

# TECHNICAL SHEET

## 12 V 100 Ah

### Pro Series 2

Compatible with  SafeCharge



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

|                            |  |
|----------------------------|--|
| Recommended charge current | 50 A   |
| Maximum charge current     | 100 A  |
| Recommended charge voltage | 14.2 V - 14.6 V (Bulk)   13.6 V - 13.8 V (Float) |

## DISCHARGE SPECIFICATIONS

|                                      |                      |
|--------------------------------------|----------------------|
| Continuous discharge current         | 100 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 |

## MECHANICAL SPECIFICATIONS

|                                |   |
|--------------------------------|---|
| Dimensions                     | 308 X 168 X 216 mm   12.13 X 6.61 X 8.5 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   |

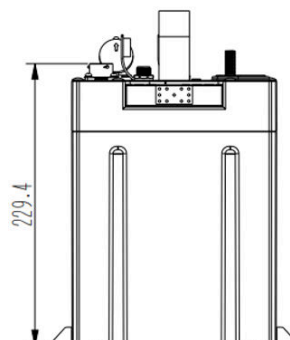
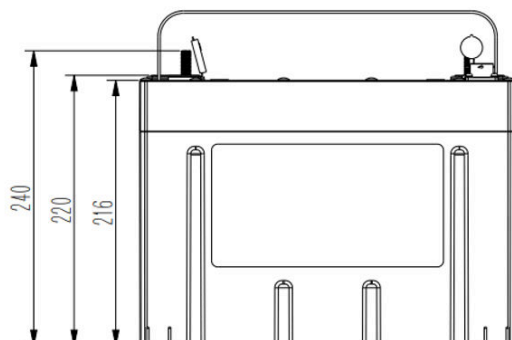
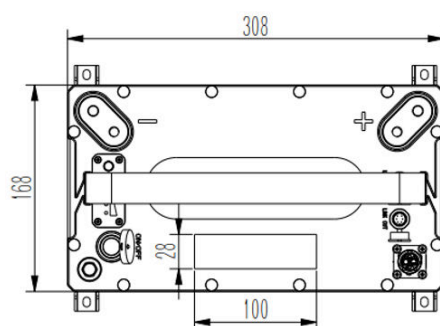
## CERTIFICATIONS & DESIGN

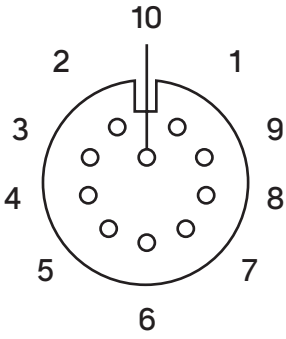
|                         |   |
|-------------------------|---|
| Design                  | 4S4P  |
| Certifications          | CE   UL1973   RoHS   IEC62619   ABYC E-13     |
| Shipping classification | UN 3480   CLASS 9                             |
| Cell type               | SquareCell - LiFePO4 - 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 et Cooling | Victron CAN & NMEA 2000 intégrés | Bluetooth with Daisy-Chain | Over Current limit managed by the mobile APP | Easy Access to BMS | 10 years of warranty | Compatible with SafeCharge

| OTHER FUNCTION       |   |
|----------------------|---|
| OTA (Bluetooth)      | Yes   |
| Button               | Button1- power On/Off<br>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                      |



| PIN OUT  |          |         |          |                                 |
|--|----------|---------|----------|---------------------------------|
| OTA (Bluetooth)  | 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 °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 ( $\leq 2$ day) 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 abnormality
- 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.