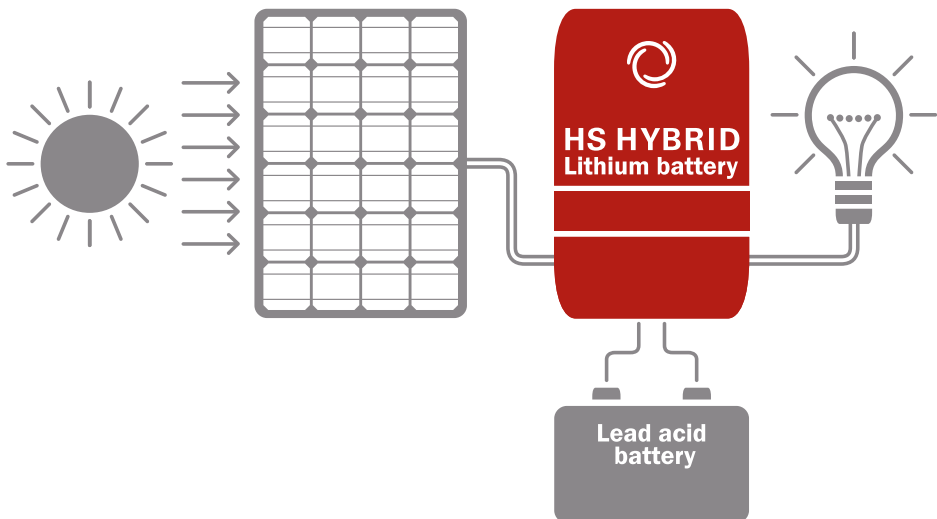


USER MANUAL

HS 25/50/100

Installation & User Manual



EN

For Housing IP65
User Manual: Part No. 00000078



HS 25/50/100

TABLE OF CONTENTS

	PACKAGE CONTENTS	2
1	GENERAL INFORMATION	2
2	TECHNICAL SPECIFICATIONS	4
3	OVERVIEW	6
4	SYSTEM FUNCTIONS	7
5	INSTALLATION	8
	5.1 General installation guidelines	8
	5.2 Mechanical installation	8
	5.3 Electrical installation	9
6	INITIAL HYBRID SYSTEM SET UP	12
7	DISPLAY & OPERATION	13
	7.1 Three push button control	13
	7.2 Standard screen	13
	7.3 System information	14
	7.4 Select lead acid battery type	15
	7.5 Error messages	15
8	SYSTEM DISCONNECTION AND DISMOUNTING	15
9	TROUBLE SHOOTING AND FAQ	16
10	MAINTENANCE	17
11	OPTIONAL FEATURES	17
12	WARRANTY & LEGAL NOTES	19
13	RECYCLING INFORMATION	19

PACKAGE CONTENTS

DEVICE HS 25/50/100 IP65
2X CABLE ENTRY PORTS
4X MOUNTING SCREWS AND DOWELS
USB PORT EXTENSION CABLE
USER MANUAL

1. GENERAL INFORMATION

THANK YOU FOR PURCHASING A HIGH QUALITY, GERMAN MADE PRODUCT FROM BOS BALANCE OF STORAGE SYSTEMS AG. WE WORKED ACCORDING TO STRICT ENGINEERING STANDARDS IN ORDER TO DELIVER VALUABLE ENERGY SERVICES FOR OUR CUSTOMERS. IN CASE OF TECHNICAL PROBLEMS OR COMMENTS OF ANY KIND, PLEASE CONTACT THE LOCAL DISTRIBUTOR FOR SUPPORT.

PLEASE READ THE WHOLE OF THIS USER MANUAL BEFORE INSTALLATION AND USAGE OF THE HYBRID SYSTEM.

Safety instructions

- Only connect 12VDC loads.
- Only connect to 12VDC batteries of the following types:
 - Lead storage batteries with liquid electrolytes
 - Sealed Lead acid batteries – GEL or AGM
- Do not use with Nickel Cadmium, Nickel Metal Hydride or other battery types.
- Only connect to PV modules within the specified range.
- Do not use for any other charging source than solar cells (if device has an AC/DC input, use only recommended AC/DC chargers).
- Best operating temperature is between 15 and 20°C. Higher temperatures shorten the lifespan of the batteries. Do NOT place system in direct sunlight!
- Keep the device away from fire & other heat sources.
- Only technical professionals should perform the installation.
- Install and use the device only after reading & understanding this manual.
- Install this device step by step as written in this manual for best results.
- Follow all safety precautions during installation of device & handling batteries.
- Improper handling of batteries may introduce a risk of battery explosion.
- Hazard of corrosion from leaking batteries.
- Keep batteries and acid away from children & animals.
- During handling of batteries no smoking or exposure to naked light & fire.
- Wear eye protection during installation process.
- Do not wear jewelry during installation as short circuits might be caused.
- Use electrically insulated tools for connecting cables.
- Use only properly functioning test equipment with this device.
- Internal voltage of device may be higher than the rated level, so take care to avoid being zapped during installation.
- Keep this document in a safe place for the entire service life of the device. Pass the document on to subsequent owners and operators of the device.
- Incorrect operation can reduce solar system output or damage system components.
- Solar cells generate power from being exposed to light.
 - Be cautious to avoid sparks during installation. Sparks may damage equipment.
- This risk is also present in low light situations.
- The device must not be connected to the PV panel nor the lead acid battery if it has a damaged casing.
- Factory labels and markings must never be altered, removed or rendered unreadable.
- This device contains sensitive electronics, so take care during installation and use.
- Consider all relevant official safety instructions during transportation of the device. Safety instructions might vary depending on the mode of transport and on local country regulations.

HS 25/50/100

Application Scope

- This device is for residential, recreational & small commercial operations
- This waterproof equipment (IP65) may be installed indoors or outdoors
- Failure to follow this precaution can cause damage to this device and the energy source to which it is connected
- This device can be operated in hybrid mode or pure lithium mode. The mode is recognized automatically, based on the fact if a lead acid battery is connected or not.
- For operation in pure lithium mode, simply connect the PV panels and the DC loads.
- For operation in hybrid mode, additionally connect a lead acid battery.
- Consult authorized supplier if device is to be connected in nonstandard configuration
- Lead acid battery type needs to be set during installation of this device. If not changed the standard setting is AGM lead acid battery.
- Sizing of lead acid battery and PV generator needs to fit to the overall system design. For long lifetime lead acid battery must frequently be charged to 100%.
- If sizing of the system is not done within the specification warranty becomes void
- Failure to comply with correct product usage may void warranty

2. TECHNICAL SPECIFICATIONS

	HS25	HS50	HS100
Nominal System Voltage	12VDC		
System Voltage Range	10 – 15VDC		
Integrated Lithium Battery Capacity	82Wh	164Wh	328Wh
Recommended Lead Acid Capacity (not included)	10-30Ah @12V	35-65Ah @12V	70-125Ah @12V
Hybrid System Capacity (Total)	255-435Wh	570-930Wh	1140-1800Wh
Lithium / Lead Acid Capacity Ratio	Recommended 1/3		
Nominal System Power	180W		
Max. Output Load Current	8A	15A	15A
Max. PV Open Circuit Voltage	25V	25V	25V
Max. Charge Current	8A	13A	13A
Max. Short Circuit Current	10A	15A	15A
Max. Short Circuit Current (pure Lithium)	10A	10A	10A
System Efficiency	>85%		

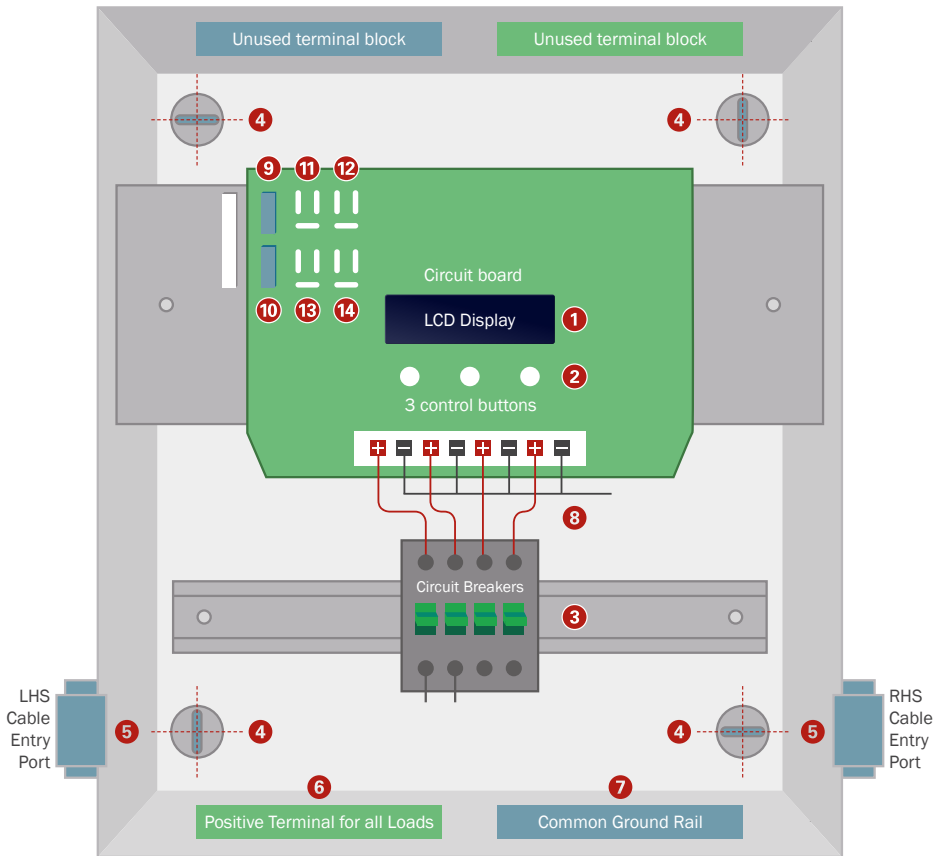
Integrated USB Charging Port	1 port 5V / 1A
Style of Housing	IP65 water and dust proof; IK07 impact resistant (Material: ABS/PC)
Housing Dimensions	420 x 230 x 140mm
Weight	4,7kg 5,5kg 7,0kg
Connection terminals	Terminals for PV panel, loads, excess loads and lead acid battery
Max. Wire Size	16mm ²
Ambient Temp. (operation & warehousing)	0-50 °C maximum battery life at 15-25 °C
Protection features	Overcurrent, overload, short circuit
Compatible external batteries	Any 12V lead acid batteries
Charging type	Pulse width modulation

Warnings, system measurements and specifications

Self-power consumption when operating at rated voltage	10-15 mA
No load current	200uA and with display 9 mA
Power measured after system disconnection due to deep discharge	100uA
Warning before system cuts-off the load	Yes, indicated on display (SOC)
If no external lead acid battery connected	The systems runs on pure lithium mode till DDP is activated. It does not have any effects on the overall functioning
Delayed load disconnection	No delay in disconnection
Type of controller	Series controller
Threshold voltage levels	11.0 V - DDP 13.7V OCP 14.4V boost
Temperature compensation for the threshold values (mV/OC/cell)	Not compensated
AC ripples in battery charging current	Equals the PWM of charging current from PV panel
Temperature correlation of power	No specific correlation between temperature and incoming or outgoing power

HS 25/50/100

3. OVERVIEW



- ① Display
- ② 3x Push buttons “Down”, “Next” and “OK”
- ③ Circuit breakers mounted on DIN rail for wire connection
- ④ Wall mounting holes
- ⑤ Cable entry ports. Place wherever it is convenient for installation.
- ⑥ Connection terminal for positive lines of 12VDC loads. Note that the holes have different sizes, check which size fits to the wire.
- ⑦ Connection terminal for ground lines of 12VDC loads, battery and PV panel. Note that the holes have different sizes, check which size fits to the wire size.
- ⑧ Internal wiring between circuit breakers and PCBA. Do NOT change.
- ⑨ Lithium battery pack PTC fuse HS50
- ⑩ Additional lithium battery pack PTC fuse HS100
- ⑪⑫ Lithium battery power connectors HS 50
- ⑬⑭ Additional lithium battery power connectors HS 100

4. SYSTEM FUNCTIONS

OVERCURRENT PROTECTION

The system is protected against over currents. If the drawn current exceeds 15A, the system switches off all loads automatically and the display indicates “Overcurrent”. Please check the connected loads, make sure that 15A (respectively 180W) are not exceeded and confirm the overcurrent message to restart the loads. If “overcurrent” is displayed immediately again, please disconnect the loads and reconnect one at a time to figure out which load draws too much energy.

SHORT CIRCUIT PROTECTION

The system is protected against short circuits. If a short circuit occurs the display indicates “overcurrent”. Please check the connected loads for short circuits and confirm the overcurrent message to restart the loads. If “overcurrent” is displayed immediately again, please disconnect the loads and reconnect one at a time to figure out which load causes a short circuit.

EXCESS OUTPUT FUNCTIONALITY

In hybrid mode the excess output is activated as long as there is sufficient energy in the lithium battery to power the loads. Once the loads are powered by the lead acid battery the excess output is switched off automatically. In pure lithium mode the excess output is activated once the lithium battery reaches a full state of charge and excess energy is available. Once the loads are powered by the lead acid battery the excess output is switched off automatically. The excess output is used for driving usual loads like fans, fridges or USB charging devices. Switching off these loads automatically gives high priority to other loads like emergency light.

USB PORT

There is a standard USB port available to charge small devices by USB. To extend the USB port use the provided USB port extension cable. See electrical installation guideline for details.

REVERSE POLARITY PROTECTION

All inputs and outputs are protected against wrong polarity. The inputs/outputs are turned off in case of wrong polarity.

DAY & NIGHT DETECTION

The system measures the PV panel open circuit voltage at the intervals of 3 mins. Based on that measurement the system detects whether it's day or night. If immediate real time detection is required by the user, the “OK” button needs to be pushed.

LEAD ACID BATTERY SUPPORT DURING DISCHARGE

As long as the lithium battery is not depleted, it supports the lead acid battery in case of power devices connected straight to lead acid (e.g. inverters). Up to a certain threshold the connected load would primarily consume energy out of the lithium battery, even though it is connected straight to lead acid.

AUTOMATIC BATTERY SWITCHING

For high battery life the system automatically charges the lead acid battery with higher priority, while the Lithium battery first powers all loads until it is empty. This happens completely automatically.

HS 25/50/100

LITHIUM POWERING OF BIG LOADS AT LOW STATE OF CHARGE

If the integrated lithium battery pack is at a low state of charge and big loads are connected to the system, the lithium voltage gets pulled down to a level that the system switches off the lithium battery (loads are then powered by the lead acid battery). To prevent continuous on/off switching of the lithium battery at high loads, the lithium battery gets reconnected only once in 2 minutes.

AUTOMATIC SYSTEM AND LCD DISPLAY RESET

The system resets itself and its LCD display every 5 min to clear any displayed error messages and to recheck the system. If an overcurrent was detected, the overcurrent protection resets as well. In case the overcurrent is still prevalent, overcurrent protection kicks in immediately again.

LCD DISPLAY SLEEP MODE

The LCD display switches off, if neither the PV panel showed any activity (night or disconnected) nor the "OK" button has been pushed during the last 5 minutes.

SYSTEM SLEEP MODE

After two days with neither a load connected, nor the "OK" button pushed nor the PV panel connected the system turns off the USB port, the display and all load ports and falls into sleep mode, in order to save standby energy. To wake up the system press either the "OK" button or connect a PV panel during daytime (PV voltage needs to be higher than 15VDC).

5. INSTALLATION

5.1 General installation guidelines

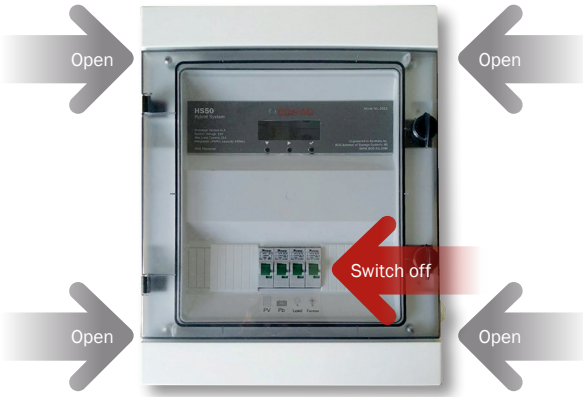
This waterproof equipment (IP65) may be installed indoors or outdoors. Installation only by qualified electrical personal. First mount the HS battery system on the wall, then install the wires. Do not install the HS battery system upside down or vertical. If the HS system is to be used in hybrid mode, an external lead acid battery needs to be installed and connected to the HS battery system. Install the external lead acid battery on the floor below the HS System in consideration of the installation guidelines of the lead acid battery manufacturer. Please consider that a lead acid battery must always be vented, even if it is a sealed one. See VDE 0510 for more details.

5.2 Mechanical installation

OPENING CLEAR PERSPEX COVER

Upon delivery, the transparent Perspex cover is clamped closed. Unlock by turning the currently vertically aligned handles a quarter turn anticlockwise. Open the Perspex cover fully which can swing open to half a full circle turn.





REMOVE THE FRONT PANEL

Switch off all circuit breaker switches. (Usually down, green indicator). There is a screw in each of the four corners just under the area covered by the transparent Perspex hinged waterproof door. Remove all four screws and take off the front cover from the enclosure.

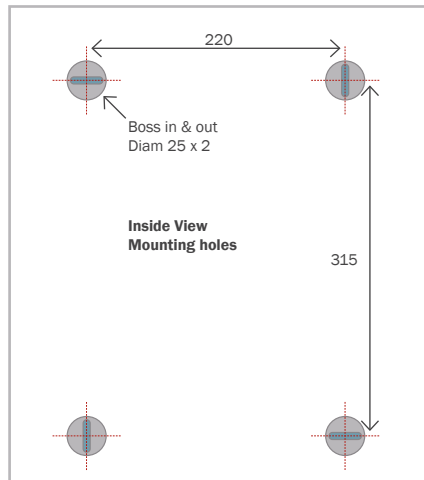
INSTALL THE CABLE ENTRY PORTS

Install the provided cable entry ports by drilling the IP65 protected housing at the marked sections on either the left or the right hand side, depending on your overall installation. Please note that only proper installation of the provided cable entry ports ensures IP65 protection.

MOUNT THE REAR ENCLOSURE SECTION

There are currently four sealed mounting bosses on the rear face of the enclosure. See template next heading. Two of them have a horizontal slot and the other two have a vertical slot form. Drill holes suitable for the four mounting screws you will use. If needed these holes can be widened into slots to assist in mounting the enclosure level.

ENCLOSURE MOUNTING SIZES



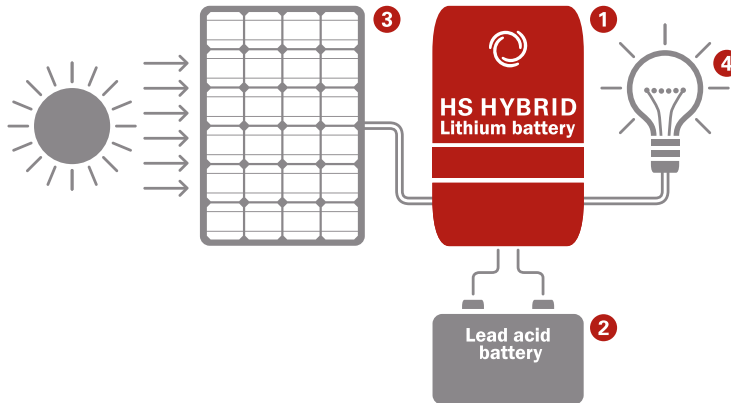
Now proceed to electrical installation.

5.3 Electrical installation

HS 25/50/100

GENERAL INSTALLATION RULES

If not yet done, switch off all Circuit breaker switches. (Usually down, green indicator)



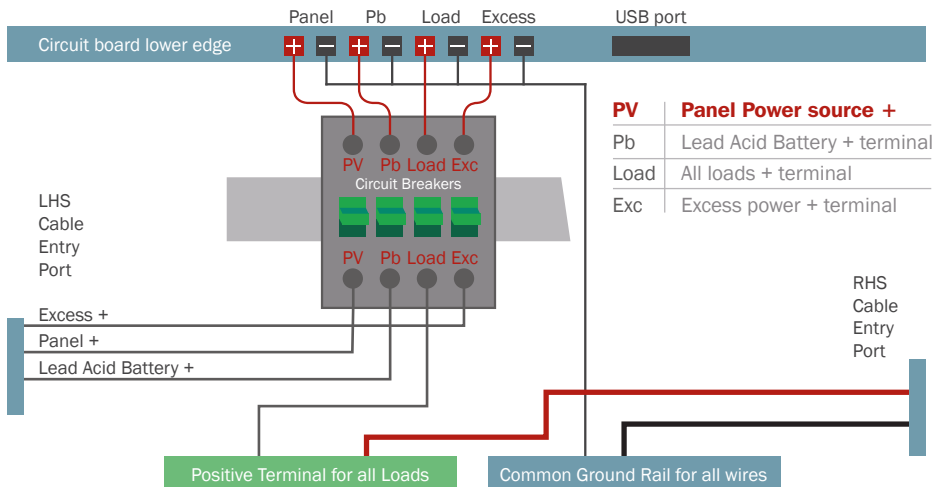
1 Hybrid battery system 2 Lead acid battery 3 PV panel 4 DC load

First connect the lead acid battery, then the PV panel and then the loads.

Connect the positive pole first and then the negative pole.

Enter the IP65 protected housing with the cables through the preinstalled cable entry ports.

Install the hybrid battery system in the following step order:



1. LEAD ACID BATTERY INSTALLATION

If the device shall be used in hybrid mode, a lead acid battery needs to be connected (Note: for operation in pure lithium mode, simply disconnect the lead acid battery).

Insert the positive battery wire into the circuit breaker connector at Pb+ and tighten the screw. Then insert the negative (ground) battery wire into the common ground rail and tighten the screw (note that the common ground rail has different sized connection holes, please choose a suitably sized hole depending on the wire diameter). Please keep battery cables as short as possible. Cables longer than 30cm require a separate breaker directly at the battery. If no further breaker is installed next to the battery, the battery cables must be protected against short circuit or mechanical damage.

Note: It can take the system up to 1 Minute to recognize the Lead Acid Battery, if you want to fasten that up just press the OK-Button to refresh the system.

2. PV PANEL INSTALLATION

Insert the positive panel wire into the circuit breaker connector at PV+ and tighten the screw. Then insert the negative (ground) panel wire into the common ground rail and tighten the screw (note that the common ground rail has different sized connection holes, please choose a suitably sized hole depending on the wire diameter).

3. OPTIONAL INVERTER INSTALLATION

In case a small inverter shall be used with the system connect in as follows: Insert the positive inverter wire into the circuit breaker connector at Pb+ and tighten the screw.

Then insert the negative (ground) inverter wire into the common ground rail and tighten the screw (note that the common ground rail has different sized connection holes, please choose a suitably sized hole depending on the wire diameter).

4. MAIN LOADS INSTALLATION

Insert the positive load wires into the common positive terminal for all loads and tighten the screws (note that the common ground rail has different sized connection holes, please choose a suitably sized hole depending on the wire diameter). Then insert the negative (ground) load wires into the common ground rail and tighten the screws (note that the common ground rail has different sized connection holes, please choose a suitably sized hole depending on the wire diameter).

5. EXCESS LOAD INSTALLATION

Insert the positive excess load wire into the circuit breaker connector at Excess and tighten the screw. If many excess loads are used, one of the rails at top of the housing can be used for power distribution. Then insert the negative (ground) excess load wire into the common ground rail and tighten the screw (note that the common ground rail has different sized connection holes, please choose a suitably sized hole depending on the wire diameter).

6. USB CABLE

If the USB output shall be used outside of the IP65 housing, please mount the provided USB port extension cable by entering the housing through the larger cable entry port and connecting the USB extension cable to the USB port on the PCBA.

7. CABLE STRAIN RELIEF

Once the cable entry ports are tightened, cable strain relief is achieved. Note that proper strain relief is only achieved if the cable diameter fits to the entry port diameter. In case the cables are not held tight, secure the cables with a strain relief fixture next to the device. Recommended clearance to the device is 250 mm.

HS 25/50/100

8. CABLE ENTRY SEALING IP65

Using one single multi wire cable the recommended diameter for the entry hole ensures a waterproof seal to IP65 to which the whole product conforms. If several smaller cables are used, please mount it at the bottom of the enclosure and be aware that the installation is not IP65 waterproof anymore.

9. LITHIUM BATTERY CONNECTION

For transportation and warehousing the internal lithium batteries might be disconnected. Please check the connection points on the PCBA at position 11, 12, 13 and 14. If not yet connected, simply connect both respective plugs without using force. After initial connection of both plugs the “OK” pushbutton needs to be pressed two times. For HS50 only connect two battery packs at 11 and 12. For HS100 connect four battery packs at 11, 12, 13 and 14. Make sure to have two fuses connected for HS100 operation (one fuse for HS50).

10. MOUNT FRONT ENCLOSURE SECTION

Secure the front section of enclosure to rear section which is now mounted on a surface. All four screws should be firmly fastened to ensure IP65 waterproofing of enclosure. All the circuit breaker switches can now be turned on (usually up, red indicator).

6. INITIAL HYBRID SYSTEM SET UP

The system detects automatically if a lead acid battery is connected and switches from pure lithium to hybrid battery mode consequently.

If the system is operated in hybrid battery mode, the right battery type needs to be chosen in the menu. Please refer to details below.

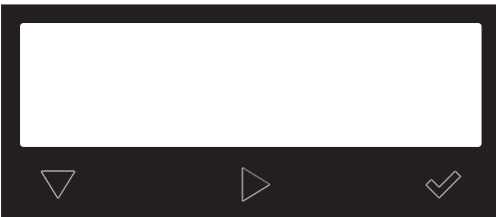
7. DISPLAY & OPERATION

The LED screen is used to show system information & error messages by using letters and numbers.

7.1 Three push button control

Control of the display is done by pressing the 3 buttons below it in specific combinations. The diagram below shows screen and button layout.

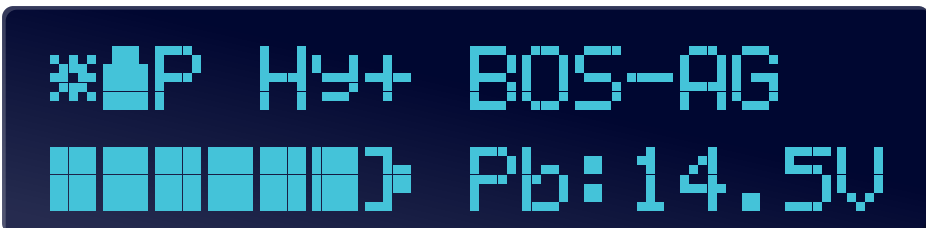
- Left button to move to next available option
- Middle button to move to next menu level
- Right button to confirm and to enter the menu when display is off



7.2 Standard screen

The picture below shows the standard screen without any menu entered. If display is off, push the right button to get to standard screen.

- Sun and small blinking battery sign indicate daytime and that the system is being charged
- Hy indicates that the system is being operated in Hybrid mode
- + indicates that the excess energy output is active
- Battery indicates the state of charge of the system
- Pb indicates the current lead acid battery voltage
- L indicates that the load is supplied from the Lithium battery
- Pb indicates that the load is supplied from the Lead Acid battery



HS 25/50/100



Li+ BOS-AG
■■■■■

PURE LITHIUM MODE

- Li indicates pure lithium mode (no lead acid battery connected)



H+ BOS-AG
■■■■□ Pb: 12.7V

EMPTY BATTERY

- Moon indicates that it is night and the PV panels are not generating any power
- Half empty battery indicate that the lithium battery is empty and that the system runs on lead acid battery. Excess energy output is switched off.



H+ BOS-AG
□□□□□ Pb: ---

- Completely empty battery indicates that both batteries, the lithium and the lead acid battery are empty.

7.3 System information

System information is entered by pushing the left button in standard screen.



System
information




LiFePO4 Voltage:
Li: 13.3V

LITHIUM VOLTAGE

Lithium voltage is shown when pushing the middle button in system information screen

7.4 Select lead acid battery type

Select battery type menu is entered by pushing the left button at system information screen.



Select
Battery-Type

- During installation before use or when the lead acid battery is changed, make a selection of which type of Lead acid battery will be used with the system.
- Confirm with middle push button or switch to next option with left pushbutton.




Battery Type:
Flooded LA

- Flooded lead acid battery chosen
- Confirm with middle push button or switch to next option with left pushbutton



Battery Type:
Sealed LA

- Sealed lead acid battery chosen
- Confirm with middle push button or switch to next option with left pushbutton



Battery SET TO:
Flooded LA



Battery SET TO:
Sealed LA

- The display shows a confirmation of the chosen battery type after pushing the middle push button

7.5 Error messages



OverCurrent
PRESS OK

- In case of overcurrent or short circuit the display shows "Overcurrent PRESS OK"
- Confirm with right button

8. System disconnection and dismantling

Before dismantling of device, switch off all circuit breakers.

Start to dismantle the system in the following step order:

First disconnect the PV panel, then the lead acid battery, then the loads.

Disconnect the positive pole first and then the negative pole. After electrical disconnection, continue to dismantle the system mechanically.

If the system shall be stored longer than 2 months, disconnect the integrated lithium battery.

Be aware that IP65 protection might not be applicable anymore after dismantling.

In case of disposal, refer to the recycling information.

9. Trouble shooting and FAQ

OVERCURRENT AND SHORT CIRCUIT PROTECTION RELEASE

In case of overcurrent or short circuit at the standard load, the excess energy or emergency light outputs, the pushbutton needs to be pressed for reset.

AUTOMATIC SYSTEM RESET

In certain unlikely circumstances, e.g. after a surge or burst event, the display might show random information. Either wait for 5 minutes until the system resets automatically, or keep all three push buttons pushed at the same time for at least 15 seconds to reset the system manually. If undefined information stays unchanged, please contact your local BOS dealer.

LITHIUM BATTERY CHARGE

The Lithium battery built into the device has been designed to last at least 10 years of normal use. If the product is stored for a long period of time, please recharge the battery frequently. Therefore, connect the system to either a PV module or to a DC power source. Please be aware that batteries will get damaged by deep discharge.

HOW DO I OPERATE THE SYSTEM IN PURE LITHIUM MODE?

Simply don't connect a lead acid battery to the system. The system then switches to pure lithium mode automatically.

HOW DO I OPERATE THE SYSTEM IN HYBRID MODE?

Connect a certified lead acid battery (see spec sheet for details) to the system. The system switches automatically to hybrid mode.

THE DISPLAY SHOWS LI INSTEAD OF HY

If you want to run the system in hybrid battery mode, make sure that a lead acid battery is properly connected to the system, and that the circuit breaker of the lead acid battery is not switched off.

THE LOADS ARE NOT POWERED EVEN THOUGH THERE IS STILL POWER AVAILABLE

Check if the loads are connected to the standard load output or to the excess load output. Note if loads are connected to the excess output, they are only powered if the state of charge of the batteries is high and the system is powered from the lithium battery. Once state of charge drops below 50%, the excess energy output switches off automatically and all loads at excess are not powered any more.

THE PUSHBUTTONS DON'T WORK ANYMORE

Please open the 4 top casing screws and push the top casing slightly down before fixing the screws again. Make sure that the pushbuttons work before fixing the screws. Do not use force for mounting as the pushbuttons might break.

THE INVERTER DOESN'T START PROPERLY

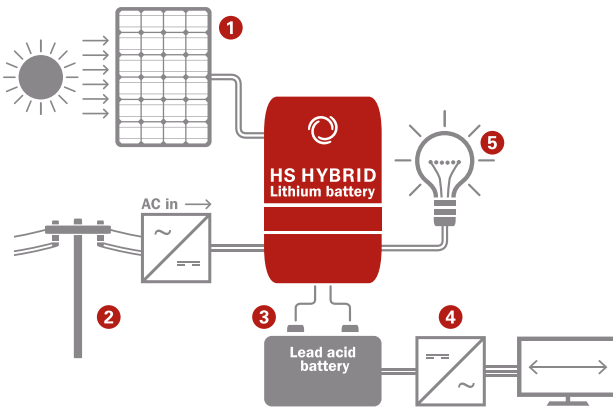
Check that inverter size fits to the system (max. 300W inverter) and cable connection is tightend up. Check if inverter is connected straight to lead acid battery (or at the lead acid battery circuit breaker). If onverter is connected to DC load outlet, then change connection straight to lead acid battery.

10. Maintenance

The device is basically maintenance-free. Cable connections should be checked frequently. Clean the device from dust when necessary with a cloth. Take note of maintenance requirements of the lead acid battery. Please refer to the respective user manual for details.

11. Optional features

OPTIONAL INVERTER TO POWER AC LOADS



- 1.** Standard solar panel power supply as DC input.
- 2.** Optional AC input through AC/DC converter (no feed-in into AC grids possible). The HS hybrid systems have an optional DC input connector for use with standard chargers, similar to notebook chargers. Please ask your local dealer for recommended chargers.
- 3.** HS hybrid battery system consisting of charge regulator with integrated lithium battery and external lead acid battery.
- 4.** Optional AC output (refer to above graphics for details): Connect a inverter (recommended 180-300W) straight to the lead acid battery. This enables the powering of bigger AC loads such as small pumps or smaller AC loads, e.g. big screen TV, HIFI sound system, mobile and notebook charger etc. Please ask for recommendations on inverters.
- 5.** DC loads on the standard load outputs, such as highly efficient LED lamps, DC TVs, DC fans

The system needs to be sized properly and the use of high quality inverters is recommended. Please ask our sales team for support and recommendations.

HS 25/50/100

OPTIONAL SYSTEM CHARGING FROM THE GRID

BOS HS25, HS50 and HS100 systems can be charged from the grid during hours of available power in order to use the power stored in the hybrid system as backup once power outages occur.

OPTIONAL POWERING OF NEIGHBOURS HOMES WITH DC METERS

The device can be used to sell energy to neighbouring houses or rooms with the help of BOS DC power meters and BOS DC power transmitters. Please refer to your local agent for details.

OPTIONAL DATA LOGGING

Data logging is possible with the help of a separate device that can be integrated into the IP65 housing. Please refer to your local agent for details.

OPTIONAL ADDING OF FURTHER CIRCUIT BREAKERS

On the DIN rail additional circuit breakers could be added to protect single loads separately. Adding of additional circuit breakers by professional electricians only.

OPTIONAL USE OF UPPER CONNECTING TERMINAL BARS

The upper terminal bars can be used for connecting additional loads or for creating additional ground connection points. In initial product configuration, the upper terminals are not connected.

12. Warranty & Legal notes

WARRANTY - PROTOTYPE VERSION

The Hybrid Battery System comes with a two-year warranty on the product including the integrated lithium battery starting from the date of purchase. There is no warranty granted on other system components from other manufacturers that are used together with the Hybrid Battery System. In case of problems, comments or a warranty claim or the need for spare parts please contact the local dealer or BOS AG headquarters for support.

EXCLUSION OF LIABILITY

The manufacturer can neither monitor the compliance with this manual nor the conditions and methods during the installation, operation, usage and maintenance of the device. Improper installation of the device may result in damage to property and, as a result, to bodily injury.

Therefore, the manufacturer assumes no responsibility and liability for loss, damage or costs which result from or are in any way related to incorrect installation, improper operation, incorrect execution of installation work and incorrect usage and maintenance.

Similarly, we assume no responsibility for patent right or other right infringements of third parties caused by usage of this device.

The manufacturer reserves the right to make changes to the product, technical data or installation and operating instructions without prior notice.

DECLARATION OF CONFORMITY

The Hybrid Battery System complies with the CE norm and requirements. The full declaration of conformity is found for download at www.bos-ag.com

13. Recycling information



DO NOT THROW THE BATTERY IN MUNICIPAL WASTE. THE SYMBOL OF THE CROSSED OUT WHEELED BIN INDICATES THAT THE BATTERY SHOULD NOT BE PLACED IN MUNICIPAL WASTE.

RECYCLING OF THE INTEGRATED LITHIUM BATTERY IS HANDLED IN GERMANY BY GRS SERVICE GMBH. DO NOT DISPOSE IN WASTE BIN, BUT RECYCLE ELECTRONICS, BATTERIES AND PACKAGING MATERIALS ACCORDING TO LOCAL REGULATIONS.

CONTACT HEADQUARTER

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CONTACT LOCAL DEALER
