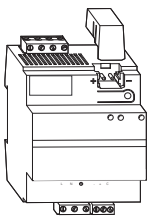
GB

Schneider Electric

Emergency power supply REG-K

Operating instruction



Art. no. MTN683901

Necessary accessories

– Lead gel battery (art. no. MTN668991)

Accessories

– Power supply unit REG-K/160 mA
with emergency input (art. no. MTN683816)
– Power supply unit REG-K/320 mA
with emergency input (art. no. MTN683832)
– Power supply unit REG-K/640 mA
with emergency input (art. no. MTN683890)

For your savety

DANGER
Risk of fatal injury from electrical current.
All work carried out on the device may only be performed by skilled electricians. The country-specific regulations and the valid KNX guidelines must be followed!

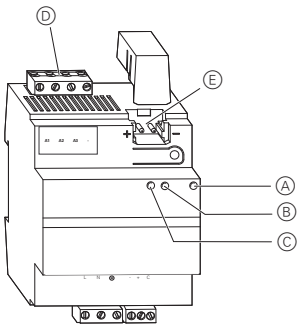
CAUTION
Adjacent devices can be damaged. Only devices with least basic insulation may be installed next to the switch actuator.!

CAUTION
Safety clearance must be guaranteed as per DIN EN 60664-1. A distance of at least 4 mm must be maintained between individual cores of the 230 V cable and the bus line.

Getting to know the emergency power supply

The emergency power supply REG-K (referred to below as the **emergency power supply**) secures the power supply unit against mains failure. This ensures that the bus voltage remains constantly available, as it is, when necessary, supplied by a lead gel battery which is connected to the emergency power supply.
A yellow display on the power supply unit indicates when the bus voltage is being supplied by the emergency power supply.
The display statuses (Battery, Error, Power) are also available at outputs A1, A2, A3 and can, for example, be recorded by the binary input REG-K/4x24 (art. no. MTN6448592).

Connections, displays and operating elements



Ⓐ green LED: Mains voltage display
Ⓑ red LED: Error warning
Ⓒ yellow LED: Battery operating display
Ⓓ Operating state logging outputs
Ⓔ Battery connection (with cover)

Installing the emergency power supply

CAUTION
No other device than one power supply (e.g. art. no. MTN683890) that is approved for the use with this emergency power supply should be exclusive connected to the power supply connection terminals (-, +, C)!

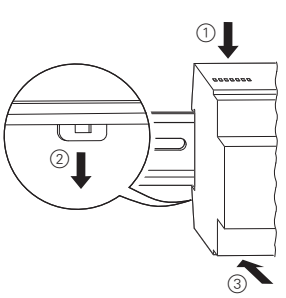
CAUTION
The connection cables to the power supply may have a length of max. 1 m and and must be laid out as a SELV cable! The connection cables to the battery may have a length of max. 5 m and and must be laid out as a SELV cable!

CAUTION
Only one DC 12V/6 - 18 Ah lead-gel battery (art. no. MTN668991) should be attached to the battery connection! The connection from the lead-gel battery must be protected ba a series-connected circuit-breaker.

CAUTION
When handling and positioning batteries it is essential to comply with the relevant safety rules and regulations (incl. VDE 0510 Part 2 and Part 7) to avoid the risk of injury!

The rechargeable lead-gel batteries requires no maintenance and can be used in closed, ventilated spaces at temperatures between -5 °C and +45 °C. It is however not permitted to position them in areas where there is a risk of explosion.

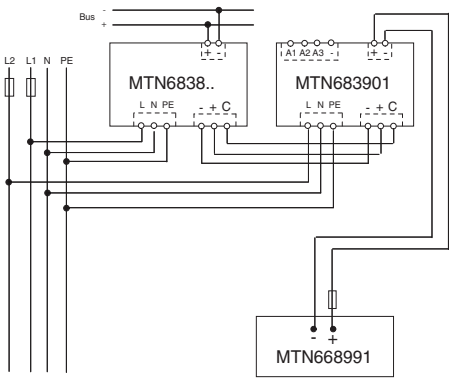
① Insert the emergency power supply into the DIN rail with the clamping spring facing down and suspend it in the rail.



② Connect up a suitable battery on the yellow/white battery terminal.
Put on the battery terminal cover.

Due to the possibility of a voltage drop, two cores each of 0.8 mm diameter should be used in parallel (line cross-section > 0.5 mm^2) in each cable to the battery.

③ Connect the mains voltage.
④ Connect the power supply.

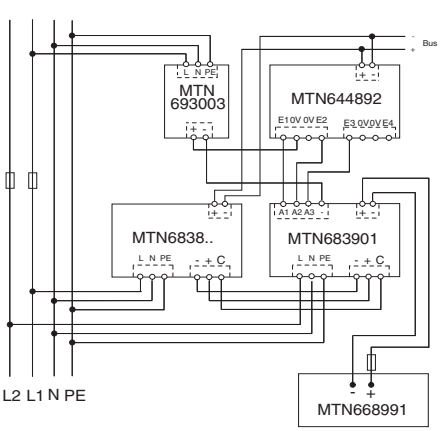


MTN683901	Emergency power supply REG-K
MTN6838..	Power supply unit
MTN668991	Lead gel battery

To provide extra security against any failure of the bus voltage, the emergency power supply can be connected up to another electrical circuit (a different phase) than the power supply.

⑤ If necessary: Connect up a binary input.

CAUTION
In case of recording the display status with a binary input:
You may only connect the binary input REG-K/ 4x24 (art. no. MTN644892) in combination with the power supply unit 24 V (art. no. MTN693003) by the following connecting diagram!



MTN683901	Emergency power supply REG-K
MTN6838..	Power supply unit
MTN693003	Power supply REG, DC 24 V/0,4 A
MTN644892	Binary input REG-K/4x24
MTN668991	Lead gel battery

– Connect **A1**, **A2**, **A3** of the emergency power suply to **E1**, **E2**, **E3** of the binary input.
– Connect „**-**“ of the binary output of the emergency power supply to „**-**“ of the 24 V power supply unit.
– Connect „**+**“ of the 24 V power supply unit to „**0**“ of the binary input.

Faults

No bus voltage in the connected line.

The mains voltage for both the power supply unit and the emergency power supply has failed, and the battery is discharged. The connected battery must be charged to a high enough level to ensure reliable emergency power supply. Refer to the technical data for the battery to check how long the battery should be charged and how long it can provide power.

Key to emergency power supply displays

Mains voltage display (Power, green)	Error warning (Error, red)	Battery operating display (Battery, yellow)	
on	off	off	Mains voltage available, battery charging
on	on	off	Mains voltage available, battery voltage < 11 V.
on	off	on	Mains voltage available, power supply provided by battery
on	on	on	Mains voltage available, power supply provided by the battery and output current too high or battery voltage < 11 V
off	off	on	No mains voltage, power supply provided by the battery (battery not charging)
off	on	on	No mains voltage, power supply provided by the battery and output current too high or battery voltage < 11 V
off	off	off	No mains voltage, no battery voltage

Technical Data

Mains input	
Input voltage:	AC 110 - 230 V +/- 10 %, 50 - 60 Hz Power consumption: 25 W
Power consumption:	25 W
Output to power supply unit (-, +, C)	
Nominal current:	without battery approx. 300 mA with battery approx. 640 mA
Short circuit current:	< 1.5 A
Stored energy time:	approx. 30 min (with 640 mA and fully charged 7.2 Ah battery)
Output/input to battery (+, -)	
Charging current:	max. 1 A
Power consumption:	< 50 W
Charging time:	Charging time
Display status output (A1, A2, A3, -):	Connection for binary input (art. no. MTN644892)
A1:	status mains voltage display
A2:	status error warning display
A3:	status battery operating display
-:	joint potential
Compatible batteries:	Lead-gel batteries in accordance with DIN
Nominal voltage:	2 V
Nominal capacity:	6 - 17 Ah
Output/input to battery (+, -)	
Charging current:	max. 1 A
Power consumption:	< 50 W
Charging time:	(7,2Ah-/17Ah-battery) approx. 10h/ 25h
Ambient temperature:	
Operation:	-5 °C to +45 °C
Storage:	-25 °C to +55 °C
Transport:	-25 °C to +70 °C
Environment:	The device is designed for use at an installation height of up to 2000 m above sea level (MSL)
Max. ambient humidity:	93 % relative humidity, no dew formation
Connections:	
Inputs, outputs:	Screw terminals for 0.5 - 2.5 mm^2
single-core:	1.5 mm^2 to 2.5 mm^2
finely stranded with core end sleeve::	1.5 mm^2 to 2.5 mm^2
Battery connection:	Battery terminal (yellow/ white). The battery should be connected with four cores of each 0.8 mm diameter (pairs of two parallel), to provide a line cross-section of at least 0.5 mm^2 per cable
Dimensions:	90 x 72 x 65 mm (HxWxD)
Device width:	4 pitches
EC guidelines:	89/336/EEC

Schneider Electric Industries SAS

If you have technical questions, please contact the Customer Care Center in your country.

www.schneider-electric.com

This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations. As standards, specifications and designs develop from time to time, always ask for confirmation of the information given in this publication.

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