Volthium

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TECHNICAL SHEET
12 V 100 Ah
Pro Series 2

Compatible with SafeCharge



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Before using your Volthium battery, please read the user manual and the datasheet specific to your battery.
You can find these documents by clicking on the following link: https://volthium.com/en/documents/
Any improper use of the product may void its warranty.
For any additional questions, please contact Volthium technical support.

ELECTRICAL SPECIFICATIONS	
Voltage	12.8 volt
Capacity	100 Ah
Capacity @ 20A	300 min
Energy	1280 Wh
Self-discharge	< 3% per month
Maximum unit in series	4
Maximum unit in parallel	Unlimited
Internal resistance@1khz AC	≤ 10 mΩ

CHARGE SPECIFICATIONS	
Maximum continious charge current	100 A
Recommended charge voltage	14.2 V - 14.6 V (Bulk) | 13.6 V - 13.8 V (Float)

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DISCHARGE SPECIFICATIONS	
Maximum continuous discharge current	150 A
BMS – Discharge disconnect voltage	11.5 V
BMS – Discharge reconnection voltage	12.8 V
Short circuit protection	Yes <1500 A @ 500 uS
Allowed MAX discharge current	150 A | @ 25 °C
Peak/Surge current limit	<500 A @ 3 S
End discharge	10.2 ~ 11.8 V
Cranking amp	1200 A
Cold cranking amp	1100 A

TEMPERATURE SPECIFICATIONS	
Discharge temperature	From -20 to 60°C
Charging temperature	From -20 to 60°C

STORAGE SPECIFICATIONS	
Storage temperature	From -10 to 40°C
Storage voltage	From 13.1 V to 13.3 V

COMMUNICATIONS SPECIFICATIONS	
Bluetooth	Embedded
Communication ports	CAN & RS485
LCD screen	Yes
Volthium CAN Hub Communication (VE.CAN)	Compatible
Communication	M12-10P
SafeCharge™ Compatibility	Yes
Overcurrent limit	Managed by the mobile application

HEATING SPECIFICATIONS	
Activation temperature	From -45 to 11°C
Activation current	6 A
Heating current	4 A
System activation mode	Automatic

NUMBER OF CYCLES ACCORDING TO THE AVERAGE DISCHARGE % OF USE	
30% discharge	8200 < cycles
80% discharge	6000 < cycles
100% discharge	3500 < cycles

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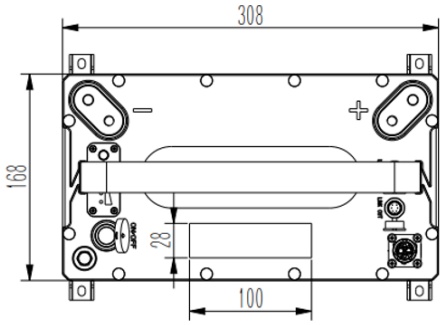
MECHANICAL SPECIFICATIONS	
Dimensions	308 X 168 X 216 mm | 12.13 X 6.61 X 8.6 po
Group / format	GR27
Weight	12.2kg | 27 lbs
Terminal Type	M8
Tightening torque on terminals	8~10 nm / 6~8 ft/lb
Ingress protection rating	IP67 (Against dust and water up to 1m depth for a maximum period of 30 minutes)
Operation altitude	<3000 m
On/Off Switch	Yes

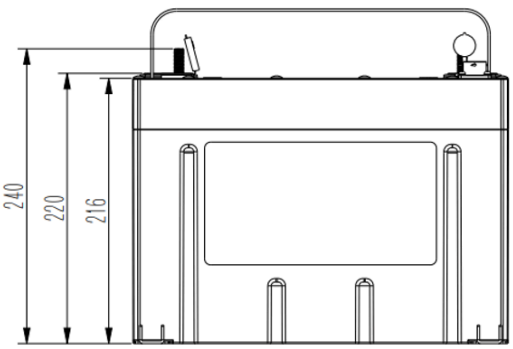
CERTIFICATIONS & DESIGN	
Design	4S1P
Certifications	CE | UL1973 | RoHS | IEC62619 | ABYC E-13
Shipping classification	UN 3480 | CLASS 9
Cell type	SquareCell - LiFePO4 - 3.2 V - 100 A Grade A+
Warranty	10 years

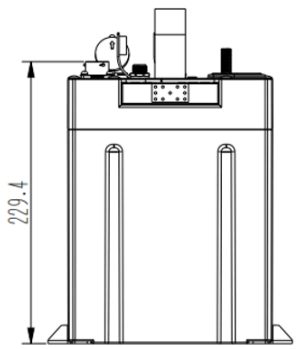
SPECIAL FEATURES RECAP

IP67 | LCD on Top | On/Off Switch | Cold cranking amps (CCA) 1100 | Series+Parallel allowed | Self Heating and Cooling | Victron CAN & NMEA 2000 integrated | Bluetooth with Daisy-Chain | Overcurrent limit managed by the mobile application | Easy Access to BMS | 10 years of warranty | Compatible with SafeCharge ™

OTHER FUNCTION	
OTA (Bluetooth)	Yes
Button	Button1- power On/Off Button2-show SOC and network
Panel	SOC indicator
Sleep mode	Enter : 15 days without charge/discharge/ communication
	Wake up : Charge or discharge or communication
Active sleep	Enter : Connect the 8 and 9 pins of the Link IN port
	Wake up : Disconnect the 8 and 9 pins of the Link IN port
Cell Balancing	Active
Charge current limit	Connect the external Current Limiter



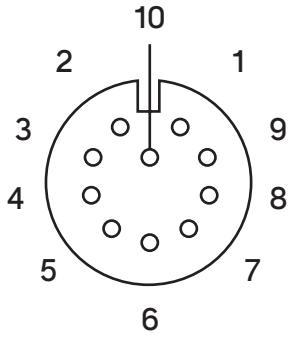




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ITEM			BMS protection value	Delay	Remark
Overcharge	Voltage	Total battery	15.4±0.6V (alarm)	1±1s	
		Recovery	13.8±0.4V		
		First Level Per cell	3.85±0.05V (alarm)	1±1s	Can set by APP
		Recovery	3.45±0.05V		
	Current	First Level Overcurrent	100±5A (alarm)	30±5s	Can set by APP
		Second Level Overcurrent	300±20A	3±2s	
	Temperature	Low temperature	0±5°C (alarm)	5±1s	
		Recovery	10±5°C		
		High temperature	65±5°C (alarm)	5±1s	
		Recovery	50±5°C		
Overdisharge	Voltage	Total battery	10.8±0.4V (alarm)	5±1s	
		Recovery	12.0±0.2V		
		First Level Per cell	2.7V±0.05V (alarm)	5±2s	Can set by APP
		Recovery	3.0V±0.1V		
		First Level Overcurrent	160±10A (alarm)	30±5s	
		Second Level Overcurrent	500±20A(alarm)	4±2s	
		Third Level Overcurrent	1000±200A	400±50ms	
		Short circuit Overcurrent	≥1500A	~500us	
	Temperature	Low temperature	-25±5°C (alarm)	5±1s	
		Recovery	-15±5°C	5±1s	
		High temperature	65±5°C (alarm)		
		Recovery	50±5°C	5±1s	

PIN OUT

Top view	Pins No.	Link In	Link Out	Usage
	1	CAN2H	/	External CAN | Inverter
	2	CAN2L	/	
	3	CANH	CANH	/
	4	CANL	CANL	
	5	RS485A	RS485A	Upper monitor software
	6	RS485B	RS485B	
	7	/	/	/
	8	S1	/	Active sleep: Connect S1 and S2
	9	S2	/	
	10	/	/	/

TRANSPORT & STORAGE

- Do not violently shake, impact or squeeze, and prevent sun and rain during the transportation.
- Do light take and put and strictly prevent falling, rolling, and heavy pressure during loading and unloading.
- The battery should be placed in a dry, clean, dark, and well-ventilated indoor environment for long-term storage, and the recommended storage temperature range is 15~35 ℃.
- No harmful gases, flammable and explosive products and corrosive chemical substances in the storage location.
- The batteries should be stored and transported in close to 50% SOC.
- If do not use for a long time, the battery needs to be charged every 6 months according to the specs.
- No fall down, no pile up over 6 layers, and keep face up.

WARNING & TIPS

Please read battery specification or manual carefully before use. Improper use may cause heat, fire, rupture, damage or capacity deterioration of the battery. We will not be responsible for any accidents caused by the usage without following our handling instructions.

Warning

- Battery must be far away from heat source, high voltage, and direct exposed to sunshine.
- Never throw the battery into water or fire.
- Never reverse two terminals when using the battery.
- Never connect the positive and negative of battery with conductor.

- Never knock, throw or trample the battery.
- Never disassemble the battery without manufacturer's permission and guidance.
- Never mixed battery with different capacity and brand;

Tips

- It is suggested to fully charged the battery per month to correct the battery SOC.
- Please charge your battery timely (≤2day) when battery runs out of power.
- Please use the dedicated lithium battery charger to charge the battery.
- Stop using when battery emit peculiar smell, heating, distortion or appear any abnormity
- Please keep the battery far away from children or pets.
- If the battery pack leaks electrolyte, avoid contacting with the liquid or gas leakage if the electrolyte of battery pack leaks, please take these steps immediately :

  Gas Inhalation : Evacuate the people in the contaminated area and seek medical aid as soon as possible.
  Eye Contact : Flush your eye with clean and flowing water for 15 min, and seek medical aid as soon as possible.
  Skin Contact : Thoroughly rinse the exposed area with soap and water to be sure no chemical or soap is left on them, and seek medical aid as soon as possible.
  Swallowing : Try to induce vomiting, seeks medical aid as soon as possible immediately.
  Fire : Please use carbon dioxide fire extinguisher rather than liquid to put out fires.