

LiTE Commercial 500/400 HV

Total Energy Capacity [kWh]	500
Energy, 80% DoD [kWh]	400
Energy, 90% DoD [kWh]	450
Current Capacity [Ah]	1000
Max/Cont. Charge and Discharge Current [A] ¹	800/700
Max & Cont. Charge and Discharge Power [kW] ¹	400
Nominal Voltage [V]	512
Max/Min. Operating Voltage [V]	568/456
Max Recommended Inverter Total Rated Power (cont.) [kVA]	400
Battery Dimensions – H x W x D [mm] ²	1450x3520x730
Crated Dimensions – H x W x D [mm]	1575x3990x835
Battery Weight [kg]	4400
Crated Weight [kg]	On-Site Build
DC Connection – Fly Leads (no. per electrode) [mm ²] ³	1 x 185mm ² 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	CAN Bus for diagnostics & troubleshooting. RJ45 Strictly for BMS & inverter communication
Human Interface	On and Off buttons, State of Charge display (0 to 100%), Error light, Error Reset button, USB 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 ₄)
Cell Form Factor	Large Format heavy-duty prismatic cells of 200Ah each and 3.2V nominal voltage, fully sealed in aluminium casing with laser welded electrode connections
Battery Cooling	Fan and louver cooling solution
Suitable Ambient Temp [°C] ⁴	0°C to +35°C
Extreme Operating Temp [°C]	-20°C to +60°C
Warranty ⁵	10 years or 4 000 cycles for average 80% DoD, and max 90% DoD
Service Life ⁵	>16 years (>5 500 cycles) expected life at 80% DoD per cycle, >20 years (>7 500 cycles) at 50% DoD

Notes to Specification Sheet

The LiTE Commercial high voltage range is available in two variants, namely the HV and HV+. The HV models are suitable for the ATESS HPS range of hybrid battery inverters and the HV+ is suitable for the PCS range of battery inverters and associated PBD DC.

1. The maximum values given apply to both charge and discharge. For systems requiring more power, two or more batteries must be installed in parallel. 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. De-rating will apply outside this temperature range.
2. Excluding protrusions.
3. Fly Leads 4.0m long as standard, power cable Red = Positive, Black = Negative, conductors in 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 fly leads exit the battery on the right-hand side near the floor on all the LiTE Commercial HV and HV+ models. This is to suit the bottom entry of the floor standing ATESS 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 35°C not recommended for optimal battery life.
5. See Freedom Won Warranty document for further detail.