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TECHNICAL SHEET
12 V 560 Ah PRO

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	560 Ah
Capacity @ 20A	1680 min
Energy	7168 Wh
Self-discharge	< 3% per month
Maximum unit in series	4
Maximum unit in parallel	Unlimited
Internal resistance@1khz AC	≤ 20 mΩ

CHARGE SPECIFICATIONS	
Maximum continuous charge current	250 A | 300 A for 30 min
Recommended charge voltage	14.2 V - 14.6 V (Bulk) | 13.6 V - 13.8 V (Float)

DISCHARGE SPECIFICATIONS	
Maximum Continuous discharge current	250 A | 400 A for 30s | 600 A for 8s
Peak/Surge current limit	1500 A for 10s
Short circuit protection	2000 A @ 500 uS
Cold cranking amp (CCA)	2000 A
BMS – Discharge disconnect voltage	11.5 V
BMS – Discharge reconnection voltage	12.8 V
End discharge	11 ~ 11.6 V

TEMPERATURE SPECIFICATIONS	
Discharge temperature	From -45 to 60°C (with the thermostat activated)
Charging temperature	From -45 to 60°C (with the thermostat activated)

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	No
Volthium CAN Hub Communication (VE.CAN)	Compatible
Communication	M12-10P
SafeCharge™ Compatibility	Yes
SafeCharge™ Overcurrent limit	Managed by the mobile application

HEATING SPECIFICATIONS	
Our regular self-heating system diverts current from the charging source to the heating pad until the optimal internal temperature is reached.	
Activation temperature	From -45 to 11°C
Activation current	6 A
Heating current	4 A
System activation mode	Automatic

THERMOSTAT SPECIFICATIONS	
Our thermostat self-heating system uses internal energy to maintain optimal temperature, ensuring immediate charge acceptance, peak battery performance, and eliminating cold delays.	
Thermostat function	Yes
Activation mode	Configurable via the mobile app.

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

MECHANICAL SPECIFICATIONS	
Dimensions	532 X 262 X 341 mm | 20.9 X 10.3 X 13.4 po
Group / format	N/A
Weight	66kg | 145 lbs
Terminal Type	M8
Tightening torque on terminals	8~10 nm / 6~8 ft/lb
Ingress protection rating	IP66 (Water and dust resistant)
Operation altitude	<3000 m
On/Off Switch	Yes - Dry contact terminal (remote control)

CERTIFICATIONS & DESIGN	
Design	4S2P
Certifications	Cells : UL1973 | UL9540A
Shipping classification	UN 3480 | CLASS 9
Cell type	SquareCell - LiFePO4 - 3.2 V - 280 A Grade A+
Warranty	10 years (5 years commercial use)

SPECIAL FEATURES RECAP

IP66 | On/Off Switch | Cold cranking amps (CCA) 2000 A | Series+Parallel allowed | Self Heating et Cooling | Bluetooth with Daisy-Chain | Over Current limit managa by the mobile APP | Easy Access to BMS | 10 years of warranty (5 years commercial use) | 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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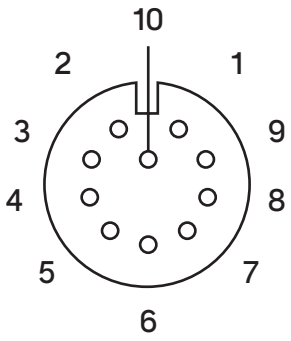
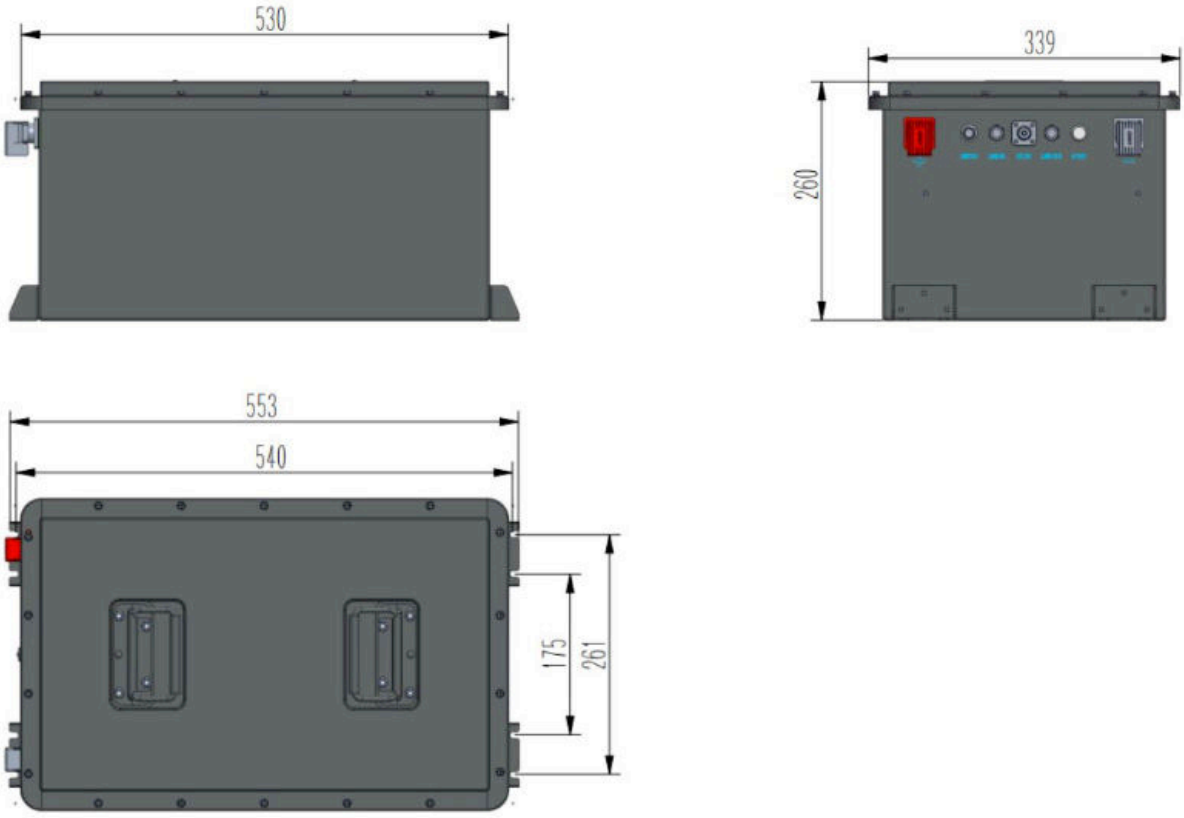
ITEM			BMS protection value	Delay	Remark
Overcharge	Voltage	Total battery	15.4±0.6V (alarm)	1±1s	
		Recovery	13.8±0.4V		
		First Level Per cell	3.65±0.05V (alarm)	5±1s	Can set by APP
		Recovery	3.45±0.05V		
		Second Level Per cell	3.85±0.05V	1±0.5s	
		Recovery	3.45±0.05V		
		Third Level Per cell	4.00±0.05V	30±1s	
		Unrecoverable	Blown Fuse		
	Current	First Level Overcurrent	315±5A (alarm)	30±5s	Can set by APP
		Second Level Overcurrent	400±5A	3±2s	
	Temperature	Low temperature	0±5°C (alarm)	5±1s	
		Recovery	10±5°C		
		High temperature	60±5°C (alarm)	5±1s	
		Recovery	45±5°C		
Overdisharge	Voltage	Total battery	10.0±0.4V (alarm)	1±0.5s	
		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		
		Second Level Per cell	2.5V±0.05V	1±0.5s	
		Recovery	3.0V±0.1V		
	Current	First Level Overcurrent	400±5A (alarm)	30±5s	
		Second Level Overcurrent	600±5A (alarm)	8±2s	
		Third Level Overcurrent	160±20A	1±0.5s	
		Short Circuit Overcurrent	≥2000A	~500us	
	Temperature	Low temperature	-31±5°C (alarm)	5±1s	
		Recovery	-15±5°C		
		High temperature	65±5°C (alarm)	5±1s	
		Recovery	55±5°C		

PIN OUT

Top view	Pins No.	Link In	Link Out	Usage
	1	CAN2H	/	Release the reserved energy : Connect D1 and D2
	2	CAN2L	/	
	3	CANH	CANH	Communication between batteries
	4	CANL	CANL	
	5	RS485A	RS485A	Upper monitor software
	6	RS485B	RS485B	
	7	/	/	
	8	S1	/	Remote ON/OFF (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 °C.
- 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.