Automations- und
Steuerungstechnik GmbH

Product description

KNXGuard

The EIB security device

Order codes:
KNXGuard highest security: E001-H017001
KNXGuard high security: E001-H017002
KNXGuard customized: E001-H017003

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Contents

Highlights

- Protects your EIB system from unwanted programming access
- Alarming
- Can be used as an ACK device
- No physical address needed

Fields of application

- Protection of EIB-installations against sabotage

Contents of delivery

- KNXGuard
- Documentation

Introduction

Many of our customers asked for protection against unwanted access and sabotage in their EIB systems.

Everybody can use the ETS software, connect to the EIB, and read or even write the installed devices. A password can be activated with newer BCU2 devices, but of course this password can get spied out.

Example 1:
There is much work involved in programming an EIB system. But all that work can get easily destroyed if somebody would delete, for example, all the addresstables or physical addresses of the installed devices.

To repair such an attack, each and every device has to be found, to activate its programming button. If another device now already is parametrized with this physical address, this device has to be found first, to repair its address. And if the devices are installed inside of walls or ceilings, the costs would get extremely high.

Example 2:
Your own customer "optimizes" the EIB device settings. Of course shortly after he will call you because his EIB system doesn't work right anymore. You try to correct the settings, changing EIS types of the new group addresses, etc. But still it may happen that some changes will not be noticed on the spot (or ever), the EIB system reacts strangely. But now you have been the last person making changes to the EIB, you have to grand the correct function. A situation which often leads to court.

Example 3:
Your customer doesn't pay your work on his EIB installation, and claims that there are problems. Another company now is reading and changing the EIB system, to repair the claimed problems – and fails – the EIB now really doesn't work anymore. The question in court will be: who is responsible for the problems? Your original installation, or the later done changes?

Example 4:
In a big house with several families (each appartment has its own EIB line, connected on a common backbone) one family member opens up the filter tables in the line couplers and sends ‚funny telegrams‘ to the other appartments. Or he is reprogramming devices in the other lines. Or, most fatal: he changes the port direction registers inside the devices, and damage them beyond repair.

The KNXGuard device will protect you from all of this.

The different KNXGuard types:

To program a bus device, a point-to-point connection has to get established (physical telegrams), to „open" the device and send the physical programming telegrams.

KNXGuard type "Highest security "
The „Highest security" KNXGuard will prevent any physical telegrams on the EIB. That way it is impossible to change anything in any device.

KNXGuard type "High security "
Some physical telegrams will be allowed on the bus: the reading telegrams. Therefore devices can get read or polled, but still no physical writetelegrams are possible.

KNXGuard type "User defined"
That type is having the same functions as the „High security" device, but you can activate/deactive this type of KNXGuard by sending special telegrams (using the EIBDoktor). The telegrams will be send to the broadcast address 15/7/255, inside the telegram is the serial number of the KNXGuard and a special security code, using an RSA algorithm: somebody else can protocol the telegrams to deactivate the KNXGuard, but that will be useless, since the telegrams are only correct at a special time, so sending the same telegram later is having no effect at all.

Requirements for all KNXGuard devices:
You have to install an KNXGuard into every line you want to protect: security on the „backbone" will not grand security in lower lines most times.

Alarming
You can define an „Alarming group address", the KNXGuard will send a telegram to this address each time somebody is trying to do an illegal access. This telegram can be used to display a warning inside a visualization software, for example.

ACK functionality
The KNXGuard also acts as an „ACK device", which means that it will acknowledge all groupaddress-telegrams, and prevents unneccessary busload this way. This will not affect the function of the EIB, damaged telegrams will still get repeated.

No physical address
The KNXGuard acts as an „invisible" device, it will not get used inside the ETS project. The ETS is also not able to detect the KNXGuard. Therefore the KNXGuard does not need a physical address.