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## SPECIFICATION SHEET- Freedom Lite Home and Business LiFePO4 ENERGY STORAGE

The following specifications pertain to the **Freedom Lite Home and Business** range of 52V lithium iron phosphate batteries manufactured by Freedom Won. For larger models refer to the **Freedom Lite Commercial** range.

Freedom Lite	Home 5/4	Home 10/8	Home 15/12	Home 20/16	Home 30/24	Business 40/32	Business 60/48	Business 80/64
Total Energy Capacity [kWh]	5	10	15	20	30	40	60	80
Energy, 80% DoD [kWh] (1)	4	8	12	16	24	32	48	64
Energy, 90% DoD [kWh]	4,5	9	13,5	18	27	36	54	72
Current Capacity [Ah]	100	200	300	400	600	800	1200	1600
Max & Cont. Charge Current [A] (2)	100	200	300	400	600	600	800	800
Max & Cont. Charge Power [kW] (2)	5	10	15	20	30	30	40	40
Max/Cont. Discharge Current [A] (2)	300/240	300/240	480/400	480/400	750/600	750/600	1000/800	1000/800
Max/Cont. Discharge Power [kW] (2)	15/12	15/12	24/20	24/20	38/30	38/30	50/40	50/40
Max Recommended Inverter Total Rated Power (cont.) [kVA]	10	10	15	15	25	25	35	35
Nominal Voltage [V]	52V, to suit 48V Inverters, min 47V, max 56V							
Weight [kg]	49	89	130	211	310	412	613	811
Dimensions on or against wall - Height x Width x Depth [mm]	500x340x290	745x340x290	745x490x265	976x708x265	1540x455x370	1895x584x310	1895x859x310	1895x1142x310
Enclosure	Aluminium – powder coated white front, rated for indoor use							
DC Connection - Integrated Cables, [no. per electrode] (3)	1x 50mm <sup>2</sup>	1 x 50mm <sup>2</sup>	2 x 50mm <sup>2</sup>	2 x 50mm <sup>2</sup>	2 x 95mm <sup>2</sup>	2 x 95mm <sup>2</sup>	2 x 95mm <sup>2</sup>	2 x 95mm <sup>2</sup>
Control Interface	RJ45 Socket x 2 – CAN Bus for Interfacing with Compatible Inverters and System Controllers, and communication for the connection of parallel batteries – note that parallel batteries must all be of the same model.							
Protection	Shunt Trip Circuit Breaker sized to suit max current, can be tripped by BMS if critical fault, manual reset. Includes overcurrent, cell under and over voltage, temperature, weak cell detection, minimum SOC control							
Human Interface	State of Charge Display (0 to 100%), Error light, Error Reset Button, Serial RS232 Plug for Programming (note the Lite 80/56 has a CAN port for programming and not a serial port), WiFi remote monitoring (optional accessory)							
Warranty [4]	10 years or 4 000 cycles for average 80% DoD, and max 90% DoD							
Service Life [4]	>16 years (>5 500 cycles) expected life at 80% DoD (1), >20 years (>7 500 cycles) at 50% DoD							
Essential Accessories	Note that for connecting the battery to a PC a special adapter is required: <ul style="list-style-type: none"> <li>• Lite 5/4 up to Lite 60/42 - Serial RS232 to USB adapter (must be the brand supplied by Freedom Won)</li> <li>• Lite 80/56 - CANdapter (available from Freedom Won) (supplied with battery)</li> </ul> CAN Bus Termination Resistor – one required per battery, available from Freedom Won (not included with battery)							

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Notes to Specification Sheet:

- 1) DoD = Depth of Discharge, recommended 80% DoD for average daily discharge, 70% DoD on average for optimal life – max for normal operation 90% DoD, max for system in standby 100% DoD.
- 2) Max load duration – 5 minutes per 30-minute cycle. 2 x Max overload can be handled for 2 seconds.
- 3) Fly Leads 1,8m long, power cable Red = Positive, Black = Negative, conductors in table refer to one electrode i.e. per positive and negative connections
- 4) End of Life (EoL) defined as cell dropping to 60% of Beginning of Life (BoL) capacity for expected life and 70% of BoL capacity for warranty. This warranty applies to Lites sold after 1 September 2019. For Lites sold prior please contact Freedom Won for warranty information.

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