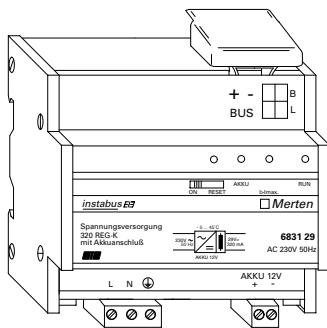


## Power supply 320 REG-K with battery connection, version 2A



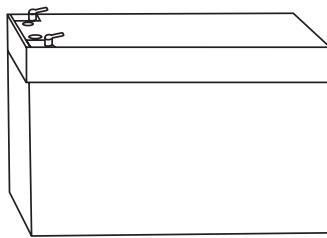
Colour

light grey

Article no.

683129

## Lead gel battery



Design

Article no.

12 V, 7.2 Ah 668990

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## 1. Function

The power supply makes the energy available for the bus devices on a line. At least one power supply is required per bus line.

The power supply (PS) provides a stabilised safety extra-low voltage (SELV) of DC  $29 \pm 1$  V. The max. output current is 320 mA. If the bus devices are evenly distributed on the line, it is possible to operate up to 64 bus devices on one line with the standard power consumption of 5 mA. The max. cable length between the power supply and the furthest bus device is 350 m. The bus devices on the connected line can be reset via a slide switch on the power supply (under the hinged cover next to the bus terminal from version 1A onwards). The state (RESET) is indicated via the red LED (RESET) on the device.

**i** The disconnection of a line (RESET) should be carried out for at least 30 seconds.

The bus voltage is connected by setting the slide switch to the "ON" position. The green LED (RUN) indicates that the power supply is ready for operation. On failure of the mains voltage, the bus voltage is supplied by the lead gel battery (article no. 668990) connected to the emergency power input. The battery operation is indicated by the yellow LED (AKKU) on the device. During mains operation, the battery is recharged by an integrated charging circuit.

If the output current is too high, the red overcurrent LED ( $|I| > I_{max}$ ) lights up or flashes. In the event of a short circuit between the red and black conductors of the bus cable, the green LED (RUN) and/or the yellow LED (AKKU) light up or flash.

**i** Once the short circuit has been rectified, the power supply must be switched to the RESET state for approx. 5 seconds.

## Meaning of the LEDs

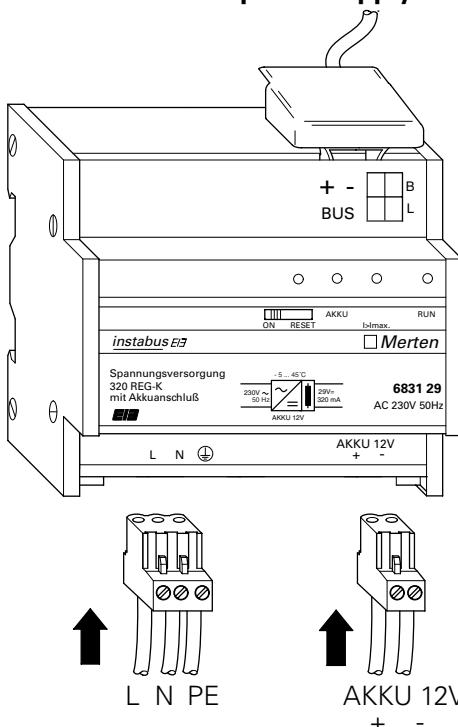
RUN	$ I _{max}$	AKKU	RESET	State
green	off	off	red	Slide switch in OFF or RESET position
green	off	off	off	Normal mains operation with $ I  < I_{max}$
green	red	off	off	Mains operation with $ I  > I_{max}$ , the bus voltage is retained
flashes green	flashes red	off	off	Mains operation with $ I  > I_{max}$ , the bus voltage has failed or there is a short circuit (if the battery is not connected)
off	off	off	off	Short circuit during mains operation
green	off	yellow	off	Battery operation with $ I  < I_{max}$

RUN	$ >I_{max} $	AKKU	RESET	State
flashes green	flashes red	yellow	off	Battery operation with $ >I_{max} $ or battery operation $U_{Akku} < 10$ V, the battery corresponds to $U_{Batt}$
off	off	yellow	off	Short circuit during battery operation

## 2. Installation

The INSTABUS power supply is mounted on a DIN rail EN 50022-35. A data rail is not required. The bus connection is carried out via the bus connecting terminal supplied with the device. The cable cover is then placed over the bus connecting terminal to guarantee the safety clearance of the bus cable to the 230 V cables. A maximum of 4 core pairs can be connected to the bus connecting terminal. All the devices that are mounted next to the power supply must at least be equipped with basic insulation.

### Connection of the power supply REG-K



The mains connection is carried out via plug-in terminals with screw connection. The cables can be screwed onto the plug-in terminal before installing the device and then inserted at a later date.

The external 6-15 Ah lead gel battery (e.g. art. no. 668990) is connected to the 12 V emergency power input via a plug-in terminal with screw connection (the correct polarity must be observed). It is not permitted to connect further loads to the 12 V battery which draw more current than the charge retention current of the power supply.

The DC 12 V cable must be protected by a series-connected circuit-breaker. An NYM cable with 1.5 mm must be fused with 6 A. When the second core pair of the bus cable is used, it must be fused with max. 2.5 A.

## 3. Technical Data

Valid for devices from version 2A onwards (indicated on the label on the back of the power supply)

### Mains input

Input voltage:	AC 230 V +6%/-10%, 50 Hz
Output voltage:	DC 29 V $\pm 1$ V, SELV
Residual ripple:	< 50 m Vss
Output current:	DC 320 mA, short-circuit-proof

Stored energy time (at nominal current):	> 100 ms (can be extended with lead gel battery)
Stored energy time with battery art. no. 668990 (at nominal current):	> 6 hours

### Emergency power input

Input voltage:	DC 10-15 V
Cable length to power supply and battery:	max. 5 m
Lead gel battery:	6-15 Ah (e.g. art. no. 668990 with 7.2 Ah)
Charge retention current:	max. 250 mA (from version 1A onwards), do not connect exhausted batteries

### End-of-charge voltage:

13 .8 V

### Ambient temperature

Operation:	-5 °C to +45 °C
Storage:	-25 °C to +55 °C
Transport:	-25 °C to +70 °C

### Max. humidity:

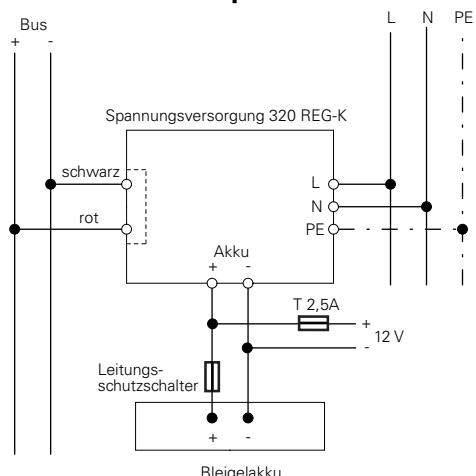
93 %

### Connections

Mains and PE:	Plug-in terminal with screw connection for max. 0.5-2.5 mm
Bus:	Plug for bus connecting terminal
External battery:	Plug-in terminal with screw connection for max. 0.5-2.5 mm

Display elements:	Green LED for error-free operation (RUN) Red LED for short circuit on the line or excessive device load ( $I > I_{max}$ ) Yellow LED for battery operation on mains failure (AK-KU) Red LED for monitoring purposes when the voltage is interrupted by pressing the slide switch (RESET)
Operating elements:	Slide switch behind the hinged cover for interrupting the voltage and for resetting the bus devices connected to the line
EC guidelines:	corresponds to low voltage guideline 73/23/EEC, corresponds to EMC guideline 89/336/EEC
Dimensions:	90x90x65 mm (HxWxD)
Device width:	5 modules = 90 mm

### Connection example



### 4. Settings in the EIB Tool Software (ETS)

#### Selection in the product database

Manufacturer:	Merten
Product family:	1.1 System devices
Product type:	1.1.01 Power supply
Media type:	Twisted Pair
Product name:	Power supply 320 REG-K with battery connection
Order number:	683129