

# Pytes

## V5° Gen 2 Rack Battery

Enhanced  
Performance & Safety



Optimized  
Passive  
Balancing



Multi-Layer  
Protection



Fire  
Suppression



## V5° a Plus



### Leading Pack Integration Capabilities

- Powered by Tier 1 automotive-grade battery cells
- Over 20 years of expertise in BMS design



### High-Efficiency Passive Balancing Technology

- Cell-Level passive balancing
- Built-in current limiters to prevent over current and improve module balancing performance



### Enhanced Safety Features

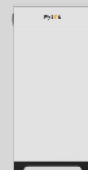
- Equipped with a circuit breaker, ensuring controlled disconnection of the DC system (Emergency Shutdown Function)
- Built-in pre-charge circuit to limit inrush current and safeguard critical components
- Integrated aerosol fire suppression system

## V5° a Plus Enclosures



### V5° Bracket

- Indoor rated
- Floor-mounted installation
- Stack up to 6\*V5° a Plus, expandable on demand



### V-BOX-OC PLUS

- IP55 / NEMA 3 rated, suitable for both indoor and outdoor
- Ground / Floor -mounted installation
- Busbar & Breaker integrated
- Can hold 4\*V5° a Plus, expandable on demand

## Electrical

Battery Chemistry	Lithium Iron Phosphate (LFP)
Rated Voltage	51.2 V
Rated Capacity	100 Ah
Rated Energy	5.12 kWh
Recommended Charge / Discharge Current	75 A (3.84 kW)
Maximum Short Circuit Fault Current	1910 A @ 77 ms
Integrated Breaker	Dual 125 Vdc / 125 Adc
Scalability	16 pcs (82 kWh) in a group 6 groups (492 kWh) in a system with a Pytes hub

## General

Dimensions (W x D x H)	19.05 x 22.76 x 5.51 inch (484 x 578.2 x 140 mm)
Weight (lb / kg)	100 / 45.34
Ingress Rating	IP 20
Power Terminal	Amphenol Surlok Plus 8.0 mm
Communication Ports	CAN / RS485 / RS232 / Dry Contact / WiFi
Round-Trip Efficiency	≥ 95%
Cycle Life <sup>1</sup>	≥ 6000 cycles
Warranty <sup>2</sup>	10 years

## Internal Heating Film

Rated Input Voltage	51.2 Vdc
Rated Power	250 W
Control Temperature	On: ≤ 41 °F (5 °C) Off: ≥ 59 °F (15 °C)

## Environmental

Charging Temperature <sup>3</sup>	14 °F~122 °F (-10 °C ~ 50 °C)
Discharging Temperature	-4 °F~131 °F (-20 °C ~ 55 °C)
Recommended Operating Altitude	≤ 9843 ft (3000 m)
Relative Humidity	0~95%, non-condensing

## Compliance

Certifications	UL 9540 Ed.3, UL 9540A, UL 1973, UN 38.3
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1. Operating conditions: 77 °F ± 7 °F (25 °C ± 4 °C), 0.5 C/0.5 C @ 90% DOD, ret @70% (EOL). Total throughput energy: (51.2 V×100 Ah / 1000 × 80% × 6000 / 1000) × 90%= 22 MWh.

2. 10 years or 6000 cycles (whichever comes first).

3. When the ambient temperature is between -0.4 °F (-18 °C) and 32 °F (0 °C), the heating film will activate to warm the battery until the temperature reaches the battery charging temperature range. External charging source (PV, grid, generator) is required for heating film operation.

