremely difficult to connect to the module with the intention of sabotage.	The monitoring station instantly receives notifications on events. The information includes time, device type and name, event type, and location room[5].
Communication failure detection	
The device regularly exchanges data with the hub. With minimal polling settings (3 data packages in 12 seconds), it takes 36 seconds to identify communication loss and notify the security company and users about the incident.	

Convenient to work for PROs

Installing a wired system is always a challenge. We have taken care of the quick installation of LineProtect Fibra. The module is installed into Case and can be mounted in just a few minutes. With few clicks, it can be connected to the hub in iOS, Android, macOS, and Windows apps. Installers can configure the device remotely in the Ajax apps.

Fibra power supply calculator

Use our online calculator to ensure the Fibra system covers your facility. It helps verify the project of a wired security system and provides additional information for installers.

Installation

- Installation into Case
- Case has special holders to secure the module
- Jumper included

LineProtect Fibra is installed into Case, which has an optimal arrangement of channels for wires, special holders for the device, and the built-in tamper module. There are several variations with different sizes of casings. Installation kit with dowels and screws included. No tools are required to install LineProtect into Case.

Setup

- Pairing with a hub via line scanning or QR code
- Device identification via triggering or LED indication
- Optimal default settings

Installers can add a module in two ways: automatically scanning lines or scanning a QR code. When scanning lines, there are two ways to identify the desired device: by clicking in the app or tamper activating. When an installer adds a device, it will immediately have a default name and settings are suitable for most cases.

Configuration

- Configuration and testing remotely and on-site
- Desktop and mobile apps
- Accounts for companies and installers

Forget about configuring via the keyboard. All testing and configuration can be done in mobile and desktop Ajax apps. An installer can work both on behalf of the company and as a sole installer.

Monitoring

- Fully addressability of the device
- Instant notifications in Ajax apps
- Alarm and event monitoring in **PRO Desktop** for monitoring companies

With proprietary protocols, any Ajax system can transmit alarms to the PRO Desktop monitoring app and third-party CMS. When an alarm is received, the monitoring station operator knows what happened and where the rapid response unit has to be sent. All Ajax devices are addressable, so events, the device type, its assigned name and room can be transmitted to PRO Desktop or third-party monitoring software.

1 — LineProtect Fibra does not provide additional power supply to the line.
2 — Notification of attempts to break or open Case. Case is sold separately.
3 — When using a twisted pair cable UTP cat. 5. Other cables may have different values.

4 — Case has tamper boards. These boards are connected to the LineProtect terminals (indicated as TAMPER on a device board). LineProtect itself does not have a tamper.

5 — The list of transmitted parameters may differ depending on the type of the CMS and the selected communication protocol.