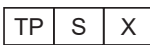


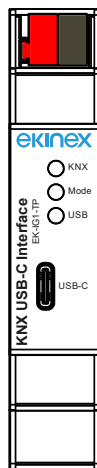
## KNX USB-C Interface

Code: EK-IG1-TP



Datasheet STEKIG1TP\_EN

Compact KNX/USB Type-C interface. Enables programming of KNX devices via ETS® software and supports KNX long telegrams. Designed for 35 mm DIN rail mounting.



REFLID1GTPD

### Description

The ekinex® KNX USB-C interface EK-IG1-TP is a data interface between a PC or laptop and the KNX installation bus.

The device can be used as a programming interface for ETS® software and supports KNX Long Frames. Long telegrams enable a faster download to devices that support these telegrams, and it is necessary for KNX Security.

The LEDs on the device indicate the operating status and communication errors on the bus. The USB connector (USB C) is galvanic isolated from the KNX bus.

Notes for developers: In addition to the telegram interface via cEMI, the KNX USB-C Interface EK-IG1-TP includes a complete KNX Stack with communication objects and BAOS protocol V2. Thus, the device offers the possibility to extend devices with USB connection to full KNX devices, which can even be programmed by ETS.

### Main functional characteristics

#### KNX

- Medium TP
- Interface protocol: HID/cEMI
- Max. APDU length: 233 Bytes
- Object Server: BAOS V2
- Device model: System B

#### Indicators

- 3 LEDs (multicolor)

### Technical data

#### Supply

- Powered by USB. An external power supply is not necessary.
- Current consumption: <15mA from KNX bus, <3mA from USB-C port Connectors

#### Connectors

- Connector for KNX TP Bus (red/black)
- USB: Connector type C, max. cable length: 5m

#### Environmental conditions

- Operating temperature: - 5 ... + 45 °C
- Non-operating ambient temp.: - 25 ... + 70 °C
- Relative humidity: 5 ... 93% not condensing

#### 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

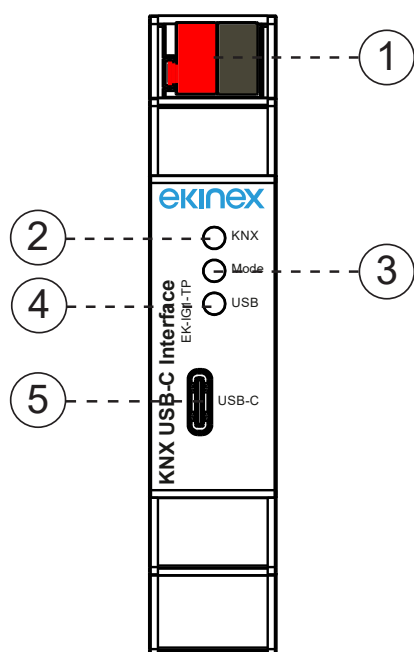
### Connection and display elements

#### Connection elements

The device is equipped with a KNX terminal (1) for connection to the KNX bus network and a female USB Type-C port (5) for power supply and wired connection to a PC or laptop.



**Note.** The device is not working without USB connection.



EK-IG1-TP

- Multicolor LED USB (4), the indications of which are listed in the following table:

| LED status         | Meaning                       |
|--------------------|-------------------------------|
| LED lights green   | USB active                    |
| LED flickers green | Telegram traffic on USB       |
| LED briefly red    | Communication failures on USB |

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

## 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.

## Display elements

The device is provided with three LEDs for status indication:

- Multicolor LED KNX (2), that behaves as described in the following table:

| LED status        | Meaning                               |
|-------------------|---------------------------------------|
| LED lights green  | KNX bus voltage available.            |
| LED flashes green | Telegram traffic on the KNX bus       |
| LED briefly red   | Communication failures on the KNX bus |

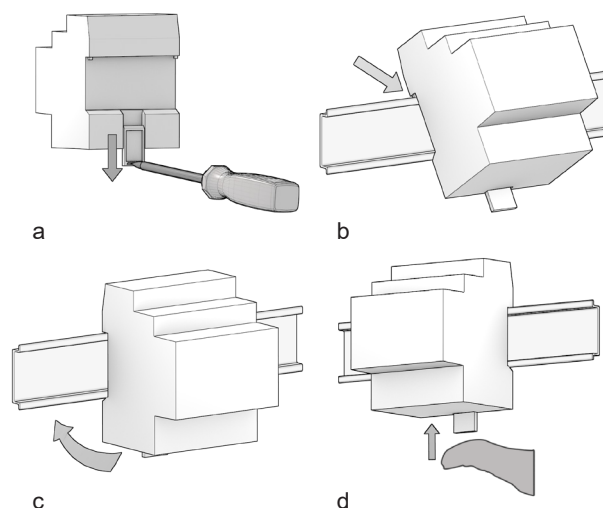
- Multicolor LED Mode (3): the indications are listed in the following table:

| LED status         | Meaning                                         |
|--------------------|-------------------------------------------------|
| LED lights green   | USB active                                      |
| LED lights red     | Programming mode is activated via BAOS protocol |
| LED briefly orange | Interface is set to bus monitor mode            |

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

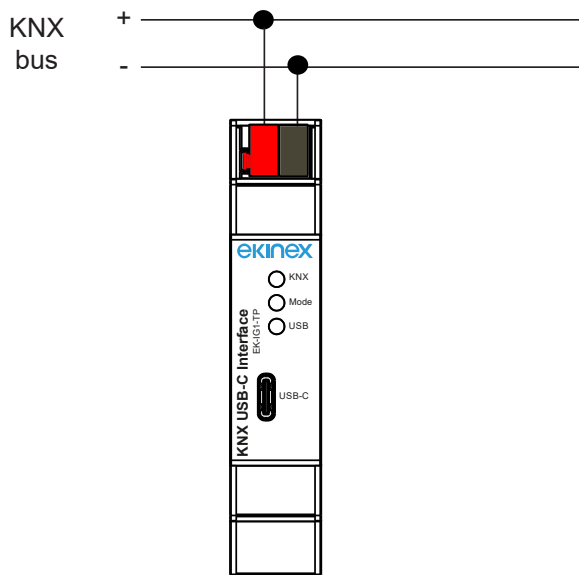
The connection of the KNX bus line is made with the terminal block (1) included in the delivery and inserted into the slot of the housing.



**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 KNX programming mode

The individual address of the interface can be set locally via the ETS. Therefore no programming button or LED is available on this device.

If programming mode is activated via the BAOS protocol, this is indicated by LED Mode (3) lighting up red.

The following configuration is set by factory default: individual address: 15.15.255.



**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.

### Interface settings in ETS 5:

In the ETS 5, interfaces can be selected and configured via the ETS menu "Bus – Interfaces". All available connections are listed under "Discovered Interfaces". After clicking on the desired connection, connection specific information and options appear on the right side of the ETS window. The device can be chosen as the "Current Interface" by double-clicking it from "Discovered Interfaces".

For detailed information on configuration options, refer to the application manual of the device available on the website [www.ekinex.com](http://www.ekinex.com)

### Interface settings in ETS 6:

In the ETS 6, interfaces can be selected and configured in the ETS project via the "Interface" button.



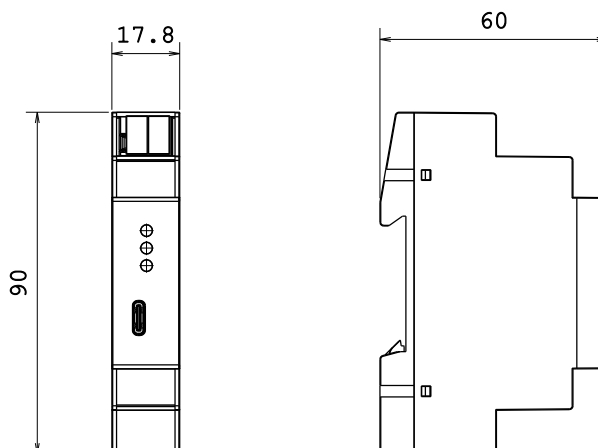
All available connections are listed here.

By clicking on a connection, this is selected as the desired interface. By clicking the gear next to the desired connection, the connection specific information and options appear.

## USB suspend

If the PC or Laptop switches to suspend mode, also connected USB devices will be suspended to save energy. Computers running MS Windows® 8.1 or higher may set unused peripherals to standby even during normal operation. In suspend mode all LEDs of the KNX USB interface are off.

## 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 program<br>(## = version) |
|-----------|---------------------------------------|
| EK-IG1-TP | APEKIG1TP##.knxprod                   |

This technical datasheet refers to the A1.0 release of the ekinex® EK-IG1-TP device and is available for download on the website [www.ekinex.com](http://www.ekinex.com) in PDF format (Portable Data Format ).

| File name        | Device release | Updated   |
|------------------|----------------|-----------|
| STEKIG1TP_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](mailto:support@ekinex.com) or visit the website [www.ekinex.com](http://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
- KNX® and ETS® are registered trademarks of KNX Association cvba, Brussels

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