Volthium
Énergie
Energy ∞

USER'S MANUAL
MANUAL

Wallmount 25.6V 200 Ah

DESCRIPTION

Our Wallmount battery is composed of 102AH square cell prismatic cells, certified to UL1973, UL1642, CSA UL9540A, IEC62133, IEC62660, and equipped with an internal BMS offering all the electronic protections (over-discharge current, over-charge current, cell monitoring, automatic balancing, cold charge protection and many others).

The batteries are also equipped with a NADER UL1077 physical circuit breaker.

The complete battery assembly has been certified by Intertek and proof of ETL SPE-1000 certification is on the battery.

The 24V batteries are composed of 8 cells in series.

NO.	Name	Function	Remarks
1	Terminal	Positive Output	
2	Terminal	Negative Output	
3	On / Off	BMS power	
4	MCB	Battery output circuit breaker	
5	ID	Battery Address	
6	CAN	CAN Port	
7	RS485	RS485 Port	

8	Battery-COMM	Communication Port	
9	SOC	LED capacity	
10	RUN	Run LED	Blinks when battery is charging or discharging. Solid green when battery is idle
11	ALM	ALM LED	Glows red when battery in protection
12	LCD display	LCD which provides Voltage, SOC, and other data from the BMS	Display will turn off after a minute of inactivity

CHARGING VOLTAGE AND CURRENT

Description	25.6V battery
Bulk	28V
Absorption (optional)	28V
Float	27.2V
Recommended charging current	80A
BMS low voltage disconnect	21.5 - 22.4V

TERMINALS

The batteries are equipped with M8 connectors.

CIRCUIT BREAKER

The batteries are equipped with a NADER physical circuit breaker, certified UL1077 and CSA C22.2 No. 235-04, of 200A (optional).

PARALLELING

The batteries can be connected in parallel even if they are not at the same charge level.

Indeed, the batteries are equipped with an incoming charge regulator. That said, if you send the battery a charge current higher than the limit programmed in the BMS (e.g. 154A), the battery will activate its regulator, and the maximum incoming current will be 9 amps. Thus, if a full battery is connected to the empty battery, the latter will automatically activate its integrated regulator. Note that the BMS will deactivate the regulator after 3 minutes, and reactivate it automatically if necessary.

ID ADDRESS PER BATTERY

It is important to define a different address for each battery using the Dip Switches. Each battery has 4 small switches.

Depending on the protocol used, the address assignment may vary. Refer to the diagram below.

ID No. 16 ID No. 1 ID No. 2 ID No. 3 ID No. 4 ID No. 5

ID No. 6 ID No. 7 ID No. 8 ID No. 9 ID No. 10 ID No. 11

ID No. 12 ID No. 13 ID No. 14 ID No. 15

COMMUNICATION

Volthium Wallmount batteries integrate RS485 and CANBUS communication protocols. Through the communication, the batteries will push the charging parameters. The installer can manually enter the charging parameters of the devices,
or configure the devices so that the battery pushes the parameters. The parameters that the battery pushes are conservative and are intended to promote maximum battery life.

- The (default) battery software will push a bulk of 27.5V .

- The 5 KW batteries will push a current parameter :

  - of recharge at 50 AMP.
  - of discharge at 100 AMP.

SETTING UP COMMUNICATION TO POPULAR INVERTERS

GROWATT (in RS485)

Connect the batteries together via the RS485 ports only. Each battery has two RS485 ports, allowing easy interconnection from one battery to another.

- Set the first (master) battery to ID #2, and the following ones in order (3-4-5-6...).

- No battery has the #1 position, that's normal!

- Connect the battery with ID #2 from its RS485 port to the UPS with a standard network cable.

- Configure batteries with GroWatt USE settings. (Not USE2)

Solark (in CAN)

Connect the batteries to each other via the Battery-Comm ports only. Each battery has two "Battery-Comm" ports, allowing easy interconnection from one battery to another.

- Set the first battery (master) to ID #1, and the following ones in order (3-4-5-6...).

- Please make sure you have not used the ID #2 address.

- Connect the battery with ID #1 from its CAN port to the inverter with a standard network cable, to the CAN port of the Solark.

- Switch on the power supply of the Solark with the batteries.

- Please set the battery type so that the UPS can communicate with the BMS of the Volthium battery.
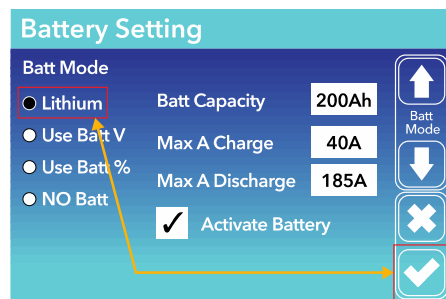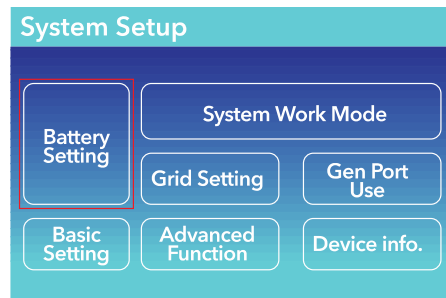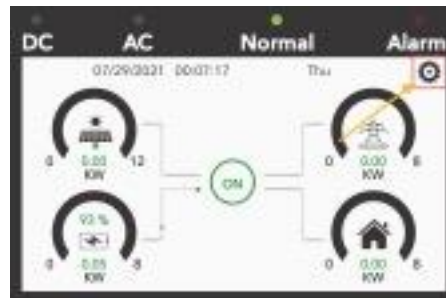
Battery Setting

Lithium Mode	00	
Shutdown	20 %	Batt Mode
Low Batt	35 %	
Restart	50 %	

- Wait for 3 minutes and the BMS values will be available on the inverter display.

Li-BMS

Mean Voltage:	52.45 V	Charging Voltage:	58.0 V
Total Current:	1.0 A	Discharge Voltage:	45.0V
Mean Temp:	18.0 C	Charging Current:	70A
Total SOC:	42 %	Discharge Current:	150A

Sum Data

Alarms: 0x0000   0x0000

Details Data

Schneider (in RS485)

- Update the battery with the Schneider firmware available from Volthium technical service.
  The RS485-USB cable will be necessary.

- Connect the batteries together via the Battery-comm ports only. Each battery has two Battery-comm ports, allowing easy interconnection from one battery to another.

- Set the first (master) battery to ID #1, and the following ones in order (2-3-4-5-...).

- Plug a standard network cable into the RS485 port of the battery with ID #1, and cut the other end of the RJ45 cable to strip the white-brown and brown strands (7 and 8).

- Connect the white-brown wire to the RS485-A connector of the Schneider HomeInsight (PIN 9 on the HomeInsight)

- Connect the brown wire to the RS485-B connector of the Schneider HomeInsight (PIN 11 on the HomeInsight)


- In Schneider's online portal, in the green horizontal menu, go to "Setup", then in the left vertical menu, click on "Configuration", then in the on-screen page, click on "Modbus Setting", and set the port speed of "Serial PORT A" to 19,200 baud.

- Still in the Schneider online portal, go to "Setup" in the horizontal menu, press "Device Detection", then enter the "Range" of addresses you have. If you have only one battery, put from 1 to 2 as in the example:

- Press "Close". That's it, the battery will appear in your "Devices".

CONNECTION TO VICTRON

- Connect the batteries to each other via the Battery-Comm ports only using standard network cables. Each battery has two "Battery-Comm" ports, allowing easy interconnection from one battery to another.

    - Set the first battery (master) to ID#1, and the following ones in order (3-4-5-6...).

    - Please make sure that you do not use the ID #2 address.

    - Connect the battery with ID #1 from its CAN port to the VenusOS device with a VE.CAN RJ-45 cable to the BMS-CAN port of the VenusOS device from Victron.

- If your VenusOS device does not have a BMS-CAN port, you can use the VE.CAN port as long as you set the port's baud rate in the VenusOS settings (500 kb/s BMS-CAN).

- To do this, navigate to the Venus operating system and go to "Settings" "Services".
  Can-Profile.
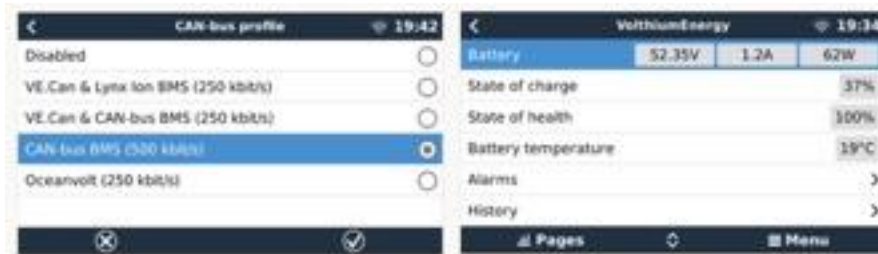
- Finally, use a Victron termination connector to close the communication loop. Note that you cannot close the loop on the battery with this termination adapter.

Make your own cable (VE.CAN). Here is the Pin-Out

Description	
Type A: battery side	B-V, Green, B-Orange, Blue, B-Blue, Orange, B-Brown, Brown
VE.Can : Victron equipment	B-green, Green. Orange, B-Brown, B-Orange, Brown, Blue, B-Blue

RS-485 AND SIMULTANEOUS CAN

If you want to use RS-485 communication with a computer in addition to the connection to Victron, then each of the batteries will be connected with 2 straight network cables. The addressing will remain the same. Understand that the RS-485 link is independent of the CAN link.

OPERATING ENVIRONMENT

Type	Required points
Operating temperature	Operating range : -20°C ~+60°C
Storage temperature	-20 °C ~+60 °C
Relative humidity	<95 %
Atmospheric pressure	86kPa~106kPa

PRECAUTIONS

Please read and observe the following conditions of installation and use of the battery, improper installation using the battery may result in personal injury or damage to the product.

1. Do not dispose of the battery in water. Store batteries in a cool, dry environment when not in use.

2. Do not place the battery in a fire or heat the battery to avoid an explosion or other dangerous incidents.

3. When charging the battery, please choose specialized charging equipment and follow the correct procedures, do not use improper chargers.

4. Do not reverse the positive and negative terminals, do not connect the battery directly to the AC power supply, avoid short-circuiting the battery.

5. Do not use batteries from different manufacturers or of different types together, and do not use used batteries with new ones.

6. Do not use the battery if it becomes hot, swells, warps or leaks.

7. Do not pierce the battery with a nail or other sharp object; do not throw, dab or bump the battery.

8. Do not open or attempt to repair the battery when it is defective. **Warranty invalid if the battery is repaired or disassembled.**

9. The batteries are half-charged before shipping, do not use the battery if it is hot, bulging or has an abnormal smell and so on, and inform the service department immediately.

10. If you need to store the battery for a long time, please charge and discharge the battery every three months to ensure the best performance, and the best state of charge for storage is between 50% ~ 60%.

11. Use the battery only within the temperature range defined in the user's manual.

12. The state of charge of the batteries is 50% before shipping, please charge the battery before use.

⚠ **If you encounter specific technical problems not mentioned above, please contact the technical staff.**

STATE OF CHARGE (SOC) AND VOLTAGE WHEN DISCHARGING TO 50AH

25.6V 200AH - 50A discharge	
SOC	Voltage
100 %	27.01
90 %	26.02
80 %	25.98
70 %	25.87
60 %	25.72
50 %	25.66
40 %	25.57
30 %	25.40
20 %	25.14
10 %	24.71
0 %	21.64