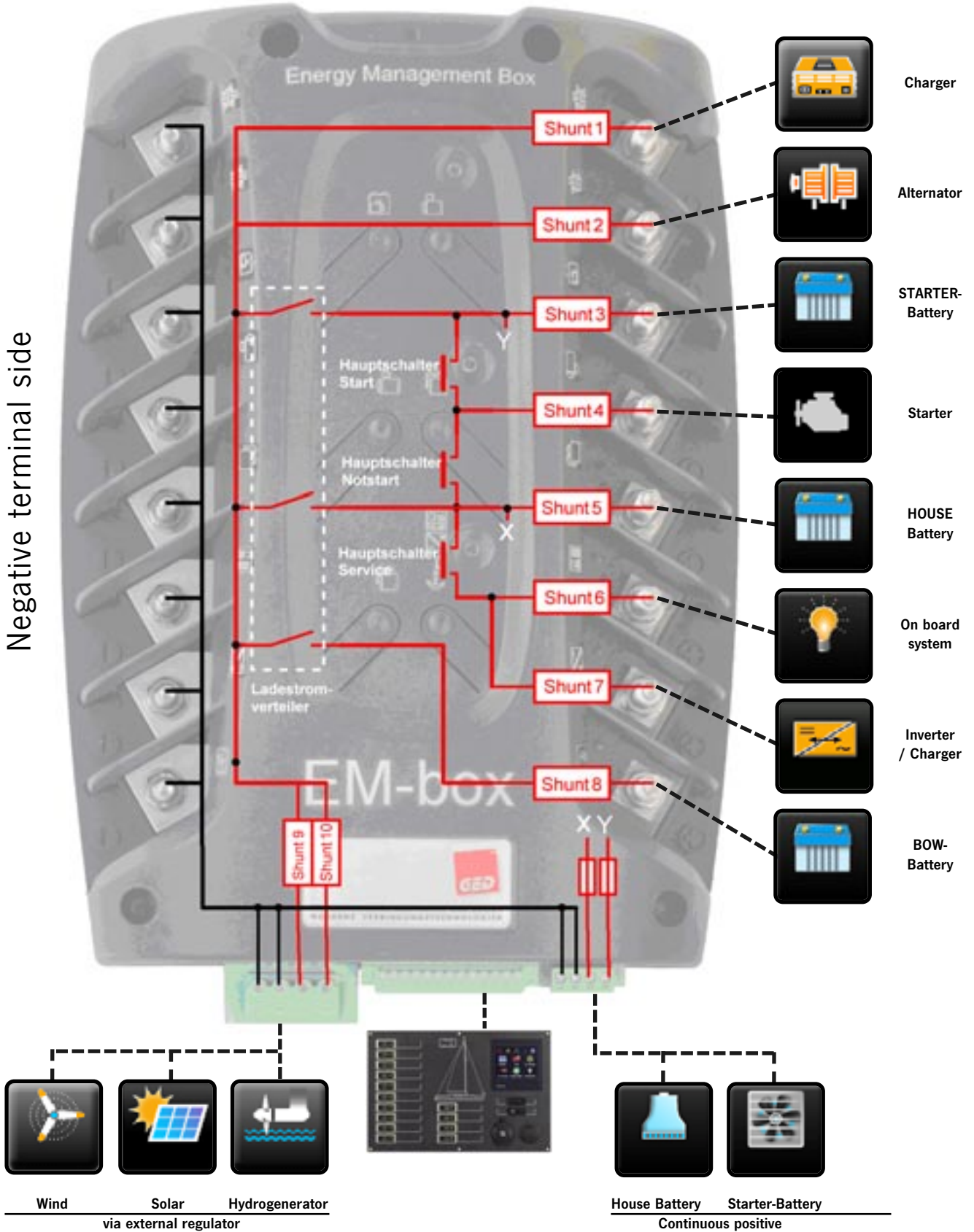


The intelligent DC main distribution system for all batteries, charging sources, on-board power supply and engine



The Energy Management Box reduces the high-current wiring around the engine and battery system to a minimum. It handles the complete charging and energy management of a modern single engine yacht or a expedition vehicle with up to 3 battery

groups (starter, house and bow batteries) and additional alternative charging sources (solar, wind and hydrogen generators). Even the DC connection of a combi inverter is taken into account.

**The EM-box combines:**

- 10 high power shunts
- Charging distributor for the alternator
- 3 remote controlled battery main switches
- Deep discharge protection
- Charge current distribution for battery charger, solar panels, wind generator, hydro generator
- Negative busbar
- Main protection of the electrical on board system
- Engine emergency start from house battery
- Manual emergency switching of the main switches
- P-BUS Interface for System Monitor PSM2/PSL

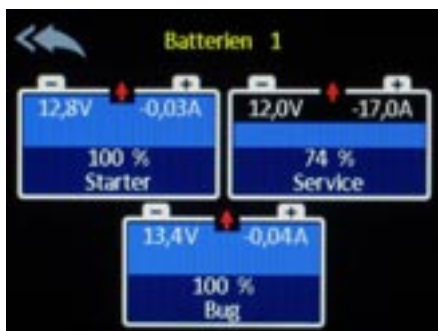
**The EM-box enables:**

- Easy and clearly arranged installation
- Less error sources
- Safety due to separate positive and negative connections
- Reduced space requirement
- Immediate operation without configuration
- Low installation costs
- Battery monitoring for all battery banks
- Remote control of the main switches
- Clear DC energy balance
- Use for 12 V or 24 V electrical systems

**SYSTEM MONITOR**

The integrated 10 shunts in conjunction with the System Monitor PSM 2 / PSL enables the display of all information about the

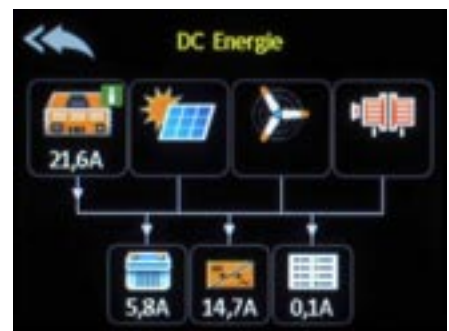
energy flow and charge status of all connected batteries. The remotable main switches are also controlled from there.



**BATTERY MONITOR**



**MAIN SWITCH CONTROL**



**DC ENERGY MONITOR**

**Remote controlled battery disconnect switch**

Bistable relay with emergency manual operation. No current consumption of the relays in the switched state.

**Charging current distributor, alternator regulator**

Voltage-controlled battery charge in alternators with sense input for the connected battery groups (start / house / bow). Current and voltage monitored charging current distribution of all charging sources adapted to the charge states of the battery groups. Protection against harmful overload by warning and subsequent shutdown.

**Current measurement, state of charge determination**

Individual measurement of current, voltage and temperature (per external sensor) for each battery group. Calculation of the current capacity of the starter and consumer battery. Current measurement on all high current connections (10 channels).

**Deep discharge protection**

Automatic disconnection of the electrical system from the batteries to prevent over-discharging via voltage / current detection. Emergency-ON function and automatic reclosing during charging operation.

● EM-box V3 -12V	Order-No.: 0 7100 1000
● EM-box V3 -24V	Order-No.: 0 7100 1001
<b>Current carrying capacity Main switch</b>	260 A @ 23°C, 190 A @ 85°C
<b>Overload main switch</b>	max. 1500 A for 0.5 s
<b>Load capacity charging inputs shunt 1,2</b>	2x 150 A, total max. 250 A
<b>Load capacity charging inputs solar/wind</b>	2x 40 A, total max. 60 A
<b>Load capacity of load outputs</b>	2x 200 A, total max. 260 A
<b>Load capacity of measuring shunt</b>	200 A, 1500 A for 0.5 s
<b>Resolution of the current measurement</b>	10 mA
<b>Operating voltage</b>	DC 12 V or 24 V
<b>Power consumption (standby / active)</b>	9 mA / 150 mA @ 12 V
<b>Terminal stud</b>	M8
<b>Weight</b>	3.1 kg
<b>Dimensions H x W x D</b>	330 x 250 x 75 mm
<b>Temperature range</b>	-15 ° C - +50 ° C