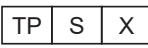


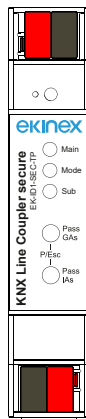
KNX Line Couple secure

Code: EK-ID1-SEC-TP



Datasheet STEKID1SECTP_EN

Secure KNX line coupler with a compact design. Connects two KNX bus segments (e.g., a KNX line to a KNX area). It features an integrated KNX bus communication module and is designed for 35 mm DIN rail mounting. Power is supplied via the KNX bus.



REFUD1SECTPD

Description

The ekinex® KNX LineCoupler secure EK-ID1-SEC-TP is a KNX line coupler in a compact design. It connects two KNX bus segments (for example, a KNX line with a KNX area).

The device has an extended filter table for main group 0...31 and ensures a galvanic isolation between the lines. The coupler supports KNX Data Security and KNX Long Frames. It is compatible with the ETS® software ETS 5 or higher. The functionality of Security Proxy and Segment Coupler is only supported with the ETS 6 database.

The buttons on the front panel allow disabling the telegram filter for testing purposes. The LEDs indicate operating conditions as well as communication errors on the KNX bus.

The power is supplied via the KNX bus (main line).

Main functional characteristics

KNX

- Medium TP/TP
- KNX Security (AES-128) (incl. Security Proxy)
- KNX Segment Coupler
- Extended filter table for main group 0...31

Controls and indicators

- 2 buttons and 3 LEDs (multicolor)
- KNX programming button with LED (red)

Technical data

Power supply

- 30 Vdc from KNX bus line
- Current consumption: KNX main line approx. 5 mA, KNX sub line approx. 3 mA

Connectors

- Connector for KNX TP main line (red/black)
- Connector for KNX TP sub line (red/black)

Environmental conditions

- Ambient temp. operating: - 5 ... + 45 °C
- Ambient temp. non-op.: - 25 ... + 70 °C
- Rel. humidity (non-condensing): 5 ... 93 %

Other characteristics

- Housing in plastic material (PC)
- Mounting on 35 mm rail (according to EN 60715)
- Protection degree IP20 (installed device, according to EN 60529)
- Appliance class III (according to EN 60664-1)
- Classification climatic 3K5 and mechanical 3M2 (according to EN 50491-2)
- 1 modular units (1 unit = 18 mm)
- Weight 40 g
- Dimensions (WxHxD): 17.8 x 90 x 60 mm

Switching and display elements

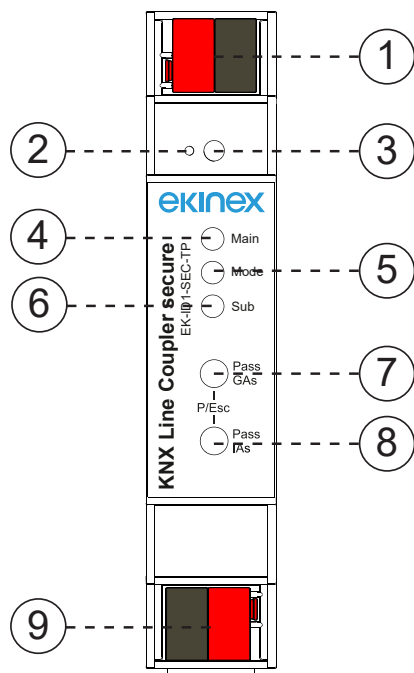
The device is equipped with a programming pushbutton and a programming LED, two operating buttons, three LEDs for status indication, two KNX bus connectors for the main line and the sub line.

Switching elements

- Pushbutton (3) for switching between the normal and programming operating mode. This operation can be done by simultaneously pressing the pushbuttons (7) and (8) as well;
- Pushbuttons (7), (8) to perform the following operations:

a) With the button **Pass GAs** (7), the forwarding of group addressed telegrams can be activated

b) With the button **Pass IAs** (8) the forwarding of individually addressed telegrams can be activated.



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- Multicolor LED Mode (5): the indications are listed in the following table:

LED status	Meaning
LED lights green	Device is working in standard operation mode.
LED light red	Programming mode is active.
LED flashes 1x orange	Programming mode is not active.
LED flashes 2x orange	Manual operation is active: Forwarding IA or GA
LED flashes red	Programming mode is not active.
LED flashes green	Manual operation is not active.
LED flashes green	The device is not loaded correctly, e.g. after aborting a download.
LED flashes green	The device is currently loaded by the ETS

For detailed information on configuration options, refer to the application manual of the device.

Display elements

- Red LED (2) for displaying the active operating mode of the device (on = programming, off = normal operation)
- Multicolor LED Main (4), that behaves as described in the following table:

LED status	Meaning
LED lights green	KNX bus power active (main line)
LED flashes green	Telegram traffic on the KNX bus (main line)
LED briefly red	Communication error on the KNX bus (main line)

- Multicolor LED Sub (6), the indications of which are listed in the following table:

LED status	Meaning
LED lights green	KNX bus power active (sub line)
LED flashes green	Telegram traffic on the KNX bus (sub line)
LED briefly red	Communication error on the KNX bus (sub line)

Mounting

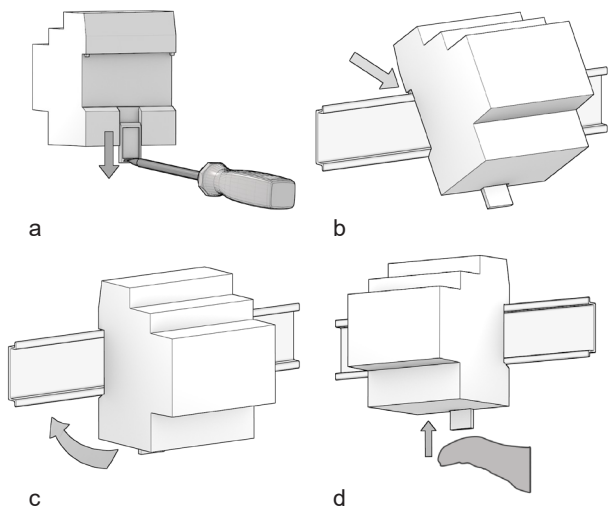
The device has degree of protection IP20, and is therefore suitable for use in dry interior rooms. The housing is made for rail mounting according to EN 60715 in boards or cabinets for electrical distribution.



Warning! The electrical connection of the device can be carried out only by qualified personnel. The incorrect installation may result in electric shock or fire. Before making the electrical connections, make sure the power supply has been turned off.

For the installation of the device on the rail proceed as follows:

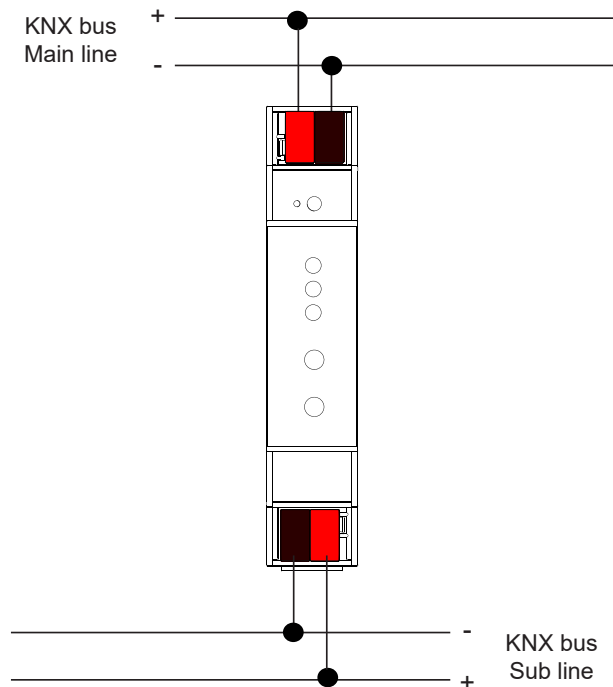
- with the aid of a tool bring the locking device in the fully lowered position (a);
- place the upper edge of the rear inner profile on the upper edge of the rail (b);
- rotate the device towards the rail (c);
- push the locking device upward until it stops (d).



Before removing the device, be sure the bus terminal has been extracted from its slot. Use a screwdriver to slide down the locking device and remove the device from the rail.

Connection of the KNX bus line

The connection of the KNX bus main line is made with the terminal block (1) included in delivery and inserted into the slot of the housing. Similarly, the connection to the KNX bus sub line is made via the door terminal (9), included in the package and inserted in the appropriate housing.



Warning! In order to supply the KNX bus lines use only KNX bus power supplies (e.g. ekinex EK-AH1-TP or EK-AM1-TP). The use of other power supplies can compromise the communication and damage the devices connected to the bus.

Characteristics of the KNX terminal block

- spring clamping of conductors
- 4 seats for conductors for each polarity
- terminal suitable for KNX bus cable with single-wire conductors and diameter between 0.6 and 0.8 mm
- recommended wire stripping approx. 5 mm
- color codification: red = + (positive) bus conductor, black = - (negative) bus conductor

Configuration and commissioning

In the factory default settings, the device has the physical address 15.15.0. Also, KNX Data Security is disabled and the initial key (FDSK) must be used for secure commissioning.



Note. The configuration and commissioning of KNX devices require specialized skills. To acquire these skills, you should attend the workshops at KNX certified training centers.

The device can work as a line or area coupler, as a segment coupler, or as a repeater (only with ETS5). For configuration details, please refer to the application manual.

Commissioning

For commissioning the device the following activities are required:

- make the KNX bus connections as described above;
- turn on the bus power supply;
- switch the device operation to the programming mode by pressing the programming pushbutton located on the front side of the housing.
- Download into the device the physical address and the configuration with the ETS® program.

At the end of the download the operation of the device automatically returns to normal mode; in this mode the programming LED is turned off. Now the bus device is programmed and ready for use.

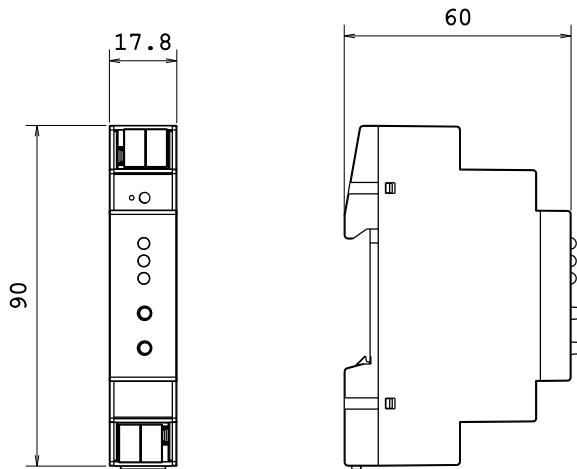
Reset to factory default settings

It is possible to reset the device to its factory default settings.

- Disconnect the KNX bus connector (main line) (1) from the device;
- press the KNX programming button (3) and keep it pressed down;
- reconnect the KNX bus connector (main line) (1) to the device;
- keep the KNX programming button (3) pressed for at least another 6 seconds;
- a short flashing of all LEDs (2)-(4)-(5)-(6) visualizes the successful reset of the device to factory default settings.

At this point it is necessary to re-address and configure the device via ETS.

Dimensions [mm]



Marks

- KNX
- CE marking according to:
 - EMC directive 2014 / 30 / EU
 - RoHS directive 2011 / 65 / EU
 - EN 63044-3: 2018, EN 50491-5-1: 2010
 - EN 50491-5-2:2010, EN 50491-5-3: 2010
 - EN 61000-6-2: 2019
 - EN 61000-6-3: 2007 + A1: 2011
 - EN 63000: 2018

Maintenance

The device is maintenance-free. To clean use a dry cloth. It must be avoided the use of solvents or other aggressive substances.

Disposal



At the end of its useful life the product described in this datasheet is classified as waste from electronic equipment in accordance with the European Directive 2012/19/EU (WEEE recast), and cannot be disposed together with the municipal undifferentiated solid waste.



Warning! Incorrect disposal of this product may cause serious damage to the environment and human health. Please be informed about the correct disposal procedures for waste collecting and processing provided by local authorities.

Documentation

Code	Application programme (## = version)
EK-ID1-SEC-TP (for ETS 5)	APEKID1SECTP-5##.knxprod
EK-ID1-SEC-TP (for ETS 6)	APEKID1SECTP##.knxprod

This technical datasheet refers to the A1.0 release of the ekinex® EK-ID1-SEC-TP devices and is available for download on the website www.ekinex.com in PDF format (Portable Data Format).

File name	Device release	Update
STEKID1SECTP_EN.pdf	A1.0	02 / 2026

Warnings

- Installation, electrical connection, configuration and commissioning of the device can only be carried out by qualified personnel in compliance with the applicable technical standards and laws of the respective countries
- Opening the housing of the device causes the immediate end of the warranty period
- In case of tampering, the compliance with the essential requirements of the applicable directives, for which the device has been certified, is no longer guaranteed
- ekinex® KNX defective devices must be returned to the manufacturer at the following address: EKINEX S.p.A. Via Novara 37, I-28010 Vaprio d'Agogna (NO) Italy

Other information

- This datasheet is aimed at installers, system integrators and planners
- For further information on the product, please contact the ekinex® technical support at the e-mail address: support@ekinex.com or visit the website www.ekinex.com
- Each ekinex® device has a unique serial number on the label. The serial number can be used by installers or system integrators for documentation purposes and has to be added in each communication addressed to the EKINEX technical support in case of malfunctioning of the device
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