Power Supply Systems KNX PS640 and KNX PS640 USB

Item numbers 70140, 70143 (USB)

Technical Data and Installation Notes

Contents

Description

The Power Supply Systems KNX PS640 and KNX PS640 USB deliver a 29 V bus voltage for the KNX system and 24 V DC supply voltage for 24 V devices. Special operating conditions such as short circuit, overvoltage, overload or excess temperature are recorded and may be read off on the display. The present power discharge is displayed as well. It is possible to reset the connected bus devices directly by means of the key pad.

Functions:

- Delivers a **29 V KNX bus voltage** (reduced), output current max. 640 mA, short-circuit proof
- Delivers **24 V DC** (not reduced), output current max. 150 mA
- **Reset** of a line directly on the device
- Record of operating hours, overload, external overvoltage, internal overvoltage, short circuit and excess temperature
- Display of operating data bus voltage, bus current and temperature of the device
- The display may be shown in German, English, Spanish or Dutch
- Only **KNX PS640 USB**: USB interface for bus access via PC

Technical data

Housing	Plastic material
Colour	White
Mounting	Snap-on fitting on mounting rails
Protection category	IP 20
Dimensions	approx. 123 x 89 x 61 (W x H x D, mm), 7 width units
Weight	approx. 370 g
Ambient temperature	Operation -5…+45 °C, storage -25…+70°C
Ambient air humidity	max. 95% RH, avoid bedewing
Operating voltage	230 V AC , 50 Hz
Power consumption Standby	approx. 2.3 W
Outputs	• KNX bus voltage 29 V (reduced), Output current max. 640 mA, short-circuit proof • 24 V DC (not reduced), Output current max. 150 mA

The product conforms with the provisions of EU directives.

Installation and Commissioning

Installation notes

Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.

DANGER! Risk to life from live voltage (mains voltage)!
There are unprotected live components inside the device.
• VDE and national regulations are to be followed.
• Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
• Do not use the device if it is damaged.
• Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

Installation

Observe the correct installation. Incorrect installation may destroy the power supply system or connected electronic devices.
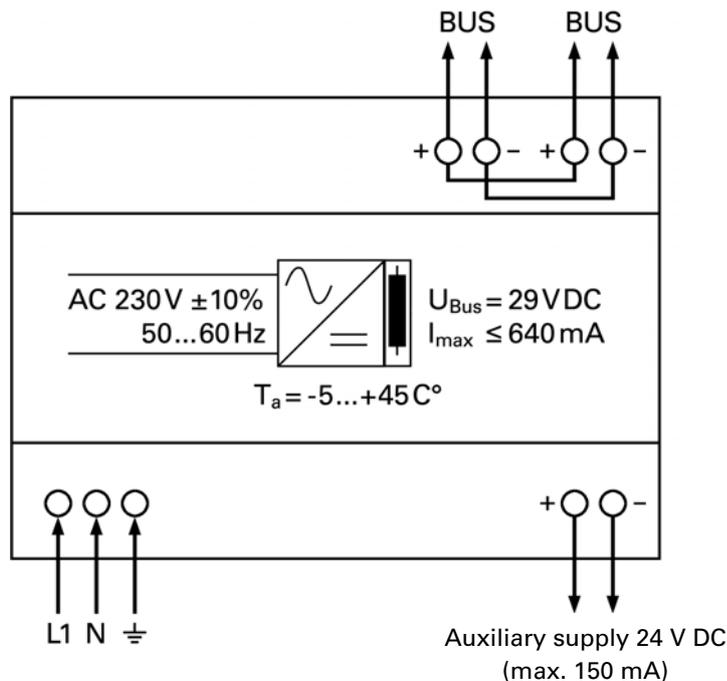
Housing
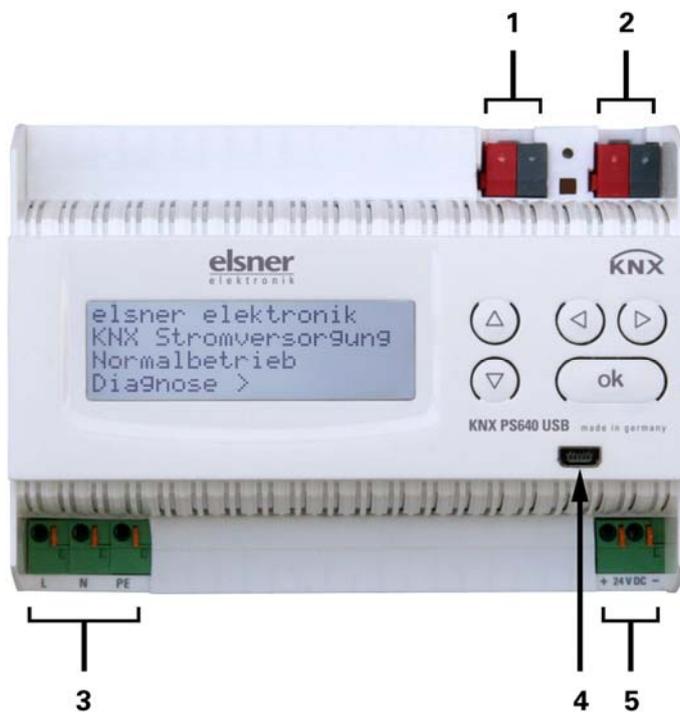
1   Bus (KNX terminal + / -)
2   Bus (KNX terminal + / -)
3   Input operating voltage 230 V AC, L / N / PE
4   USB interface (only KNX PS640 USB)
5   Output direct current voltage 24 V DC, + / -

Connections 3 and 5 are suitable for solid conductors up to 1.5 mm² or conductors with fine wires.

Scheme

BUS   BUS

$+ \quad - \quad + \quad -$

AC 230 V ±10%
50...60 Hz

$U_{Bus} = 29\,V\,DC$
$I_{max} \leq 640\,mA$

$T_a = -5...+45\,C°$

L1 N ⏚

Auxiliary supply 24 V DC (max. 150 mA)

Operation

Starting Position

```
elsner elektronik
KNX Power Supply
Normal Operation
Diagnostics >
```

The following may be read off and set on the display of the power supply system KNX PS640:

- Reset of a line
- Recall of the data memory with operating hours, overcharge, external electrical surge, internal electrical surge, short circuit and excess temperature
- Recall of the operating data bus voltage, bus current and temperature
- Language of display

The display is dimmed after 60 seconds if during this period no key is pressed.

Line reset

Standard screen:

```
elsner elektronik
KNX Power Supply
Normal Operation
Diagnostics >
```
Press key ▷ once.

```
Line Reset       >  ▓
Data Memory >
Operating Data  >
Language
```

Press key ▷ once more in order to get into the sector "Line reset".

```
Reset: Yes          ▓
       No
       30 seconds
Reset not active!
```

Move the cursor (flashing rectangle at right edge) to the desired setting with the keys ▽ or △ and confirm with key **ok**.

Yes: Reset is activated. The line is switched to neutral and shorted. The basic setting displays: "Reset is active!"

No: Reset not activated. The power supply system works in normal operation.

30 seconds: A reset of 30 seconds is started. Afterwards, the line is supplied with voltage as usual. During the reset state, which lasts 30 seconds, the basic setting displays: "Reset active: XX sec" (countdown).

With key ◁, you return to the previous menu level.

Data memory

Standard screen:

```
elsner elektronik
KNX Power Supply
Normal Operation
Diagnostics >
```
Press key ▷ once.

```
Line Reset        >
Data Memory       >  ▓
Operating Data    >
Language          >
```

Move the cursor (flashing rectangle at right edge) to the "Data memory" menu with the keys ▽ and △ and confirm with key ▷.

```
Hours ofOperation> ▓
Overload           >
Ext. Overvoltage >
Int. Overvoltage >
```

```
Short circuit      >
Excess Temperat. >
```

Move the cursor to the desired menu with the up and down keys and press key ▷.

Operating hours

```
Run time:  0 years
   0 day  0 hrs.

< = Back
```
The operating hours of the power supply system are displayed in years, days and hours.

With key ◁ you return to the previous menu level.

Overload

```
Overload detected
 0 times. Duration:
 0 day. 0 hrs. 0 min
< = Back
```
The number of overload incidents and the total time in days, hours and minutes are displayed.

With key ◁ you return to the previous menu level.

External Overvoltage

```
External Overvoltage
was detected
0 times.
< = Back
```

The number of external overvoltage incidents is displayed.

With key ◁ you return to the previous menu level.

Internal Overvoltage

```
Internal Overvoltage
was detected
0 times.
< = Back
```

The number of internal overvoltage incidents is displayed.

With key ◁ you return to the previous menu level.

Short Circuit

```
A short at the bus
was detected
 0 times.
< = Back
```

The number of short circuit incidents at the bus is displayed.

With key ◁ you return to the previous menu level.

Excess Temperature

```
Excess Temperature
on the board
was detected
 0 times!
```

The number of excess temperature incidents on the circuit board of the device is displayed.

With key ◁ you return to the previous menu level.

Operating data

Standard screen:

```
elsner elektronik
KNX Power Supply
Normal Operation
Diagnostics >
```

Press key ▷ once.

```
Line Reset       >
Data Memory      >
Operating Data   > ▓
Language         >
```

Move the cursor (flashing rectangle at right edge) to the "Operating Data" menu with the keys ▽ and △ and confirm with key ▷.

```
Bus Voltage    29.4 V
Bus Current    320 mA
Temperature    42.1°C
```

The current values of

- Bus voltage
- Bus current
- Temperature on the circuit board of the device

are displayed.

With key ◁ you return to the previous menu level.

Language

Standard screen:

```
elsner elektronik
KNX Power Supply
Normal Operation
Diagnostics >
```
Press key ▷ once.

```
Line Reset       >
Data Memory      >
Operating Data   >
Language         > ▓
```

Move the cursor (flashing rectangle at right edge) to the "Language" menu with the keys ▽ and △ and confirm with the key ▷.

```
Sprache   :Deutsch ▓
Language  :English
Idioma    :Espanol
Taal      :Hollands
```

Move the cursor to the desired language with the up and down keys and press the key **ok**. The display automatically jumps to the previous menu in the desired language. With key ◁ you get back by one menu level to the basic setting.