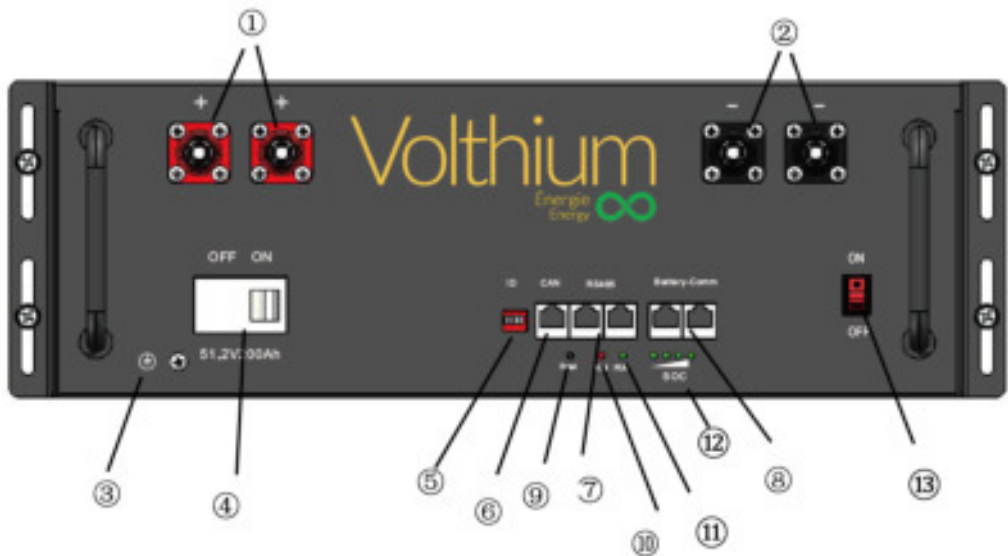


### DESCRIPTION

The RACKMOUNT SÉRIES is composed of 100AH uUL1973 certified prismatic square cells and CSA C22.2 breaker. There are 16 series, each of them is made up of a pack of 2 cells in parallel.

*For more details refer to the technical sheet.*



NO.	Name	Function	Remarks
1	Terminal	Positive Output	
2	Terminal	Negative Output	
3	GND	GND	
4	MCB	Power Switch	
5	ID	Battery Address	
6	CAN	CAN Port	
7	RS485	RS485 Port	
8	Battery-Comm	Communication Port	
9	Reset	Reset	
10	ALM	ALM LED	
11	RUN	RUN LED	
12	SOC	Capacity LED	
13	Switch	Battery On/Off	



## CURRENT AND LOAD VOLTAGE

DESCRIPTION	BATTERIE 25.6V	BATTERIE 51.2V
Bulk	28V	56V
Absorption (optionnel)	28V	56V
Float	27.2V	54.4V
Courant de charge par unité	50A	100A
Low disconnect Voltage (BMS)	21.5 – 22.4	43.2 - 44.7V

## TERMINAL

These are brand name Amphenol. The terminal models attached to the battery (“Receptacle”) are “SLPPB35BNO” for the positive, and “SLPPB35BNB” for the negative. They are only compatible with a “PLUG” type terminal from Amphenol SurLok with a caliber.

AWG-2 (35mm). Here is an example of a compatible connector (black): “SLPPB35BNB4”. You will find all the details and nomenclature of SurLok model numbers on the last page of the document. You will find official connectors at DigiKey, Newark and mouser. SurLok receptacles used on the battery are UL1977 certified.

## CIRCUIT BREAKER

The Batteries are fitted with "Nader" brand circuit breakers. Depending on the battery version, this will be 125A or 150A. These are UL1077 & CSA C22.2 No. 235-04 and UL489 & CSA 22.2 No. 5 certified.

## PARALLELING

When the DC current of the battery bank exceeds 150A, we suggest the use of BUSBAR. Each battery will connect to the BusBar using an AWG-2 cable, and then from the BUSBAR to your equipment with the cable of your choice.

## ADDRESSING

It is important to define an addressing, using the DipSwitch, for each of the batteries. Each battery has 4 small switches. For example, for a single battery, put the first 3 switches to off, and the last to ON. For other configurations, refer to the diagram below.



## RS485 CONNECTIVITY BETWEEN BATTERIES

Some devices, such as SOL-ARK inverters or Windows computers have the ability to read battery data using the RS-485 protocol. To do this, you will need to have previously set up the addresses using DipSwitch, and then use a standard network cable, in order to connect the RS485 ports of each of the units with each other. Each of the batteries has 2 RS485 communication ports. If only 2 units are connected in parallel, put a single Cat5e / 6 network cable between the RS485 port (1/2) of battery 1, to the RS485 port (1/2) of battery 2. In the case of a third battery, connect the RS485 cable (2/2) of battery 2 to the RS485 port (1/2) of battery 3. And so on for the others.

Your compatible device (example a Windows computer) can then connect to the master battery (battery # 1), and the entire battery bank will be visible.

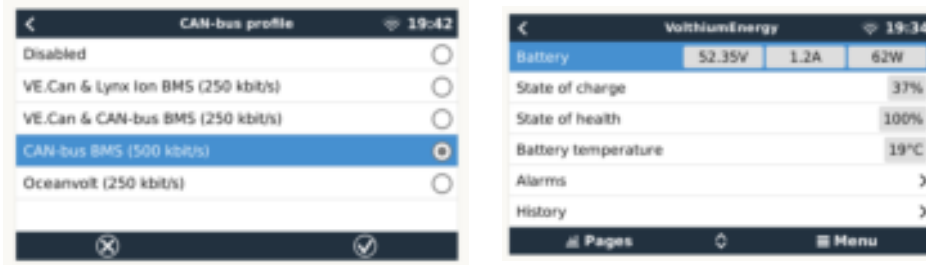
## CONNECTION TO VICTRON

First, make sure you have set the address on each battery. Then connect each of the batteries with a standard straight network cable (cat5e / 6). The batteries have 2 "Battery-comm" ports, connect each of the batteries using these ports.

The "CAN" port of the master battery will be used for Victron equipment.

To connect the VE.CAN port to the master battery, you will need to use a VE.CAN RJ45 communication cable made especially for this type of communication. The Pin-out of these Victron cable is different than standard network straight cable. In addition, you will need to set the VE.CAN port to 500kb / s in your Victron Venus equipment.

To do this, On the GX device, Select the *CAN-bus BMS (500 kbit/s)* CAN-profile in the CCGX. Menu path: *Settings* → *Services* → *CAN-profile*.



Finally, use a terminating Victron connector to close the communication loop. This cannot be installed on the battery. Install it on Victron hardware. GX or Venus devices always have 2 CAN port, so it could be installed in the second port.



### Building his own VE.CAN Cable

#### TypeA : Battery side

W-Green, Green, W-Orange, Blue, W-Blue, Orange, W-Brown, Brown

#### VE.Can : Victron Side

W-Green, Green, Orange, W-Brown, W-orange, Brown, Blue, W-Blue

## RS-485 & VICTRON

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

## USAGE ENVIRONMENT

Type	Points required
Usage Temperature	Range of function : -20°C ~+60°C
Storage Temperature	-20°C ~+60°C
Humidity Level	<95%
Atmospheric pressure	86kPa~106kPa
Essentials	No conductive dust and corrosive gas, no vibration. Keep away from heat and flame.

## CAUTIONS

Please read and respect the following battery installation conditions and use, improper installation using the battery may cause personal injury or damage the product.

1. DO NOT throw the battery in water. Store batteries in a cool, dry environment when not in use.
2. DO NOT ignite the battery or heat the battery to avoid explosion or other dangerous events.
3. When charging the battery, please choose specialized charging equipment and follow the correct procedures, do not use improper chargers.
4. DO NOT reverse positive and negative terminals, do not connect battery directly to AC power, avoid battery short circuit.

5. DO NOT use batteries from different manufacturers or different types and types together, and do not use old batteries with new batteries.
6. DO NOT use the battery when it becomes hot, swells, deforms, or leaks.
7. DO NOT pierce the battery with a nail or other sharp object; do not throw, dab, knock or hit 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 notify the after-sales service. At once.
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 charge state for storage is between 50% ~ 60%.
11. Please use the battery within the temperature range set in the manual.
12. The state of charge of the batteries is 50% before shipment, please charge the battery before use.



Note: If you have specific technical issues not listed above, please contact technical staff.

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

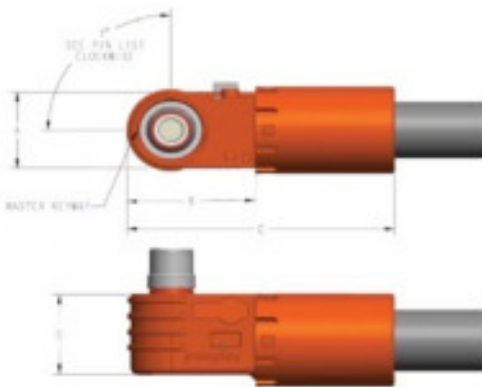
25.6V 200A -50A DISCHARGE	
SOC	Voltage
100%	27.01
90%	26.02
80%	25.98
70%	25.87
60%	25.72
50%	25.66
40%	25.57
30%	25.40
20%	24.14
10%	24.71
0%	21.64

51.2V 200A -50A DISCHARGE	
SOC	Voltage
100%	54.53
90%	52.35
80%	52.29
70%	52.10
60%	51.81
50%	51.7
40%	51.55
30%	51.28
20%	50.85
10%	50.09
0%	47.31

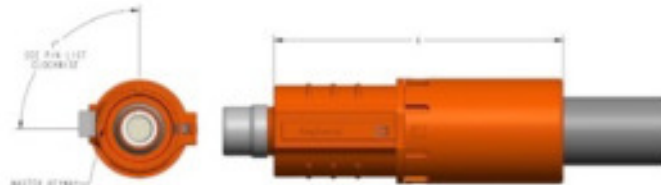
Technical Data			
Contact Size	8.0mm	IP Rating	IP 67
Current Rating	Up to 250A	Protection	Touch Proof
Operating Voltage	1000V AC/DC	Flammability	UL 94-V0
Operating Temp	-40°C to 125°C	Locking	Spring Locking

The markets and applications for the SurLok Plus™ EMI Version series include but are not limited to the following:

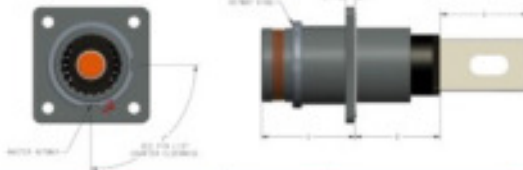
- EV/HEV
- BMS/Energy Storage
- Process Control/Automation
- Heavy Equipment



Size	Right Angle Plug Dimensions			
	A	B	C	D
8.0mm	26.2	41.2	86.2	25.8



Size	Straight Plug Dimensions		
	A	B	C
8.0mm	82.5	34.3	30.0



Size	Receptacle Dimensions			
	A	B	C	D
8.0mm	25.15	22.85	2.5	23.5

	Product Series: SurLok Plus™ EMI Version													
	Plug	RADSOK® Size	Applicable Cable Size		Backshells	Sealing	Connector Color		Keyway	EMI	HVIL (Optional)			
PLUG	P Right Angle Plug 90°	B 8.0mm	35	35mm² : 150 Amps	B	W/ Backshells	S	O Orange	0	90°	E	EMI	H	HVIL
									1	270°				
	IP Straight Plug	N	W/D Backshells (For Overmolding Only)	N	Non-Sealed	R Red	2	60°						
							3	120°						
4	150°													

	Product Series: SurLok Plus™ EMI Version													
	Receptacle	RADSOK® Size	Termination Style	Panel Mount	Sealing	Connector Color		Keyway	EMI	HVIL (Optional)				
RECEPTACLE	R Receptacle (W/D Keyway)	B 8.0mm	B	Busbar	P	Panel Mount W/ Flange	S	O Orange	0	90°	E	EMI	H	HVIL
									1	270°				
	IR Receptacle (W/ Keyway)	N	Non-Sealed	R Red	2	60°								
					3	120°								
4	150°													