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# Instruction manual

## Electrobloc EBL 269

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## 1 Introduction

This instruction manual contains important information for safe operation of the Electrobloc. It is essential to read and to follow the given safety information.

The instruction manual should always be kept in the motorhome/caravan. All safety information must be passed on to other users.



- ▲ Failure to comply with this sign may lead to the endangerment of persons.



- ▲ Failure to comply with this sign may damage the device or the connected consumers.



- ▲ This sign indicates recommendations or special features.

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## 2 Safety information

The design of the Electrobloc is state-of-the-art and according to approved safety technology. Nevertheless, if the safety information in this instruction manual is not closely followed, persons might get injured or the Electrobloc might be damaged.

Do not use the Electrobloc if it is not in technically good order and condition. The instruction manual must be followed.

Any technical faults affecting the safety of persons or of the Electrobloc must be dealt with immediately by qualified personnel.



- ▲ The electrical system of the motorhome or the caravan must meet current DIN, VDE and ISO regulations. Manipulations of the electrical system will endanger the safety of persons and the vehicle, and are therefore prohibited.
- ▲ Never make any modifications to the Electrobloc.
- ▲ The electrical connection may only be established by qualified personnel and must be carried out according to the Schaudt installation instructions.
- ▲ Connection work is to be carried out in tensionless condition only.
- ▲ Risk of fatal injury due to electric shock or fire in the case of a defective mains cable or incorrect connection!
- ▲ Risk of fatal injury!  
Never perform maintenance on the Electrobloc when it is live.



- ▲ Blown fuses must only be replaced when the cause of the fault is known and eliminated.
- ▲ Never bridge or repair fuses.
- ▲ Danger of burning! Blown fuses must only be changed on a zero-current Electrobloc.
- ▲ Only use original fuses rated as specified in the instruction manual.
- ▲ Danger of burning! During operation the back of the Electrobloc gets hot. Do not touch.
- ▲ Danger of explosion from formation of detonating gas due to an incorrectly set battery selector switch, defective batteries, defective Electrobloc or an excessively high battery working temperature (more than 30 °C).
- ▲ The mains connection line may only be replaced by an authorised customer service department or by qualified persons.



- ▲ The AES refrigerator fuse may only be used if a AES refrigerator is connected. Otherwise, the living area battery may get totally discharged. Battery damage is possible.
- ▲ An incorrectly set battery selector switch damages the living area battery.
- ▲ Disconnect the Electrobloc from the mains before adjusting the battery selector switch.
- ▲ If the living area battery is changed or removed, the frost protection valve on the heater system opens automatically. Water may be lost. For more information, see the instruction manual of the heater system.
- ▲ Before and after shutdown, the living area battery must be fully recharged to avoid battery damage. For this purpose the vehicle must be connected to mains supply for a minimum of 12 hours with an 80 Ah battery and 24 hours with a 160 Ah battery.
- ▲ Do not operate the Schaudt solar charge regulator without a battery. This might damage the solar charge regulator or any connected consumers. If the battery is going to be changed or removed, take off the positive lead "+ Solarzelle" (+ Solar Module) on the solar charge regulator.
- ▲ To avoid voltage peaks during warm-up, do not connect the generator until it is running in a stable manner. Otherwise, the Electrobloc, the 12 V consumers or other connected equipment might get damaged. It is essential that the generator complies with the mains supply specifications.
- ▲ The mains supply on board car ferries might not always be perfect. Therefore, never connect the Electrobloc to the mains on car ferries. Otherwise, the Electrobloc, the 12 V consumers or other connected equipment might get damaged.

### 3 Description and appropriate use



▲ This device is not intended to be used by persons (including children) with limited physical, sensory or mental aptitude or lack of experience and/or knowledge unless they are supervised by a person responsible for their safety or have received instruction from this person as to how the device is used.

▲ Children are to be supervised so as to ensure they do not play with the device.

▲ This device is exclusively designed for installation into a vehicle.

The Electrobloc EBL 269 is designed as a main power distributor for motorhomes. The Electrobloc is a permanent installation. The Electrobloc is for charging batteries and supplying 12 V appliances with power.

The electrical management system "Electrobloc" consists of:

- The LAS 1218 charger module
- The 12 V distribution
- Fuses for the 12 V circuits
- Other control and monitoring functions

The charger module is a primary controlled switch-mode power supply. This modern switching technology achieves high charging performance at a compact size and low weight.

A control and switch panel has to be connected for operation. This control and switch panel controls the electrical functions in the living area of the motorhome, including accessories.

There are connections for an auxiliary charging unit and a solar charge regulator.

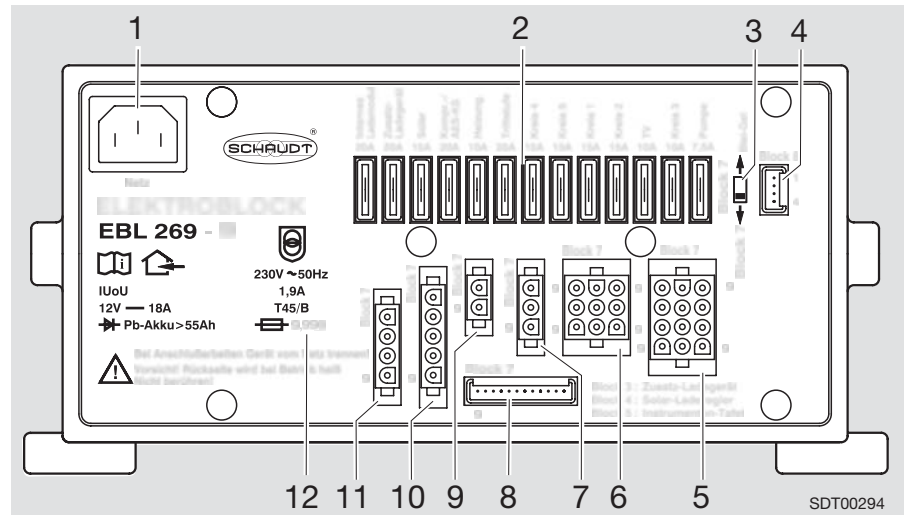


Fig. 1 Electrobloc EBL 269 front view

- 1 Mains connection
- 2 Flat vehicle fuses
- 3 Battery selector switch
- 4 Connections block 8
- 5 Connections block 7
- 6 Connections block 6
- 7 Connections block 4: Solar charge regulator
- 8 Connections block 5: Control and switch panel
- 9 Connections block 3: Auxiliary charging unit
- 10 Connections block 2
- 11 Connections block 1
- 12 Fuse value <sup>1)</sup>

1) The various types have differing fuse values.

Type no.	Fuse value
911.520	2.5 A slow blow
911.525	2.5 A slow blow
911.521	3.15 A slow blow
911.526	3.15 A slow blow

## 4 Suitable accessories (not supplied)

<b>Control and switch panel</b>	IT 269-3, LT 300
<b>Auxiliary charging unit</b>	Schaudt battery charging unit type LAS... with up to 18 A charge current Additional 2-pin charging cable, lengths supplied on request
<b>Solar charge regulator</b>	Schaudt solar charge regulator type LR... for solar modules with a total current of 14 A incl. 0.5 m connection cable and connector plug

## 5 Electrical data

<b>Mains connection</b>	230 V AC $\pm$ 10 %, 47 to 63 Hz sinusoidal, protection class I	
<b>Suitable batteries</b>	6-cell lead acid or lead gel batteries of at least 55 Ah	
<b>Current-carrying capacity</b>	12 V outputs	No more than 90 % of the rated current of the appropriate fuse may be drawn, see the block diagram.

## 6 Operation

### 6.1 Operating controls

#### Flat vehicle fuses



- ▲ Blown fuses must only be replaced when the cause of the fault is known and eliminated.
- ▲ Never bridge or repair fuses.
- ▲ Danger of burning! Blown fuses must only be changed on a zero-current Electrobloc.
- ▲ Only use original fuses rated as specified in the instruction manual.

The flat vehicle fuses protect the various circuits.



- ▲ Before starting up:
  - Make sure the living area battery is connected.
  - Make sure the battery selector switch is set for the correct type of battery.
  - Make sure the AES fuse is only used if the compressor/AES refrigerator is connected. Otherwise, the living area battery may get totally discharged. Battery damage is possible.

- **Start up the system** Switch on the system using the 12 V main switch at the control and switch panel. Follow the instruction manual of the control and switch panel.

- **Shutting down the system** Switch off the system using the 12 V main switch at the control and switch panel.

**Battery selector switch**



▲ Danger of explosion from formation of detonating gas due to an incorrectly set battery selector switch, defective batteries, defective Electrobloc or an excessively high battery working temperature (more than 30 °C).



- ▲ An incorrectly set battery selector switch damages the living area battery.
- ▲ Disconnect the Electrobloc from the mains before adjusting the battery selector switch.

The switching option provided by the battery selector switch ensures optimum charging of the two different types of battery, lead acid and lead gel. The switch must be set to the correct battery type: lead acid or lead gel.

Use a thin object (e.g. a ballpoint pen cartridge) to move the battery selector switch.

- Set lead gel battery: Set the battery selector switch to "Blei-Gel" (lead gel).
- Set lead acid battery: Set the battery selector switch to "Blei-Säure" (lead acid).

**12 V main switch (on the control and switch panel)**

The 12 V main switch on the control and switch panel switches all consumers and the panel on and off.

Exceptions:

- Frost protection valve
- Heater
- Step
- AES/compressor refrigerator
- For EBL 269 and EBL 269 A: Circuit 1, awning light
- For EBL 269-2 and EBL 269-2 A: Circuit 4, circuit 5

For more information, see the instruction manual of the control and switch panel.

**6.2 Additional functions**

**Automatic switch function for AES/compressor refrigerator**

This relay supplies the AES/compressor refrigerator with power from the starter battery when the vehicle engine is running and the D+ connection is live. An AES/compressor refrigerator is powered by the living area battery when the vehicle engine is switched off.

**Automatic switch function for absorber refrigerator**

This relay supplies the absorber refrigerator with power from the starter battery when the vehicle engine is running and the D+ connection is live.

**Mains charging of starter battery**

This feature provides an automatic float charge for the starter battery at up to 2 A when the 230 V mains is connected to the Electrobloc.

## 7 Maintenance

The Electrobloc requires no maintenance.

**Cleaning** Clean the Electrobloc with a soft, slightly damp cloth and mild detergent. Never use spirit, thinners or similar substances. Do not allow fluid to penetrate the inside of the Electrobloc.

## 8 Shutting down the system



- ▲ Before and after shutdown, the living area battery must be fully recharged to avoid battery damage. For this purpose the vehicle must be connected to mains supply for a minimum of 12 hours with an 80 Ah battery and 24 hours with a 160 Ah battery.
- ▲ Do not operate the Schaudt solar charge regulator without a battery. This might damage the solar charge regulator or any connected consumers. If the battery is going to be changed or removed, take off the positive lead "+ Solarzelle" (+ Solar Module) on the solar charge regulator.

Switch off the system if you are not going to use the vehicle for a lengthy period (for example during the winter).

### Disconnecting the living area battery from the 12 V power supply

Carry out the following work steps in the correct sequence:

1. Switch off the 12 V main switch on the control and switch panel.
2. Remove the plug "+ Solarzelle" (+ Solar Module) on the solar charge regulator.
3. Remove the clamps from the battery poles.

## 9 Changing the battery



- ▲ Batteries may only be changed by qualified personnel.
- ▲ Follow the instructions of the battery manufacturer.
- ▲ Charging unsuitable types of battery may irreparably damage them.
- ▲ Only use the Electrobloc for connecting the 12 V power supply to 6-cell lead gel or lead acid batteries.

Only use batteries of the same type and capacity and those installed by the manufacturer.

You can change from lead acid to lead gel batteries.

You cannot change from lead gel to lead acid batteries. Ask your dealer for advice.



- ▲ Danger of explosion from formation of detonating gas due to an incorrectly set battery selector switch, defective batteries, defective Electrobloc or an excessively high battery working temperature (more than 30 °C).



- ▲ An incorrectly set battery selector switch damages the living area battery.
- ▲ Disconnect the Electrobloc from the mains before adjusting the battery selector switch.

The switching option provided by the battery selector switch ensures optimum charging of the two different types of battery, lead acid and lead gel. The switch must be set to the correct battery type: lead acid or lead gel.

Use a thin object (e.g. a ballpoint pen cartridge) to move the battery selector switch.

- Set lead gel battery: Set the battery selector switch to "Blei-Gel" (lead gel).
- Set lead acid battery: Set the battery selector switch to "Blei-Säure" (lead acid).

## 10 Technical faults, possible causes and remedies

If you are unable to solve a fault using the following tables, please contact our customer service address.

If this is not possible, e.g. if you are abroad, you can have the Electrobloc repaired at a specialist workshop.

Inexpert repairs invalidate the guarantee for the Electrobloc and Schaudt GmbH takes no liability for any resulting damage.

Fault	Possible cause	Remedy
Living area battery is not charged during 230 V operation (battery voltage constantly below 13.3 V)	No mains voltage	Switch on the automatic fuse in the vehicle
		Have the mains voltage checked
Living area battery is over-charged during 230 V operation (battery voltage constantly above 14.5 V)	Defective Electrobloc	Call customer service
	Defective Electrobloc	Call customer service
Starter battery is not charged during 230 V operation (battery voltage constantly below 13.0 V)	No mains voltage	Switch on the automatic fuse in the vehicle
		Have the mains voltage checked
Living area battery is not charged during mobile operation (battery voltage below 13.0 V)	Defective Electrobloc	Call customer service
	Defective alternator	Have the alternator checked
The living area battery is overcharged during mobile operation (battery voltage constantly above 14.3 V)	No voltage at D+ input	Have the fuse and wiring checked
	Defective Electrobloc	Call customer service
	Defective alternator	Have the alternator checked



<b>Fault</b>	<b>Possible cause</b>	<b>Remedy</b>
The refrigerator does not work during mobile operation	No power supply to the refrigerator	Have the fuse and wiring checked
	Defective Electrobloc	Call customer service
	Defective refrigerator	Have the refrigerator checked
Solar charger does not work (power supply and engine are off)	Solar charge regulator not plugged in	Plug in the solar charge regulator
	Defective fuse or wiring	Have the fuse and wiring checked
	Defective solar charge regulator	Have the solar charge regulator checked
12 V power supply in the living area does not work	12 V main switch for the living area battery is switched off	Switch on the 12 V main switch for the living area battery
	Defective fuse or wiring	Have the fuse and wiring checked
	Defective Electrobloc	Call customer service



▲ If the device becomes too hot due to excessive ambient temperature or lack of ventilation, the charging current is automatically reduced. However, always prevent the device from overheating.

## 11 Customer service

**Customer service address** Schaudt GmbH, Elektrotechnik & Apparatebau  
 Planckstraße 8  
 88677 Markdorf  
 Germany  
 Phone: +49 7544 9577-16  
 Email: kundendienst@schaudt-gmbh.de

Opening hours      Mon to Thu    8 to 12 a.m., 1 to 4 p.m.  
                                  Fri                    8 to 12 a.m.

**Sending in the device** Returning a defective device:

- Always use well-padded packaging.
- Fill in and enclose the fault report, see section 13.
- Send it to the addressee delivered free.

**Disposal instruction** When the product service life is over, dispose of the device in accordance with the applicable regulations.

## 12 Block diagram - for specialist workshop only

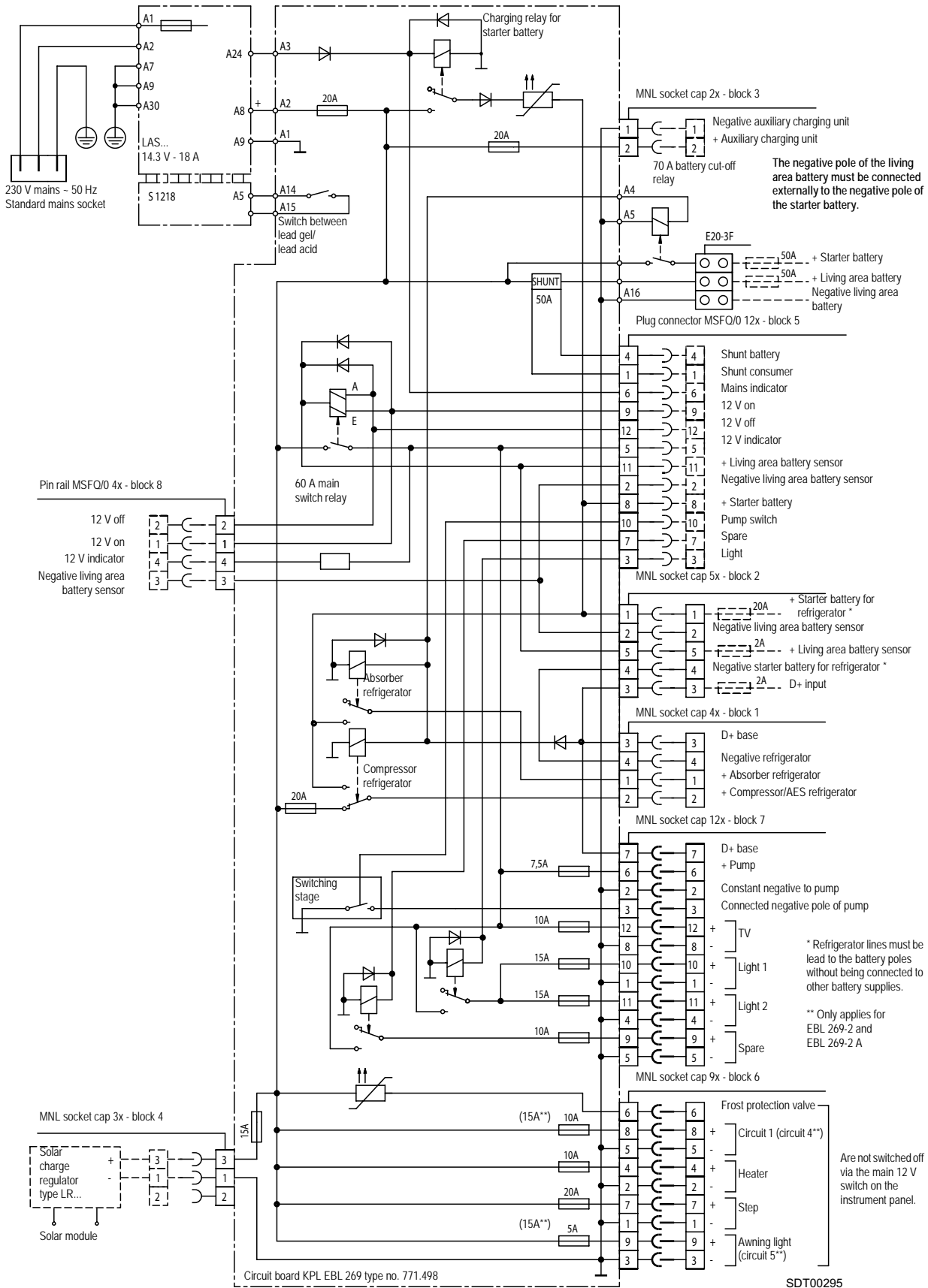


Fig. 2 Block diagram of Electrobloc EBL 269

### 13 Fault report

In the event of damage, please return the defective device together with the completed fault report.

Device type: EBL 269

Type no.:  
(please enter)

There is the following defect:  
(please tick)

Battery not being charged during power operation	<input type="checkbox"/>
Battery not being charged during mobile operation	<input type="checkbox"/>
The following electrical consumers do not work:	<input type="checkbox"/>

Constant fault	<input type="checkbox"/>
Temporary fault/loose contact	<input type="checkbox"/>

Other remarks:

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