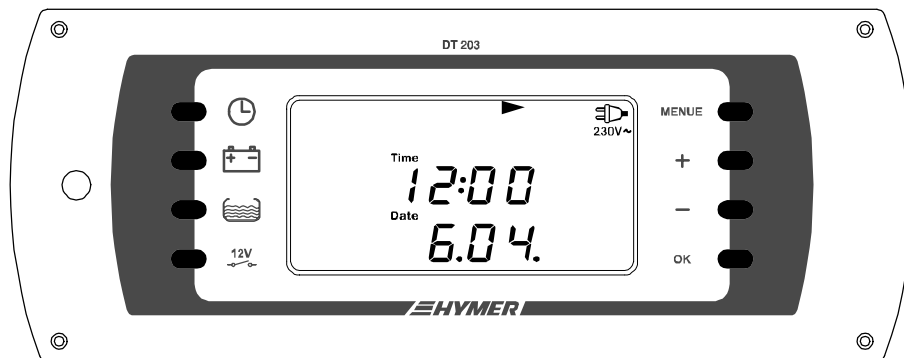


## Instruction Manual



## Control and Display Panel DT 203

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## 1 Safety Information

### 1.1 Meaning of safety symbols



**▲ 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.



**▲ WARNING!**

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



**▲ ATTENTION!**

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



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
  - charge/discharge currents
  - voltages
- of the starter and living area battery;
- then (if solar system fitted)
- Solar current

**Button: Main display:**

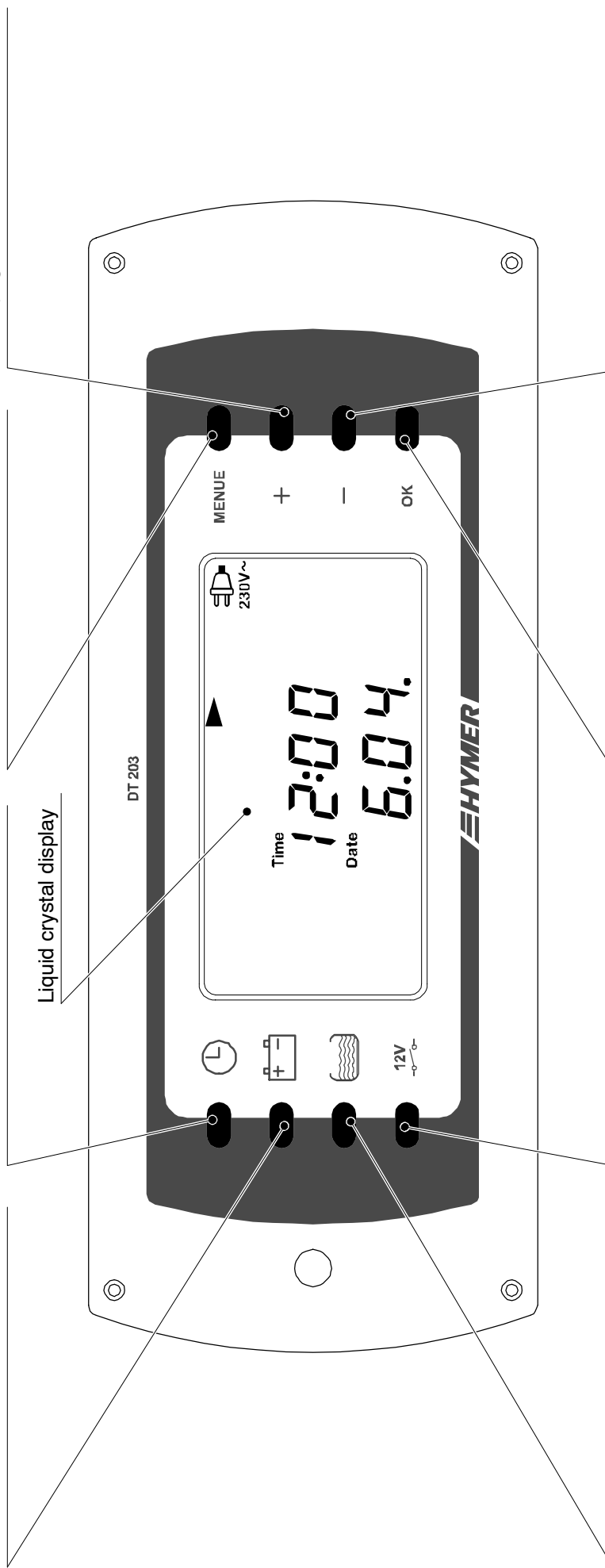
- Display of inside and outside temperature
- Return to the main display (time and date) from any display or setting menu

**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



**Button: Tank display:**

- Display of the water and waste water tank fill levels

**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



## 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

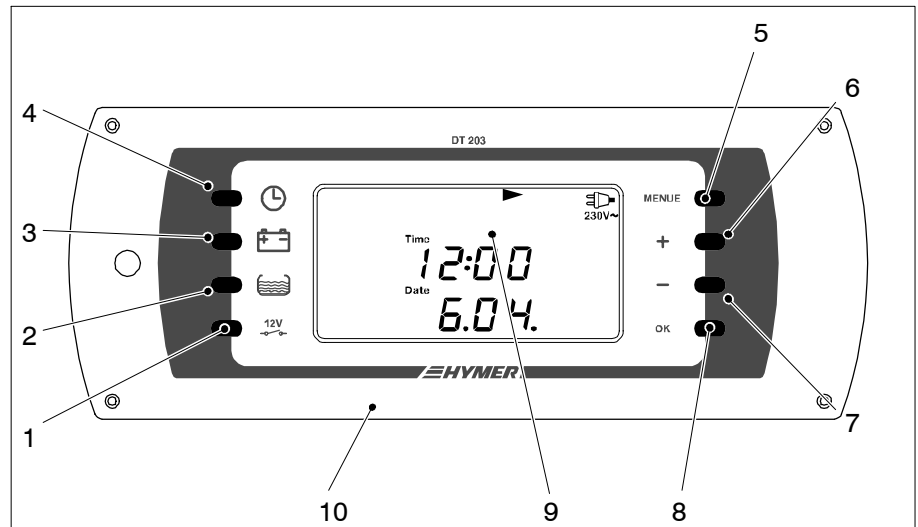






Fig. 1 Layout of the DT 203 control and display panel

- |                          |                                     |
|--------------------------|-------------------------------------|
| 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 203 control and display panel has the following controls:

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

## 3.2 Display indicators

The different areas of the display are subdivided as follows:

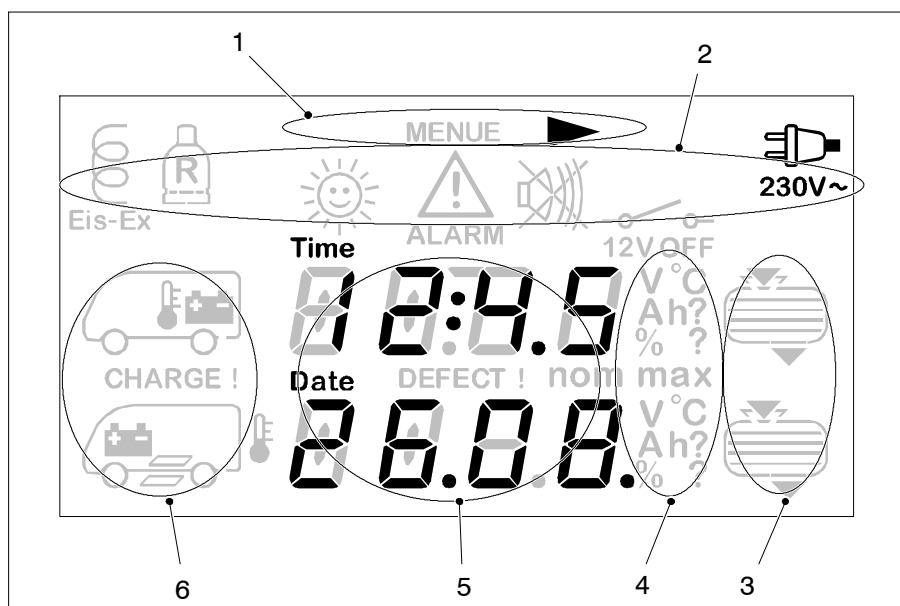
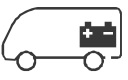



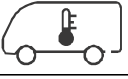
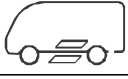
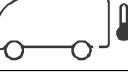









Fig. 2 Layout of display (using main display as an example)

- 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
	Mains indicator 230V supply		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 lights up.
- 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" continues to be displayed if the connector for mains operation is plugged in on the vehicle.
- The illumination will be darkened after 10 s.

### 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 lights up.

➤ Press the "12V" button again.

- "12V OFF" is displayed.
- Any functions enabled continue to be displayed (e.g. "Mains indicator" and "EisEx").
- The system has now been switched off.
- The illumination will be darkened after 3 s.

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

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

## 3.5 Displays

### 3.5.1 Main display

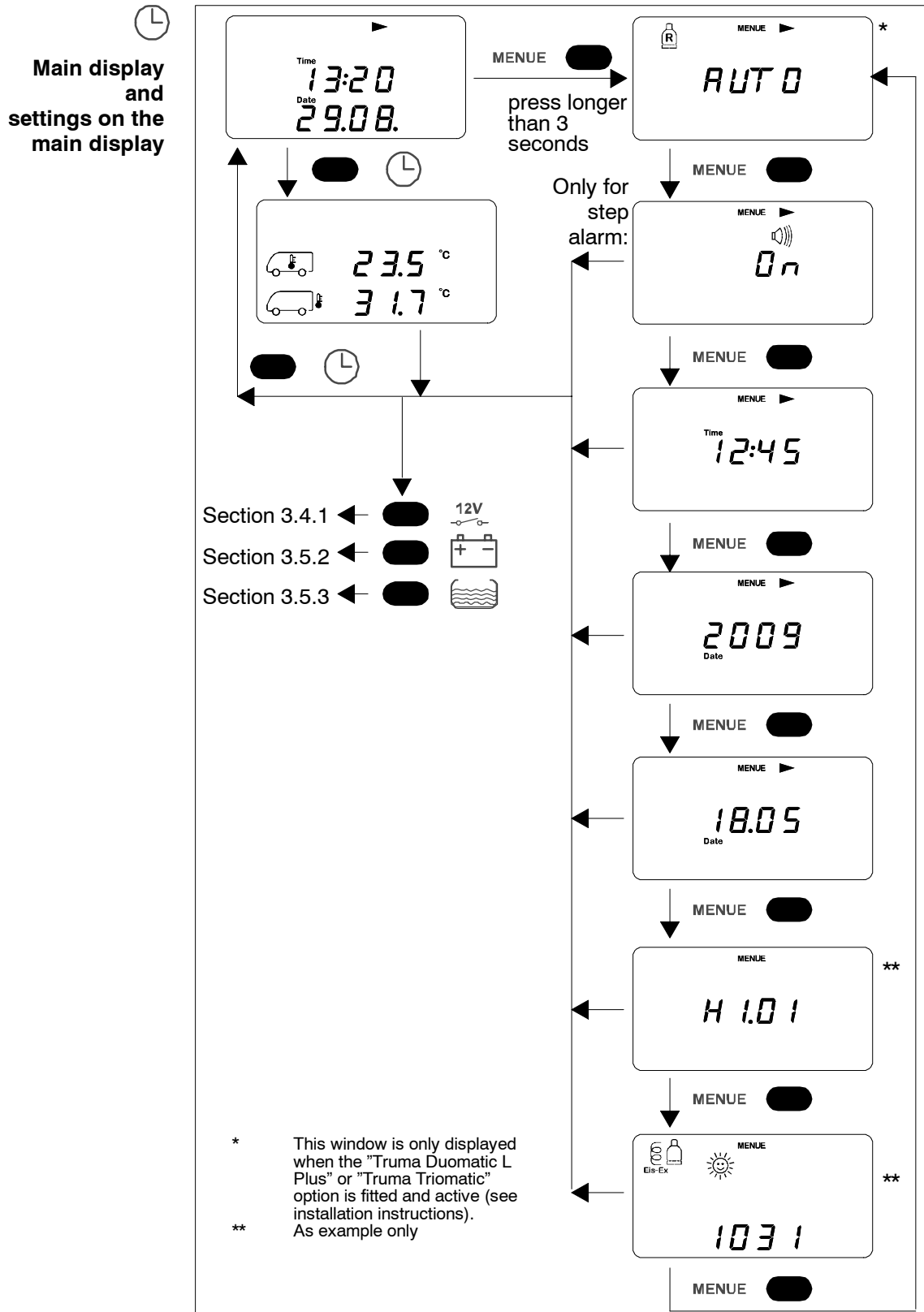


Fig. 3 Layout of main display





- ▲ The main display showing the time is always displayed automatically 10 seconds after the last button is pressed.



- Press the "Main display" button.

- The display lights up.
- The time, date and any other symbols are displayed.



- Re-press the "Main display" button (whilst the display is still lit).

- The display stays lit up.
- The inside temperature (display range -40 °C ... + 60 °C) and the outside temperature (display range -40 °C ... + 60 °C) are displayed

## 3.5.1.1 Setting date and time



- Press the "Main display" button.

- The display lights up.
- The time and any 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".

OK

- The minute display flashes.

- 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".

MENUE

- Press the "Menu" button.

- The day display flashes.

+

- Use the "+" and "-" buttons to set the day.

—

- Confirm by pressing "OK".

OK

- The month display flashes.

- Set the month the same way.

MENUE

- Press the "Menu" button.



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

- The display stays lit up.
- The main display is shown.



- ▲ It is possible to exit setting mode from anywhere 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 lights up.
- The time, date and any 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 stays lit up.
- The main display is shown.



- ▲ It is possible to exit setting mode from anywhere 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).  
A defect step limit switch may cause a false alarm – the step alarm is triggered although the step is retracted.

It is possible to disable the alarm in this case so as not to distract anyone whilst the vehicle is moving:



- Press the "Main display" button.

- The display lights up.
- The time and any 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".

OK

- The symbol for the warning buzzer is shown with a line through it.
- The warning buzzer is silent.



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

- The display stays lit up.
- The main display is shown.

- Rectifying the step malfunction.



### ▲ WARNING!

The step malfunction must be rectified immediately because constant false alarms reduce concentration levels.



- ▲ For reasons of safety, the step alarm is triggered after the next engine start until the malfunction is rectified.

## 3.5.2 Battery display

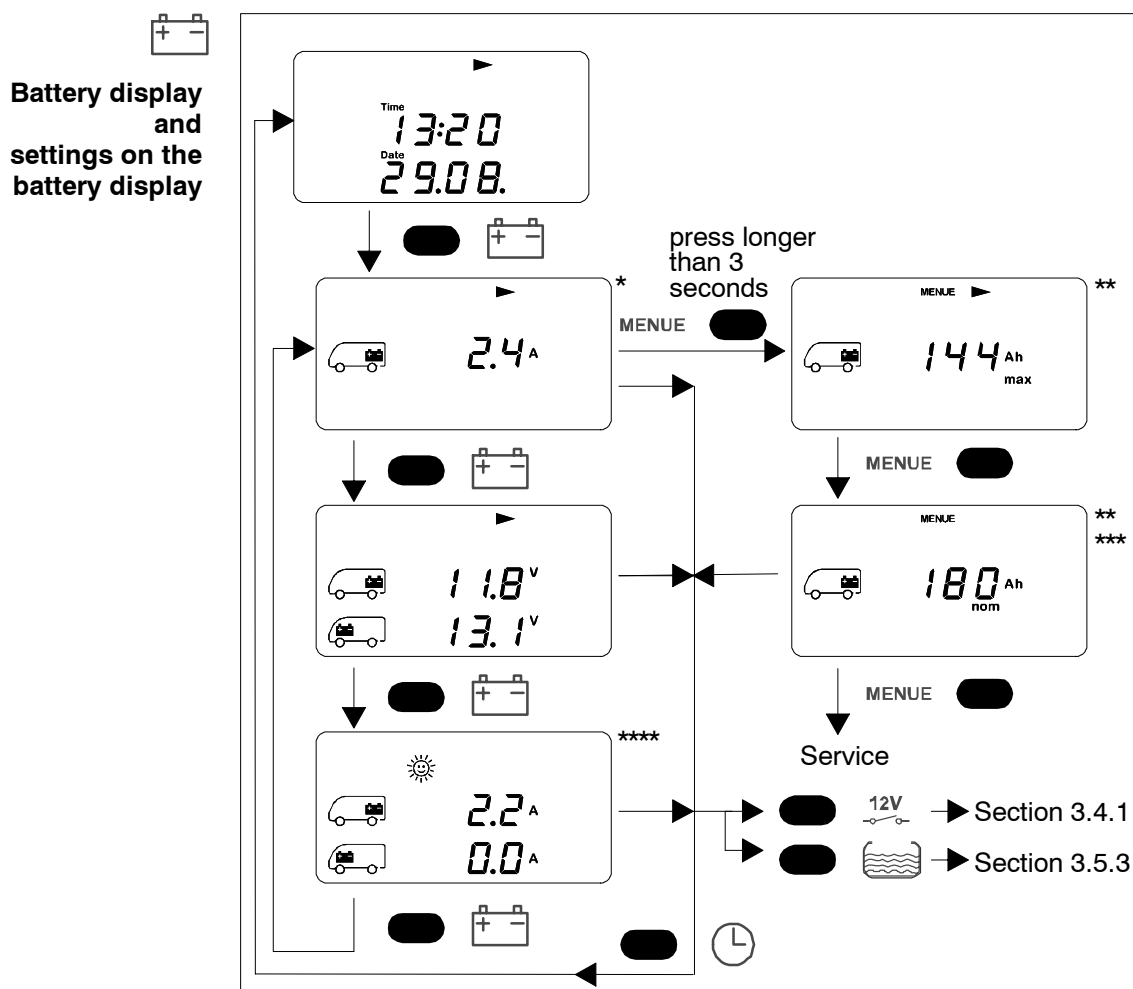


Fig. 4 Layout of battery display

- \* If function "Read battery capacity" has been enabled by the manufacturer, the battery capacity and the charge current are displayed in the first and second line respectively.
- \*\* Only available if function "Read battery capacity" has been enabled by the manufacturer
- \*\*\* Setting can be adjusted using the "+" and "-" buttons; press "OK" to confirm
- \*\*\*\* Only displayed when the "Read solar current" option is enabled



➤ Press the "Battery display" button.

- The display lights up.
- The power of the living area battery is displayed.  
" + ": Living area battery is charged  
" - ": Living area battery is discharged



➤ Keep pressing the "Battery display" button again (whilst the display is still lit).

- The display stays lit up.
- The following information is displayed in sequence:
  - voltage of living area battery and voltage of starter battery
  - solar controller charge current for the living area battery
  - solar controller charge current for the starter battery\*\*\*



## ▲ \*\*\*\*

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



## ▲ If function "Display battery capacity" has been enabled by the manufacturer:

- The remaining usable battery capacity of the living area battery is displayed together with the charge current to the living area battery (see Fig. 4: \*).
- 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



## ▲ This section only applies if function "Display battery capacity" has been enabled by the manufacturer.

After exchanging the living area battery, the nominal capacity must be reset in the battery display. This must be carried out even if 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 lights up.
- 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.



## ▲ Default factory setting: 90 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 "+" 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.



- Press the "Battery display" button once entries are complete.
  - The display stays lit up.
  - The voltages of the living area battery and the starter battery are displayed.



- ▲ It is possible to exit setting mode from anywhere 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 (pre-set) 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:



MENUE

- Switch the system on (see Section 3.4.1).
- 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 has a real "fill level display" for the living area battery. The battery capacity display 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 Section 3.6.1 for "**Charge**" and "**Date**").

## 3.5.2.2 Battery current

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

- From the electroblock via the 230V 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 electroblock 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 less	<ul style="list-style-type: none"> <li>• Risk of total discharge</li> <li>• The battery monitor immediately switches off all consumers (apart from the frost protection valve)</li> </ul>
11V or greater	12V power supply can be switched on using the main switch
Less than or equal to 10.8V	<ul style="list-style-type: none"> <li>• If the voltage drops below 10.8V, the battery alarm is triggered</li> </ul>
Less than or equal to 11.8V if function "Display battery capacity" has been enabled by the manufacturer:	<ul style="list-style-type: none"> <li>• If the voltage drops below 11.8V, the battery alarm is triggered</li> <li>• If the voltage stays below 10.5 - 12V<sup>1)</sup> for longer than 5 minutes, the battery capacity is set to "Zero".</li> <li>• If the voltage remains below 10.5 - 12V<sup>1)</sup> for longer than 15 minutes, the system is switched off.</li> </ul>
12V to 13.2V	Battery in off-load status

Battery voltage	Description
More than 13.2V	Battery is being charged: Main charge
13.8V constant	Trickle charge voltage
14.3V	Final charging voltage (full charge)

<sup>1)</sup> Dependent on the current drain

## Off-load voltage

Measuring the off-load voltage is another 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 a battery alarm is displayed (living area battery and starter battery symbols) and the battery must be recharged (see 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.

## 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 LR(S)... solar charger is fitted and the "Read solar current" option is enabled.

The ☀ symbol is only displayed when the solar charge current is greater than ca. 0.3 A.



## 3.5.2.5 Battery monitor

### Static battery monitor

- The battery monitor alarm is always displayed below 10.8V.
- The cut-off threshold is fixed at 10.5V.

### Dynamic battery monitor (only if function "Read battery capacity" has been enabled by the manufacturer)

- 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 11.8V (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 (for it to stay closed). The remaining battery capacity is set to 0%.

## 3.5.3 Tank display

Tank display and settings on the tank display

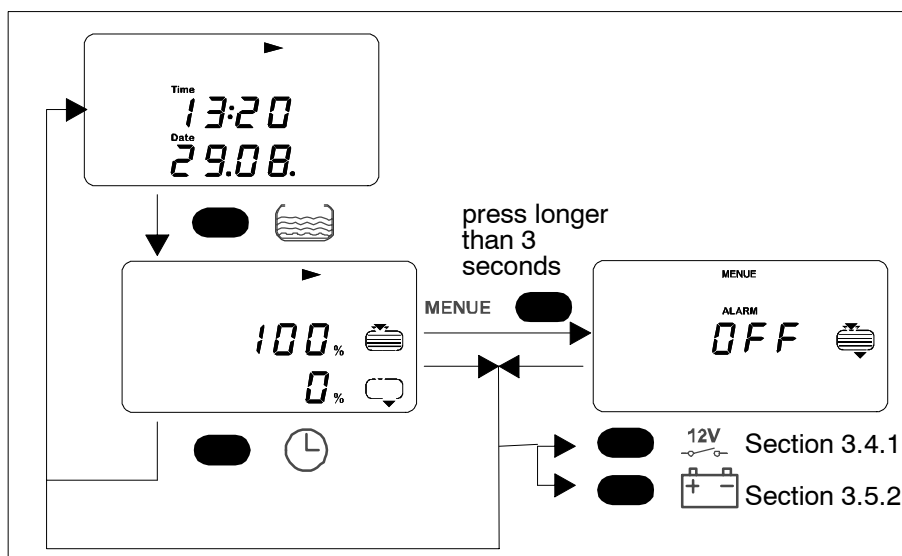


Fig. 5 Layout of tank display



➤ Press the "Tank display" button.

- The display lights up.
- The fill level of the tanks is displayed.

### 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 liquid slopping around inside the tanks from causing false alarms.

## 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/off for all tanks simultaneously.



- Press the "Tank display" button.

- The display lights up.
- The fill level of the tanks is displayed.

MENUE

- Press the "Menu" button and keep it pressed for 3 seconds.
  - The display switches to 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  $\square \text{ ON}$  (tank alarm ON) or  $\square \text{ FF}$  (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.



#### ▲ WARNING!

Extended steps can be damaged or cause injury. So therefore:





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






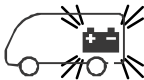





#### ▲ ATTENTION!

Total discharge results in damage to the living area battery. So therefore:

- Prevent low battery charge (indicated by low voltage).
- Check the voltage regularly (see Section 3.5.2.3).
- If function "Read battery capacity" has been enabled by the manufacturer: Check the battery capacity regularly (see Page 14).

Alarm	Possible cause	Remedy
 <p>(alarm is also displayed when 12V supply is switched off)</p>	<p>Battery voltage is too low (below 10.8V)</p>	<p>Connect the vehicle to the 230V power supply.</p>
	 <p>The display panel can only be switched on if the battery voltage is greater than 11V, otherwise the living area battery voltage is displayed after an attempt is made to switch on.</p>	
<p>Battery display: <b>CHARGE !</b> and <b>Date</b></p>	<p>Time-dependent charge request.</p>	<p>Use the 230V power supply to charge the battery.</p>
<p>Tank display: </p>	<p>With engine stopped: Water tank sensor fault.</p>	<p>Clean the sensors and check as necessary.</p>
<p>Main display: </p>	<p>230V power supply has failed or has been disconnected from the motor-home.</p>	<p>230V supply must be connected or switched on.</p> <p>Start engine.</p> <p>Acknowledge the alarm if you have deliberately disconnected it/switched it off</p> <ul style="list-style-type: none"> <li>➤ Press the "Main display" button.</li> <li>➤ Press the "OK" button.</li> <li>• The symbol disappears.</li> </ul>

Alarm	Possible cause	Remedy
Main display: 	Battery voltage too high/low	Determine from the battery display whether the voltage is too high or too low: <ul style="list-style-type: none"> <li>High voltage: Check electroblock.</li> <li>Low voltage: Charge battery.</li> </ul>
Main display: 	Water tank is empty.	Refill the water tank.
	Waste water tank is full.	Empty the waste water tank.
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).
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 with Truma Duo Comfort fitted:		
Main display: 	Gas cylinder is empty.	Replace the empty gas cylinder with a full one.
Function "Read battery capacity" (if enabled by the manufacturer) gives rise to the following changes:		
Main display:   Battery display: 	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.
Battery display: CHARGE! and 	Unknown battery capacity: Battery capacity is unknown (e.g. after starting the system or having changed the battery).   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.	Use the 230V power supply to fully charge the battery. This provides a defined charge status.

## 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 electroblock for information on voltage distribution and fusing).

Please contact our customer service department if you cannot 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 becomes void if incorrect repair work is carried out. Schaudt GmbH cannot 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 Electroblock EBL... instruction manual. .
System cannot 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 Electroblock EBL... instruction manual. .
	Battery cut-off is activated.	See Electroblock EBL... instruction manual. .
Living area battery is flat.	Living area battery is discharged.	Charge the living area battery immediately. The living area battery is damaged beyond repair if left 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.
The "Check mains" symbol is not displayed although the 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 electroblock 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 and for answering the manufacturer's questions. It can be determined as follows:



➤ Press the "Main display" button.

- The display lights up.
- The time, date and any 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. "H1.01".

## 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 battery manufacturer's instructions. 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 motor-home 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 lights up.
- "12V OFF" is displayed briefly.
- The system has now been switched off.

➤ Disable the battery isolator on electroblock EBL ...

➤ The display is completely dark.



▲ The heater system's frost protection valve opens when the living area battery is isolated from the electroblock by the battery cut-off. 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 ... electroblock 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 electroblock EBL ...



➤ Press the "12V" button.

- The display lights up.
- "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 panel 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 203 control and display panel is the central operating unit for the EBL ... electroblock 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 203 control and display panel is responsible for controlling the electrical functions in the motorhome's living area and for displaying various readings.

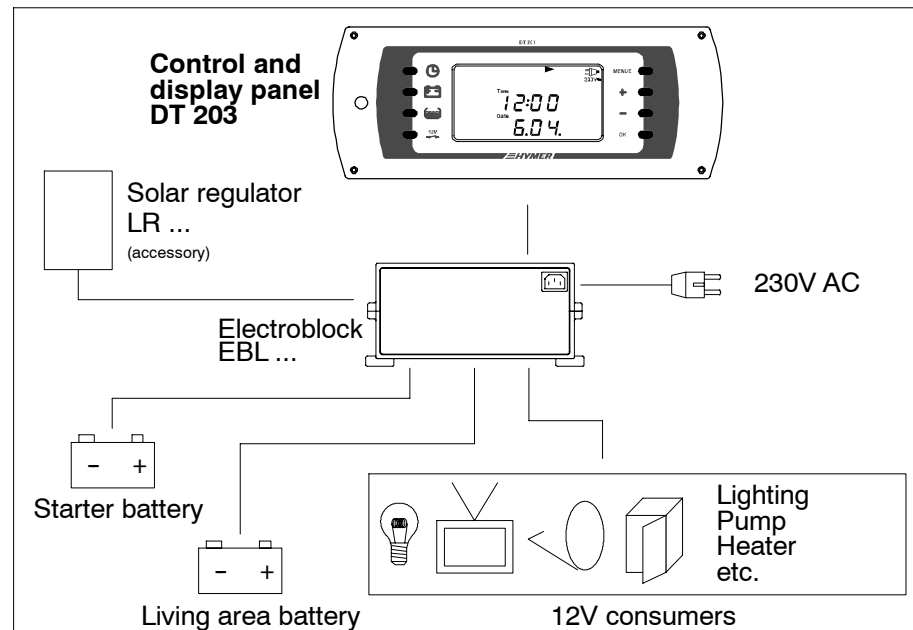


Fig. 6 On-board power supply system

**System devices** An EBL... electroblock 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:

- EBL ... electroblock
- Water tank (a capacitive sensor is optional)
- Waste water tank
- Truma Duo Comfort™ 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 203 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

Used as the basis for this declaration (application submitted for approval; date 06/2010):

Model approval issued by the Federal Transport Authority

Model approval no.: e1\*72/245\*2008/28\*2762\*\_\_

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

### C Customer service

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

tel.: +49 7544 9577-16 email: 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).

## D Fault report

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

Device type: \_\_\_\_\_  
Item no.: \_\_\_\_\_  
Vehicle: \_\_\_\_\_ Manufacturer: \_\_\_\_\_  
Model: \_\_\_\_\_  
Own installation? Yes ☐ No ☐  
Upgrade? Yes ☐ No ☐  
Upstream overvoltage protection? Yes ☐ No ☐

Following fault has occurred (please tick):

- ☐ Electrical consumers do not work – which?  
(please specify below)
- ☐ Erroneous display of:
  - ☐ Tank
  - ☐ Voltage
  - ☐ Current
- ☐ Switching on and off not possible
- ☐ Persistent fault
- ☐ Intermittent fault/loose contact

Other remarks:

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## E Block diagram/wiring diagram

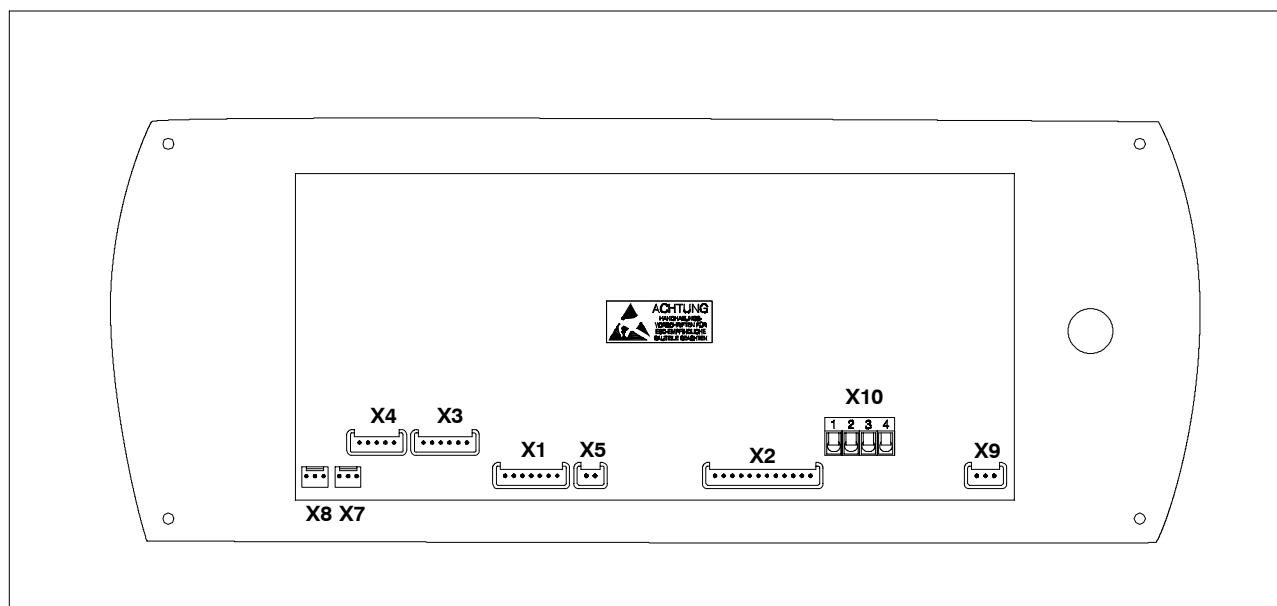


Fig. 7 Connection diagram of DT 203 control and switch panel

<b>X1 Lumberg MSFQ 7-way</b> 1 D+ 2 n.c. 3 n.c. 4 n.c. 5 n.c. 6 Solar starter battery 7 Solar living area battery	<b>X2 Lumberg MSFQ 12-way</b> 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
<b>X3 Lumberg MSFQ 6-way</b> 1 full 2 3/4 3 1/2 4 1/4 5 Base water tank 6 n.c.	<b>X4 Lumberg MSFQ 5-way</b> 1 full 2 3/4 3 1/2 4 1/4 5 Base waste water tank
<b>X5 Lumberg MSFQ 2-way</b> 1 Outside temperature sensor 2 Outside temperature sensor	<b>X7 ELCO 8263 3-way</b> 1 Minus 2 + EisEx 3 Gas Reserve 1
<b>X8 ELCO 8263 3-way</b> 1 Minus 2 + EisEx 3 Gas Reserve 2	<b>X9 Lumberg MSFQ 3-way</b> 1 Capacity tank probe signal 2 Minus 3 +
<b>X10 Plug-in/screw terminals 4-way</b> 1 Minus 2 Step 3 n.c. 4 n.c.	