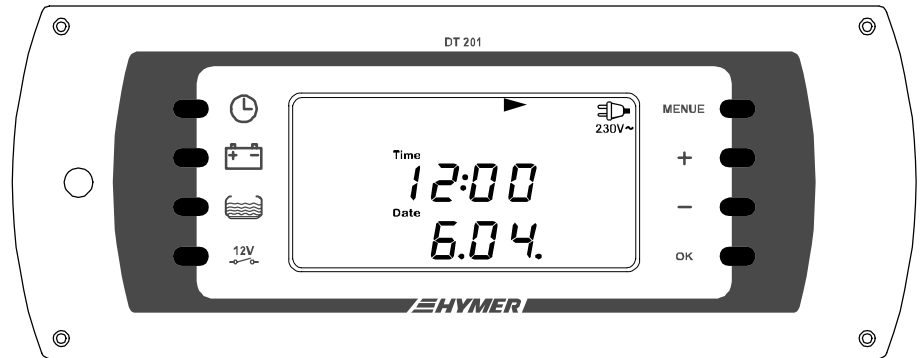


Instruction Manual



Control and Display Panel DT 201 B

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1 Safety Information

1.1 Meaning of safety symbols



▲ DANGER!

Failure to heed this warning may result in death or serious injury.



▲ WARNING!

Failure to heed this warning may result in personal injuries.



▲ ATTENTION!

Failure to heed this warning may result in damage to the device or connected consumers.

1.2 General safety information

The device is state-of-the-art and complies with approved safety regulations. Nonetheless, personal injuries or damage to the device may occur if the safety instructions contained herein are not followed.

Ensure that the device is in perfect working order before use.

Any technical faults which may impact personal safety or the safety of the device must be rectified immediately by qualified personnel.



▲ WARNING!

Hot components!

Burns:

- Only change blown fuses when the device is completely de-energised.
- Only replace blown fuses once the cause of the fault has been identified and rectified.
- Never bypass or repair fuses.
- Only use original fuses rated as specified on the device.
- Device parts can become hot during operation. Do not touch.
- Never store heat sensitive objects close to the device (e.g. temperature sensitive clothes if the device has been installed in a wardrobe).



Pressing a button once: Lights up display; the readings of the selected display are shown.
 Pressing a button repeatedly: Displays other readings on subsequent displays (if available)

Button: Battery display:

- Successive display of
 - ▶ battery capacity
 - ▶ charge/discharge currents
 - ▶ voltages
- of the starter and living area battery;
- afterwards solar current
- ▶ (if solar system present)

Button: Main display:

- ▶ Display of inside and outside temperature
- ▶ Return to the main display (time and date) from any display or setting menu

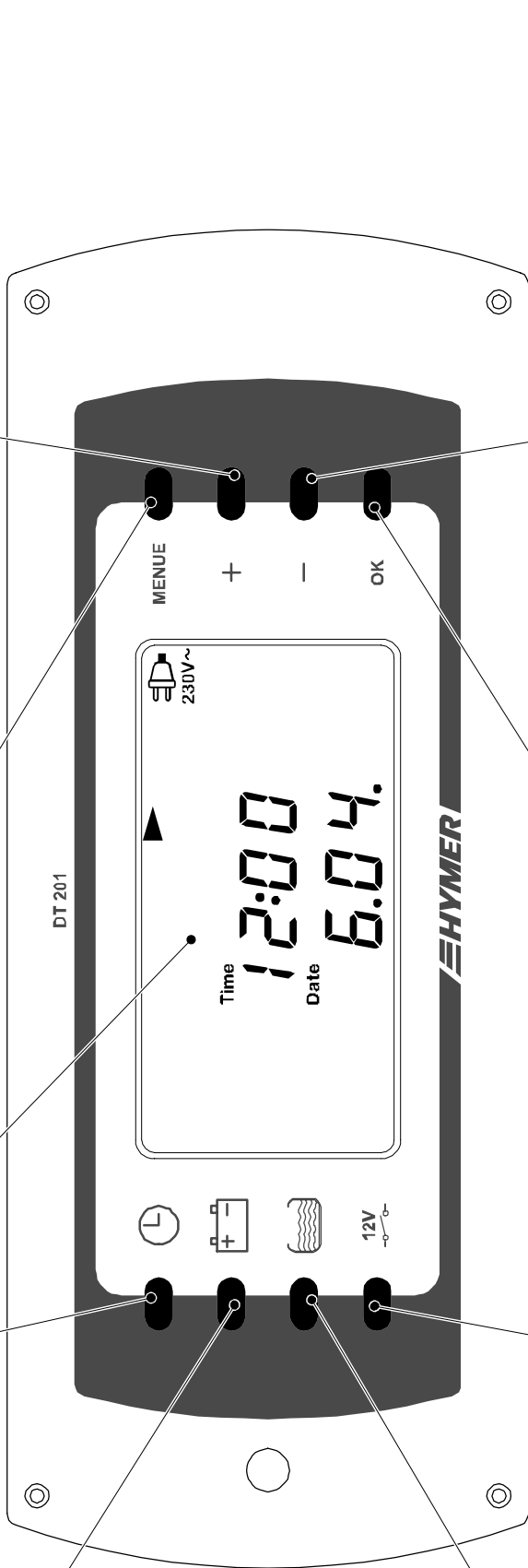
Button: Menu:

- Certain display pages have configuration options. If these are available:
 - ▶ Press button for at least 3 seconds: The settings display is opened

”+” button :

- Change (configurable) values on menu pages

Liquid crystal display



Button: Tank display:

- ▶ Display of the water and waste water tank fill levels
- ▶ Display of extra or sewage tank fill level (if present)

Main switch:

- ▶ Switch on/off the 12V supply to the motorhome or caravan.

”OK” button:

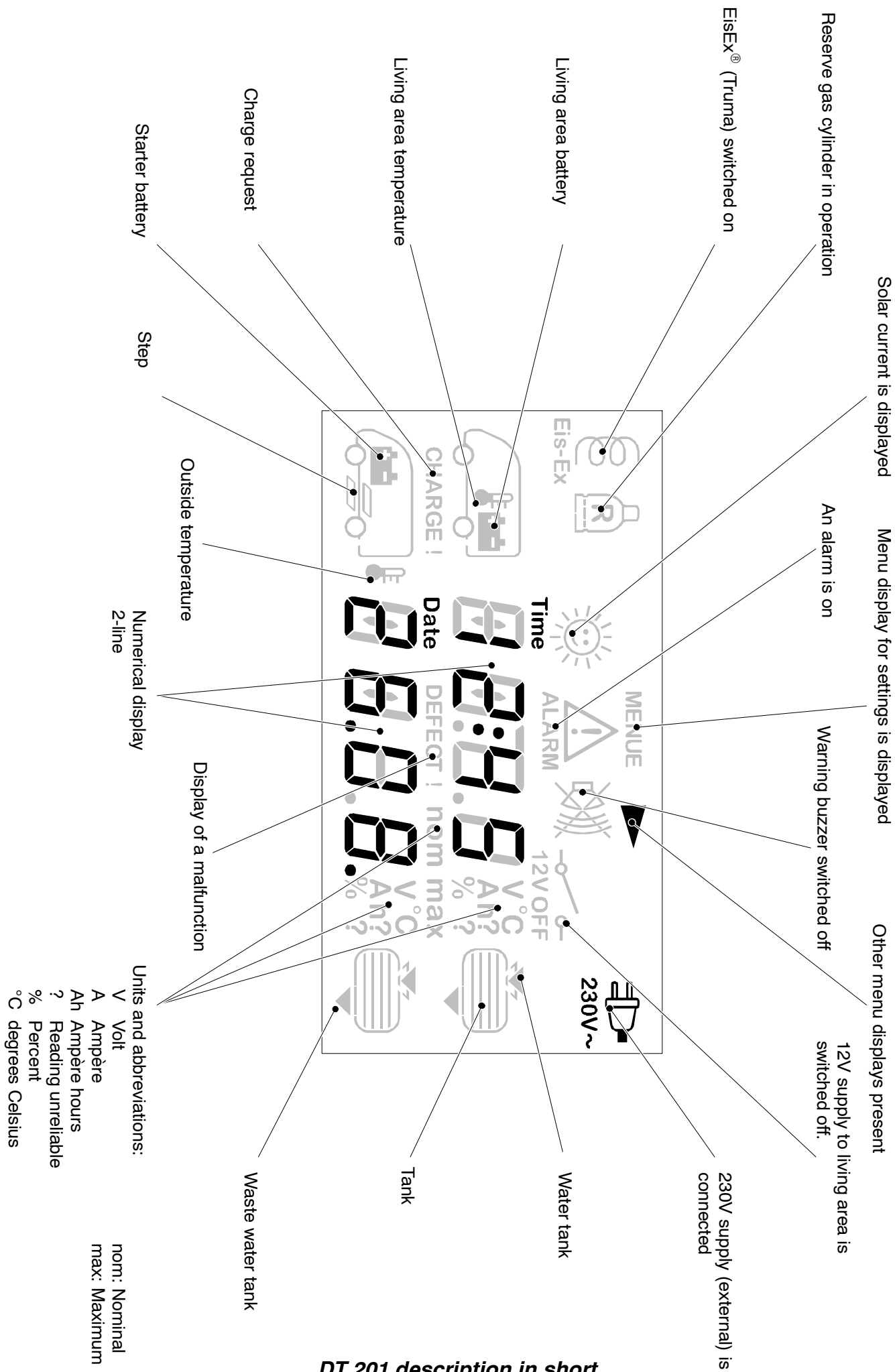
- ▶ Confirmation of values entered

”-” button :

- Change (configurable) values on menu pages



If no button is pressed for 20 seconds, the main display is automatically reshown (date and time) and the light is turned off.



DT 201 description in short

2 Introduction

This instruction manual contains important information on the safe operation of equipment supplied by Schaudt. Make sure you read and follow the safety instructions provided.

The instruction manual should be kept in the vehicle at all times. Ensure that other users are made aware of the safety regulations.

3 Operation

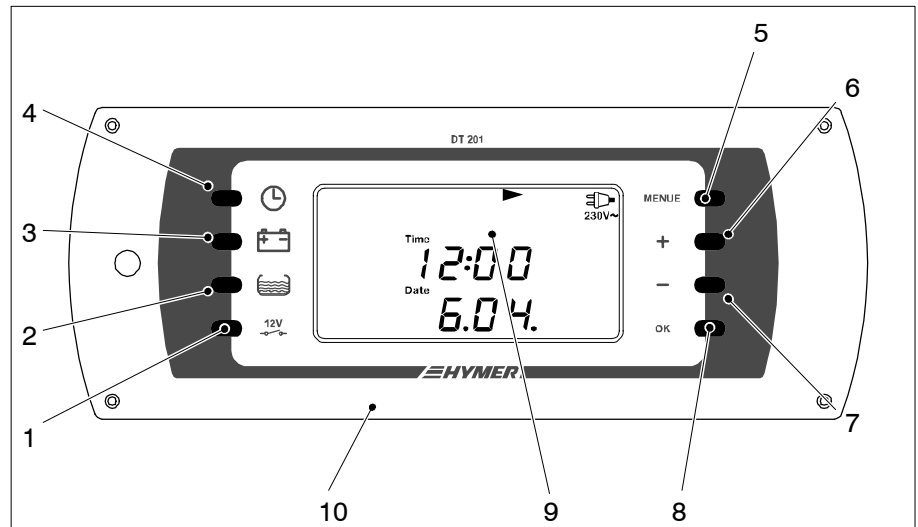






Fig. 1 Layout of the DT 201 B control and display panel

- | | | | |
|---|------------------------|----|-----------------------------------|
| 1 | Main switch | 6 | "+" button |
| 2 | Tank display button | 7 | "-" button |
| 3 | Battery display button | 8 | "OK" button |
| 4 | Main display button | 9 | Background illuminated LC display |
| 5 | "Menu" button | 10 | Aluminium front panel |

3.1 Operating controls

The DT 201 B control and display panel has the following controls:

- 
Main switch:
 Button for powering on and off the 12V supply to the motorhome or caravan.
- 
Button: Main display
- 
Button: Battery display
- 
Button: Tank display
- MENUE** **Button: Menu (settings)**
- +** **"+" button :** Change (configurable) values in menu displays
- **"-" button :** Change (configurable) values in menu displays
- OK** **"OK" button:** Confirmation of values entered

3.2 Display indicators

The different areas of the display are subdivided as follows:

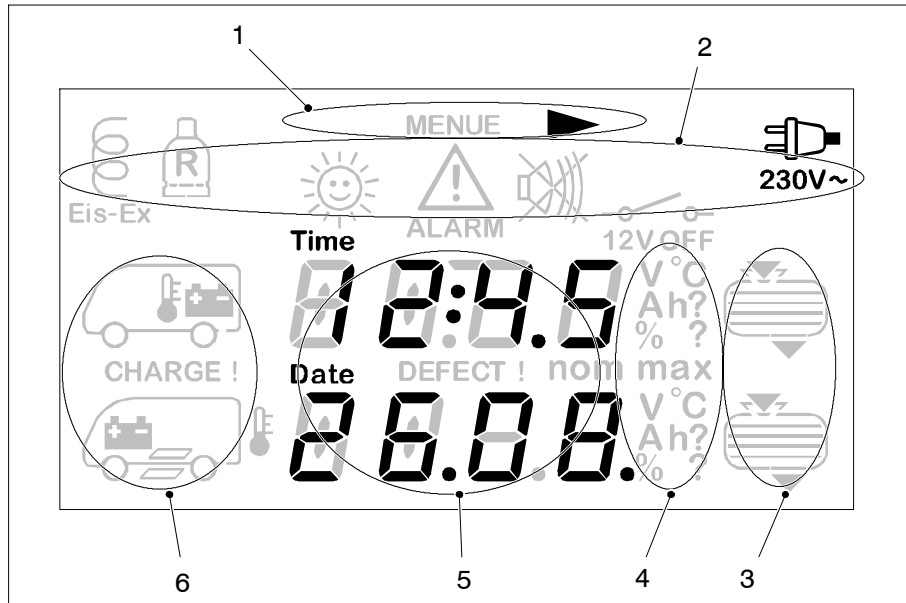


Fig. 2 Layout of display (using main display as an example)

- 1 Info line
- 2 Symbol line
- 3 Tank field (for tank display)
- 4 Units field
- 5 Main display
- 6 Vehicle area (for battery and temperature display)

Symbol meaning The symbols have the following meanings:

Symbol	Meaning	Symbol	Meaning
	Living area battery		An alarm is on
	Starter battery		Solar charging
	Inside temperature		Step
	Outside temperature		Acoustic warning
	Water tank (example: 50% fill level)		Spare gas cylinder (optional)
	Waste water tank (example: 25% fill level)		EisEx, optional
	Sewage tank, optional (example: 0% fill level)		Mains indicator 230V supply
	Waste tank 2, optional (example: 0% fill level)		Direction arrow

3.3 Starting up

230V mains operation ➤ Connect the plug for mains operation to the 230V power supply.

3.4 12V supply to the living area - switching on and off

3.4.1 Switching on



▲ The control and display panel can only be switched on when the battery voltage of the living area battery is greater than 11.0V. See also Section 3.6.

The assumption is that battery isolation was not activated the last time the vehicle was left.



➤ Press the "12V" button briefly.

- The display is illuminated.
- The time and date are in the main display.
- Any alarms set (e.g. "CHARGE") are flagged (see Section 3.6).
- The 12V living area supply is switched on.



- Symbol "Mains indicator" is displayed if the connector for mains operation is plugged in on the vehicle.

3.4.2 Switching off



▲ 12V power supply must always be switched off when leaving the motor-home. This prevents the living area battery from discharging unnecessarily.



➤ Press the "12V" button briefly.

- The display is illuminated.
- "12V OFF" is displayed briefly.
- The system has now been switched off.

These consumers are still operable even when the 12V power supply is switched off.

- Frost protection valve
- Heater
- Step
- AES/compressor refrigerator
- Awning light
- Circuit 4

3.5 Displays

3.5.1 Main display

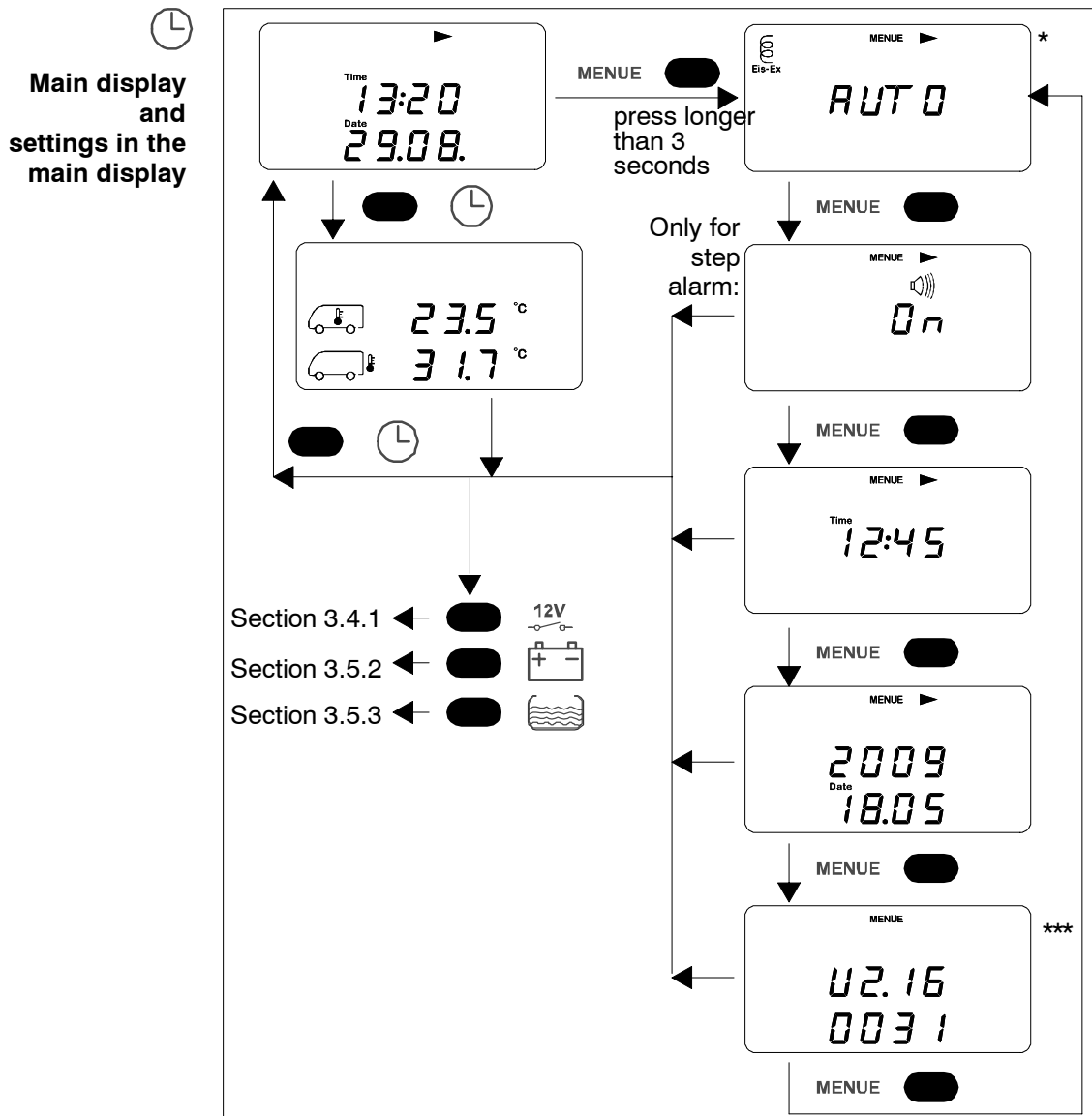


Fig. 3 Layout of main display

* This window is only displayed when the "Truma Duomatic L Plus" or "Truma Triomatic" option is fitted and active (see installation instructions).

** Contents are shown as examples only



▲ The main display showing the time is always displayed automatically 20 seconds after the last button is pressed.



➤ Press the "Main display" button.




- The display is illuminated.
- The time, date and potentially other symbols are displayed.





➤ Press again the "Main display" button (whilst the display is still lit).



- The display remains illuminated.
- The inside temperature (display range -40 °C ... + 60 °C) and the outside temperature (display range -40 °C ... + 60 °C) are shown

3.5.1.1 Setting date and time


-  ➤ Press the "Main display" button.
 - The display is illuminated.
 - The time and potentially other symbols are displayed.
 - MENUE ➤ Press the "Menu" button and keep it pressed for 3 seconds.
 - The display changes to the setting mode for the main display.
 - MENUE ➤ Keep pressing the "Menu" button until the hour display flashes.
 - + ➤ Use the "+" and "-" buttons to set the hour.
 - ➤ Confirm by pressing "OK".
 - The minute display flashes.
 - OK ➤ Set the minutes the same way.
 - MENUE ➤ Press the "Menu" button.
 - The year display flashes.
 - + ➤ Use the "+" and "-" buttons to set the year.
 - ➤ Confirm by pressing "OK".
 - The day display flashes.
 - OK ➤ Use the "+" and "-" buttons to set the day.
 - ➤ Confirm by pressing "OK".
 - The month display flashes.
 - OK ➤ Set the month the same way.
 -  ➤ Press the "Main display" button once entries are complete.
 - The display remains illuminated.
 - The main display is shown.
-  ▲ It is possible to exit the setting mode from any place by pressing a button. Any entries not saved are lost (press the "OK" button to save).

3.5.1.2 Switching on/off EisEx system




-  ▲ This function is only available when a Truma Duomatic L Plus or Truma Triomatic is fitted in the vehicle.
-  ➤ Press the "Main display" button.
 - The display is illuminated.
 - The time, date and potentially other symbols are displayed.
 - MENUE ➤ Press the "Menu" button and keep it pressed for 3 seconds.
 - The display changes to the setting mode for the main display. The current setting of the EisEx system is displayed, e.g. "AUTO".

- + ➤ The setting can be changed with the "+" and "-" buttons:
- - "OFF": The EisEx system is switched off.
 - "ON": The EisEx system is switched on.
 - "AUTO". The EisEx system is switched on automatically at temperatures below 7.5 °C and switched off automatically at temperatures above 7.5 °C.
- OK ➤ Confirm by pressing "OK". Configure other settings if required.
-  ➤ Press the "Main display" button once entries are complete.
 - The display remains illuminated.
 - The main display is shown.
-  ▲ It is possible to exit the setting mode from any place by pressing a button. Any entries not saved are lost (press the "OK" button to save).

3.5.1.3 Switching off step alarm

-  ▲ This function is only available when the step alarm is active (the warning buzzer is sounding). This can cause a false alarm in exceptional circumstances: The step alarm is triggered although the step is retracted.

The acoustic warning signal can be disabled in this case:

-  ➤ Press the "Main display" button.
 - The display is illuminated.
 - The time and potentially other symbols are displayed.
- MENUE ➤ Press the "Menu" button and keep it pressed for 3 seconds.
 - The display changes to the setting mode for the main display.
- MENUE ➤ Keep pressing the "Menu" button until the symbol for the warning buzzer and "On" are displayed.
- + ➤ Set value "Off" with the "+" or "-" button.
- ➤ Confirm by pressing "OK".
 - The symbol for the warning buzzer is shown with a line through it.
 - The warning buzzer is silent.
- OK
-  ➤ Press the "Main display" button once entries are complete.
 - The display remains illuminated.
 - The main display is shown.
- Rectify malfunction.
-  ▲ For reasons of safety, the step alarm is triggered after the next engine start until the malfunction is rectified.



- ▲ *
The solar system functions are only available if the relevant equipment (solar controller and solar cell) is connected up to the EBL ... Electrobloc and option "Read solar current" is enabled. Only the vehicle manufacturer can activate it at a later point in time.



- ▲ In the display for usable capacity of the living area battery, the "OK" button can be used to switch between the absolute value (in Ah) and the % entry.

3.5.2.1 Setting the installed (nominal) capacity for the living area battery

After exchanging the living area battery, the nominal capacity must be reset in the battery display. This must be carried out even when the capacities of the new and old batteries are identical. This resets the control and display panel to the "New battery value" for the max. usable capacity (80% of nominal capacity).



- Press the "Battery display" button.
 - The display is illuminated.
 - The remaining usable capacity of the living area battery is displayed.
 - The charge current of the living area battery is displayed.

MENUE

- Press the "Menu" button and keep it pressed for 3 seconds.
 - The display switches to the setting mode for the battery display.
 - The maximum usable capacity of the living area battery is displayed. The system uses the configurable "installed (nominal) battery capacity" to calculate this value.

MENUE

- Press the "Menu" button again whilst the display is lit up.
 - The display of the installed (nominal) living area battery capacity flashes.



- ▲ Standard factory setting: ??? Ah
The nominal battery capacity (e.g. in the event of retrofitting a battery) can be set in the 50 Ah to 495 Ah range. Use the K100 value for input (if this is not specified, multiply the K20 value by 1.125 and use the result).

+

- Use the "+" and "-" buttons to adjust the value.

-

OK

- Confirm by pressing "OK".



- ▲ If the installed battery capacity is to be displayed but not adjusted, the "OK" button must **not** be pressed. The setting menu must be exited by pressing a button (the menu is also exited automatically after 20 seconds) or by switching off the 12V supply.

- The installed (nominal) capacity of the living area battery is displayed at all times.



➤ Press the "Battery display" button once entries are complete.

- The display remains illuminated.
- The remaining usable capacity of the living area battery is displayed. The system uses the current living area battery charge status to calculate this setting.



▲ It is possible to exit the setting mode from any place by pressing a button. Any entries not saved are lost (press the "OK" button to save).

Battery capacity - additional information

The maximum usable capacity of the living area battery is displayed. This value can not be changed. The display shows the (changeable) nominal capacity in %. The (preset) value of 80% represents the maximum battery capacity usable in practical motorhome usage. This value can also increase to over 80%.

Maximum possible battery capacity

Query:

➤ Switch the system on (see Section 3.4.1).



MENUE

➤ Press the "Battery display" button.

➤ Press the "Menu" button and keep it pressed for 3 seconds.

- The display switches to the setting mode for the battery display.
- Symbol "Living area battery" is displayed. The associated maximum value is displayed.

The control and display panel features a real "fill level display" for the living area battery. The display of the battery capacity gives direct information on how much power is stored in the battery.

The full or flat battery status is detected by the control and display panel. The maximum capacity is recalculated after each complete discharging cycle (complete charging/ discharging cycle). The default setting can no longer be attained due to the increasing age of the battery. The condition of the living area battery can be determined from this. The battery must be checked and, if necessary, replaced when the maximum capacity is less than 50% of the nominal capacity.



▲ A brand new battery does not reach its full capacity until after several charge cycles.

The lower the battery temperature (and hence the greater the difference from the ideal temperature of 20 °C), the greater the capacity display error.

At very low battery temperatures, the battery is no longer fully charged and the system's full or flat indicator no longer works correctly as the battery capacity becomes lower at low temperatures (see information provided by the battery manufacturer).

Example

The motorhome can run for 3 days (without solar system or fuel cell) after a full charge (100%) without having to be connected up to a 230V supply. 40% battery capacity is now displayed (for example). This means:

- The battery can supply the motorhome with power for about 2 more days at most.

Other functions:

- The capacity display is automatically set to "full" when the full charge state is reached.
 - A warning is generated if the battery capacity drops to approx. 15%.
 - Automatic determination of the maximum attainable battery capacity (in %) for defined maximum discharging of the battery.
 - Charge request if the last full charge was more than 20 days ago.
 - Variable nominal capacity setting (e.g. if a battery with a greater capacity is retrofitted).
- ▲ The battery should be recharged at regular intervals. Otherwise a request is issued (see also Section 3.6.1 for "Charge" and "Date").



3.5.2.2 Battery current

The battery display works in conjunction with the Electrobloc and takes into account all types of battery charging:

- From the Electrobloc via the 230 V power supply
- From the vehicle via the alternator whilst driving
- From the solar controller (if fitted) via the solar modules



- ▲ The starter battery is charged by the Electrobloc with max. 6A. This charge current for conservation charging is not shown on the control and display panel.

3.5.2.3 Battery voltage

Battery status

The following table shows how to correctly interpret the living area battery voltage displayed. These values apply to actual operation, not offload voltage.

Battery voltage	Description
10.4 or lower	<ul style="list-style-type: none"> ● Risk of total discharge ● The battery monitor immediately switches off all consumers (apart from the frost protection valve)
11V or higher	12V power supply can be switched on using the main switch
10.5V to 12V	<ul style="list-style-type: none"> ● If the voltage falls below 12V, the battery alarm is triggered ● If the voltage stays below 10.5 - 12V¹⁾ for longer than 1 minute, the battery capacity is set to "Null". ● If the voltage remains below 10.5 - 12V¹⁾ for longer than 5 minutes, the system is switched off
12V to 13.2V	Battery in off-load status
More than 13.2V	Battery is being charged: Main charge
13.8V constant	Trickle charge voltage
14.3V	Final charging voltage (full charge) <ul style="list-style-type: none"> ● 1 hour for lead-acid battery ● 8 hours for lead-gel battery

¹⁾ Dependent on the current drain

Off-load voltage Measuring the off-load voltage is an additional way of assessing the condition of the battery. Off-load voltage is the voltage of the charged battery in a passive state, with no current being supplied or drawn.

Take the measurement several hours after the last charging. In the meantime, no significant load should have been placed on the battery, meaning no current should have been drawn from it. If the off-load voltage of the battery is less than 12.0V, there is a risk of total discharge.



- ▲ Carry out checks in the mornings before 12V consumers are switched on.

The battery voltage is too low if "CHARGE" is displayed and the battery must be recharged (see also Section 3.6.1).



- ▲ After starting up the system again, the voltage of the living area battery should be tested before starting up the engine and before connecting the vehicle to the mains. If idle for a maximum period of 6 months (and if the battery was previously fully loaded), the battery voltage should be greater than 12.7V. The battery is probably faulty if the voltage is below 12V.

The following table shows the correct interpretation of the off-load voltage displayed. The values specified apply for Gel batteries.

Values for off-load voltage	Charge state of the battery
Less than 12V	Totally discharged
12.2V	25 %
12.3V	50 %
More than 12.8V	Full

Voltage display Starter battery When the vehicle is moving, the voltage of the starter battery for basic vehicles fitted with a 12V starter battery is displayed marginally too low when the refrigerator is run with 12V. For basic vehicles fitted with a 24V starter battery, the voltage display is correct when the refrigerator is switched off or gas-powered, or when the engine is switched off.

On-board supply overloaded When the 12V on-board supply is overloaded (i.e. when the battery voltage drops below 12V), switch off some of the consumers.

3.5.2.4 Solar current



- ▲ The solar current display is only available if a Schaudt GmbH LRS ... solar charger is fitted and the "Read solar current" option is active.

3.5.2.5 Battery monitor

The battery monitor (with dynamic voltage threshold) continually checks the living area battery. The cut-off point is "earlier" for lower discharge currents than for larger currents. This provides improved total discharge protection. Monitoring is also performed in the switched-off state. A warning is displayed if it drops below 12.0V (depending on the current being drawn) - see Section 3.6 "Alarms".

If the voltage of the living area battery sinks further, falling below 10.5V, the battery monitor immediately switches off all 12V consumers. The control and display panel also switches itself off. Only the frost protection valve continues to be powered (so it stays closed). Before switch-off, all switch states and the value of the battery capacity are stored and restored after power-on.

3.5.3 Tank display

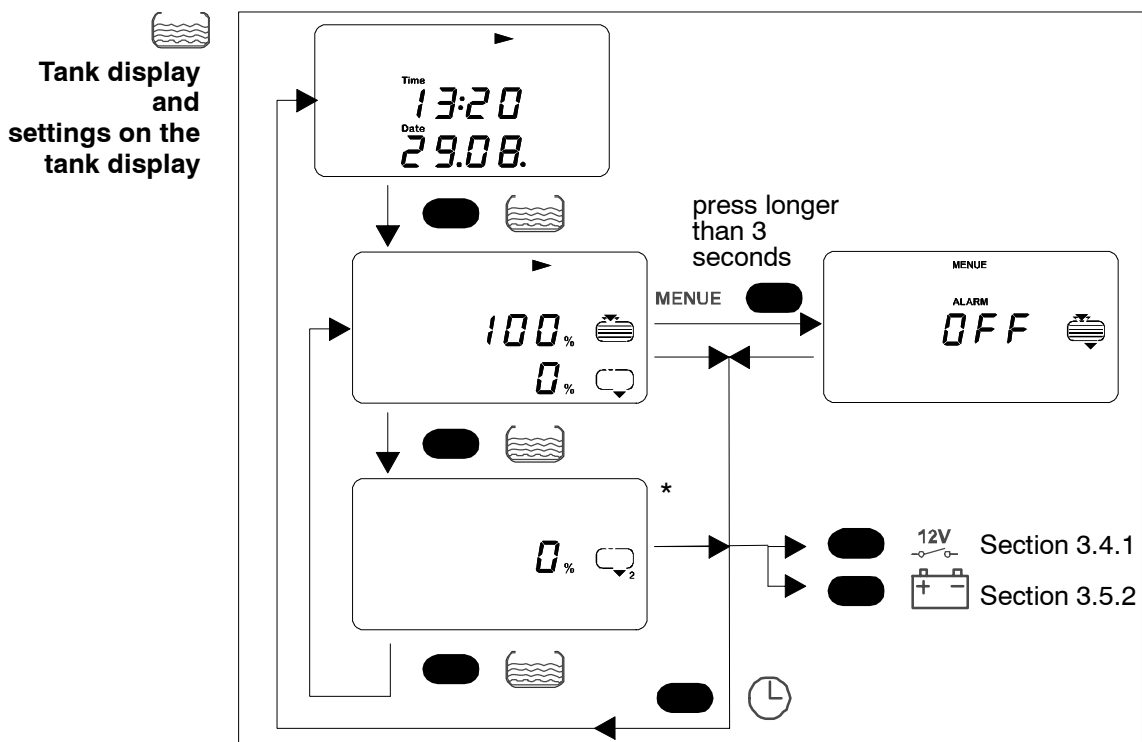


Fig. 5 Layout of tank display

* Only displayed when the "Extra tank" option is enabled



➤ Press the "Tank display" button.

- The display is illuminated.
- The fill level of the tanks is displayed.



➤ Press again the "Tank display" button (whilst the display is still lit).

- The display remains illuminated.
- The fill level of the extra tank is displayed*



* The extra tank fill level display is only available if the relevant equipment ("Waste water tank 2" or "Sewage tank") exists and option "Extra tank 2 - waste water" or "Extra tank - sewage" is enabled. Only the vehicle manufacturer can activate it at a later point in time.

Tank monitor The tank monitor automatically checks the water and waste water fill levels once a minute and when changing to the tank display.

An alarm is triggered when the water tank is empty or the waste water tank is full. Warnings are displayed on the screen (see Section 3.6 "Alarms").



- ▲ Monitoring does not take place if the 12V power supply is switched off and whilst the vehicle is moving. This prevents false tank alarms from being generated by the liquid slopping around inside the tanks.

3.5.3.1 Switching the tank alarm on and off



- ▲ The tank alarm can, for instance, be switched off when the water tank is constantly empty (e.g. city water connection). The tank alarm can only be switched on or off for all tanks at once.



- Press the "Tank display" button.

- The display is illuminated.
- The fill level of the tanks is displayed.

MENUE

- Press the "Menu" button and keep it pressed for 3 seconds.

- The display switches to the setting mode for the tank display.
- The "Alarm" and "Tank" symbols are displayed. The associated "On" or "Off" setting flashes.

+

- Use buttons "+" and "-" to set $\square \square$ (tank alarm ON) or $\square \square \square$ (tank alarm OFF).

-

- Confirm by pressing "OK".

OK



- Press the "Tank display" button once entries are complete.

3.6 Troubleshooting and remedies

3.6.1 Alarms



A flashing warning triangle indicates an alarm in the main display. A flashing symbol is displayed in the relevant function area in the main display and the screen is illuminated for 20 seconds whenever an alarm is set. More specific information on the alarms is displayed on the battery and tank displays. The relevant symbols are also displayed simultaneously if several alarms are set at the same time.



▲ ATTENTION!

Extended step.
Step damage:


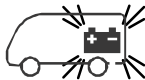
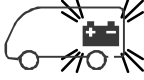

- Do not rely solely on the acoustic warning signal.
- Always ensure that the step has been retracted before driving off.










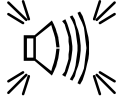


▲ ATTENTION!

Total discharge.
Damage to the living area battery:

- Prevent low battery charge (indicated by low voltage).
- Check the battery capacity regularly (see Section 13 for preferred method)
- Check the voltage regularly (see Section 3.5.2.3 for alternative)

Alarm	Possible cause	Remedy
CHARGE (alarm is also displayed when 12V supply is switched off)	Battery voltage is too low	The system shuts down automatically after approx. 5 minutes. Connect the vehicle to the 230V power supply.
	 The display panel can only be switched on if the battery voltage lies above 11V, otherwise the living area battery voltage is displayed after an attempt is made to switch on.	
Main display:  Battery display: CHARGE ! with battery capacity rating	Battery flat (remaining capacity is less than 15%).	Recharge the battery.
Main display:  Battery display:  DEFECT !	Full living area battery capacity is less than 50% of the default nominal capacity setting. Battery has reached the end of its working life.	Replace battery.

Alarm	Possible cause	Remedy
Battery display: CHARGE! and 	Unknown battery capacity: Battery capacity is unknown (e.g. after starting the system or having changed the battery).	Use the 230V power supply to fully charge the battery. This will provide a defined charge status.  The display is illuminated for 20 seconds after the charging process has finished and when the 230V power supply has been switched off. Both displays are then cleared.
Battery display: CHARGE! and DATE	Time-dependent charging request.	Use the 230V power supply to charge the battery.
Tank display: 	With engine stopped: Water tank sensor fault.	Clean the sensors and check as necessary.
Main display: 	230V power supply has failed or has been disconnected from the motorhome.	230V supply must be connected or switched on. Start engine. Acknowledge the alarm if you have deliberately disconnected it/switched it off <ul style="list-style-type: none"> ➤ Press the "Main display" button. ➤ Press the "OK" button. ● The symbol disappears.
Main display:  	Water tank is empty. Waste water tank is full.	Refill the water tank. Empty the waste water tank.
Only when an extra tank is fitted: The relevant display appears depending on which tank is available: <ul style="list-style-type: none"> ● Water tank 2 display is the same as the water tank display ● Waste water tank 2 display is the same as the waste water tank display ● Sewage tank display is the same as the waste water tank display 		
Main display for temperature display: ?	Unreliable measurement; defective sensor.	Inform customer service/dealer
Main display: 	No date has been entered.	Enter date (see Section 3.5.1.1).

Alarm	Possible cause	Remedy
Main display:  The warning buzzer sounds.	The step is extended whilst the engine is running.	Retract the step. There is a fault if the warning buzzer sounds despite the step being retracted. In this case, the warning buzzer can be switched off manually (see Section 3.5.1.3). Inform customer service/dealer
Only applicable if Truma Duomatic L Plus is fitted:		
Main display: 	One of the gas cylinders is empty.	Replace the empty gas cylinder with a full one.
Main display: 	Both gas cylinders are empty.	Replace the empty gas cylinders with full ones.

3.6.2 Faults

Flat vehicle fuses

The majority of power supply system faults are caused by blown fuses (refer to the instruction manual for the relevant electrobloc for information on voltage distribution and fusing).

Please contact our customer service department if you can not rectify the fault using the following table.


If this is not possible (such as when you are abroad), you can have the control and display panel repaired at a specialist workshop. Please note that the warranty will become void if incorrect repair work is carried out. Schaudt GmbH shall not accept liability for any damages resulting from such repairs.

Fault	Possible cause	Remedy
12V supply does not function (or some areas are not powered).	12V main switch is switched off.	12V main switch must be switched on.
	Fuse blown.	See Electrobloc EBL... instruction manual. .
System can not be switched on.	Living area battery has not been charged (voltage less than 11.0V); battery monitor has switched off.	Charge the living area battery.
	Fuse blown.	See Electrobloc EBL... instruction manual. .
Living area battery is flat.	Living area battery is discharged.	Charge the living area battery immediately. The living area battery will be damaged beyond repair if it remains totally discharged for a lengthy period.
	The battery can be discharged by inactive consumers such as the frost protection valve in the heater system	Fully charge the living area battery before taking the motorhome out of service for a longer period.

Fault	Possible cause	Remedy
The "Check mains" symbol is not displayed although 230V power supply is connected.	The mains connection is dead.	Check the mains connection (e.g. camping site).
	The power cut-out in front of the Electrobloc has tripped or is switched off.	Reset the power cut-out.

3.6.3 Check the software version (SW vers.)

The software version must be known for servicing purposes or for answering the manufacturer's questions. It can be determined as follows:

- 
 - Press the "Main display" button.
 - The display is illuminated.
 - The time, date and potentially other symbols are displayed.
- MENUE
 - Press the "Menu" button and keep it pressed for 3 seconds.
 - The display changes to the setting mode for the main display.
- MENUE
 - Repeatedly press the "Menu" button until a letter appears in the first position in the top line.
 - The software version is displayed, e.g. "U2.16".

3.7 Closing down

3.7.1 Closing down for up to 6 months

- Fully charge the living area battery before closing down the system.

The living area battery is then protected against total discharge. This only applies if the battery is intact. Follow the instructions from the battery manufacturer. Once shut down, the system requires approx. 4 Ah per month.

Disconnect the living area battery from the 12V on-board supply

Disconnect the living area battery from the 12V power supply if the motorhome is not used for a longer period (during the winter for example). For this, the system has a battery cut-off mechanism that isolates the living area battery from the vehicle.



- Press the "12V" button briefly.
 - The display is illuminated.
 - "12V OFF" is displayed briefly.
 - The system has now been switched off.
- Disable battery isolator on electrobloc EBL ...



- ▲ The heater system's frost protection valve opens when the living area battery is isolated from the Electrobloc by the battery isolation. The boiler and water tank empty when the frost protection valve is open. See the instruction manual for the heater system for further information.
- Follow the other instructions in the EBL ... Electrobloc instruction manual.

3.7.2 Starting up after a shutdown

This assumes that the 12V system was shut down the last time the vehicle was left (battery isolation activated).



- ▲ Some consumers (see Section 3.4.1) are operable even when the 12V power supply is switched off. To start these consumers for the first time
 - after the 12V system has been shut down
 - after the battery monitor has shut the system down
 - after a battery change
 - after reconnecting the living room battery after a long break

the 12V supply on the control and display panel must be switched on briefly (see also Section 3.5.2.3).

➤ Enable the battery isolator on electrobloc EBL ...

12V


➤ Press the "12V" button.

- The display is illuminated.
- "Date" flashes.

➤ Set date and time (see Section 3.5.1.1) – the other settings are stored automatically on shutdown.

➤ Check battery voltage (see Section 3.5.2.3).

➤ Continue start-up as per Section 3.3.

4 Maintenance

The control and display panel requires no maintenance.

Cleaning

Clean the front plate with a soft, slightly damp cloth and a mild detergent. Never use spirit, thinners or similar substances. Do not allow fluid to ingress the control and display panel.

Tank sensors/ tank probes

Clean the sensors/probes (the sensor/probe surfaces must always be clean). Inform the customer service department at Schaudt GmbH if there is still a problem.

5 Application and function

The DT 201 B control and display panel is the central operating unit for the EBL ... Electrobloc, which supplies power to all of the 12V consumers in the electrical system on board the motorhome or caravan. It is usually installed in an easily accessible spot high up near the door of the motorhome or caravan.

The DT 201 B control and display panel is responsible for controlling the electrical functions in the motorhome's living area and for displaying various readings.

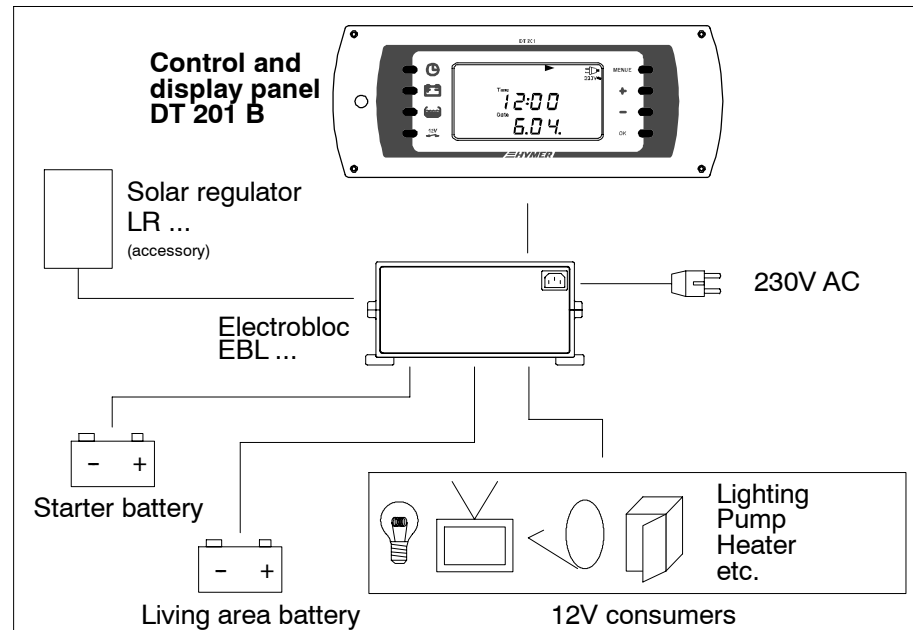


Fig. 6 On-board power supply system

System devices

An Electrobloc EBL ... must be connected for operation. This powers the 12V devices in the motorhome/caravan and charges the living area battery and starter battery.

The following connection options are available:

- Electrobloc EBL ...
- Water tank (a capacitive sensor is optional)
- Waste water tank
- Extra tank, optional (can be installed as a water tank, waste water tank or sewage tank)
- Truma Triomatic™ or Truma Duomatic L Plus™
- Inside and outside temperature sensors

▲ This device is intended solely for installation in a vehicle.



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Appendix

A EC Declaration of Conformity

Schaudt GmbH hereby confirms that the design of the DT 201 B control and display panel complies with the following relevant regulations:

- DIRECTIVE OF THE COMMISSION 2004/104/EC from October 14th 2004 for the adaptation of directive 72/245/EEC of the council on noise suppression (electromagnetic compatibility) of motor vehicles to technical advancements
- DIRECTIVE 2005/49/EC OF THE COMMISSION from July 25th 2005 for the change of directive 72/245/EEC of the council on noise suppression (electromagnetic compatibility) of motor vehicles and directive 70/156/EEC of the council for harmonization of the legal provisions of Member States on the operating license for motor vehicles and motor vehicle trailers for the purposes of adaptation to technical advancements.
- DIRECTIVE 2005/83/EC OF THE COMMISSION from November 23rd 2005 for the change of Appendices I, VI, VII, VIII, IX and X of directive 72/245/EEC of the council on noise suppression (electromagnetic compatibility) of motor vehicles for the purposes of their adaptation to technical advancements

This declaration is based on:

Model approval issued by the Federal Transport Authority
Model approval no.: e1*72/245*2008/28*2762*07
EU approval code: e1 03 2762

The original EC Declaration of Conformity is available for reference at any time.

Manufacturer Schaudt GmbH, Elektrotechnik & Apparatebau

Address Planckstraße 8
88677 Markdorf
Germany

B Special fittings/accessories

Rod tank probes Per tank:
1 x rod-type tank probe, 1 x seal
1 x locking nut, 1 x probe cable (5 x 0.5)

Capacitance probes Alternative (per tank):
1 x capacitance tank probe for infinitely variable display of water tank fill level

Tank sensors Alternative (per tank):
5 x tank sensor, 1 x sensor cable 5 x 0.5

Mixed operation Mixed operation of tank probes and tank sensors is possible.

C Customer service

Customer service address Schaudt GmbH, Elektrotechnik & Apparatebau
Planckstraße 8
D-88677 Markdorf

tel.: +49 7544 9577-16 e-mail: kundendienst@schaudt-gmbh.de

Office hours Mon to Thurs 08.00 – 12.00, 13.00 – 16.00
 Fri 08.00 – 12.00

Send in the device Returning a defective device:



The switch panel must be transported in the ESD protective bag as supplied by us. The PCB of the control and switch panel contains components that can be destroyed by electrostatic discharge (ESD). Do not touch the components on the PCB.

A suitable bag can be ordered from Schaudt GmbH if you do not have one available.

- Always use well padded packaging.
- Fill in and enclose the fault report, see Appendix D.
- Send it to the addressee (free of charge).

E Block diagram/connection diagram

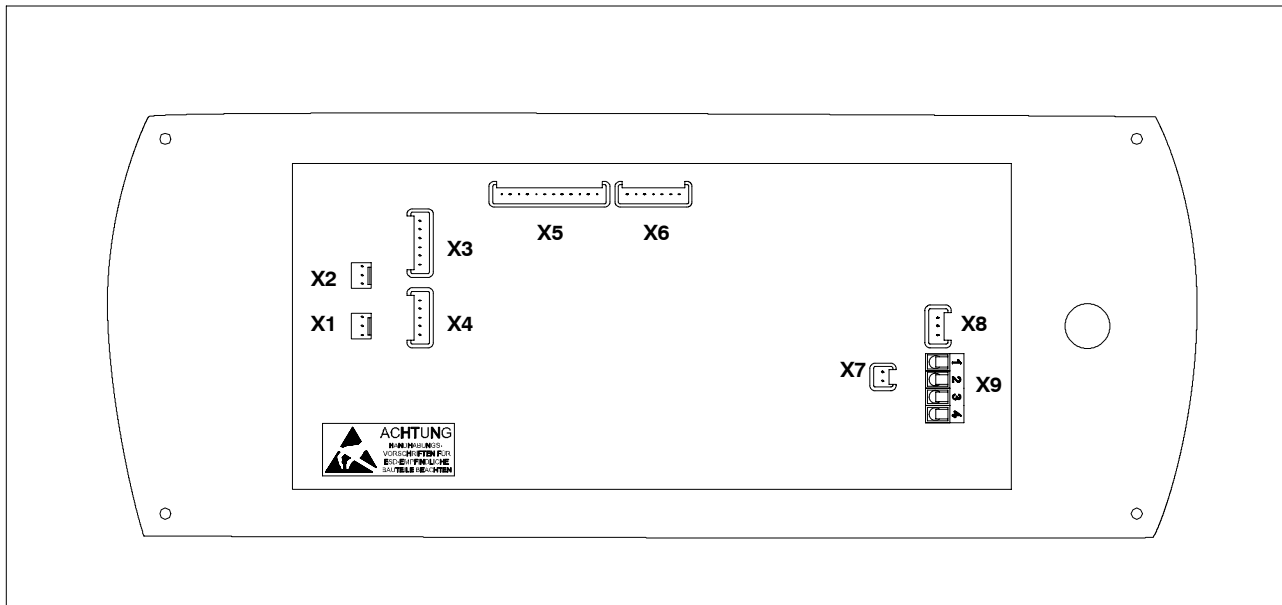


Fig. 7 DT 201 B control and switch panel connection diagram

<p>X1 ELCO 8263 3-way</p> <p>1 Minus 2 + EisEx 3 Gas Reserve 1</p>	<p>X2 ELCO 8263 3-way</p> <p>1 Minus 2 + EisEx 3 Gas Reserve 2</p>
<p>X3 Lumberg MSFQ 6-way</p> <p>1 full 2 3/4 3 1/2 4 1/4 5 Base water tank 6 n.c.</p>	<p>X4 Lumberg MSFQ 5-way</p> <p>1 full 2 3/4 3 1/2 4 1/4 5 Base waste water tank</p>
<p>X5 Lumberg MSFQ 12-way</p> <p>1 Main switch relay 1 Off 2 Main switch relay 1 On 3 Main switch relay 2 Off 4 Main switch relay 2 On 5 Mains signal 6 Shunt consumer 7 Shunt battery 8 Negative living area battery sensor 9 Lighting negative 10 +sensor, living area battery 11 + starter battery, 12V 12 +lighting</p>	<p>X6 Lumberg MSFQ 7-way</p> <p>1 D+ 2 n.c. 3 n.c. 4 n.c. 5 n.c. 6 Solar starter battery 7 Solar living area battery</p>
<p>X7 Lumberg MSFQ 2-way</p> <p>1 Outside temperature sensor 2 Outside temperature sensor</p>	<p>X8 Lumberg MSFQ 3-way</p> <p>1 Capacity tank probe signal 2 Minus 3 +</p>
<p>X9 Plug-in/screw terminal, 4-way</p> <p>1 Minus 2 Step 3 n.c. 4 n.c.</p>	