

Product and Applications Description

The power supply unit provides the system power necessary for KNX. The connection to the bus line is established via the bus connection block (red/black) located on the front side. The integrated choke prevents the data telegrams from short-circuiting on the bus line. When the built-in reset switch is operated (operation > 20s), the bus devices are returned to their initial state. For each bus line, at least one power supply unit is needed. Up to two power supply units may be attached to a single bus line. A second unit is not required unless the supply voltage at a bus device is less than 21 V.

Note: If two power supply units are operated in parallel on one bus line and if the overload LED is lit on one or both power supplies, then the bus configuration must be changed until the overload display disappears. The cable length between the two power supply units operated in parallel is not prescribed. When more than 30 bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, the power supply unit should be arranged near these bus devices. The distance between power supply unit and any of its bus devices must not exceed 350 m.

The power supply unit has a voltage and current regulation and is therefore short-circuit proof. Short power failures can be bridged with a backup interval of approximately 200 ms.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit power supply line. The power supply units can supply DC 24 V power from an additional pair of terminals (yellow/white). This output voltage can be used to power e.g. an additional line via a separate choke.

The power supply units can be powered by AC 120...230V or by DC 220V.

More information www.siemens.com/gamma-td

Technical Specifications

Input voltage

- rated voltage: AC 120-230 V, 50...60 Hz, DC 220 V

Rated power consumption

approx. 24 VA

Output voltage

- rated voltage: DC 24 V (class 2)
- safety extra low voltage (SELV)
- permissible range: DC 21...30 V

Output current

- rated current 160 mA (N 125/02)
320 mA (N 125/12)
640 mA (N 125/22)
- short-circuit current:
limited to
1.0 A (N 125/02, N 125/12)
1.5 A (N 125/22)

Backup interval

on input voltage failure: approx. 200 ms at rated current

Control elements

slide switch for re-setting the bus devices connected to the line (operation > 20 s)

Display elements

- 1 red LED: for indicating a voltage interruption on operating the slide switch in RESET-position
- 1 green LED for indicating normal operation
- 1 red LED for indicating a shorted-out bus line or device over-load

Listings and Certifications

UL listed (E464611)

UL 916, Open Energy Management Equipment
CAN/CSA-C22.2 No. 205-12, Signal Equipment

CE marked

complies with EMC regulations (residential and non-residential buildings), and low voltage regulations
EIB KNX certified

Connections

- mains connection, screwless plug-in terminals:
strip insulation for 10...11 mm
permissible conductor types/cross sections:
 - AWG 20 (0.75 mm²) – AWG 12 (3.3 mm²) solid, stranded
 - 0.5...2.5 mm² single-core
 - 0.5...2.5 mm² stranded multi-core
 - 0.5...2.5 mm² finely stranded, untreated
- bus line:
screwless extra low voltage terminal (red/black)
Ø 0.6...0.8 mm (AWG 18, solid Cu)
- output voltage (no choke):
screwless extra low voltage terminal (yellow/white)
Ø 0.6...0.8 mm (AWG 18, solid Cu)

Physical specifications

- housing: plastic
- dimensions: N-system DIN-rail mounted device,
width: 4 SU (1 SU = 18 mm)
- Fire load: approx. 3700 kJ
- weight: approx. 260 g (9.2 oz)
- installation: rapid mounting on DIN rail according to EN 60715-TH35

Environmental specifications

- climatic conditions: EN 50090-2-2
- ambient temperature operating: - 5...+ 45° C (23...113°F)
- storage temperature: - 25...+ 70° C (-13...158°F)
- relative humidity (non-condensing): 5 % to 93 %

Electromagnetic compatibility

complies with EN 50491-5-1, -5-2, -5-3

Reliability

Failure rate: 1178 fit at 40°C

Electromagnetic compatibility

USA:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Changes or modifications not expressly approved by Siemens Schweiz AG could void the user's authority to operate the equipment.

United States representative:

<https://new.siemens.com/us/en/products/buildingtechnologies/home.html>

Canada:

CAN ICES-3(B)/NMB-3(B)

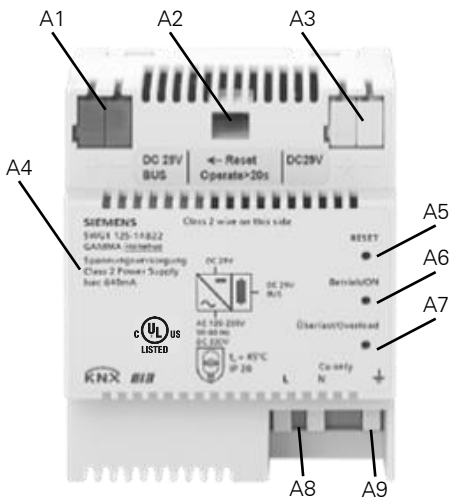
! WARNING

Hazardous voltage.
Can cause death, or serious injury or property damage.

The device must not be opened.
A faulty device should be returned to the local Siemens sales office or distributor.

The device must be mounted and commissioned by a factory trained person.
The prevailing safety rules must be observed!
Mount in dry locations only!

Location and Function of the Display and Control Elements



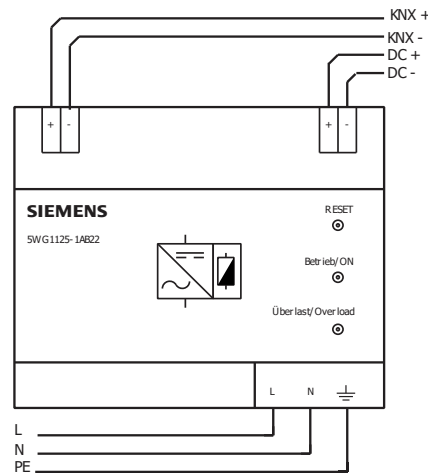
- A1 extra low-voltage bus terminals (red/black)
- A2 reset switch
- A3 extra low-voltage terminals (yellow/white)
- A4 type plate
- A5 red LED for indicating that A2 is in reset position; the power supply unit N 125/_2 does not supply power
- A6 green LED for indicating normal operation of the power supply unit N 125/_2
- A7 red LED for indicating a shorted-out bus line or a device over-load
- A8 screwless plug-in terminals for connecting the mains (mains terminals)
- A9 screwless plug-in terminal for ground (protective earth terminal)

Installation Instructions

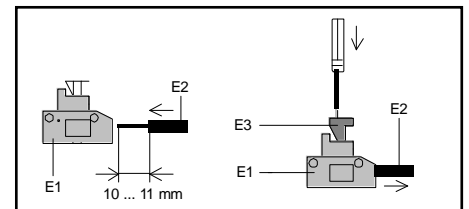
The device may be used for permanent interior installations in dry locations within distribution boards or small casings with DIN rail EN 60715-TH35.

This equipment is intended for field installation within the enclosure of another product.

Typical circuit



Wiring



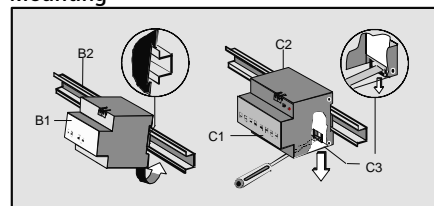
Connecting mains

- Mains is connected via screwless plug-in terminals (E1).
- Remove approx. 10 to 11 mm of insulation from the wire (E2) and plug it into the terminal (E1).

Disconnect mains

- Press the terminal lock (E3) of the terminal (E1) with a screw-driver and
- remove the wire (E2) from the terminal (E1).

Mounting

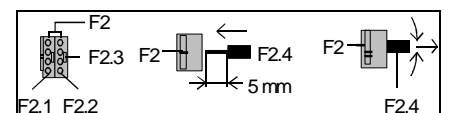


Mounting the Power Supply unit to a DIN-rail

- Slide the DIN-rail device (B1) onto the DIN-rail (B2) and
- swivel back the DIN-rail device until the slide clicks into place audibly.

Dismounting DIN-rail devices

- Remove all connected wires,
- press down the slide (C3) with a screw-driver and
- swivel the DIN-rail device (C1) from the DIN-rail (C2).



Slipping on of the safety extra low voltage block

- slip the connection block onto the guide slot and
- press the connection block down to the stop

Connecting the safety extra low voltage block

- The connection block (F2) can be used with single core conductors \varnothing 0.6 ... 0.8 mm.
- The connection block (F2) consists of a red (yellow) connector (F2.1) and a black (white) connector (F2.2). Each connector can take up to four wires with single core conductors \varnothing 0.6 ... 0.8 mm.
- Remove approx. 5 mm of insulation from the conductor (F2.4) and plug it into the connection block (F2) (red = +, black = -).

Disconnecting the safety extra low voltage block

- Unplug the connection block (F2) and remove the bus cable conductor (F2.4) while simultaneously wiggling it.