

## 48V 14.36kWh 19in LFP pack

Vaulta batteries offer a safe and reliable energy source that are suitable for various applications such as telecom, and on/off grid. Vaulta batteries are designed and made in Australia, and are the most environmentally friendly battery systems on the planet. Available for purchase or white labelling.

### Safe

- Safety certified
- Multiple short circuit protection
- Cell level monitoring
- Thermal protection and cut-offs

### Reliable

- 10 year calendar life
- Multiple charge/discharge profiles
- High energy density at packaged level (up to 145Wh/kg)
- Lithium Iron Phosphate – safer than NMC
- Repairable in the field

### Circular

- Zero cobalt
- Vaulta Inside TM

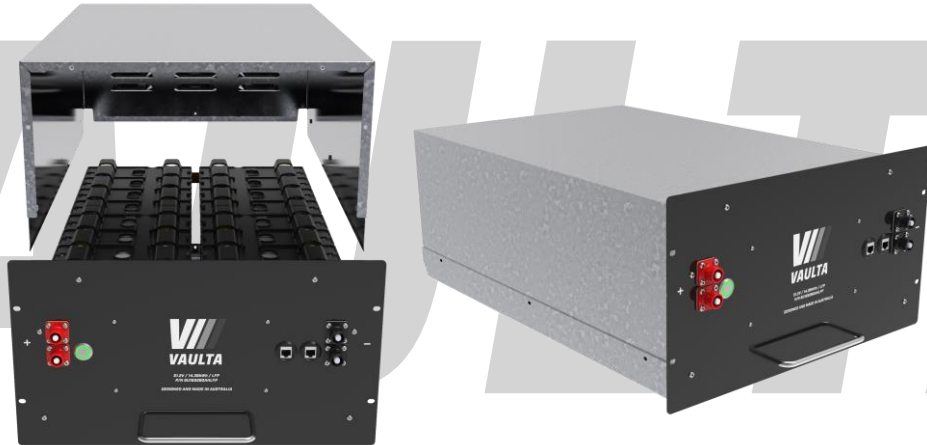
Vaulta Inside means it's using Vaulta proprietary technology, which means it's designed for:

- Local assembly
- Cell level repair
- Cell re-use
- Cell level recycling



### Specifications

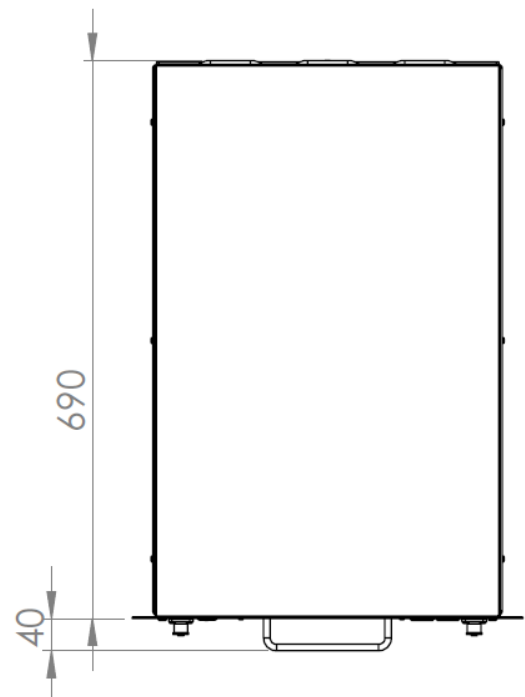
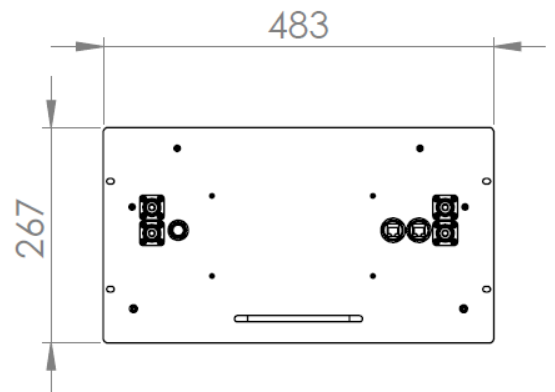
Nominal voltage (Vdc)		48 (51.2)
Nominal capacity (kWh)		14.36
Usable capacity (kWh)		13.64
Dimensions (mm)		267mm (6U) x 482 (19in rack) x 720
Weight (Kg)		<95
Charge / Discharge Current (A)	Recommended	70A/70A (0.25C)
	Max continuous	140A/140A (0.5C)
Communication port		RJ45 - CANBUS
String		16
BMS balancing		Passive (660mA)
Working temperature (C°) - charge		0 to 55
Working temperature (C°) - discharge		-20 to 55
Shelf temperature (C°)		25 recommended
Calendar life		10 years @ 25 (C°)
Cycle life		4000 cycles @ 35 (C°) 80% DOD, 0.5C/0.5C (compression) 3000 cycles @ 35 (C°), 100% DOD, 0.5C/0.5C (compression)
Planned certifications		UL1973/ASIEC62619/ UN38.3



## BMS FUNCTIONALITY

Manufactured in	Brisbane, Australia
Cell Chemistry	All - LiFePO4, Li-ion, LTO
Cell Voltage Sense Accuracy (mV)	1
Power Consumption Max (mA)	30
Power Consumption Sleep ( $\mu$ A)	4
Number of Temperature Sensors	8
Fused Cell Sense	Yes
Reverse Polarity Protection	Yes
Over-charge/discharge protection	Yes
Over-current, over/under temp protection	Yes
Short circuit protection	Yes
Coulomb Counter	Yes
CANBUS Communication	Yes

## MECHANICALS



**Battery Info**

- 86.3 % State of Charge
- 90.4 % State of Balance
- 57.36 V Total Voltage
- 57.37 V BMS Voltage
- 0.37 A Total Current
- 2 Node Count
- 3.61 V Max Cell Voltage
- 3.51 V Min Cell Voltage
- 22.2 °C Max Temperature
- 22.0 °C Min Temperature

**Battery State**

- INIT:  PRECHARGE
- DISCHARGE ENABLED:  CHARGE ENABLED
- ALL ENABLED:  DISCHARGE ENABLED PRE
- CHARGE ENABLED PRE:  ALL ENABLED PRE
- ERROR:

**Battery Events**

- CALIBRATED:  CONNECTED
- STANDALONE:  SENSE ERROR
- OVER VOLT:  UNDER VOLT
- OVER TEMP:  UNDER TEMP
- CRITICAL OVER CURRENT:  CRITICAL OVER VOLT
- CRITICAL UNDER VOLT:  BALANCING
- PRECHARGE FAIL:  SOC INVALID

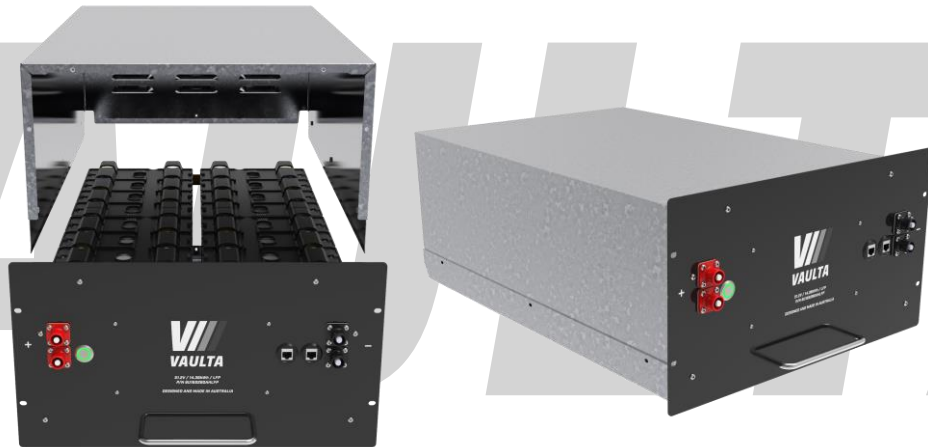
**Node Info**

Node #0: 28.575 V Total Voltage, 3.602 V Max Cell, 3.511 V Min Cell, 22.2 °C Max Temp, 22.0 °C Min Temp

Node #1: 28.610 V Total Voltage, 3.607 V Max Cell, 3.548 V Min Cell, -Infinity °C Max Temp, Infinity °C Min Temp

*Web based monitor & control*





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CANBUS Communication	Yes

### BMS Specifications

- Monitors up to 28 cells of any lithium-ion chemistry
- Pre-charge,/charge/discharge control
- Over/under voltage and over/under temp protection
- 600mA cell balancing
- 200A continuous charge/discharge
- 8 cell temperature sense
- CANbus communication
- Monitoring via software on PC
- All-in-one unit
- Self-healing protocols, with critical errors designed to require human intervention
- 115mm x 215mm

