SIEMENS

GB CE

Power Supply Unit

N 125/01 (160 mA)	**5WG1 125-1AB01**
N 125/11 (320 mA)	**5WG1 125-1AB11**
N 125/21 (640 mA)	**5WG1 125-1AB21**

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Product and Applications Description

The power supply unit N 125 provides 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 approximately 200 ms.

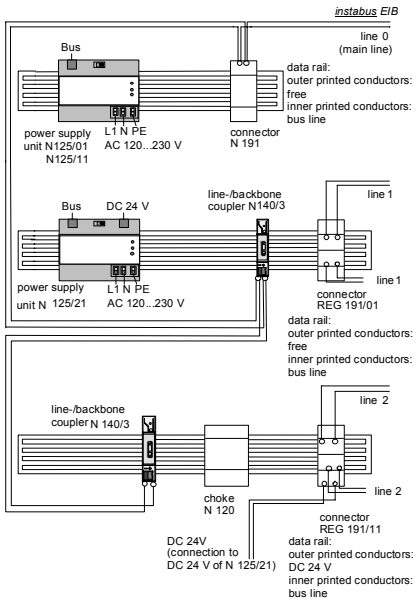
To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit N 125's power supply line.

The power supply unit N125/21 can supply DC 24 V power from an additional pair of terminals (yellow-white). This DC 24 V output voltage can be used to power e.g. an additional line via a separate choke N 120.

Application Programs

Requires no application programs

Example of Operation



Technical Specifications

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

Rated power intake
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 160 mA (N125/01),
  320 mA (N125/11),
  640 mA (N125/21)
- short-circuit current:
  limited to 1,0 A (N125/01, N125/11), 1,5 A (N125/21)

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

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 ... 2,5 mm² plain flexible conductor
  - 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)
  ∅ 0,6 ... 0,8 mm
- output voltage (no choke) – N125/21 only:
  screwless extra low voltage terminal (yellow-white)
  ∅ 0,6 ... 0,8 mm

Physical specifications
- dimensions: N-system DIN-rail mounted device,
  width: 4 SU (1 SU = 18 mm)
- weight: approx. 240 g

Electrical safety
- protection (according to EN 60529): IP 20

Environmental specifications
- ambient temperature operating: - 5 ... + 45 °C
- storage temperature: - 25 ... + 70 ° C
- relative humidity (non-condensing): 5 % to 93 %

Location and Function of the Display and Operator Elements

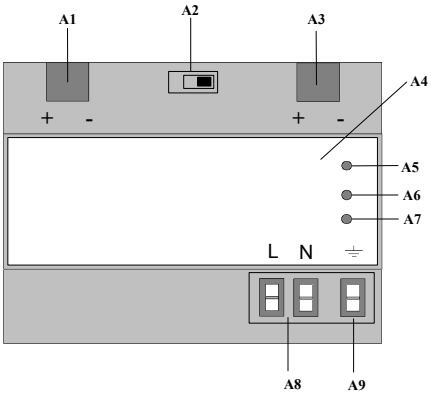


Figure 1: *Location of the display and operator elements*

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.

⚠ WARNING

- The device may be built into distribution boards (230/400V) together only with appropriate VDE-devices.
- The device must be mounted and commissioned by an authorised electrician.
- Free DIN rail areas with sticked-in data rails must be covered with covers, order no. 5WG1 192-8AA01.
- A safety disconnection of the device must be possible.
- The prevailing safety rules must be heeded.
- The device must not be opened.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Mounting and Wiring

General description
The N-system DIN-rail device can be installed to N-system distribution boards, surface or flush mounted, or to any DIN-rail available 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.

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 (Figure 2)
- 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 (Figure 2)
- Put the insulation top (D4) onto the contact system and click it into place by a slight pressure.

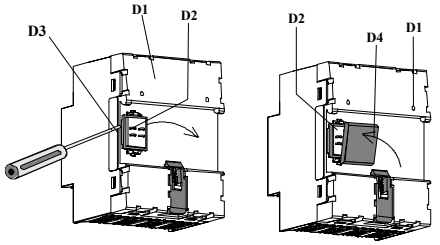


Figure 2: Covering the contact system with insulation top

General Notes

- Any faulty devices should be returned to the local Siemens office.
- If you have further questions about the product, please contact out Technical Support:

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