

## Commercial 400/320 HV+

Total Energy Capacity [kWh]	400
Energy, 80% DoD [kWh]	320
Energy, 90% DoD [kWh]	360
Current Capacity [Ah]	600
Max/Cont. Discharge Current [A] <sup>1</sup>	840/700
Max/Cont. Discharge Power [kW] <sup>1</sup>	570/475
Max & Cont. Charge Current [A]	600
Max & Cont. Charge Power [kW]	407
Nominal Voltage [V]	678
Max/Min. Operating Voltage [V]	753/604
Max Recommended Inverter Total Rated Power (cont.) [kVA]	400
Short Circuit Current [kA]	15
Battery Dimensions - H x W x D [mm] <sup>2</sup>	1576x2870x730
Crated Dimensions - H x W x D [mm]	1695x3105x835
Battery Weight [kg]	3098
Crated Weight [kg]	3332
DC Connection Power Cables - Leads (no. per electrode) [mm <sup>2</sup> ] <sup>3</sup>	1 x 185mm <sup>2</sup> PolyBraid
Round Trip Efficiency [%]	96-97
Enclosure	3mm thick Aluminium, powder coated, tamper proof, indoor use
Protection	Shunt Trip Circuit Breaker sized to suit max current, can be tripped by BMS if critical fault, manual reset. Protection for overcurrent, cell under and over voltage, temperature, weak cell detection and other critical events
Control Interface	RJ45 Ethernet connection for diagnostics & troubleshooting through E Connect. RJ45 CAN Strictly for BMS & inverter communication
Human Interface	On and Off buttons, State of Charge display (0 to 100%), error light, error reset button, RJ45 plug for programming and data access with PC, main breaker
On-board Management	Full battery management system and internal trip protection
Battery Chemistry	Lithium Iron Phosphate (LiFePO <sub>4</sub> )
Cell Form Factor	Large Format heavy-duty prismatic cells of 200Ah each and 3.2V nominal voltage, laser welded electrode connections
Battery Cooling	Forced air cooling
Suitable Ambient Temp [°C] <sup>4</sup>	0°C to +35°C
Extreme Operating Temp [°C] <sup>4</sup>	-20°C to +60°C
Remote Monitoring	Real time data logging and remote monitoring over Ethernet. Internet connection required
Warranty <sup>5</sup>	Standard Warranty: 10 years (or 6000 cycles) 80% DoD, 0.5C Max Discharge, 0.25C Max Charge, Max 25°C
Service Life <sup>5</sup>	> e.g. 16 years (>6000 cycles) expected life at 80% DoD per cycle
Battery Specification	Designed and built according to IEC62619, IEC62040, IEC61000, UN38.3

### Notes to Specification Sheet

The LiTE 2 Commercial high voltage range is available in HV and HV+. HV models are suitable for the Freedom Won Encore HPS50, 100 and 150 hybrid battery inverters. HV+ is suitable for Freedom Won Encore HPS250 and 500 battery inverters and associated DC charge controllers.

1. Max current duration 5min every 10min. 1.5 x Max overload can be handled for 5 seconds. Current limits rated for 10°C to 25°C battery temperature. Derating will apply outside this temperature range.
2. Excluding protrusions.
3. Battery power connection cables 4.0m long as standard, power cable Red = Positive, Black = Negative, conductors in the table refer to one electrode i.e. per positive and negative connections. Up to 8m long available at extra cost (must be specified in order). Note that the battery power connection cables exit the battery on the right-hand side near the floor on all the LiTE 2 Commercial HV and HV+ models. This is to suit bottom entry floor standing inverters. A cable trench is recommended for routing this cable along with all the other cables going to and from the inverter (a cable tray is an alternative).
4. Charging below 0°C not permitted. Extended time above 30°C not recommended for optimal battery life.
5. See Freedom Won Warranty document for further detail.

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