



## Description

The Vivo® power supply Slim KNX is a KNX device for rail mounting which produces and monitors the 30 Vdc voltage required to operate the bus system. The Cur-sa KNX version device has a 30 Vdc additional output, which can be used as a SELV (safety extra low voltage) auxiliary power for bus devices. The device has an integrated choke which provides the decoupling between the power supply and the information on the bus line. On a KNX bus line can be connected up to 64 KNX bus devices. The output is protected from overload and short circuit. The total current absorbed by the two outputs (KNX bus and auxiliary) cannot exceed 1,2 A. The device can support short interruptions of the mains voltage (max >100 ms).

## Function

- 30 Vdc SELV power supply for a KNX bus line with max 64 connected devices
- Auxiliary power supply 30 Vdc
- Reset of the connected bus line with a dedicated pushbutton or through Bus
- Diagnostic and warnings on KNX Bus
- Warnings on bus and on LED of the operational temperature
- Operational time on KNX Bus
- Warning in case of short circuit and data about the power consumption of the devices connected on the line.

## Main characteristics

- Housing in plastic material
- Mounting on 35 mm rail (according to EN 60715)
- Protection degree IP20 (installed device)
- Classification climatic 3K5 and mechanical 3M2 (according to EN 50491-2)
- Pollution degree 2 (according to IEC 60664-1)
- 2 modular units (1 UM = 18 mm)
- Dimensions: 36 x 90 x 70 mm (LxHxD)

Code	Weight [g]
K.SLI.01A.20N.EU	180

## Environmental conditions

- Operating temperature: - 5 ... + 45°C
- Storage temperature: - 25 ... + 70°C
- Relative humidity: 93% not condensing

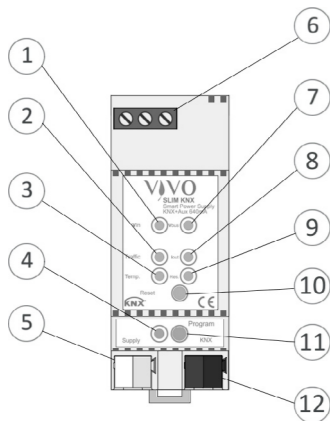
## Technical data

### Power supply

- Voltage 230 Vac, 50/60 Hz
- Power consumption 23 W (power losses < 3 W)
- Input current 0,1 A

### Output

- TBus line voltage: 30 Vdc +1/-2 Vdc SELV
- Auxiliary voltage: 30 Vdc SELV
- Rated current (total outputs): 1200 mA
- Buffer time: 100 ms
- Bus line connection: KNX terminal block (black/red) included in delivery
- Auxiliary output connection: dedicated terminal block (yellow/white)



- 1) Input voltage status LED
- 2) Telegram traffic status LED
- 3) Device temperature status LED
- 4) Programming LED
- 5) Auxiliary output connector
- 6) Device power supply
- 7) KNX Bus voltage status LED
- 8) Output current status LED
- 9) Device reset LED
- 10) Reset button
- 11) Programming button
- 12) KNX Bus line connector

## Switching, display and connection elements

The device is equipped with a reset pushbutton, 6 LEDs and terminal blocks for mains voltage 110/230 Vac, KNX bus line and auxiliary output.

## Planning

Planning a KNX bus installation, the use of a 640 mA power supply unit requires to take into account the following guidelines:

- the maximum number of bus devices connected is 64;
- the maximum length of a line segment is 350 m, measured along the line between the power supply and the furthest bus device;
- the maximum distance between two bus devices cannot exceed 700 m;
- the maximum length of a bus line is 1000 m, keeping into account all segments.

At the same bus line can be connected not more than two power supplies. A second power supply may be necessary when the installation in distribution boards requires a particular concentration of the bus devices (typically more than 30 units installed within 10 m). In this case a power supply has to be installed near the group of devices. Between two power supplies installed on the same bus line a minimum distance of 200 m is



**Warning! In order to supply the KNX bus line use only a KNX bus power supply (e.g. Vivo Slim KNX). The use of other power supplies can compromise the communication and damage the devices connected to the bus.**

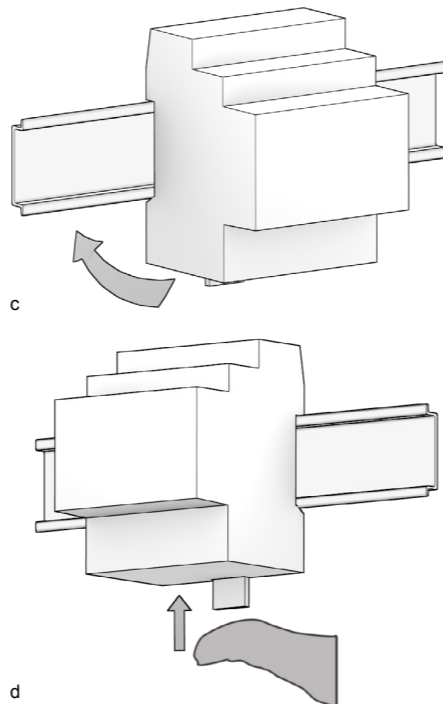
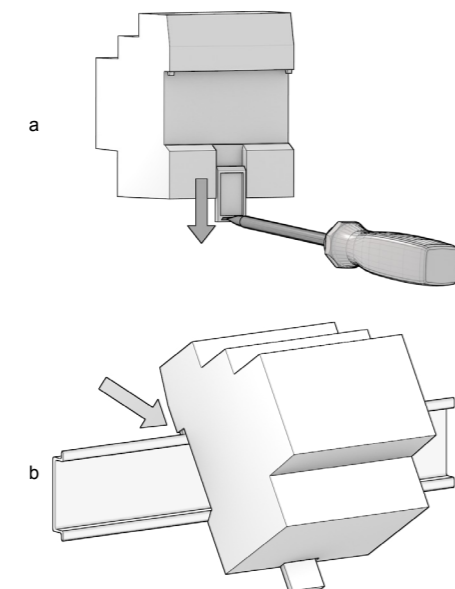
required, measured along the line.

## 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. The installation is in horizontal position, the correct position is when the terminals for KNX bus line and auxiliary output are located at the bottom and the terminals (L, N) for connecting the mains power supply 110/230 Vac are located at the top. 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 terminals for bus and auxiliary output have been extracted from their slots. Use a screwdriver to slide down the locking device and remove the device from the rail.



## Electrical connections

### Main supply 110/230 Vac

The connection to the 110/230 main supply Vac is made with screw terminals (L, N) located on the



**Note.** When mounting the device in boards and cabinets it shall be provided the necessary ventilation so that the temperature can be kept within the operating range of the device.

upper front of the device. Characteristics of the terminal blocks:

- screw clamping of conductors
- maximum cross section of conductor 2.5 mm<sup>2</sup>
- recommended wire stripping approx. 6 mm
- torque max 0.5 Nm

### KNX bus line

The connection to the KNX bus line is made with the terminal block (black/red) included in delivery and inserted into the slot located on the left bottom part of the front. 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



For the connection of the auxiliary output and the powered devices it is recommended to use a cable with a sheath of a different color than the cable connecting the KNX bus line.

### Auxiliary output

The 30 Vdc auxiliary output has a dedicated connection terminal block (yellow/white) included in the delivery and inserted into the slot located on the right bottom part of the front. The terminal block for the auxiliary output has a color coding different than the terminal block for the connection to the KNX bus. Characteristics of the 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: yellow = + (positive) conductor, white = - (negative) conductor

For the connection of the auxiliary output and the powered devices it is recommended to use a cable with a sheath of a different color than the cable connecting the KNX bus line.

## Configuration and commissioning

### Configuration

The device require any configuration with ETS® (Engineering Tool Software) tool. The application software are available in order to add to an ETS project an Slim KNX power supply.

### Commissioning

For the commissioning of the device turn on the mains power supply 230 Vac to which the device is connected. The green LED marked "ON" indicates the device operating.



**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.**

## Reset

The device has a reset pushbutton. After a reset, the bus line is not powered for 10 seconds and the bus devices connected are restored to their original condition. During this interval of time the reset LED (red) is turned permanently on.

## Failure

When the red LED (8), is turned on, this means that the KNX output is overloaded or short-circuited. The problem can be solved by removing the cause of the short circuit or by reducing the number of KNX devices connected to the line. After the removal of the problem the LED (8) come back green, at this time it is recommended to reset the line.

## Marks

- KNX
- CE: the device complies with the Low Voltage Directive (2006/95/EC) and the Electromagnetic Compatibility Directive (2004/108/EC). Tests carried out according to EN 50491-5, EN50581, EN60950-1, EN61000-6

## 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 2002/96/EC (RAEE), and cannot be disposed together with the municipal undifferentiated solid waste.

## Warnings

- Installation, electrical connection, configuration and commissioning of the device can only be carried out by qualified personnel
- The power supply line to which the device is connected must be equipped with an easily accessible

- disconnecting device with minimum separation distance between contacts of 3 mm
- 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
- Vivo® KNX defective devices must be returned to the manufacturer at the following address: Vivo Suisse Sagl, Via Calloni 1, CH 6900 Lugano



**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.**

## Other information

- The instruction sheet must be delivered to the end customer with the project documentation
- For further information on the product, please contact the Vivo® technical support at the e-mail address: customerservice@vivoknx.com or visit the website www.vivoknx.com
- Each Vivo® 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 Vivo technical support in case of malfunctioning of the device
- Vivo® is a registered trademark of Vivo Suisse Sagl
- KNX® and ETS® are registered trademarks of KNX Association cvba, Brussels

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## Smart Power supply KNX 640mA + auxiliary output 30Vdc Slim KNX

Code: K.SLI.01A.20N.EU



Its a registered brand of

## Vivo Suisse Sagl

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