



Product and Applications Description

The power supply unit N 125 provides and monitors the system power necessary for the instabus EIB. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed) and/or via the bus connection block located on the front side. If the power supply N 125 is installed the bus connector module REG 191 is not necessary (also for other DIN-rail devices connected to the same data rail) because the bus voltage is carried from the bus connection block to the data rail.

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 N 125 is needed. Up to two power supply units may be attached to a single bus line. Note: With the power supply unit N125/21 no second power supply unit is permitted to be run in parallel on the bus line.

A second unit is not required unless the supply voltage at a bus device is less than 21 V. The cable length between the two power supply units must be at least 200 m.

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 N 125 should be arranged near these bus devices. The distance between power supply unit N 125 and any of its bus devices must not exceed 350 m.

The power supply unit N 125 has a voltage and current regulation and is therefore short-circuit proof. Short power failures can be bridged with a backup interval of at least 200 ms.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit N 125's power supply line.

The power supply unit N125/21 can supply power to an additional line via a separate choke N 120, from an additional pair of terminals (yellow-white) for the DC 29 V output voltage.

Application Programs

No application program required

Technical Specifications

Input voltage

- rated voltage: AC 120 ... 230 V, 50...60Hz
- permissible range: AC 102 ... 253 V

Rated power consumption
approx. 24 VA

Output voltage

- rated voltage DC 29 V
- safety extra low voltage (SELV)
- permissible range: DC 28 ... 30 V

Output current

- rated current 640 mA
- short-circuit current: limited to 1,5 A

Backup interval

on input voltage failure: min. 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 that the power supply unit is in reset position
- 1 green LED for indicating normal operation
- 1 red LED for indicating a shorted-out bus line or device over-load

Connections

- mains connection, screwless plug-in terminals: strip insulation for 9 ... 10 mm
- permissible conductor types/cross sections:
 - 0,5 ... 3,3 mm² (AWG 12) single core
 - 0,5 ... 3,3 mm² (AWG 12) stranded conductor
 - 0,5 ... 3,3 mm² (AWG 12) flexible conductor with terminal pin, crimped on gas tight
- bus line:
 - pressure contacts on data rail,
 - screwless extra low voltage terminal (red-black) Ø 0,6 ... 0,8 mm (AWG 18, solid Cu)
- output voltage (no choke) – N125/21 only:
 - screwless extra low voltage terminal (yellow-white) Ø 0,6 ... 0,8 mm (AWG 18, solid Cu)

Physical specifications

- polymer casing
- DIN-rail mounted device, width: 4 SU (1SU = 18mm)
- weight: approx. 240 g (15oz)
- installation: rapid mounting on DIN rail complying with EN 60715-TH35-7,5

Electromagnetic compatibility

complies with Part 15 of the FCC rules pursuant to the limits for a Class A digital device

Environmental specifications

- ambient temperature operating: - 5 ... + 45° C (23...113°F)
- maximum ambient temperature range: - 25 ... + 70° C (-13...158°F)
- relative humidity (non-condensing): 5 % to 93 %

Listings and Certifications

UL listed (E239 046)

UL 916, Open Energy Management Equipment

CSA certified

(pending)

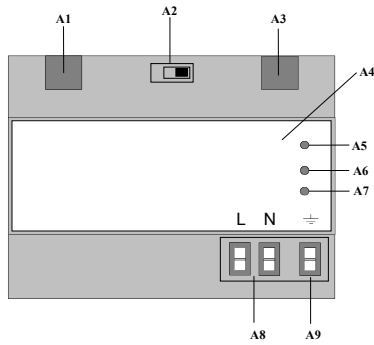
CE marked

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

EIB certified

Power Supply Unit N125
640mA
5WG1 125-1AB21

Location and Function of the Display and Control Elements

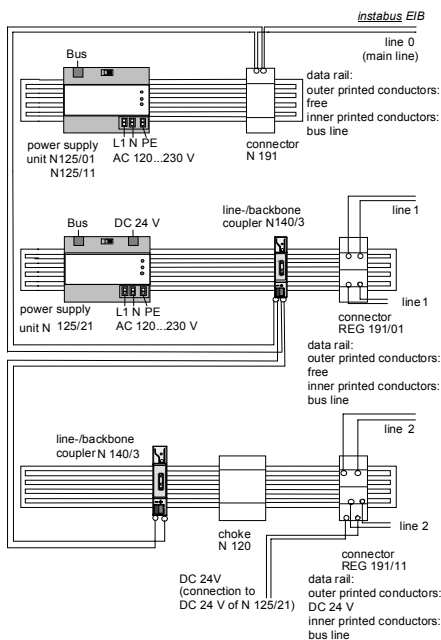


- A1 extra low-voltage bus terminals (red-black)
- A2 reset switch
- A3 extra low-voltage terminals (yellow-white) – N125/21 only
- A4 type plate
- A5 red LED for indicating that the power supply unit N 125 is in reset position
- A6 green LED for indicating normal operation of the power supply unit N 125
- 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 ground 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-TH35-7,5.

Typical circuit

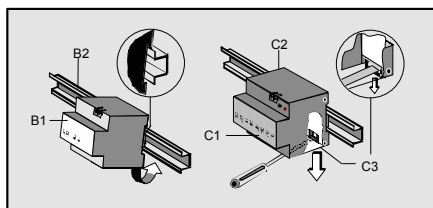


WARNING

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!



Mounting

General description

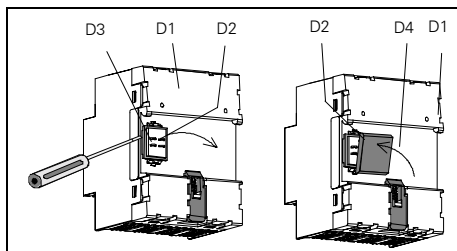
The N-system DIN-rail device can be installed in the *instabus* EIB lighting control panel, surface or flush mounted, or to any DIN rail in distribution boards, surface or flush mounted, complying with EN 60715-TH35-7,5 that has a data rail installed. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed). Take care that the type plates of all devices on a DIN-rail can be read in the same direction, guaranteeing the devices are polarised correctly.

Mounting the Power Supply Unit N 125 to a DIN-rail

- Slide the DIN-rail device (B1) onto the DIN-rail (B2) and
- press down 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).



Connection to the bus without data rail

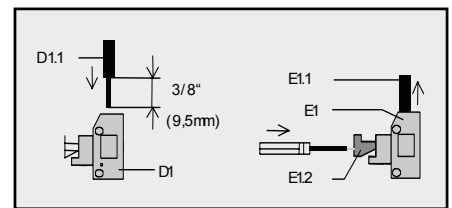
If the connection is established via bus connection block (data rail not installed) the data rail connection system has to be covered with the enclosed insulation hood after removing the guiding hood e.g. with a screw driver to guarantee a sufficient insulation from the DIN rail.

Removing the guiding top

- The guiding top (D3) surrounds the contact system (D2) on the back side of the device (D1).
- Insert the screw driver between the DIN-rail device (D1) and the guiding hood (D3) and remove the guiding hood.

Inserting the insulation top

- Put the insulation top (D4) onto the contact system and click it into place by a slight pressure.



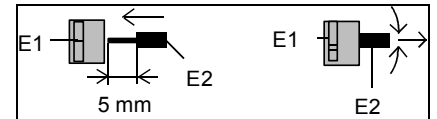
Wiring

Connecting mains

- Mains is connected via screwless plug-in terminals (D1).
- Remove approx. 3/8" (9,5mm) of insulation from the wire (D1.1) and plug it into the terminal (D1).

Disconnect mains

- Press the terminal lock (E1.2) with a screw-driver and
- remove the wire (E1.1) from the terminal (E1).



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 (E1) can be used with single core conductors Ø 0,6 ... 0,8 mm.
- Remove approx. 5 mm of insulation from the conductor (E2) and plug it into the connection block (E1) (red = +, black = -).

Disconnecting the safety extra low voltage block

- Unplug the connection block (E1) and remove the bus cable conductor (E2) while simultaneously wiggling it.